

Tenino Comprehensive Plan 2016-2036

Joint Comprehensive Plan with Thurston County



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Councilmember Craig Lester
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EXECUTIVE SUMMARY

This Comprehensive Plan provides a framework for coordinating and planning for growth within the City of Tenino, its Urban Growth Area, and achieving the community's long-term vision. This Plan is intended to act as a strategic and tactical plan to address development within the community and as a Joint Plan between the City of Tenino and Thurston County to ensure orderly development of the Urban Growth Area. This Plan is organized into the following six chapters. Six appendices provide additional information regarding essential public facilities, housing types, demographics, the Main Street 507 project, public participation, and regulatory takings.

1. Land Use

The land use chapter analyzes the implications of population, development, and environmental trends and translates the information into official City policy regarding land use. The intent of the chapter is to set forth a course for Tenino that will preserve the historic small city and natural character of the community, while offering opportunities for residential and commercial development to expand the service and employment base necessary for residents. The City has identified 10 goals related to land use.

2. Natural Resources

The City of Tenino is situated in a valley nestled amongst the hills of South Thurston County. The floor of the valley, where the bulk of the community sits, is typified by flat land and highly porous prairie soils, while the slopes to the northern, southern, and western portions tend to have steeper grades typified by forests, wetlands and sandstone outcroppings. Wetlands and the majority of the priority habitat present in the community are located along Scatter Creek. Recent westward expansion of the community has included a swath of land that acts as critical habitat for the Taylor's checkerspot butterfly and the Mazama pocket gopher. This chapter presents these known environmentally-sensitive areas in Tenino as well as a framework for the community to retain the character of the surrounding natural environs. The City has identified 13 goals related to natural resources.

3. Housing

Tenino has a mix of housing types that have been built throughout the history of the community. During the next 20 years, it is estimated that the number of housing units in Tenino will double. To evaluate housing needs and goals over the 20-year planning period, the community conducted an inventory of existing housing conditions as part of the 2016-2036 Comprehensive Plan update; findings of the inventory are presented in this chapter. The City has identified 4 goals related to housing.

4. Transportation

In order to maintain and improve circulation, safety, and mobility for residents and businesses, the City of Tenino anticipates conducting several transportation improvements over the next 20 years. This

chapter analyzes travel by personal automobiles, pedestrians, bicycles, buses, freight, and other vehicles as a means to help identify these necessary mobility enhancements. The City has identified 13 goals related to transportation.

5. Capital Facilities

In order to comply with state laws, maintain and improve City services and accommodate orderly growth, the City of Tenino anticipates significant investment in capital facilities over the next several years. A number of issues however, will make this necessary investment difficult. This plan is intended to identify anticipated capital facility costs over the next 20 years, and begin to chart a course towards the successful development and maintenance of the community's facilities.

Community streets and pedestrian facilities are generally addressed as part of Chapter 6, Transportation; however, transportation-related projects are identified in the 6-year Capital Improvement Program contained in this chapter. The City has identified 15 goals related to capital facilities.

6. Utilities

This chapter articulates policies for existing and future utility services and describes the location and capacity of significant existing and proposed utilities including electric, gas, and telecommunication facilities. The City of Tenino has identified 8 goals related to utilities.

CHAPTER 1. LAND USE

This land use chapter analyzes the implications of population, development, and environmental trends and translates the information into official City policy regarding land use. The intent of the chapter is to set forth a course for Tenino that will preserve the historic small city and natural character of the community, while offering opportunities for residential and commercial development to expand the service and employment base necessary for residents. The siting of essential public facilities is addressed in Appendix A.

A. COMMUNITY CHARACTER

The City of Tenino is a historic small community that grew as a result of natural resource industries such as logging and sandstone quarrying. The community's authentic small town character, with its walkable downtown built of local stone, and surrounding natural and working lands are key components that Tenino desires to maintain and emphasize into the future. Strategies to enhance characteristics the community sees as integral to its development are described below:

- **Preserve the historic character of Tenino** through the restoration of historic structures and the construction of new buildings that compliment older buildings.
- **Showcase the industrial character of Tenino.** Through the use of old industrial feeling materials such as steel, wood, and stone.
- **Emphasize the natural character of Tenino** through the showcasing of existing natural amenities, the preservation of views, and the retention of the appearance of the surrounding natural lands, including treed hillsides.
- **Accentuate the artisan/handmade character of Tenino** through the use of handmade design elements such as carved sandstone, hand-painted signs and art, and local metalwork.

The City will work to emphasize Tenino's small town character, walkability, and proximity to rural and natural south Thurston County throughout the community as a means to strengthen Tenino's appeal.

B. A PLAN AND CONCEPTS FOR DOWNTOWN TENINO

Tenino's small town charm and walkability are already noticeable in the downtown. However, downtown Tenino struggles to retain businesses, and pedestrians are often missing from the landscape. In an effort to build on downtown Tenino's strengths and improve its weaknesses, a Plan for downtown Tenino has been developed.

A Plan and Concepts for
DOWNTOWN TENINO

The City of Tenino believes that the highest potential for economic development and business development in the short-term is in the historic downtown of the community. This Downtown Plan is meant to identify methods to attract more visitors to the downtown, encourage more business activity, and enhance the quality of place on the community's main street.

While these concepts include a number of large projects, several are meant to illustrate small, simple concepts that could improve downtown through the efforts of interested citizens or businesses. These concepts (such as holding a temporary event in downtown, installing a wayfinding sign, or creating a place for a visitor or resident to sit) could be completed at minimal cost and contribute to the overall character and vitality of the area.

Vision: The vision behind each of these concepts is the creation of a vibrant pedestrian-oriented business district that respects and builds on the historic character of downtown Tenino.

Strategy: To reach this vision, the City of Tenino believes that it is essential to build on the distinct advantages of Tenino to encourage more residents near the downtown, more visitors to the downtown, and more businesses in the downtown. These distinct advantages (or things that are unlike any other community) include:

- Tenino's historic sandstone architecture, some of which was quarried less than three blocks from the buildings where it was used.
- The City Park, which is large for a community the size of Tenino and is located a short distance from downtown. This park includes the Quarry Pool, the Tenino Depot Museum, large sandstone blocks quarried from the former Tenino Sandstone Company quarry, and play equipment for children. The park also connects to miles of trails through property owned by the Creekside Conservancy (the organization formerly known as the Heernet Environmental Foundation).
- The Yelm-Tenino Trail, which is 14 miles long and connects to an additional 22 miles of dedicated trails and nearby rural roads appreciated by cyclists.

