



WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

Complete Streets & Main Street Highways



Washington's Complete Streets & Main Street Highways Program

Case Studies and Practice Resource

2011 Legislative Session Presentation

Washington State Department of Transportation in partnership
with the University of Washington Department of Architecture Storefront Studio

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WASHINGTON STATE Complete Streets



Let's Complete Washington's Streets!

WASHINGTON ADOPTS A COMPLETE STREET BILL

Washington State has recently passed legislation to provide a funding source for cities and towns that pass a Complete Streets ordinance, and begin projects under those new design guidelines.

The Complete Streets Grant Program is established in the WSDOT's Highways and Local Programs Division. The purpose of the grant program is to encourage local governments to adopt urban arterial retrofit street ordinances to provide safe access to all users including pedestrians, bicyclists, motorists, and public transportation users.

WHAT MAKES A STREET "COMPLETE?"

Towns and cities across the nation are beginning to enact complete street policies, which would require planners and engineers to "routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation."

Complete street policies can be enacted in both rural and urban areas, and in towns and cities of any size. Though urban areas often have more funding and political influence, rural areas actually have more fatal traffic injuries due to unsafe roads. The solutions can be simple: where a bike/transit lane might be added in a larger city, a rural road might simply need sidewalks and a wider shoulder for safe walking.

Complete Streets Grant Program State Bill 1071:

"Urban main streets should be designed to provide safe access to all users, including bicyclists, pedestrians, motorists, and public transportation users.

It is the intent of the legislature to encourage street designs that safely meet the needs of all users and also protect and preserve a community's environment and character."



Complete Streets in Washington State

TACOMA

Tacoma has established a set of Complete Streets guidelines that was recognized by the National Complete Street Coalition as a “Top Policy” in 2010.¹

On November 17, 2009 the City Council adopted Resolution Number 37916: “A Resolution relating to the City’s street design; endorsing the creation and ongoing development of Tacoma’s Complete Streets Design Guidelines; and directing the City Manager to implement the Mixed-use Centers Complete Streets Design Guidelines and the Residential Complete Streets Design Guidelines.”²



These are only a few examples of complete Street success stories in Washington State

SEDRO-WOOLLEY

An example of Complete Streets in a rural town, Sedro-Woolley has made a strong commitment to increase all accessibility for all users in future design.

“City Council created a new section in its municipal code in June 2010 stating that bicycle and pedestrian ways shall be included in transportation projects and noting that such accommodations were not required where there was no identified need or where their cost would be excessively disproportionate. Sedro-Woolley’s city engineers are currently retrofitting the Fruitdal/McGarigle arterial road, adding school zone crosswalks, pavement markings, and ADA ramps.”⁴



Complete Streets in Washington State

ISSAQUAH

The City of Issaquah adopted a policy for complete streets in November of 2007. The policy, added to the existing streets improvement program, created the objective to retrofit existing facilities to increase accessibility to more users.

“We have created a living inventory of areas we would like to see improved within the City. We have broken them down into 5 categories: signal improvements, sidewalk installation and replacement, crosswalk installation and modification, bike lane installation and modification, and street light installation.”³



SEATTLE

In April of 2007 the City of Seattle passed a city ordinance (122386) that developed guidelines for implementing Complete Street treatments to new road projects.

“Seattle’s Complete Streets guiding principle is to design, operate and maintain Seattle’s streets to promote safe and convenient access and travel for all users pedestrians, bicyclists, transit riders, and people of all abilities, as well as freight and motor vehicle drivers

The Seattle Department of Transportation (SDOT) will implement Complete Streets policy by designing, operating and maintaining the transportation network to improve travel conditions for bicyclists, pedestrians, transit and freight in a manner consistent with, and supportive of, the surrounding community”⁵



Here is a full list of cities that have adopted a Complete Street policy:

- Airway Heights
- Issaquah
- Kirkland
- Redmond
- Renton
- Seattle
- Sedro-Woolley
- University Place
- Tacoma
- Edmonds
- Everett
- Spokane





COMPLETE STREETS COMPONENTS

Pedestrians



What makes a walkable community?

There are several benefits for a walkable community. Increased accessibility to local businesses leads to economic growth and an reanimated streetscape. The street becomes not only a vehicular route through town, but serves as the pedestrian gateway to the community, activating one of the busiest spaces of the community.

37% of pedestrian deaths among 60 and older in 2009 occurred at intersections.

-IHS Fatality Facts 2009

A WALKABLE STREET MIGHT HAVE:

REDUCED SPEED LIMITS

Speed limits are a primary asset when preventing car - pedestrian collisions. Speed humps, changes in road surface, and signage can reinforce the speed limit. Certain strategies, like raised speed hump crosswalks, are multi-functional.

ACCESSIBILITY

Pedestrian walkways need to be accessible to users of all ages and abilities. Ramps, incline, and curb height must not exclude users with wheelchairs, strollers, luggage, or other mobility impairments.

PEDESTRIAN VISIBILITY

Good visibility is vital to keeping pedestrians safe, especially at crosswalks and intersections. The “daylighting” concept removes visual obstacles from a corner or intersection. Removing even one curb-parked car can significantly improve visibility.

MEDIANS

Medians between opposing lanes of traffic can serve as refuge for pedestrians crossing the road. Medians might reduce the time required to cross the street. They have also been shown to reduce auto collisions.

BULB-OUTS

Bulb-outs widen the sidewalk at an intersection, shortening the crosswalk length and creating a safe refuge for pedestrians on both sides. Bulb-outs also ease traffic flow and create shoulder space that can be utilized for parking, bicycle or transit lanes, or aesthetic streetscaping.

MORE TIME TO CROSS

Elderly and the mobility impaired pedestrians require more time to cross a street. Allowing more crossing time should ensure that the street can be safely crossed.

WALKWAY MARKINGS

Pedestrian walkways should be clearly identifiable to a passing vehicle. Change in materiality, colorful signage, electric lights, physical barriers, and materiality changes can increase awareness of a pedestrian walkway.

Signs also remind pedestrians to be safe and aware of surroundings when crossing the street.

BUFFER SPACES

Buffers create barriers between pedestrians and traffic. Buffers can be as simple as relocating parking areas so as to divide the walkway from the road.

Buffers can also opportunities to incorporate pedestrian-related amenities. These spaces can be opportunities for landscaping, bicycle parking or bike lanes, street-side parking, and benches.



COMPLETE STREETS COMPONENTS

Bicycles



Do bicyclists feel safe?

Bicyclists choose to ride bicycles for several reasons. Cyclists commute solely on their bicycle or combine a short bike route with a bus trip. Bicycles are used for errands, personal visits, transporting children to school, and exercise and recreation.

If destinations like shops, schools, and parks are located in close proximity to bicycle facilities, a bicycling network will be more successful. There are valuable economic, social, and healthy benefits to having a bikable community.

Wrong-way riding and riding on the sidewalk are two of the main contributors to car and bike collisions.

-League of American Bicyclists

WAYS TO ACCOMMODATE BICYCLE TRAVEL:

ACCESSIBILITY

Bicycling is often combined with walking or public transit use. Bike facilities, then, should be in close proximity to sidewalks and transit stops. Facilities like lockers and bicycle racks should be in close proximity to walkways, transit stops, and business entrances.

BICYCLIST AMENITIES

Well-positioned bicycle amenities can encourage biking and enable better accessibility. They might also generate income for the city and would help streetside shops and businesses. Publicly accessible bicycle programs, like the “R-Bike” program in Roslyn, WA, encourage the community’s bicycle use and build support for the existing bicycle system.

GIVE BICYCLES SPACE

Bicycle lanes designate a safe space for bicycles on the road, reducing the risk of car - bicycle collisions. Bicycle travel lanes can be wide curb lanes, bicycle lanes or separate bicycle paths. Bicycle lanes can be painted a bright color or uniquely textured.

STAY OFF THE SIDEWALK

It is actually more dangerous for bicycles to ride on the sidewalk than on the road. According to the League of American Bicyclists, wrong-way riding and riding on the sidewalk are two of the main contributors to car and bicycle collisions. Designating road space for bicycles not only creates a safe route for bicyclists, but it also keeps bicycles off the sidewalk.

COMMUNICATION

Vehicular, bicycle, and pedestrian paths need to be clearly marked to each other. Along with posted signs, signs painted on the road are helpful for both drivers and bicyclists, denoting space along the road specifically for bicyclists and making drivers aware of their presence.

Communication is also important for bicyclists. Bicycle routes must be easy to navigate and well-marked. Bicyclists must be informed that the sidewalk is intended only for pedestrian use. Pedestrian routes should be clearly distinguished from bicycle routes. Maps and posted information can inform bicyclists of existing policies and systems.



COMPLETE STREETS COMPONENTS

Transit



How accessible is public transit?

A street designed with all users in mind offers a reliable, efficient transportation system as an alternative to single occupancy vehicles. In addition to reducing traffic crashes and pollution emissions, public transit increases physical activity, improves mental health, and allows basic access to medical care and healthy food. By designing with all users in mind, public transit would increase mobility, connection and safety along these roads.

Nearly 1/3 of transit users meet the Surgeon General's recommendations for minimum daily exercise through their daily travels.

-Complete Streets Coalition

HOW CAN WE ENCOURAGE TRANSIT USE?

ACCESSIBILITY

Transit should be accessible to all modes of transportation, and should accommodate users of all ages and mobility levels.

PEDESTRIAN AMENITIES

To keep pedestrians safe while using the transit system, transit stops should lie directly adjacent to pedestrian walkways. When a bus stop is sheltered, it should be located safely and conveniently for users without blocking the sidewalk or drivers' line of sight.

CAR AMENITIES

Park & Rides successfully connect car drivers to the transit system. A Park & Ride offers a convenient carpool, reduces fuel usage, and provides temporary car storage. Encouraging transit use can also encourage bicycling and walking.

BICYCLE AMENITIES

To encourage bicycle commuting, bicycle facilities like storage racks and lockers should be located close to the transit waiting area, but separate from pedestrian and vehicular traffic.

WAITING AREAS

Waiting areas at transit stops should be universally accessible. They should provide buffer space (between 5-10 feet) from traffic. In areas with heavy transit use, bus stops should be sheltered to protect users from environmental hazards, and they should provide seating and transit information.

Transit stops should also be safe, pleasant and attractive. They should be well-lit and maybe even have video surveillance, so users feel safe during their wait. Stops are also opportunities for planting and streetscaping.

PLACEMENT

Transit stop locations are based on traffic levels, parking, safety, and convenience, and typically located near intersections. They should be clearly visible without blocking a driver's line-of-sight.

HOV LANES

High-Occupancy Vehicle (HOV) Lanes provide transit vehicles with an advantageous separated lane. This lane provides additional safety to transit vehicles. It may be used as a combined bicycle - transit lane as well.

PULL-OUTS

Transit pull-outs in high-volume traffic areas help to minimize the effects on traffic at transit stops. Pull-outs also protect loading and unloading passengers. Islands can be used on multi-lane roadways.



COMPLETE STREETS COMPONENTS

Cars



How can we increase safety and improve efficiency?

Roads are usually designed mainly for cars. Complete Streets aim to integrate all modes of transportation. While personal vehicles are a factor in road design, roads must provide safety to users of all modes and abilities. A comprehensive design strategy can alleviate traffic and vehicle safety concerns. Drivers must be made aware of the other modes of transportation with which they share the road. As the dominant system on the road, cars can pose serious dangers to pedestrians, bicyclists, and transit users.

Over half of the daily trips made are under 3 miles. 87% of those trips take place in personal vehicles.

These trips could be replaced by alternate transportation.

--BTS National Household Survey

ADDRESSING CAR-RELATED NEEDS:

REDUCED SPEED

Reasonable speed limits are vital to the safety of a roadway. Eighty-three percent of pedestrians hit by a vehicle traveling at forty miles per hour will not survive; the percentage improves significantly when the speed limit is reduced to thirty-five miles per hour.

A reduced speed limit can also result in economic benefit for the community. Local businesses might attract more customers, and property values can increase with a speed limit reduction.