Goals: Three goals inform the concepts within this Downtown Plan. These goals are:

1. **Get more people in downtown.** More people support more business.



2. **Enhance the quality of place in downtown.** A nice place attracts people.
3. **Anticipate future parking issues.** People need places to park.

Goals about attracting, retaining and expanding businesses are also important.

Goal: Get More People in Downtown

CONCEPT: HAVE MORE HOUSING NEAR DOWNTOWN

Vision: Downtown businesses supported through permanent residents, including seniors in senior housing and residents in new mixed-use and apartment projects.

Potential Housing Types



Mixed-Use



Walkup Apartment



Townhouse



Fourplex

Potential Locations for Housing Near Downtown



-  Potential Location for Commercial/Residential/ Mixed-Use Development
-  Potential Location for Apartments
-  Downtown Landmark (for orientation purposes only)

Goal: Get More People in Downtown

CONCEPT: DRAW PEOPLE INTO DOWNTOWN WITH EVENTS

Vision: Downtown businesses supported through temporary events, such as markets, craft fairs, music shows, or community movie nights that bring people into the area. The closer the event is located to downtown the better.



Farmers' Market - Port Townsend, Washington

Potential Spaces for Temporary Events



-  Potential area on private land (with permission from owner)
-  Potential area on City street (with permission from City)
-  Potential areas in parking lots (with permission from owner)
- * Downtown Landmark (for orientation purposes only)

Goal: Get More People in Downtown

CONCEPT: GIVE PEOPLE PLACES TO SIT, WALK AND ENJOY THE DOWNTOWN



Businesses in downtown are reliant on pedestrians that walk into the shop from either a parked car, the surrounding neighborhoods or the nearby trail. Yet traffic, semi-trucks and minimal facilities for people on foot create an unpleasant experience for visitors to downtown.

Long-Term Vision: A pedestrian-friendly Sussex Avenue with slower traffic, areas of wider sidewalks, and business seating on the street.

Short-Term Vision: Outdoor cafes, pedestrian spaces, and seating on side streets, back alleys, and unique places on the front or sides of buildings.

Potential Locations for Outdoor Seating in Historic Downtown



-  Potential seating areas on side streets
-  Potential seating areas in right-of-way in front of building
-  Potential seating/pedestrian areas on private property in front or on side of building
-  Potential seating areas behind building

Photos of Potential Locations for Outdoor Seating

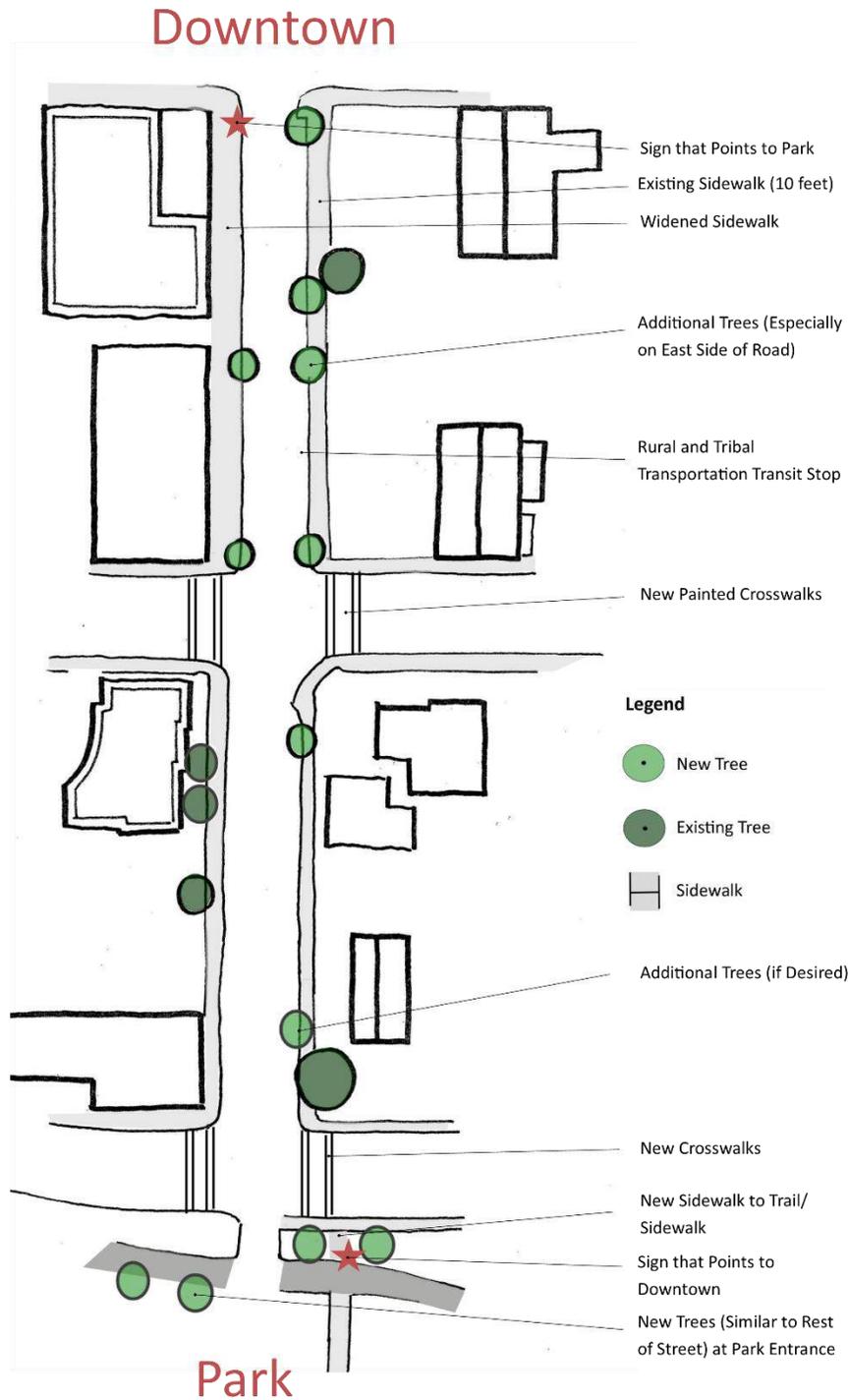


Goal: Get More People in Downtown

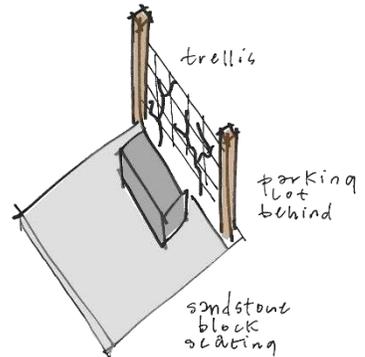
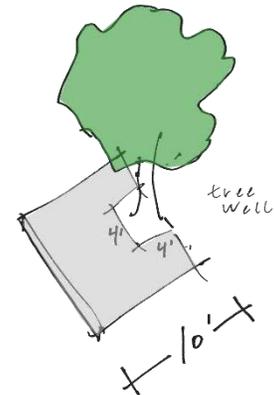
CONCEPT: CONNECT THE PARK TO DOWNTOWN

Vision: A pedestrian friendly link to the park along Olympia Avenue that can double as a home for community events such as markets, fairs, concerts, or outdoor movies.

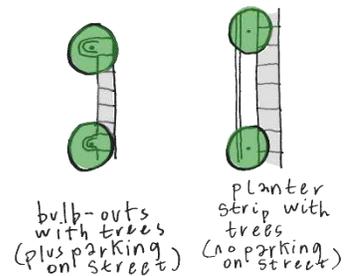
Conceptual Site Plan



Potential Methods to Add Vegetation to East Side of Sidewalk



Potential Methods to Add Vegetation to Street



Goal: Get More People in Downtown

CONCEPT: DEVELOP A BIKE SYSTEM THAT LEADS PEOPLE THROUGH DOWNTOWN

Vision: A bike network that leads people from the park to and from downtown and visa-versa with:

- Bike routes that showcase the community.
- Bike route markers that point people into downtown.
- Bike markings that guide people to the best routes to travel.



- Bike Map On-Street Route
- Potential Additional On-Street Route
- Bike Map Trail Route
- Good Location for Wayfinding Sign
- Nice Views

Potential Wayfinding Approaches



A. Stencils on Bike/Car Roads



B. Wayfinding Signs

Views



1. Scatter Creek and Hill



2. Mount Rainier



3. Downtown

Goal: Enhance the Quality of Place in Downtown

CONCEPT: BUILD ON THE CHARACTER OF DOWNTOWN

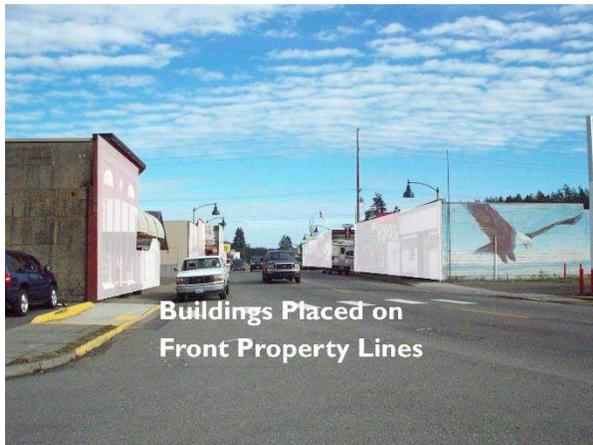
Vision: New buildings that complement existing historic structures through features such as:



Lots of windows



Three Dimensional Facades



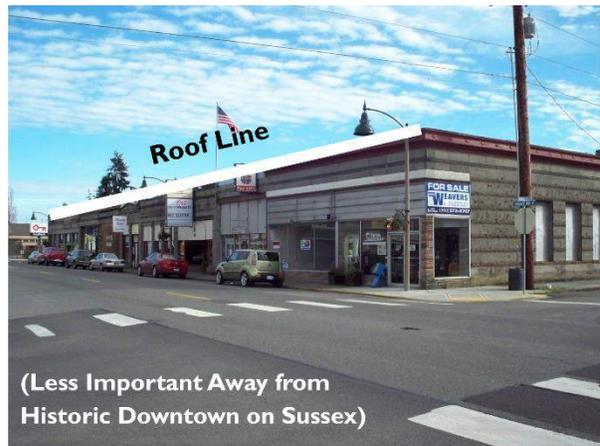
Structures Set at or Near the Front Property Line



Plants/Art



High Quality Materials



Similar Roof Lines

Goal: Enhance the Quality of Place in Downtown

CONCEPT: CREATE GATEWAYS INTO DOWNTOWN

Vision: A series of gateways on each side of downtown that define the historic downtown area, slow traffic and act as an amenity for future development of surrounding parcels.

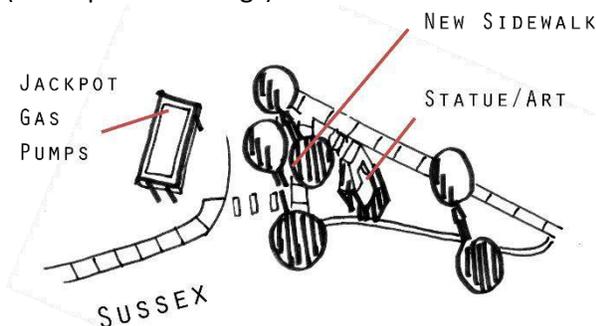


Legend: ● Roundabout ▭ Downtown Gateway

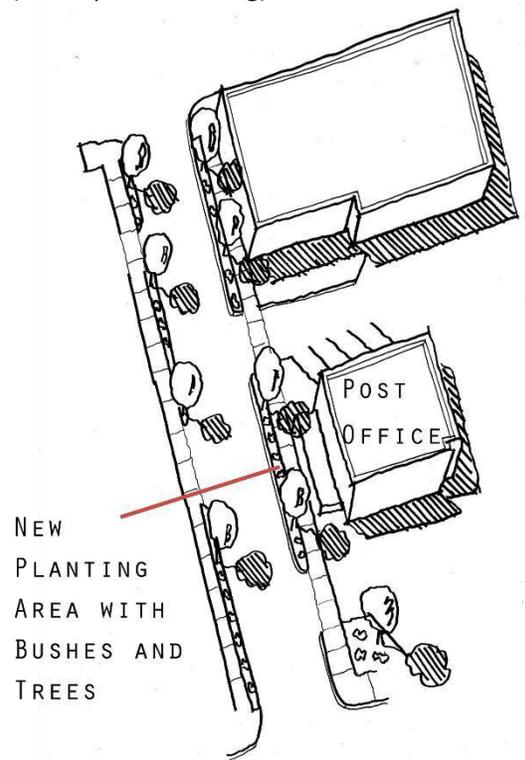
A. Old Hwy 99 and Sussex Roundabout
(Conceptual Drawing)