COMMUNICATION

An essential part of road safety is adequate, clear signage. Drivers must be made aware of nearby pedestrians, bicycles, transit, other vehicles, and any surrounding obstacles.

PARKING AREAS

Parking, while important for business and accessibility, is not vital to a streetscape.

Parking spaces can be rearranged to improve safety for passenger loading and unloading. Parking areas may also serve as buffer spaces between different modes of travel. A well-designed parking area can ease traffic flow and improve visibility at intersections.

NOISE BARRIERS

Automotive traffic is a noise issue for the surrounding community. Reduced speed significantly reduces traffic noise. In addition, a streetscape may provide noise barriers, like plantings or walls, to reduce the noise pollution levels in the community.

“ROAD DIET”

The “Road Diet” program helps over-sized roads lose lanes and width. The result is not just smaller vehicular travel space. Somewhat counter intuitively, a road under a “Road Diet” conversion becomes more efficient, carrying a greater volume of vehicles than before, and becoming safer for bicycles, pedestrians, and transit users.

Often, this conversion involves removing and narrowing lanes of travel, making drivers more aware of their speed and surroundings. Two-way left-turn lanes, or a medians with turning pockets, reduce left-turn collisions and assist in maintaining traffic flow. Often, the space redeemed by such a conversion yields space for bicycle and transit lanes, or wider sidewalks.



COMPLETE STREETS COMPONENTS

Semi-Trailers



How can freight traffic be more efficient?

Washington State's abundant natural resources and thriving economic systems demand for commercial semi-truck accessibility. Logging trucks, agricultural equipment and trailers, horse trailers, and cargo trailers are common sights throughout the state. It is valuable to maintain truck routes even when state highways pass through local communities.

The requirements for trucks are similar to that of automotives, but more extreme. Trucks need more space, more allowances, and more noise control.

Truck implements are similar to that of personal vehicles, but more extreme. They should be case-specific to the type of freight common to the community.

SPECIAL CONSIDERATIONS FOR TRUCKS:

REGIONALLY SPECIFIC

Solutions to increase freight route efficiency are informed by the community context. For example, some communities have frequent logging trucks, while others might have agricultural vehicles. Any methods used should be case-specific, addressing the situation most relevant to the community's situation.

REDUCED SPEED

Speed is especially an issue on main arterials and stat routes. The speed limit of a state route highway is usually reduced when passing through an urban. One way to improve safety and reduce truck noise is to reduce the speed limit even more.

REROUTING TRUCKS

Trucks may also be routed around a community. This solution would be more difficult to accomplish, as State Routes carry a significant amount of freight. But the removal of trucks from an urban area might enhance the streetscape, making the local businesses and public spaces more enjoyable for the community. In Grandview, WA, for example, the alternative freight route is an efficient system of service alleys.

TRUCK CURFEWS

Limiting freight traffic at certain times of the day in specific areas can reduce noise and congestion associated with trucks on busy urban arterials.

NOISE BARRIERS

Automotive traffic is a noise issue for the surrounding community, and trucks are a main contributor. While some truck noise is due to engines and brakes, the dominant source of noise is tire-pavement noise. The most effective way to reduce truck noise is to employ a noise-minimizing pavement or surface.

Noise barriers such as vegetation or better building insulation can alleviate the noise issues along the streetscape. Barriers can also be opportunities to consider other complete street concepts, like addressing bicycles, pedestrians, or environmental stewardship practices.



COMPLETE STREETS

Goals & Benefits



What would we gain?



HEALTH AND SAFETY

Complete streets encourage healthy, safe and active lifestyle. Making the road accessible to pedestrians, bikers, and transit riders, complete streets encourage and enable alternative modes of transportation and activate the community.



ACCESS AND MOBILITY

Complete streets improve access to local shops and business. Able to support a higher level of pedestrian foot traffic, complete streets activate the street, providing safe areas for visitors and residents of the community to experience and interact with the town



ENVIRONMENTAL STEWARDSHIP

Complete streets provide opportunities to demonstrate good stewardship of the environment. The ideas at work in a well-designed complete street can easily incorporate sustainable solutions in energy- and resource-related opportunities in the community.



ECONOMIC DEVELOPMENT

Complete streets have potential in activating the economy of the community. Increasing accessibility, improving safety, incorporating sustainable practices, and improving the aesthetic appeal of a town can do much in promoting business growth and add value to a community's sense of identity.



WASHINGTON STATE

Main Street Highways



When is a Highway Also a Main Street?

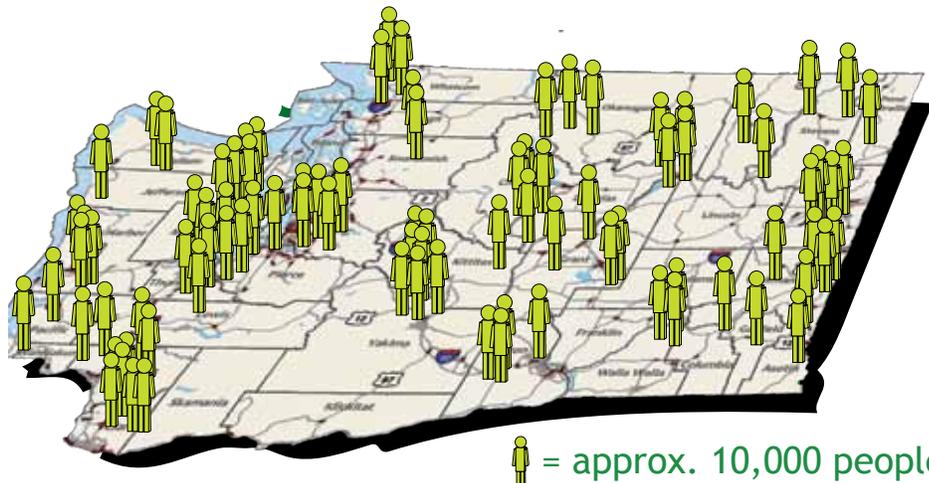
In towns and cities of all sizes throughout the state of Washington, a state highway connection runs through the center of town as its Main Street. This challenges local infrastructure and presents economic, health and safety concerns for the community.



Half of the population, 3.2 million people, in Washington State lives in a community with a Main Street Highway.

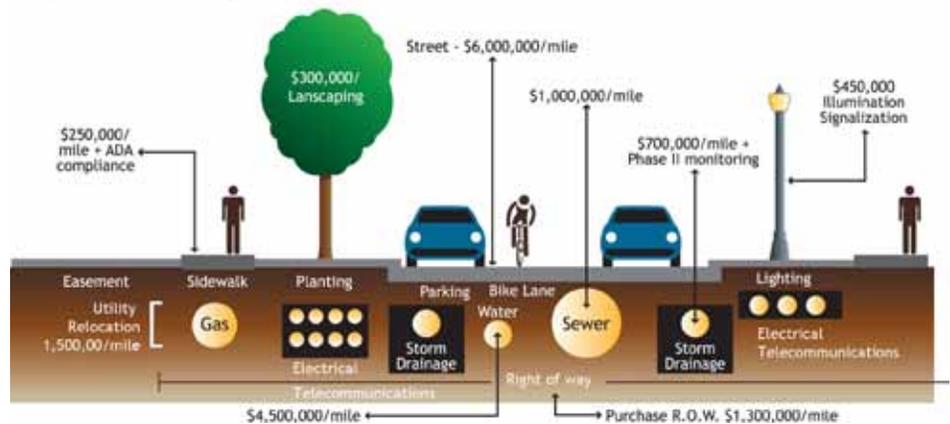
Washington State Department of Transportation's (WSDOT) Main Street Highways Program looks at ways in which visioning and planning can increase safety and accessibility based on the Complete Street concept. Projects achieved within the Complete Streets scope would enable each of the Main Street Highway communities to maintain historical and community identity, encourage economic growth and environmental stewardship, and ensure infrastructure accessibility for all users of all ages, all abilities, and all modes of transportation.

500 MILES OF COMMUNITY



There are 500 miles of state highway in Washington that also act as a community's main street

TYPICAL COST OF A COMPLETE STREET (PER MILE)



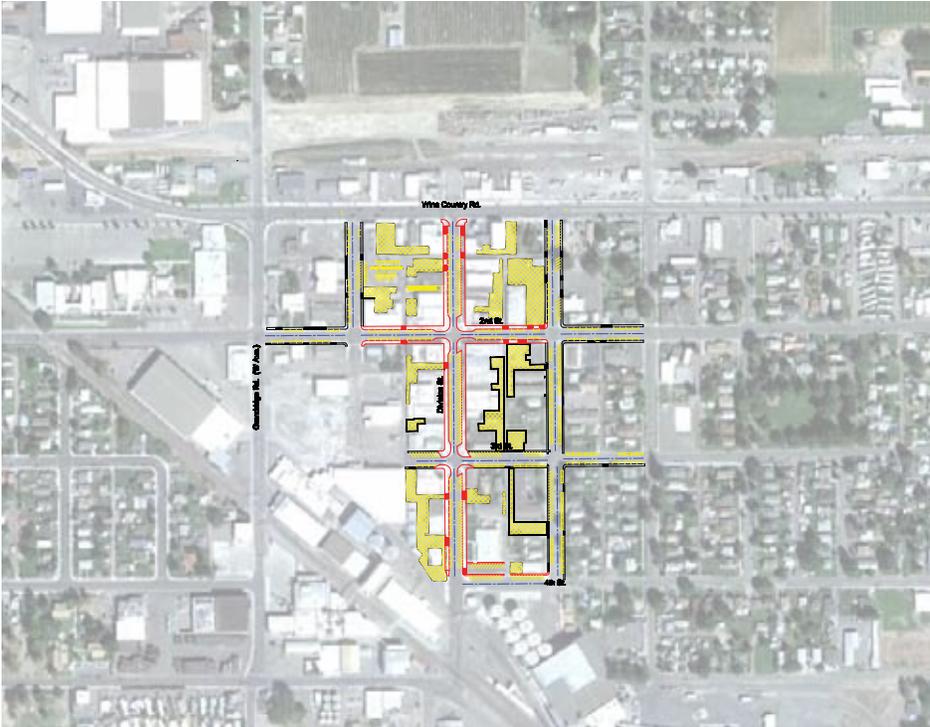
A typical Complete Street overlay costs \$15.7 million per mile. There is about 6400 people per mile living on a main street highway. The cost of implementing Complete street improvements would be \$2453.13 per resident.

Grandview



Downtown “ALIVE!”

The Setting



Vicinity map with surface street parking and lots.

Background

Grandview is a town of 9100 located in south central Washington State, at the heart of the Yakima Valley. State Route 241 connects to Interstate 82 in the north and State Route 22 to the South.



Community involvement in meetings.



Source: www.grandview.wa.us

The Vision

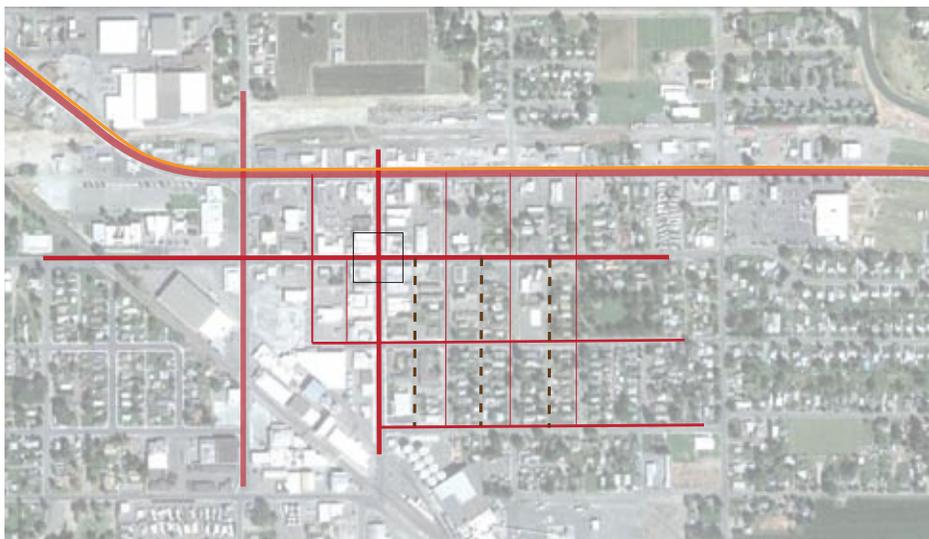
In 2006 the city of Grandview created an action plan to reinvigorated the downtown core. By 2008 they had recieved \$3.8 Million in funding from 10-11 different sources. Construction began in March of 2010, and was completed in October.