C. Ritter and Sussex Square
(Conceptual Drawings)



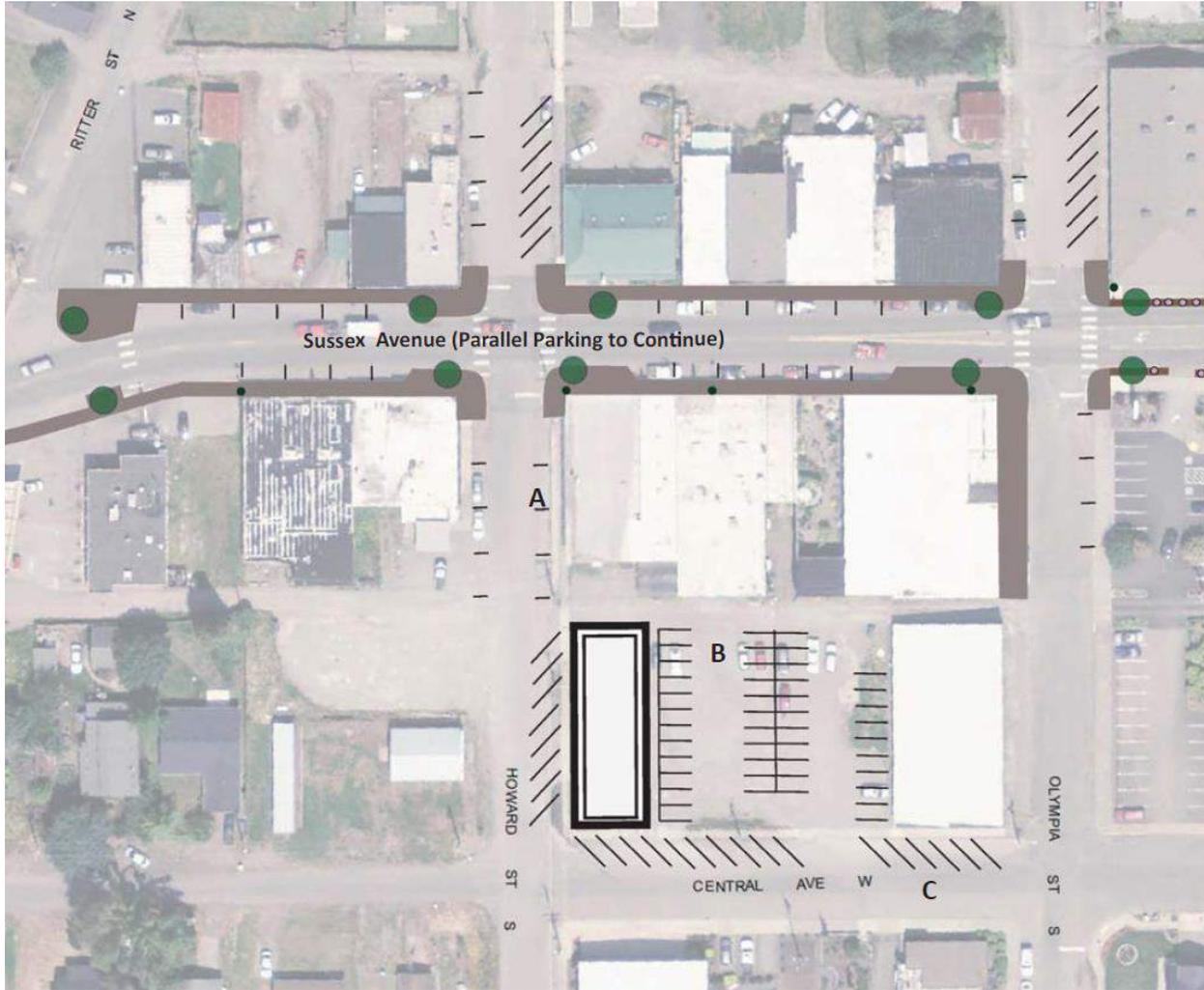
B. East Downtown Gateway
(Conceptual Drawing)



Goal: Anticipate Future Parking Issues

CONCEPT: BETTER UTILIZE SIDE STREETS, BACKING STREETS AND ALLEYS FOR PARKING

Vision: Parking on Sussex, Olympia, Howard, Hodgden, and Central Avenue, and off the alleys. If necessary, additional parking agreements made with groups like the School District and the Tenino First Presbyterian Church.



- A. On-street parallel parking on Olympia and Howard (south of Sussex) is considered the most feasible and desirable parking arrangement at this time.
- B. Creating defined parking spaces in the parking lot behind the Sandstone Café is desirable—as defining spaces would offer businesses the opportunity to have a similar amount of spots as at present, while offering a space for a new building (a 40' by 112' foot structure is shown above). The existing parking arrangements are haphazard and inherently inefficient in their use of space.
- C. Angled parking on one side of the road will work with two lane traffic in certain areas.

It should be noted that one-way streets with angled parking on one side will not result in substantially more parking spaces than two-way streets with parallel parking on both sides. However, one-way streets with angled parking on both sides are generally not considered necessary, feasible, or desirable at this point in time.

C. FUTURE LAND USE DESIGNATIONS

Tenino's authentic and walkable small town character that embraces its connection to rural Thurston County can be encouraged and preserved as the community continues to develop. In order to achieve these characteristics and the goals outlined in the Downtown Plan, seven future land use designations have been created (see Map LU-1). These designations incorporate different aspects of the desired community character described previously and vary as to what land uses are allowed. The future land use designations indicate the predominant land use anticipated in each of the areas, but are intended to allow for some mixing of uses (housing and commercial for example) in certain instances.

Focusing on the predominant character of land uses is meant to complement the historic development of the community. In Tenino's hundred plus years, residential development has been placed adjacent to the downtown core, and has related effectively to the "commercial" area. Similarly, multifamily residential has been placed on "residential" or "commercial" streets and not detracted from the development of those future land use designations. The use of these future land use designations are intended to continue this compatible mixing of land uses, and a brief description of each of the future land use designations is provided below.

Commercial (COM). The commercial designation is meant to promote commercial development within the City. Land intensities within the commercial designation range from stand-alone, single story buildings to multistory structures that encompass an entire lot. A mix of commercial and residential uses is appropriate.

Industrial (IND). The industrial designation applies to properties that have good access to rail and the highway, or properties that currently have an industrial-type use on them. The designation is meant to promote further industrial development and intensities will range from stand-alone structures to developments with 100% lot coverage.

Mixed Use (MU). The mixed use designation applies to properties anticipated to include a mix of commercial and residential uses in the future. Development intensities will vary depending on the type of buildings constructed.

Master Planned Community (MPC). The master planned community designation applies to approximately 264 acres in West Tenino that are currently used for agricultural purposes. In the future, this area is anticipated to develop with a range of uses including industrial, commercial, and residential. A master plan or plans are required to be prepared prior to the development of the site and should include the following:

- A mix of commercial, industrial, office and residential development on the flat portion of the site.
- A mix of residential types and densities on Lemon Hill.
- Parks and/or other amenities to protect and showcase the unique natural features on the site such as prairie habitat, scenic views from Lemon Hill, and trails that follow the course of hillside ravines.
- A connector to the Yelm-Tenino Trail.

The master plan may also include:

- A walkable commercial area.
- A secondary access road.

Multifamily Residential (MF). The multifamily residential designation is meant to promote additional density, especially within the downtown area, through the inclusion of various housing types. Housing types that may be appropriate in the multifamily residential areas include attached dwellings, apartments, condominiums, and townhouses with densities up to 40 units per acre. At present, properties with the multifamily future land use designation primarily consist of single-family residential units.

Residential (RES). The residential future land use designation includes areas that are typified by single-family residential housing, and the designation is intended to complement this development pattern. This residential designation is intended to allow a compatible mix of residential and nonresidential uses so long as the scale of the new development complements the size of neighboring units. Densities up to 25 units per acre may be allowed within the future land use designation; higher densities may also be appropriate.

Public/Semi-Public (P/SP). The public/semi-public designation applies to land that is owned by the City of Tenino, the Tenino School District, or land that is part of the Burlington Northern Santa Fe mainline. Land in the designation is meant to be used for public utilities, schools, rail and/or municipal activities, including recreational uses.

Historic Preservation Overlay (HP). The historic preservation overlay is meant to preserve or protect the historic character of Tenino's downtown core. The downtown has been classified as a National Historic District on the National Register of Historic Places, and several of the properties within the overlay district have been submitted for listing on the National Historic Register as historic structures. The underlying commercial future land use designation still applies to these properties, but renovations or new buildings are intended to be subject to design review to ensure that the building enhancements preserve the character of the historic district and are compatible with the adjacent historic buildings or structures.

D. URBAN GROWTH AREA

When the City annexed West Tenino in 2007, it was expected that a good portion of the site would be comprised of residential development and master planning requirements reinforce this notion. In 2013, the Mazama pocket gopher became federally-listed as a threatened species and is now protected under the Endangered Species Act. Approximately 89 acres of West Tenino has been identified as critical habitat for the Mazama pocket gopher and the Taylor’s checkerspot butterfly, another federally-listed endangered species. Taking into consideration land required for rights-of-way, open space, stormwater management facilities, and critical areas, it is estimated that between 192 and 236 dwelling units could have been located in this part of West Tenino but are now, due to mitigation requirements, assumed to be lost. In addition to this, approximately 24 acres of land that would have been used for nonresidential development has also been lost.

In order to account for the loss of commercial and residential development potential, the City is exploring the possibility of expanding the urban growth area (UGA). Map LU-2 shows the potential changes in the UGA. Area A is in close proximity to Tenino schools, and any development of the land in this area will need to take into consideration its proximity to Scatter Creek. With appropriate protections and buffers in place, however, this represents a location that may be appropriate for residential development.

Area B is in close proximity to both residential and commercial development. It is anticipated that this is an area appropriate for a mix of uses, though it is unclear how many residential units would be located here. Once again, proximity to Scatter Creek will require development to be sensitive to the natural landscape.

Area C is located adjacent to south Tenino along either side of SR 507. Areas to the west of the highway could contain a mix of residential and commercial uses while areas to the east of the highway could be developed with residential uses. Area D is proposed to be removed from the UGA as it is located at the top of the hill above Tenino City Park. Table 3.1 shows the preliminary estimates the City has calculated for changes in residential development.

Table 3.1: Residential Development and Potential Changes in the UGA			
Site to be Added to/Removed from UGA (see Map LU-2)	Acres Added or Removed	Estimated Dwelling Units Affected*	Potential Future Land Use Designation
A	+19	+42 to +52	Residential
B	+13	0	Mixed Use
C	+61	+274 to +304	Mixed Use, Residential
D	-24	-175 to -130	n/a
Total Change	69	+141 to +226	--
Lost West Tenino Units	--	-192 to -236	--
NET CHANGE	69	-51 to -10	--

**Assumes that between 20% and 40% of a site will be set aside for rights-of-way, open space, stormwater management, and critical areas.*

Approximately 69 acres of land could be added to the UGA and eventually incorporated into the City. Although the proposed changes would result in an overall increase in the footprint of the City, functionally the goal is to preserve the residential and commercial development that would have been permitted prior

to the Mazama Pocket Gopher’s federal listing. Without these changes to the UGA, the City may not be able to accommodate the growth anticipated over the next 20 years. The City will work with both Thurston Regional Planning Council and Thurston County to address any changes to the urban growth boundary.

E. GOALS, POLICIES, AND ACTIONS

Taking into consideration the Downtown Plan, desired character and the future land use designations, and proposed changes to the Urban Growth Area, the City has identified the following goals and policies. These goals and policies center on providing great neighborhoods; maintaining a vital historic business district and nonresidential development; and creating a master planned community in West Tenino. Where the jurisdictions of unincorporated Thurston County and the City of Tenino intersect, the City encourages Thurston County to adopt those goals and policies denoted with an asterisk (*).

GREAT NEIGHBORHOODS

Goal LU 1: Build excellent neighborhoods throughout Tenino.

Policy LU 1.1: Ensure that new residential and commercial developments include features such as trails, sidewalks, well-connected streets, and street trees.

ACTION: Establish street standards (especially for new streets within residential and commercial neighborhoods).

Policy LU 1.2: Require new developments to submit plans for streets, landscaping, stormwater, and pedestrian enhancements.

ACTION: Require new developments to plant and maintain trees as specified in the City of Tenino Street Tree Plan (adopted herein by reference).

Policy LU 1.3: Work diligently to enhance existing neighborhoods through strategies such as traffic calming, pedestrian enhancements, and adding street trees and/or art.

Policy LU 1.4: Promote community projects/volunteerism to help build the local character of Tenino.

Goal LU 2: The addition of housing units within residential neighborhoods does not detract from the character of existing single-family development.

Policy LU 2.1: Identify methods to respectfully include new housing units within existing single-family residential neighborhoods.

Policy LU 2.2: Consider changes to the zoning code to allow housing types that are similar to existing precedents found within the community such as bungalow courts, cottage house, accessory dwelling units, and small multifamily structures.