The community worked with city officials to overhaul a 6-block area. A more evenly distributed road system maximizes efficiency for all users and improves access to the core. The plan, called “Downtown Alive!” has created a streetscape that is welcoming, comfortable, and safer to use: a place for people to meet and live.

Since completion, existing businesses have made up for their loss during construction, and seven new businesses have moved in.

Grandview was awarded the People’s Choice Award for Best Community Impact from the Infrastructure Assistance Coordinating Council. The “Alive Downtown” Project was also given the “Director’s Award by the Federal Highway Administration (FHWA) and WSDOT.

241 MAIN STREET COMPONENTS



/ Downtown Streets
 / Pedestrian Pathway
 - - - Truck Routes

GOALS & BENEFITS

“Alive! Downtown has revitalized businesses. It has re-instilled pride in both downtown and the community as a whole.”

-Cus Arteaga
City Administrator



PEDESTRIANS

Sidewalks were widened and outfitted with furniture, trees, and landscaping to encourage pedestrian activity. A pocket park was added next to the the VFW buidling. Here, local character was reinforced with a large mural of historic Grandview.

Pedestrian space is clearly demarcated with patterned pavement. Crosswalks are safer more noticable to thanks to new, bold crossing stripes and bulbouts into the street.



CARS

The city cataloged the parking spots in the downtown core and found they could convert one curb of angled parking to parallel, with a net loss of 15 spots. This allowed for the widening of sidewalks. Those 15 spots were replaced by converting off street pay to park lots into customer parking for downtown businesses. Streets were also narrowed from 36’ to 24’ wide, which has been shown to reduce accidents.

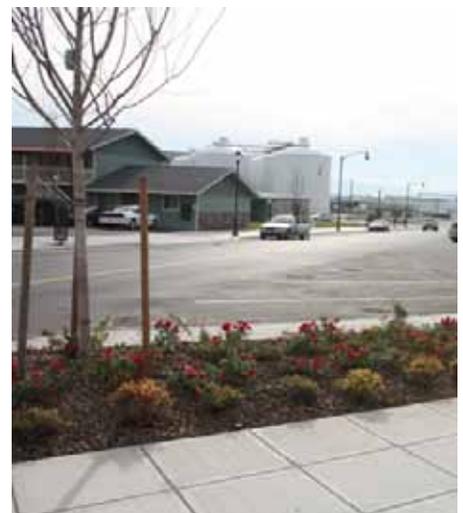
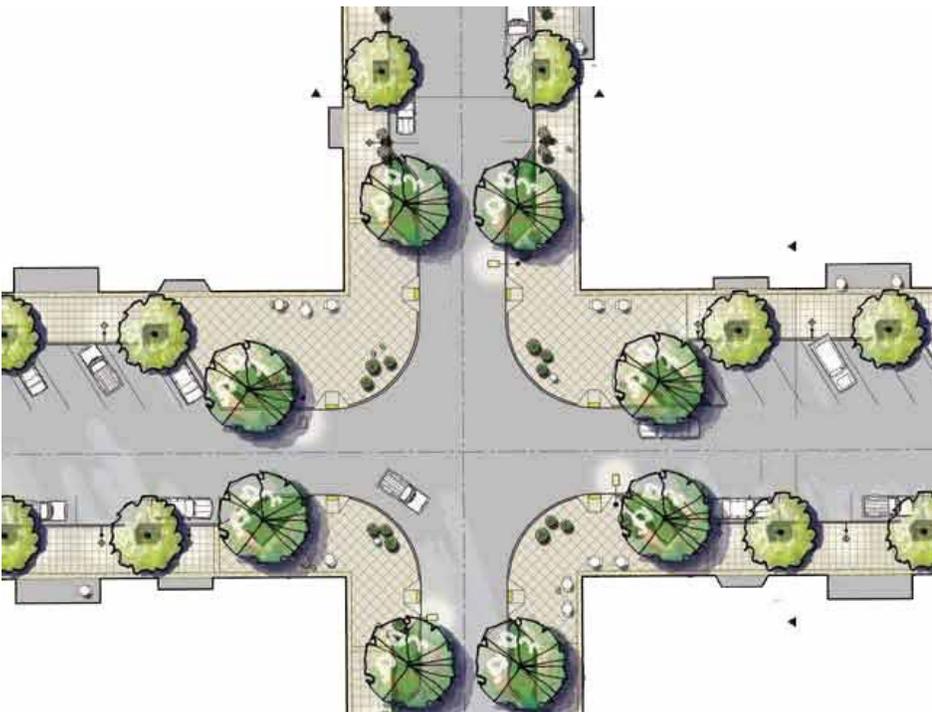
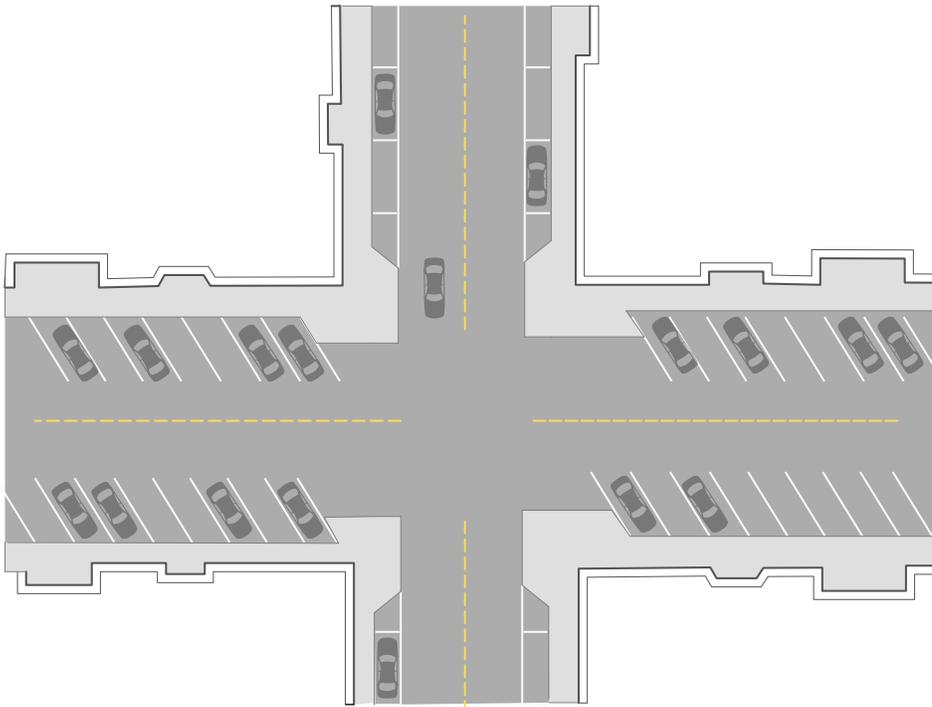


SEMI - TRAILERS

Downtown businesses often received deliveries by truck on the main street. The community expressed desire to remove or reduce truck congestion from the downtown area while still accomodating deliveries. The new plan restricted truck travel through the core, re-routing to the alleyways adjacent to the main street. This is reinforced with clear signs demarcating the route and the restricted areas.

DOWNTOWN CORE

DIVISION & 2ND STREET



Grandview worked with HBB Architects to design a typical intersection for the downtown core. They developed schematic changes for Division and West 2nd Street that could be applied over the entire 6 block area.

Typical street treatments include flower pots, textured paving, and landscaping with street trees and shrubs.

WEST 2ND STREET

Before & After

BEFORE

 Narrow sidewalks
Old, worn crosswalks
Minimal streetscaping

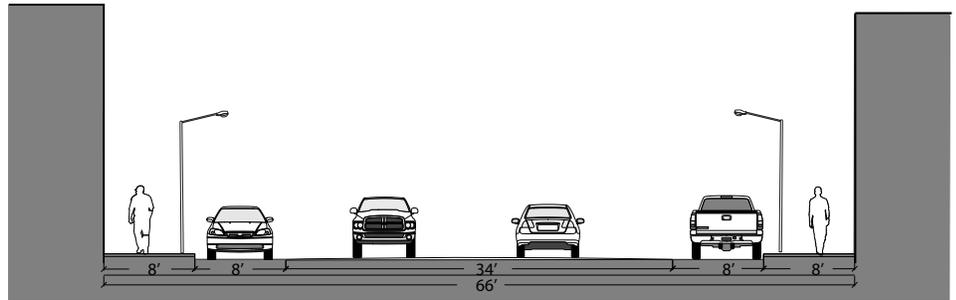
 Lack of bicycle routes

 Wide streets
Surplus of parking

 Truck traffic congests downtown streets.

 “Our downtown core was dying.”

-Brad Smith, Chamber of Commerce



AFTER

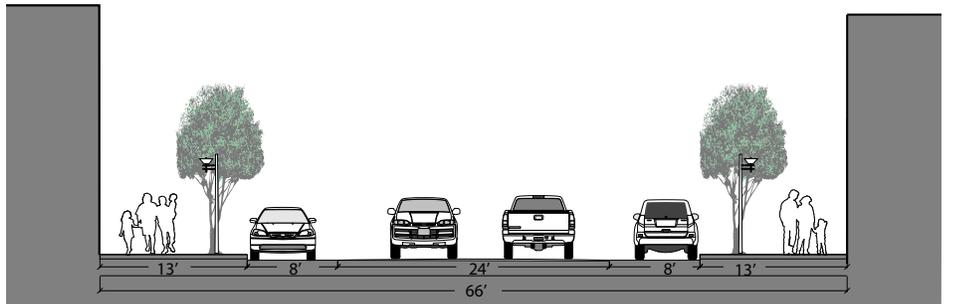
 Bulbouts
Wider sidewalks
Clearly marked crosswalks

 Connects to 16 Mile bike route to neighboring town
Sunside

 Parking rearranged to be more efficient. Road “diet” improves safety.

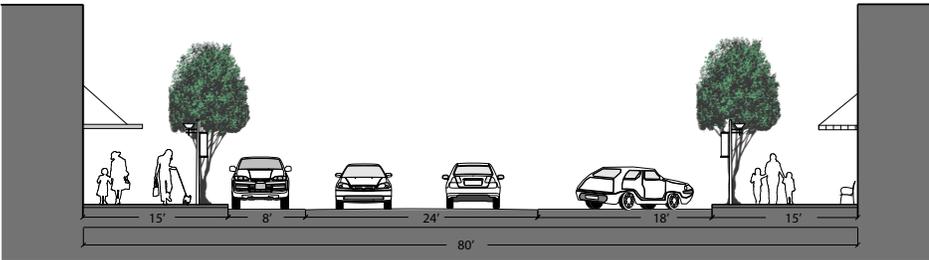
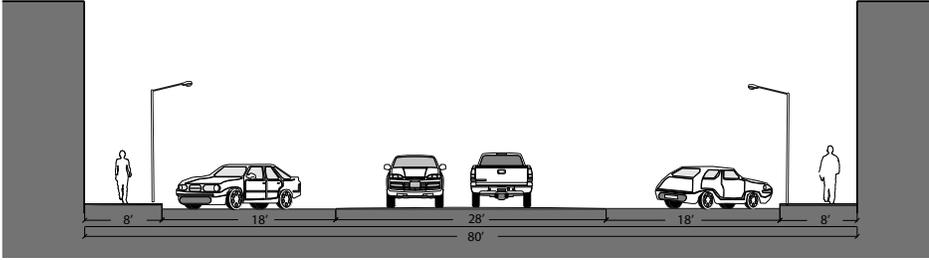
 Restricted in downtown core and re-directed to alternate routes.