Goal LU 3: New residential development contains a mix of housing types that are constructed at urban densities.

ACTION: Require sewer connections most new development. Where sewer expansion is not required, development shall be configured to plan for future infill.

***Goal LU 4: The boundaries of the Tenino UGA are modified to account for the loss of dwelling units planned for in West Tenino due to the federal listing of the Mazama pocket gopher.**

***Policy LU 4.1:** Work with Thurston Regional Planning Council and Thurston County to address proposed changes to the UGA.

VITAL HISTORIC BUSINESS DISTRICT AND NONRESIDENTIAL DEVELOPMENT

Goal LU 5: New business development thrives in Tenino.

Policy LU 5.1: Strive to make Tenino and existing commercial and industrial lands within the community attractive for development.

ACTION: Create more attractive development sites within the commercial, industrial and mixed use designations.

Goal LU 6: Downtown Tenino continues to be the historic and retail center of Tenino.

Policy LU 6.1: Encourage retail and service businesses to locate downtown, both in older buildings and newer structures.

Policy LU 6.2: Encourage cosmetic improvements to the existing streetscape and structures within the area.

ACTION: Work to complete the Main Street concepts shown on Map TS-4.

Goal LU 7: New development and redevelopment complement the walkable and historic character of Tenino.

Policy LU 7.1: Require and conduct design review for all applicable development.

Policy LU 7.2: Consider and work to limit the potential negative impacts associated with development of commercial and industrial properties as part of the development review process.

Goal LU 8: The character of existing historic buildings is retained and celebrated.

Policy LU 8.1: Encourage landowners to restore the historic character of their buildings, and to take full advantage of available historic preservation programs and funding opportunities in the process.

Policy LU 8.2: Evaluate proposed changes to historic structures or demolitions that may significantly adversely impact the character of the community under the auspices of the State Environmental Policy Act.

Goal LU 9: New multifamily and attached housing units are constructed near downtown and add vitality to the historic district.

Policy LU 9.1: Ensure that sufficient lands are zoned to accommodate additional housing units near the downtown, and the zoning code does not unnecessarily limit the development of the multifamily or attached housing types.

Policy LU 9.2: Encourage landowners and developers to consider the construction of multifamily housing or options such as townhomes near downtown.

Policy LU 9.3: Ensure that multifamily housing projects located in high-priority areas for pedestrian activity are sited such that the building is located near the street and the parking is situated behind the structure.

MASTER PLANNED COMMUNITY

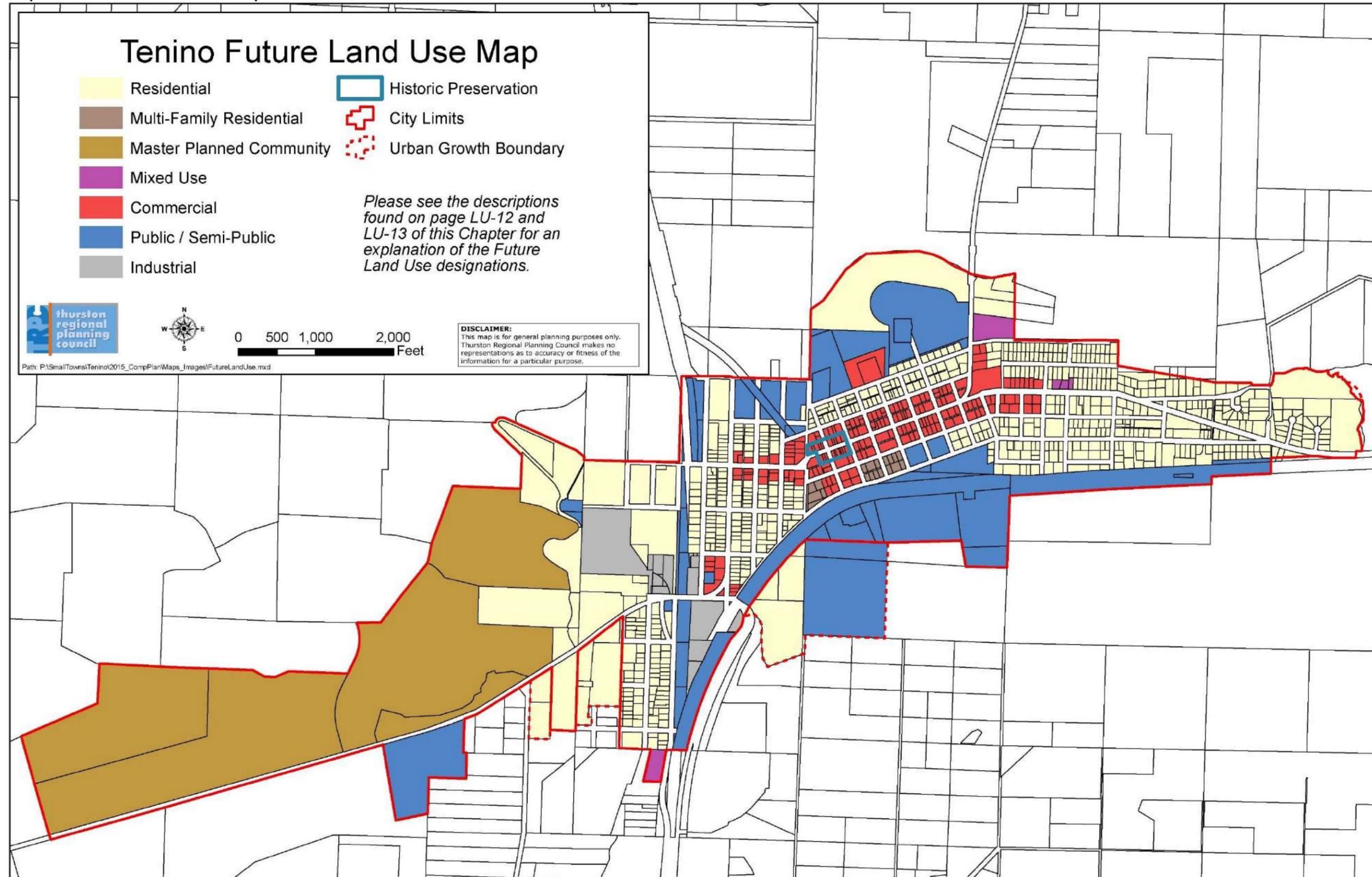
Goal LU 10: West Tenino is developed in a manner consistent with the community's vision for the area.

Policy LU 10.1: Ensure that any master plan for west Tenino adequately addresses utilities, transportation infrastructure, land use, and park and open space features.

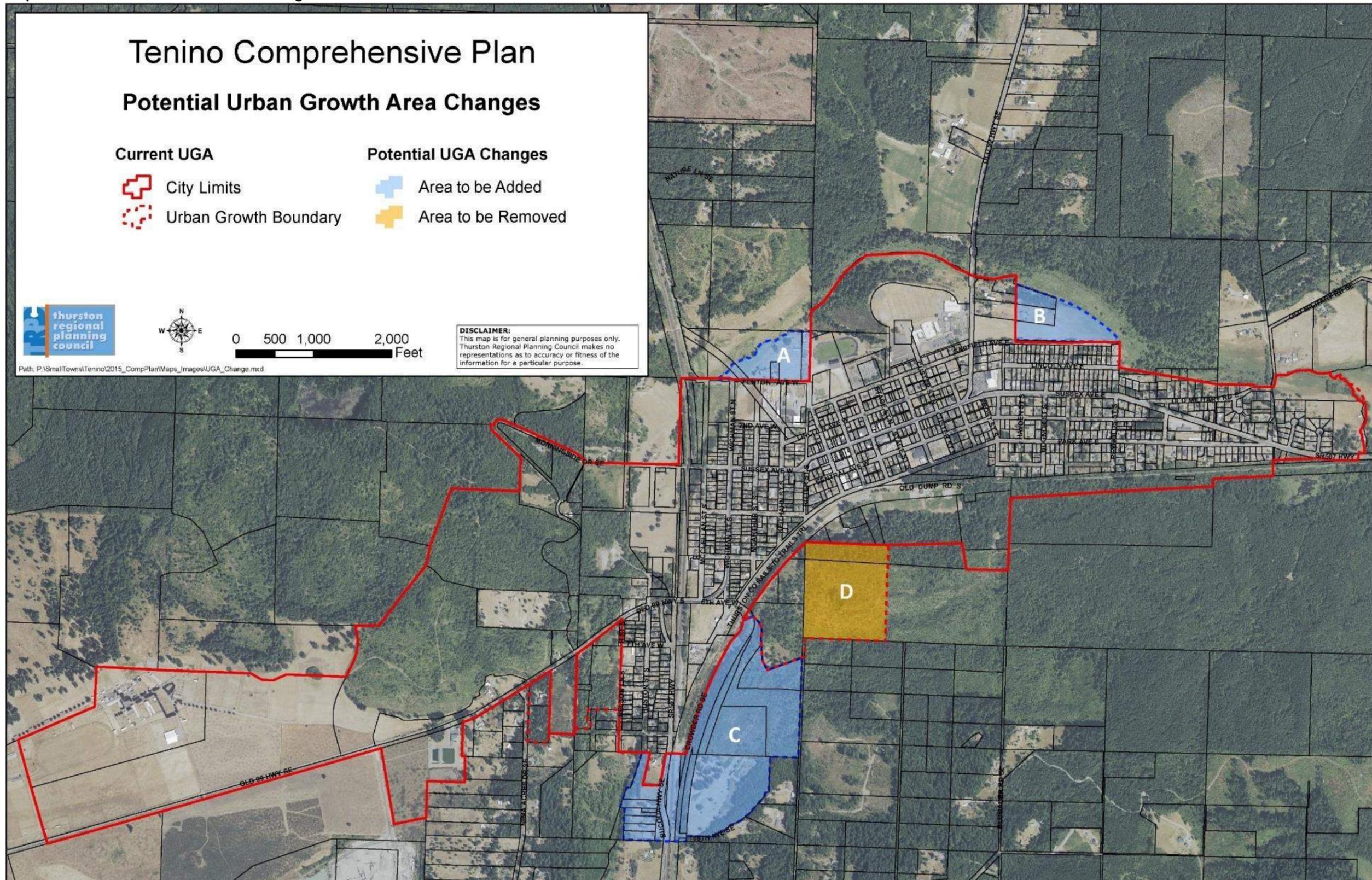
Policy LU 10.2: Review future master plan(s) in accordance with the intent of the future land use designation and the standards of the Tenino Municipal Code.

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Map LU-1: Tenino Future Land Use Map



Map LU-2: Potential Urban Growth Area Changes



CHAPTER 2. NATURAL RESOURCES

The City of Tenino is situated in a valley nestled amongst the hills of South Thurston County. The floor of the valley, where the bulk of the community sits, is typified by flat land and highly porous prairie soils, while the slopes to the northern, southern, and western portions tend to have steeper grades typified by forests, wetlands and sandstone outcroppings. Wetlands and the majority of the priority habitat present in the community are located along Scatter Creek. Recent westward expansion of the community has included a swath of land that acts as critical habitat for the Taylor's checkerspot butterfly and the Mazama pocket gopher. This chapter presents these known environmentally sensitive areas in Tenino as well as a framework for the community to retain the character of the surrounding natural environs.

A. ENVIRONMENTALLY-SENSITIVE AREAS

Environmentally sensitive or critical areas are located throughout Tenino including along Scatter Creek, the surrounding hillsides, and in the prairies of West Tenino. Critical areas, as defined in state law, include wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife conservation areas. The Growth Management Act mandates local governments that plan under RCW 36.70A.060, like Tenino, identify and adopt development regulations that protect critical areas from incompatible uses and development. When possible impacts to critical areas may occur, avoiding those impacts should be the first course of action. If impacts are unavoidable, then minimizing those impacts and mitigating them is essential. This is known as mitigation sequencing and is a tool that can be used to protect critical areas from incompatible uses and development. Where avoiding and minimizing impacts is possible but are limited by zoning requirements (such as required front, side and rear yard setbacks), the City should encourage reasonable reductions in the zoning requirements to help preserve critical areas.

The five maps found at the end of this chapter and discussed throughout show many of the areas of Tenino identified as potential critical areas. These maps are for informational purposes only and are intended to alert the development community, appraisers, and current or prospective property owners about the possible presence of critical areas on a site. The presence of a critical area on these maps is sufficient foundation for the City to require an analysis of the area prior to the acceptance of a development application for review. Fish and wildlife conservation areas are presented with State Priority Habitat and Species data, as well as on federal Endangered Species listings. Due to the changing nature of these listings and habitat and species priorities, a map of known conservation areas is not included as part of this chapter.

B. GROUNDWATER AND CRITICAL AQUIFER RECHARGE AREAS

An extreme critical aquifer recharge area underlies the majority of the flat portion of the City of Tenino (see Map NR-1). Characteristics of this aquifer recharge area are:

- **Porous Soils with No Confining Layer.** Soils are exceptionally porous and pollutants can easily enter the underlying groundwater as a result. Because the City relies on groundwater from an

unconfined aquifer as its only source of potable water and the well depth is relatively shallow, protection of this aquifer from potential pollutants is particularly important.