 Encourages walking.
Accessible to wider range of transport.
Added landscape and trees.
More visitors to town.



DIVISION STREET

Before & After



GRANDVIEW'S KEYS TO SUCCESS

Work and communicate with existing businesses to ensure economic security during construction.

Keep the community up to date and involved for full support throughout the project.

Combine complete street projects with existing renovation needs and code requirements.

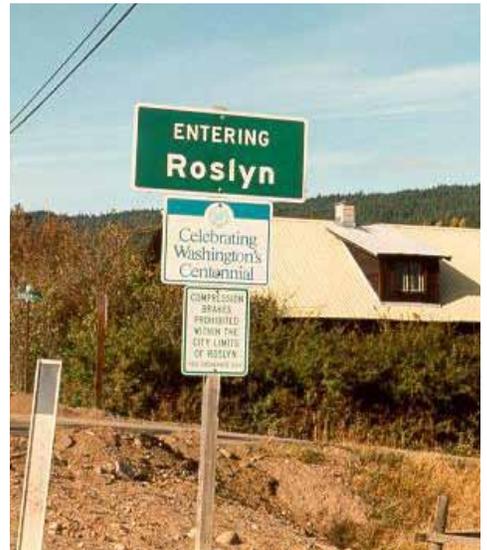
Extend revitalization out of downtown: inspire other businesses, promote town activities and events, and connect to and promote existing town features.

Don't stop here. Grandview is continuing its downtown revitalization efforts with a community wide project called EDGE: Enhancing Development of Grandview's Economy.

Thanks to Brad Smith, President of the Chamber of Commerce, for this information.



Roslyn



A 10 mile rural collector for local and recreational use.



BACKGROUND

- Population of 893 (2010) a total area of 4.9 sq mi.
- Average daily traffic up to 7400 cars at downtown core
- Known for its abundant nature, coal mining history, and as the set of the TV program “Northern Exposure.”
- Recent addition of 500+ single family homes in Suncadia, a resort community east of Roslyn.

State Route 903 connects the towns Cle Elum, Roslyn, Ronald, and the recreational area of Lake Cle Elum. It is accessed from I-90 via SR 970. As a two lane undivided highway, SR 903 serves as the main business street (known as 1st Street) in Roslyn. The surrounding areas are zoned Residential Low Density, Commercial Central, and Public. Storefront Studio, through the University of Washington, has studied in Roslyn for the past three years, developing design proposals that stimulate community interaction and promote new thought.



Left: UW Faculty Jim Nicholls speaks with local news crew.



LOCAL ACHEIVEMENTS

DOWNTOWN CLE ELUM

Sidewalk curbs have been extended to form bulbouts, a traffic calming feature that shortens crossing distance for pedestrians, allows better visibility past cars parked in the shoulder, and increases awareness of the crosswalk for motorists.



SAFE ROUTES TO SCHOOL

New sidewalks have been added along SR 903 west of the schools (*left*). East of the school, towards downtown, “Progress Path” lines SR 903, separated from the highway by a grassy bank (*right*). It is a direct, safe route to walk or bike to school for Cle Elum students.



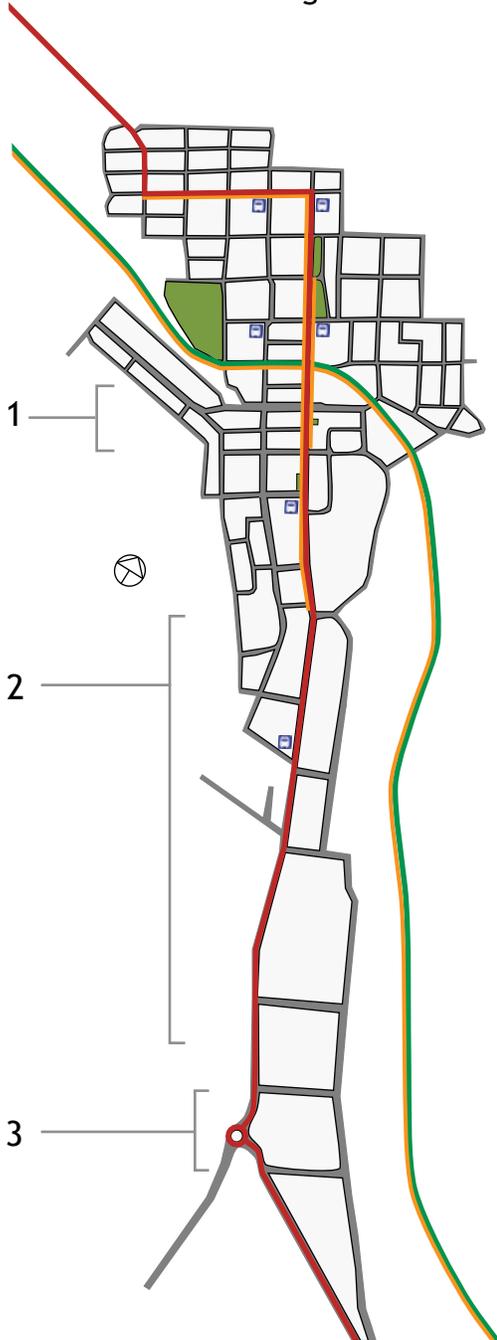
SUNCADIA ROUNDABOUT

A housing development about 1 mile south of Roslyn, has a similarly sized roundabout on Bullfrog Road. Signage and landscaping serve as examples for potential treatment of the SR 903/Bullfrog roundabout to Roslyn.



MAIN STREET COMPONENTS

In 2004, WSDOT developed a 20 year Route Improvement Plan for SR 903. The following information includes both existing conditions and the recommended improvement goals from the plan.



PEDESTRIANS

The downtown core has five blocks with sidewalk on both sides of SR 903 and four marked crosswalks. As it moves out, the poorly maintained sidewalks are limited to one side, and disappear near the edge of town.

AUTOMOBILES

The majority of accidents in the Roslyn area were caused by automobiles entering or exiting the freeway, resulting in rear end or driveway collisions. Solutions include left turn channelization, a continuous two-way left turn lane, and a consistent, reduced speed.

BICYCLES

There are no designated bike lanes along SR 903. Bicyclists ride along the shoulder, which ranges from 0-16 ft. Cars are allowed to park along the shoulders, which can obstruct cyclists.

TRANSIT

There is no public transit, though a paratransit service is offered to Medicaid patients. A Park and Ride facility and carpool system, has been suggested by WSDOT. A school bus system is well used, with service to the outer reaches of the area.

SEMI-TRAILERS

Between 4.7 million and 7.0 million tons of freight is transported annually on SR 903 from SR 970 to Pennsylvania Ave. Major commodities transported include timber, livestock, and grain products.

GOALS

- Improve crosswalk / sidewalk maintenance and access.
- Add designated bicycle routes.
- Create Park and Ride facility.
- Adjust shoulders and add traffic calming measures
- Safe routes to school
- Enhance local character.

KEY ISSUES

1 DOWNTOWN CORE

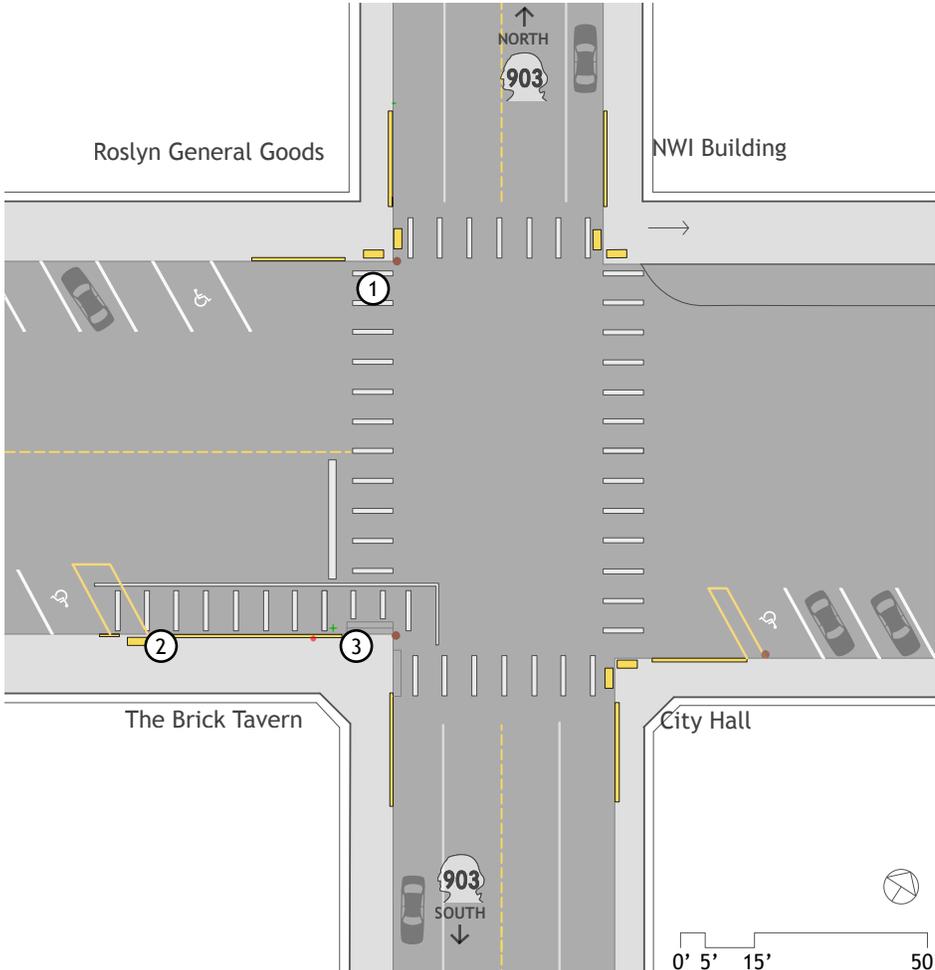
2 SHOULDER/SIDEWALK

3 BULLFROG ROUNDABOUT

1 DOWNTOWN CORE

EXISTING CONDITIONS

The main commercial intersection is Pennsylvania and SR 903. This is the only location with 4-way crosswalks and designated angle parking along the side of the road.



CROSSWALKS

The painted crosswalks are fading due to extreme winter weather(1). An accessible path lines the north side of the sidewalk along the Brick, creating a bypass from the stairs to a curb cut farther west (2) .

SIDEWALK ACCESS

The curbs at the SW corner are unusually high, and accessible by a set of stairs from each side (3).

TOWN CHARACTER

Roslyn still has the main street of a traditional coal mining town, and its building aesthetic reflects the past. Aging structures and facades need upkeep for economic stimulation.



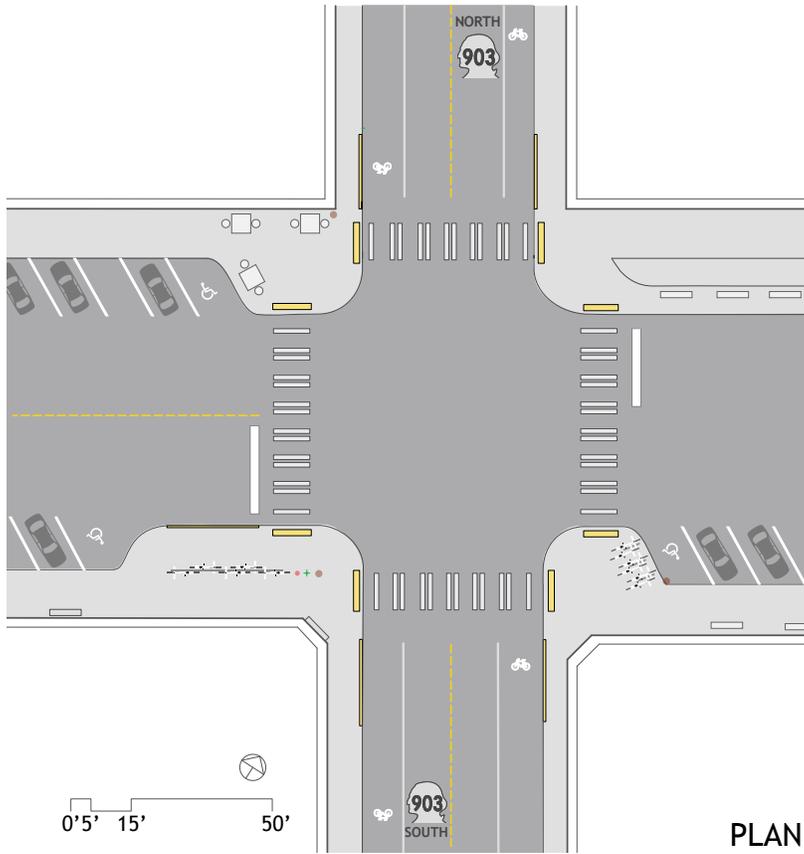
Looking South down SR 903



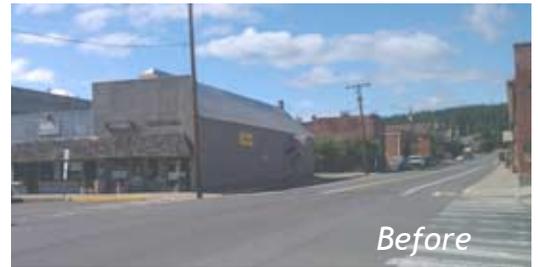
View from SW

DOWNTOWN CORE

Proposal A : 2-Way Bulbouts

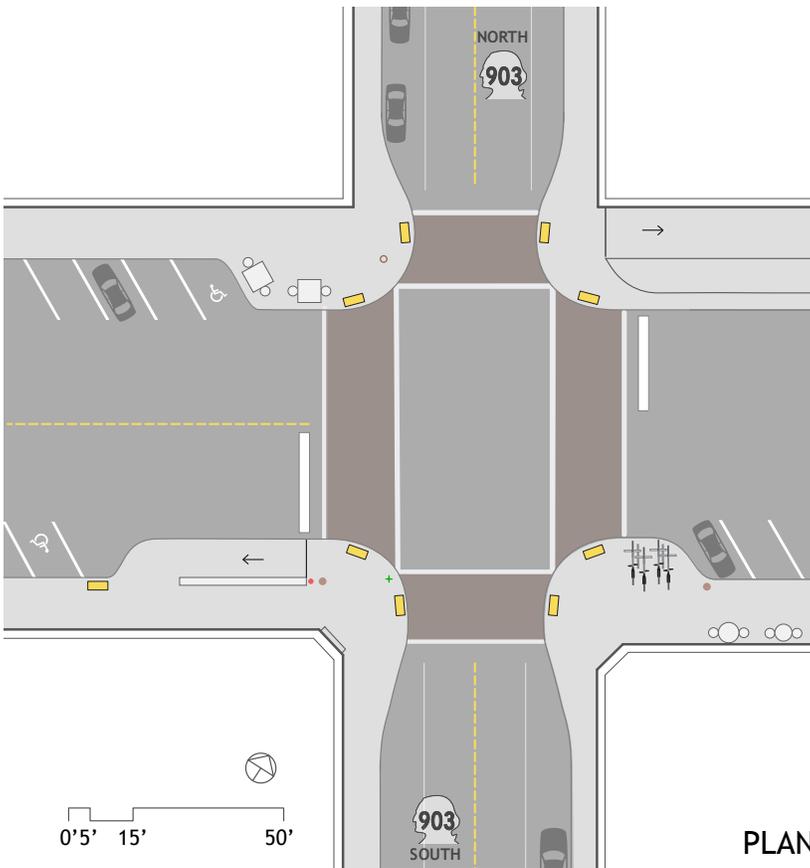


-  Bulbouts and crosswalk maintenance.
-  Additional signage and traffic calming measures.
-  Bikes share shoulder in downtown core. Additional parking on corners.
-  SR 903 is kept open for trucks and snowplows.
-  Mural and renovation stimulate economic vitality & stewardship.



DOWNTOWN CORE

Proposal B: 4-Way Bulbouts

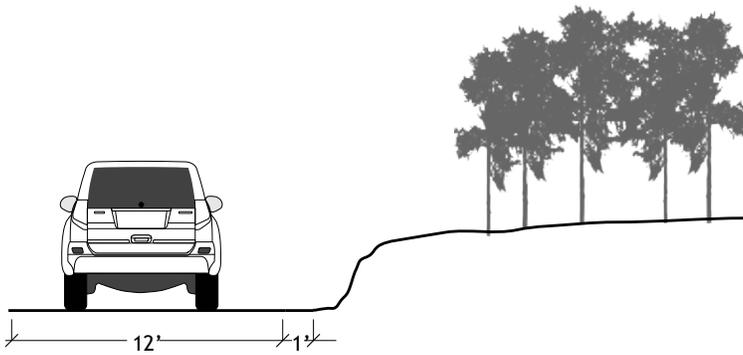


-  Cafe seating, displays, and lighting draws people downtown
-  Rumble pavement and signage calms traffic. Shoulders are reserved for parallel parking.
-  Sharrows connect to local parks and trails. Additional parking on corners
-  Safety and community features makes downtown a comfortable place to be.



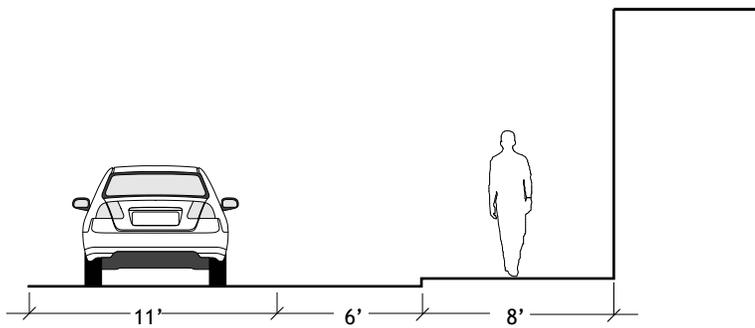
2 SHOULDER/SIDEWALK

Existing Conditions



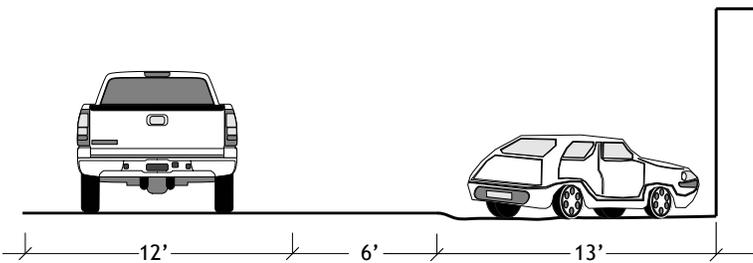
NORTH OF ROSLYN

North of town, the shoulder is as narrow as 1 ft. wide. This is especially dangerous as the road bends around corners. North of Ronald, the state route ends and becomes Salmon Le Sac Road where the shoulders widen to 4 ft.



ROSLYN'S MAIN STREET

The shoulder of SR 903 is wide, completely paved, and adjacent to a sidewalk in downtown Roslyn. On the northern and southern edges of downtown, the shoulder remains wide, but becomes rough as it moves toward the sidewalk.



SOUTH OF ROSLYN

There are no sidewalks south of 1st Street. The shoulder merges into gravel parking areas for local restaurants and narrows out after the State Route passes the roundabout and turns into Bullfrog Road.



North



Main



South

SHOULDER/SIDEWALK

Proposal: Widen Shoulder & Add Sidewalk

Current shoulder widths vary from 0-16 ft. wide along the length of the Highway. According to the proposed SR 903 Development Plan, *all shoulders in unincorporated Roslyn should be widened to a minimum of 6 ft.*

-  New sidewalk with curb.
-  Widened shoulders keep cars on the road.
-  Shoulders can be used by cyclists.
-  Better conditions outside of Roslyn makes popular outdoor recreation more accessible.



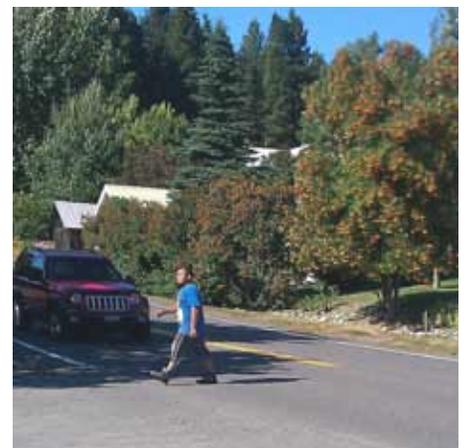
EXISTING PEDESTRIAN DANGERS



Walking along a 1' wide shoulder.



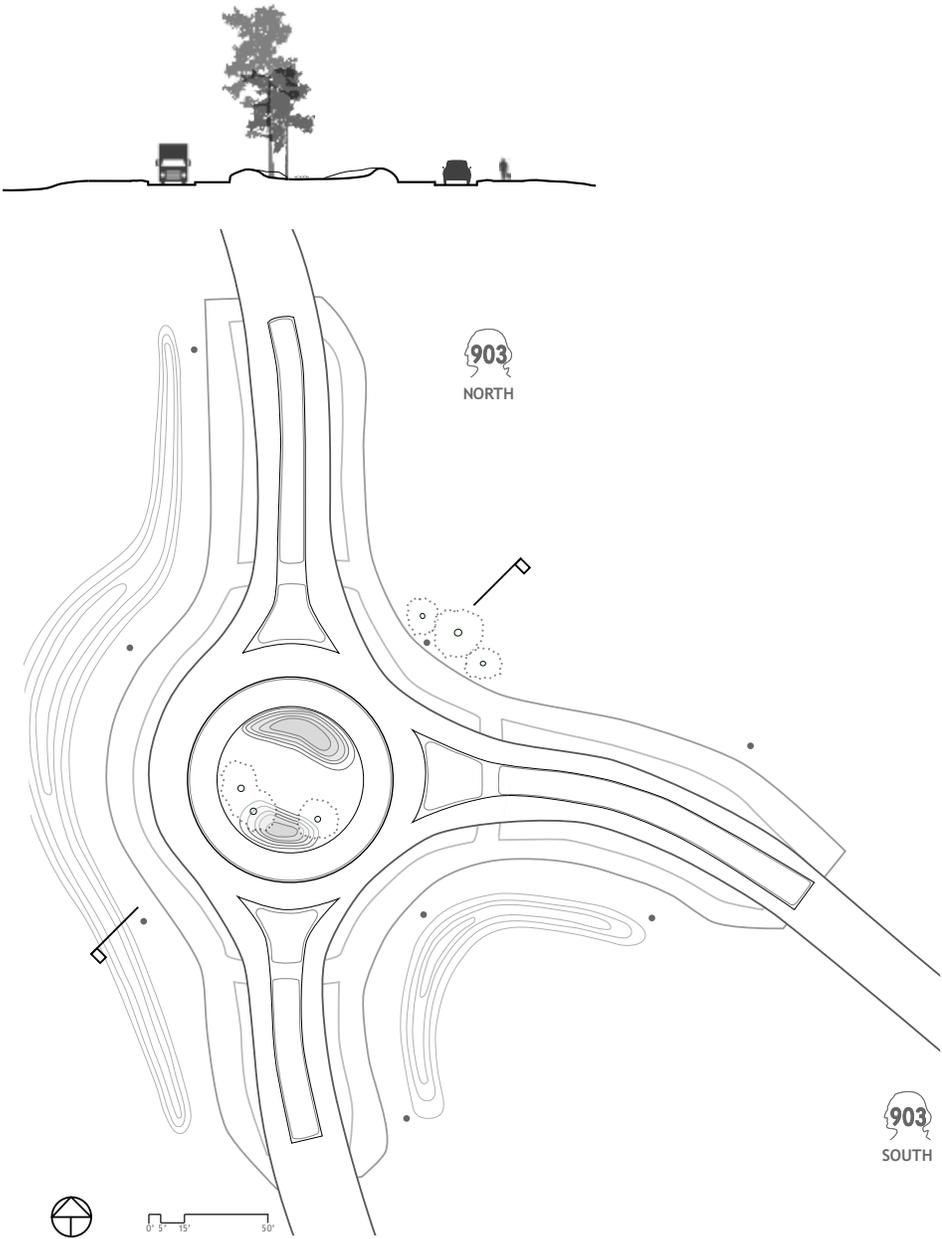
Poorly maintained sidewalk.



No crosswalk.

3 BULLFROG ROUNDABOUT

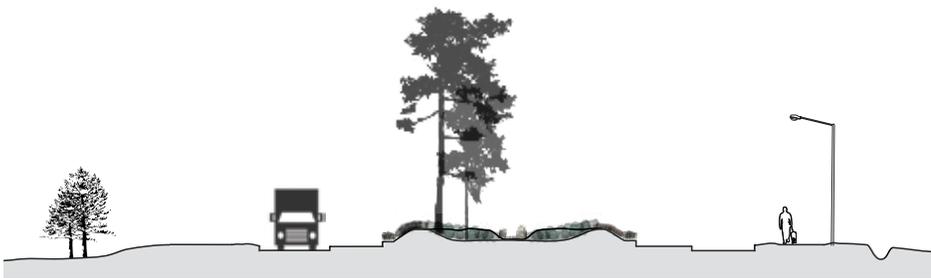
Existing Conditions



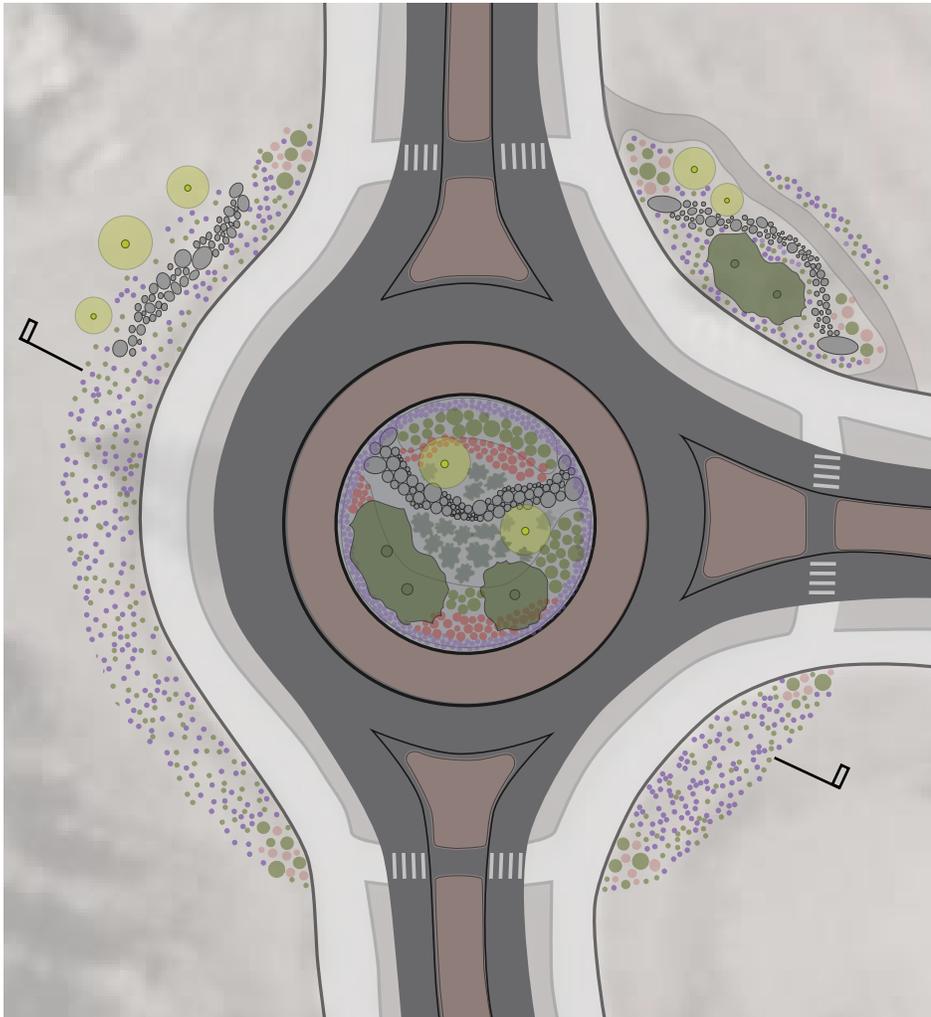
The “Bullfrog” roundabout has a 14’ truck apron and paved islands guiding the approach from each road. Bridging the islands are three marked crosswalks. Sidewalks are flanked by dirt shoulders, a barrier between motorists and pedestrians.

BULLFROG ROUNDABOUT

Proposal : Plan/Diagrams



Section



Plan

Bullfrog Roundabout is locally sponsored by the Wildflowers Club. They plan to plant the roundabout with a collection of drought tolerant plants in 2012. WSDOT requires a berm to block headlights and wants limited pedestrian access to the center of the circle.

This design extends two existing berms along the outer edge of the roundabout, blocking headlights and maximizing drought tolerant, native planting space.

North & South SR 903 connect with a path that bypasses the northeast corner of the roundabout. This improves safety between Cle Elum and Roslyn by minimizing pedestrian circulation in high traffic corners. Additional crosswalk and town Signage calm traffic around the 'bout.



BERM : HEADLIGHTS



BERM : LANDSCAPE

BULLFROG ROUNDABOUT

Proposal: Crossing Signage and Safety

 Flashing signs allow accessible crossing.

 Town signage and maintained crosswalks are easier to see.

 Cyclists are most safe riding with traffic.

 Truck apron protects roundabout.

 Native landscaping beautifies and creates a gateway.



GOALS & BENEFITS

Flashing warning devices & well marked crosswalks alert the driver to a crossing and improves accessibility for a pedestrian who is unable to hear, see, or cross quickly.

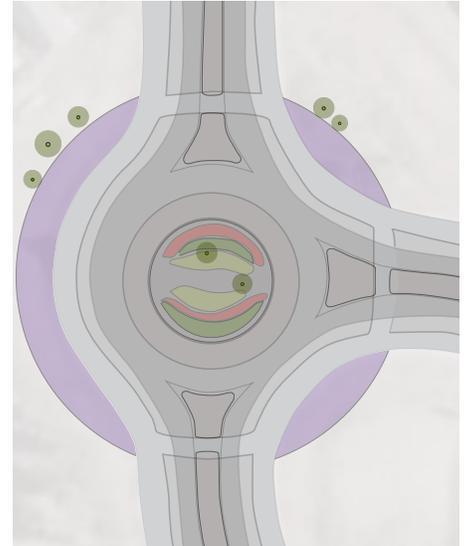
BULLFROG ROUNDABOUT

Design Elements: Landscape

“XERISCAPE”

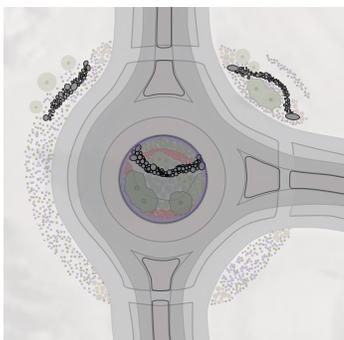
Due to an extreme climate, Kittitas County suffers from restricted water usage during the summer months. Even with abundant water, the roundabout itself has little access to irrigation. “Xeriscaping” is a type of planting that minimizes water use. This is achieved by determining which types of plants will flourish in different areas of the site, and using native, drought tolerant flowers and shrubs.

- Wildflower/Perennial
- Full Sun Perennial
- Shade Tolerant Shrubs
- Shade/Moisture Tolerant



DRY CREEK BED

Cutting through the berms, the dry creek bed collects storm water and directs it through drainage pipes under the road to the empty, grassy space on the other side of the roundabout. This design continues the creek bed under SR 903 to follow the path of water, both visually and physically connecting the center to the edges. Japanese design includes dry creeks to symbolize water. The end is marked by large rocks, imagined here as etched town signs.





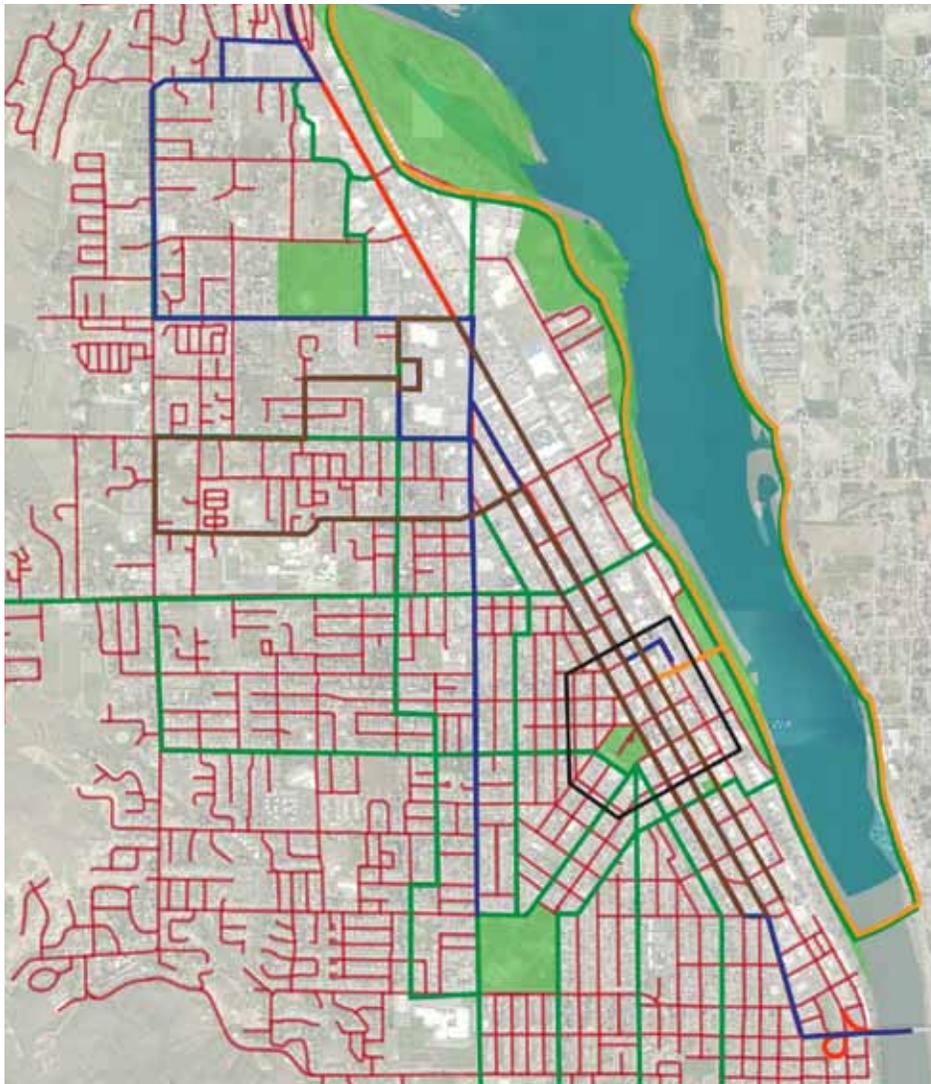
WASHINGTON STATE CASE STUDY

Wenatchee

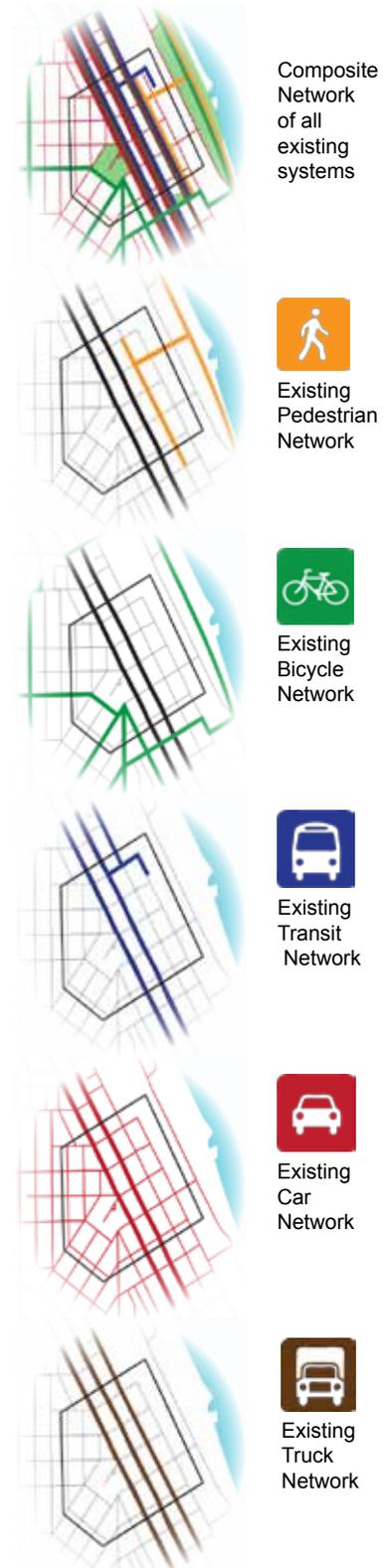


The Apple Capital

Wenatchee, located along the Columbia River in the center of Washington State, is the self-declared “Apple Capital of the World”. It is also the home of the locally-dubbed “Couplet” of State Route 285. Through Wenatchee proper, SR-285 splits into Mission Street (north-bound SR-285) and Chelan Avenue (south-bound SR-285). Each is a three-lane, one-way road which runs parallel to the main downtown strip, Wenatchee Avenue. This busy highway affects the whole community of Wenatchee, but the main focus of this study examines the Downtown Core.



Wenatchee’s Downtown Core has a complex network of existing transportation systems. Breaking this network into pieces shows how each system interacts with the Core, and helps us see opportunities for increased accessibility and safety in the Downtown Core.



THREE “MAIN STREETS”

Wenatchee has three “Main Streets” that run in the north-south direction: Chelan Street (SR-285 South), Mission Street (SR-285 North), and Wenatchee Avenue. All north-south traffic passes through Wenatchee on one of these arterials. East-west connectors link these three main arterials to the residential zones to the west, the central Downtown Core, and the waterfront to the east.

The concept in this analysis is to treat SR-285 as the safe and efficient route through town, while Wenatchee Avenue aims to capitalize the pedestrian experience in the downtown core.



The “Three Main Streets” of Downtown Wenatchee and their east-west connectors.

- The “Couplet” - the safe, fast and efficient route through downtown.
- The “Main Street”, Wenatchee Avenue, focused on the pedestrian experience.
- East-West connectors between residential zones, commercial zones, and the waterfront.



1 CHELAN STREET (SR-285 South-bound)

The furthest west of the three streets, Chelan Street marks the boundary between the residential zones to the west and the commercial zone to the east. If Chelan Street were more accessible to pedestrians, bicycles, and transit users, those in the west residential zones might be drawn into the Downtown core, encouraging business growth and healthy walking in the community.



2 MISSION STREET (SR-285 North-bound)

Mission Street features many of the public functions of Wenatchee: City Hall, the Fire Department, the Post Office, and other public facilities are located along Mission Street. This could serve as a catalyst to implement complete street improvements along Mission Street, making these public services more accessible to the community.



3 WENATCHEE AVENUE

Wenatchee’s historical “Main Street”, Wenatchee Avenue was partially revitalized by the 1989 Local Improvement District (LID) overlay. The LID improved pedestrian facilities, vehicle accommodations, and landscaping along a four-block stretch. Concepts from the LID could extend to the rest of Wenatchee Avenue, stimulating economic growth and unifying the downtown core.

RECLAIMING PARKING AREAS



A map highlighting all available surface parking in Wenatchee's downtown core.



The site of "Park(ing) Day", before and after installation. 2009. Provided by Patrick Walker.

PARKING LOTS

An inventory of available curb and surface parking indicates a parking surplus in downtown Wenatchee. These parking areas, particularly the pay lots, are largely unused. This surplus could be a valuable asset in developing the streetscape's livability, walkability, and economic viability.

Instead of discouraging local business, readjusting parking would actually help activate the streetscape, stimulating economic growth and increased public activity to the area.

ON-STREET PARKING

Both directions of the Couplet have parallel on-street parking flanking east and west curbs. This space could be used for transit and bicycle lanes.

Current angle parking might be converted to back-in angle parking. This would help keep unloading passengers out of the flow of traffic. Back-in angle parking would help visibility between vehicles and bicycles, enabling future bicycle lanes to operate safely.

PARK(ING) DAY

The elements of pedestrian bulb-outs, crosswalks, and parking can create void spaces along the curb. These spaces are additional opportunities to include more Complete Street elements, further revitalizing the streetscape.

Wenatchee participated in the 2009 National Park(ing) Day, an event where empty parking voids are transformed into small temporary parks. The site in front of Caffè Mela was transformed into a small park, with benches, potted plants. In the same way, the surplus of parking lots in downtown Wenatchee could be reclaimed to enhance the streetscape.

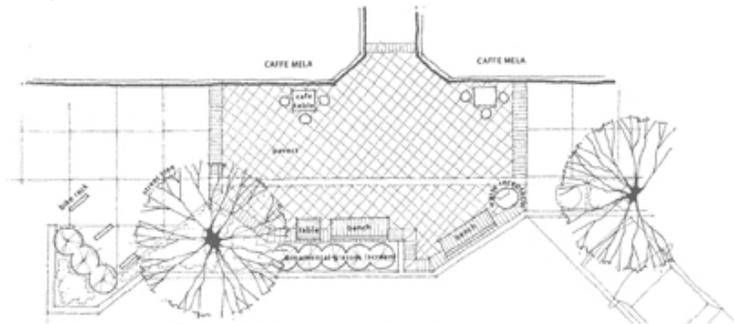
PREVIOUS STUDIES & COMMUNITY PARTICIPATION

EXTENDING BUSINESS

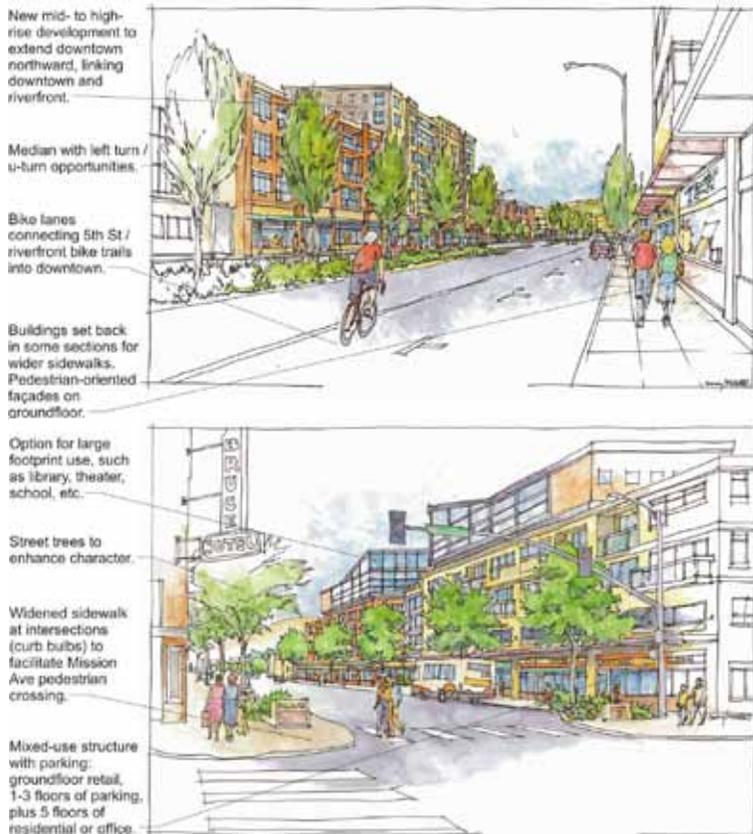
Working with the downtown business community, Project Groundwork has worked to extend streetside businesses on Wenatchee Avenue into the sidewalk. Mid-block bulb-outs would improve crosswalk safety and assist with traffic flow. Increased use of the sidewalk space for dining and public events would activate the streetscape and encourage business growth. Local Cafe Mela and Lemollo have already begun extending business into the sidewalk, and both report an increase in business and productivity.



STUDY: MIDBLOCK NEAR LEMOLO



STUDY: MIDBLOCK NEAR CAFFE MELA



RECLAIMING PARKING

The City of Wenatchee, with the help of Makers Architecture, has examined the surplus of parking available in the Wenatchee Downtown Core. The Central Business District Subarea Plan proposes mixed-use development in the under-used parking lot on Mission St & Palouse St, defining downtown core into historic and entertainment zones, and bringing Wenatchee’s character and economic development to the streetscape.



THREE “MAIN STREETS” - WENATCHEE AVENUE

The Local Improvement District (LID) on Wenatchee Ave between First Street and Yakima Street
BEFORE LID:



Wenatchee Avenue before the LID, 1989. Courtesy of Wenatchee City Hall.

AFTER LID:



Wenatchee Avenue immediately after the LID overlay, 1989. Courtesy of Wenatchee City Hall.



Wenatchee Avenue today, after the LID overlay.



Wenatchee Avenue won the Great American Main Street Award in 2003, proving the LID overlay successful.



Achievements:



Bulb-outs increase pedestrian visibility, and minimize crossing distance. Wider sidewalks allow for increased activity along the street. Crosswalks and signage are clearly marked.



Bulb-outs assist with traffic flow; Crosswalks and signage are clearly marked; Angle parking provides street parking without risking passenger safety at the curb.



The LID encourages walking downtown, makes the Downtown Core accessible to a wider range of mobility, adds vegetation and greenery to the streetscape, and has resulted in marked economic improvement

Opportunities:



Historically inspired “trolley” bus is loud: Soon Wenatchee will implement a quieter, environmentally friendly electric trolley



Signage prohibits bicycles from sidewalks, but there are few provisions for bicycles on the road. Angle parking presents a hazard to bicyclists on the road.



Wenatchee Avenue is currently the primary freight route, creating noise and congestion. Trucks should be encouraged to utilize SR-285 as the primary route through town.

IMPROVING ACCESSIBILITY ON THE COUplet

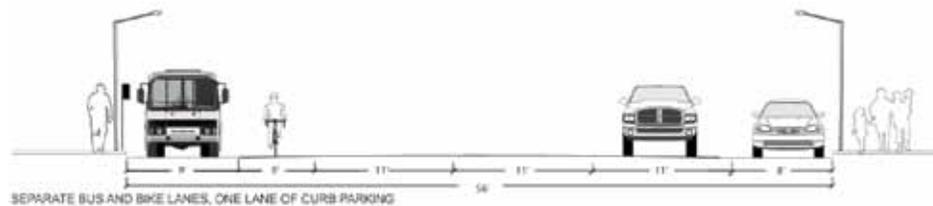
EXISTING:

The SR-285 “Couplet” currently has three lanes of traffic, flanked by continuous parallel parking strips on both curbs. Bicycles are discouraged from using the sidewalk, but have no designated space on the road. Good sidewalks accommodate pedestrian travel, but could be expanded to incorporate more pedestrian facilities and provide businesses with the opportunity to extend into the streetscape.



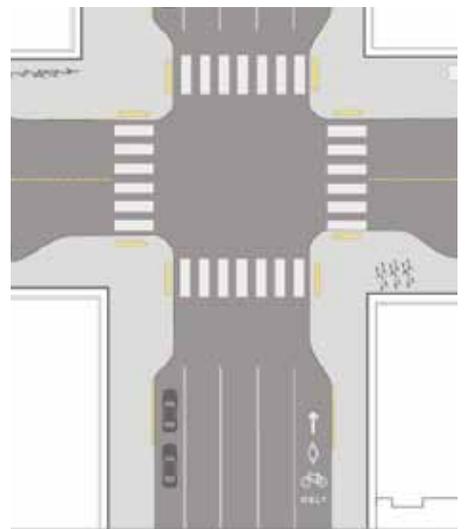
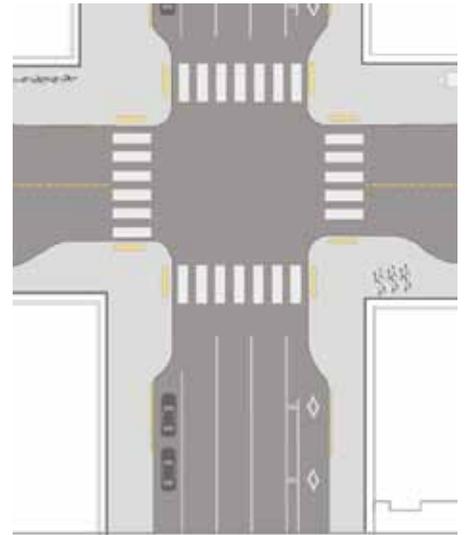
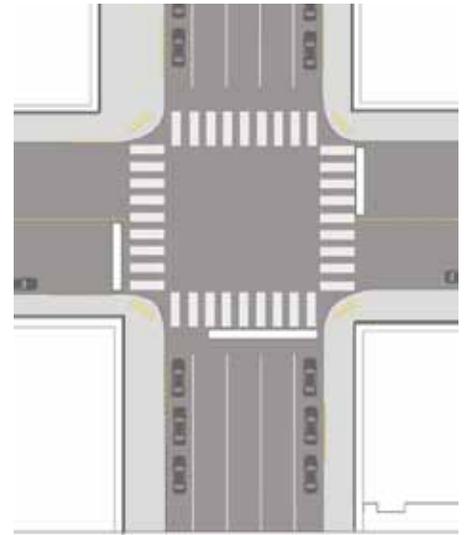
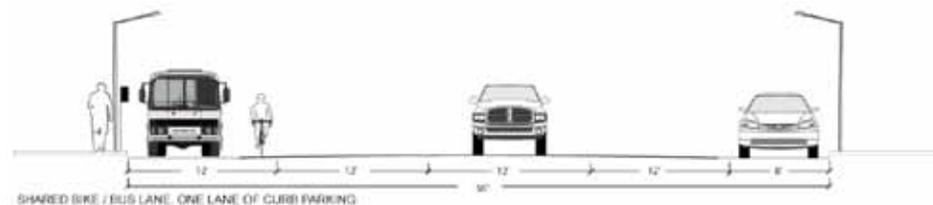
Option A: BICYCLE AND TRANSIT LANES:

One option to provide safer bicycle and transit use is to remove one side of parallel curb parking, and use the space to create separate transit and bicycle lanes. Providing a transit lane would reduce transit’s impact on traffic flow at each stop. A bicycle lane would lie between the transit and traffic lanes, keeping bicycles out of transit loading and unloading areas.



Option B: SHARED BICYCLE - TRANSIT LANE:

The transit and bicycle lanes may also be combined. A shared transit - bicycle lane gives bicycles a designated space and allows transit to pull over without impacting traffic flow while using less road space. With this solution, clear signage is imperative to prevent transit / bicycle collisions.



THREE “MAIN STREETS” - CHELAN STREET

This view of the intersection of Chelan and Yakima shows how transit and bicycle lanes might look along the SR-285 Couplet.

EXISTING LOT:



SITE WITH MAIN STREET HIGHWAY COMPONENTS:



Promotes healthy lifestyles by walking, biking, and transit use

Extends accessibility to users of all ages and abilities

Adds natural greenery to the streetscape

Stimulates streetside economic growth



Bulb-outs increase pedestrian visibility and minimize crossing distance. Wider sidewalks allow for increased activity along the street.



Bicycle lane and turn box designate space for bicycles on the road. Facilities like off-street bicycle parking and storage make bicycling easier.



Transit HOV lane allows busses to separate from traffic when loading and unloading.



Bulb-outs assist with traffic flow. Parking is readjusted to allow for HOV lane and mixed-use development.



Efficient speed and reduced obstacles encourage freight to use SR-285 as preferred route, rather than Wenatchee Avenue.

THREE “MAIN STREETS” - MISSION STREET

A large under-used parking lot is converted into a mixed-use development, with a parking structure at the alley, new businesses and public spaces at the street level, and residential above.

EXISTING LOT:



SITE WITH MAIN STREET HIGHWAYS COMPONENTS:



Promotes healthy lifestyles by walking, biking, and transit use

Extends accessibility to users of all ages and abilities

Adds natural greenery to the streetscape

Stimulates streetside economic growth



Bulb-outs increase pedestrian visibility and minimize crossing distance. Wider sidewalks allow for increased activity along the street.



Shared transit - bicycle lane designates space for bicycles on the road. Facilities like off-street bicycle parking and storage make bicycling easier.



Shared transit / bicycle lane allows busses to separate from traffic flow when loading and unloading.



Bulb-outs assist with traffic flow. Parking is readjusted to allow for HOV lane and mixed-use development.



Efficient speed and reduced obstacles encourage freight to use SR-285 as preferred route, rather than Wenatchee Avenue.

THREE “MAIN STREETS” - MISSION STREET

Another under-utilized parking lot on Mission Street is reclaimed for a mixed-use development with commercial and residential space.

EXISTING LOT:



WITH MAIN STREET HIGHWAYS COMPONENTS:



Promotes healthy lifestyles by walking, biking, and transit use

Extends accessibility to users of all ages and abilities

Adds natural greenery to the streetscape

Stimulates streetside economic growth



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Efficient speed and reduced obstacles encourage freight to use SR-285 as preferred route, rather than Wenatchee Avenue.



COMPLETE STREETS & MAIN STREET HIGHWAYS

Grant Program



How accessible are the means?

The purpose of this program is to encourage street designs that safely meet the needs of all users, including bicyclists, pedestrians, motorists, and public transportation users and also protect and preserve community environment and character. Recognizing that improvements to these city streets and main street highways are critical to community development in cities and towns across the state, this program provides fund for transportation improvements that support infill and redevelopment, intensify land uses, and connect housing and employment in order to improve the health and safety of Washington residents.

SIZE

Cost might seem daunting for a complete streets overlay, but not all projects will be multi-million dollar operations. A simple move might be all that is needed to increase safety and accessibility.

SCOPE

Complete streets aim to extend accessibility to all users, but that accessibility might not be made equally available to pedestrians, bicycle, transit user, cars, and trucks equally. While one project might aims to create a more complete bike network, freight traffic might be the driving catalyst in another project. The goal is to achieve accessibility for all users while dealing with the primary needs specific to each context.

SYSTEMS

Projects could feature elements such as:

- Crossing and intersection treatments or roundabouts
- Signage, striping, markings
- Streetscape, gateway treatments
- Sidewalks
- Bio-retention features
- Lighting
- Americans with Disabilities Act (ADA) accommodations
- Bicycle lanes, boulevards, and cycle tracks
- Urban trails and crossings
- Bicycle parking and stations
- Traffic calming measures
- Freight accommodation
- Transit accommodation
- Electric vehicle charging stations
- Furnishings
- Frontage improvements
- Roadway construction
- Information technology services (ITS)

Accessibility does not need to be made equally available to all users. The scope of every project will be informed by context-specific circumstances.

“FEDERAL PRINCIPLES OF LIVABILITY”

Providing more transportation choices

Promoting equitable, affordable housing

Enhancing economic competitiveness

Supporting existing communities

Coordinating policies and leverage investment

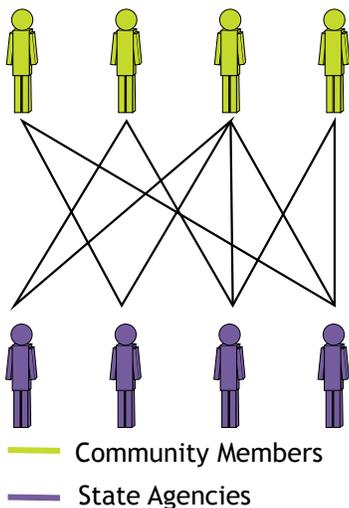
Valuing communities and neighborhood.

EPA-HUD-DOT Partnership

How does a project receive grant funding?

Public agencies must have adopted a Complete Streets ordinance or equivalent and have integrated it into a community plan in order to apply for grant funding. All projects will be evaluated by an advisory board based on the following criteria, found in Engrossed Substitute House Bill 1071 :

CURRENT SYSTEM :



MOBILITY

Promotes healthy communities by encouraging walking, bicycling and using public transportation. The project should improve connections and/or establish safer and fully accessible crossings, sidewalks, trails, bike facilities, and transit connections consistent with AASHTO, ITE or other peer reviewed, context sensitive solutions guides.

SAFETY

Improves safety in major arterials to include wider sidewalks, bicycle facilities, medians, and pedestrian streetscape features. Locations with high speed arterial streets, higher motor vehicle volumes, and housing mixed with commercial attractions, transit service, and other pedestrian and bicycle generators have the most transportation conflicts, collisions and risk.

“In Grandview, we worked with 10 or 11 different funding sources, which each had their own reporting format and methods.

-Brad Smith, Grandview Chamber of Commerce

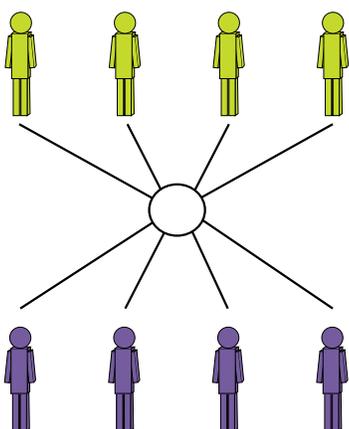
SUSTAINIBILITY

Protects the environment and reduces congestion by providing safe alternatives to single occupancy driving. In order to make alternatives to single occupancy driving safe and viable proximity and connections are needed between and among existing housing, centers of employment, education, retail and recreation. The project should support infill, encourage redevelopment and reuse of existing building stock, intensify land uses, and connect housing and employment.

COMMUNITY

Preserves community character by involving local citizens and stakeholders to participate in planning and design. Transportation projects on urban arterials and main street highways have a greater likelihood of scope, schedule and budget changes that often result in additional costs. Research has shown that more and better upfront coordination and communication with the community during the design process can reduce the potential for project delay or cost over-runs.

GRANT PROGRAM :



RATING SYSTEM

5 pts: Substantial long-term impact or improvement
3 pts: Moderate impact or improvement
1 pt: Little to no impact or improvement

The first step to a Complete Street...

Seattle's Complete Streets ordinance 122386, passed in 2007, is a local example of how enacting an ordinance is the key step to achieving results. This was possible thanks to a citywide Bicycle Master Plan, a Transportation Strategic Plan, and a Complete Streets policy already in place.

BECAUSE OF AN ORDINANCE

Seattle's Complete Streets ordinance 122386, passed in 2007, is a local example of how enacting an ordinance is the key step to achieving results. This was possible thanks to a citywide Bicycle Master Plan, a Transportation Strategic Plan, and a Complete Streets policy already in place.



Set in the busy International District, 6th Avenue South gained a wide paved sidewalk in 2008. Seattle's 2007 Complete Streets Ordinance made this possible.

The Complete Street Continues...

The Complete Street and Main Street Highways program requires a city ordinance to grant money to a community. Community projects would be more feasible if the city would enact a Complete Streets ordinance. Many communities are already working on pedestrian accessibility, bike paths and lanes, efficient transit and traffic systems, and streetscape reactivation. Working with the community, creating a master plan, and proposing an ordinance, a community like Wenatchee could enact an ordinance, and gain access to the funds of the Grant Program, taking the first step towards completing the street.



Wenatchee already has existing bike paths, pedestrian walkways, and current construction projects implementing Complete Street concepts.



If Wenatchee were to enact a Complete Streets Ordinance, funding through the Complete Streets and Main Streets Highways Grant Program would be much more accessible, enabling projects like this to come to fruition.