- **Small Contributing Watershed Upstream of the Water Source.** Scatter Creek’s watershed upstream from municipal wells is relatively small in area and offers a limited recharge capability for groundwater supplies. Capturing or slowing water upstream from the community’s wells may be accomplished through wetland preservation and construction and will ensure that drinking water supplies are recharged. This is essential, especially during the dry summer months. Wetland preservation and creation will also contribute to in-stream flows in Scatter Creek, improving the quality of water and riparian habitat.

C. FREQUENTLY FLOODED AREAS

Frequently flooded areas, or areas that often experience surface or groundwater flooding, are primarily located near Scatter Creek and in Tenino City Park. Scatter Creek often experiences low flows in the summer months but floods in winter; surrounding land has been defined as a floodplain as a result (see Map NR-2). Areas of localized flooding and high groundwater hazards also occur as a result of winter storms. Key areas that experience local flooding include the Tenino City Park and the Huston Street area and known high groundwater areas, as documented during the 1997 flood. These areas are also shown on Map NR-2.

D. WETLANDS

Wetlands in and around Tenino are located primarily along Scatter Creek, south of the Yelm-Tenino Trail in City Park, and on lands near the park (see Map NR-3). In their natural state, these wetlands perform a number of functions that are difficult, costly, and sometimes impossible to replace. Wetlands in Tenino:

- Provide erosion and sediment control.
- Stabilize streambanks, floodplains, and shorelines as a result of the extensive root systems of wetland vegetation.
- Improve water quality by decreasing the velocity of water flow as well as physically intercepting and filtering waterborne sediments, excess nutrients, heavy metals, and other pollutants.
- Provide food, shelter and essential breeding, spawning, nesting and wintering habitats for fish and wildlife, including migratory birds, anadromous fish, and other species.
- Store and slowly release stormwater.

E. FISH AND WILDLIFE CONSERVATION AREAS

Fish and wildlife conservation areas protected under the Growth Management Act are primarily located along Scatter Creek and in West Tenino. High quality habitat is also adjacent to Tenino City Park due to the nearby forest and Creekside Conservancy lands. Known fish and wildlife priority habitat and species areas are documented on the Washington Department of Fish and Wildlife’s website and in Washington State’s Priority Habitat and Species data. Existing protected and priority species known to be present in Tenino include the Mazama pocket gopher (a species listed as threatened under the Endangered Species Act) in West Tenino and coho salmon and cutthroat trout in Scatter Creek.

Populations of the Taylor’s checkerspot butterfly (a federal endangered species) and the mardon skipper butterfly (a state endangered species) also historically existed in the western portion of the community.

No populations of Taylor’s checkerspot are currently known to exist in the area (though the land has been designated as critical habitat to recover the species), and the present status of the mardon skipper in Tenino is unknown. Protected and priority species are shown in Table 2.1.

Table 2.1: Existing Protected and Priority Species in Tenino				
Species	Occurrence	Critical Habitat	Listing Status	
			Federal	State
Fish				
Coho Salmon	X		--	--
Cutthroat Trout	X		--	--
Insects				
Taylor’s Checkerspot Butterfly	X (Historic)	X	Endangered	Endangered
Mardon Skipper Butterfly	X		Candidate Species	Endangered
Mammals				
Mazama Pocket Gopher	X	X	Threatened	Threatened

Key habitats in the community include prairie lands designated as critical habitat for the both the Mazama pocket gopher and Taylor’s checkerspot butterfly, and state-designated Oregon White Oak priority habitat that primarily borders Scatter Creek. The functions and values of critical resources, including threatened and endangered species and habitats, can be protected through a variety of strategies, including educating the public about the value of the resource or species; supporting community, non-profit, and governmental efforts to conserve the species or habitat; having a proactive permit review process, and ongoing code enforcement efforts.

F. LANDSLIDE AND EROSION HAZARDS

Land with slopes of more than 40% are considered to have potential landslide or erosion hazards (see Map NR-4). Where these areas exist, potential hazards should be evaluated under the Tenino Critical Areas Ordinance to ensure development does not further contribute to a landslide or erosion hazard.

G. OPEN SPACE FRAMEWORK

While natural areas surround the City of Tenino, the primary open space and habitat areas present in the community are associated with Tenino City Park and the adjacent Creekside Conservancy properties, Scatter Creek and its surrounding riparian areas, and the prairie lands in West Tenino. Map NR-5 illustrates these open space and habitat areas as well as areas the Shoreline Master Program has jurisdiction over. Lands within 200 feet of the Ordinary High Water Mark or floodway of Scatter Creek, as well as any wetlands associated with the creek, are subject to the Tenino Shoreline Master Program. Shoreline areas contain key habitat for fish and the bulk of the community’s wetlands.

H. GOALS, POLICIES, AND ACTIONS.

In reviewing each of the critical areas, Tenino has identified the following goals and policies to protect and maintain environmentally-sensitive areas; protect groundwater and critical aquifer recharge areas; help defend the community from frequently flooded areas; preserve and protect wetland functions; conserve habitat for fish and wildlife; protect the public from landslide and erosion hazards; and maintain open space corridors. Additional goals and policies for development along Scatter Creek are presented in the Shoreline Master Program for Tenino (adopted herein by reference). Where the jurisdictions of unincorporated Thurston County and the City of Tenino intersect, the City encourages Thurston County to adopt those goals and policies denoted with an asterisk (*).

ENVIRONMENTALLY-SENSITIVE AREAS – GENERALLY

***Goal NR 1: Natural resources and the environment are conserved.**

***Policy NR 1.1:** Seek to minimize impacts to critical areas. Unavoidable impacts should be mitigated.

***Policy NR 1.2:** Ensure attributes, functions, and amenities of the natural environment are protected.

***Policy NR 1.3:** Use Best Available Science in the creation of ordinances and other development regulations and in making land use decisions to protect the functions and values of critical areas.

***Policy NR 1.4:** Where a development proposal is to be located within the boundary of one or more critical area, require site-specific analyses.

Policy NR 1.5: Ensure all development (including clearing and grading) that could potentially impact a critical area is reviewed under the Tenino Critical Areas Ordinance.

Policy NR 1.6: Require mitigation sequencing in the development of mitigation plans.

***Policy NR 1.7:** Promote the clustering of homes away from critical areas when new developments are proposed.

Goal NR 2: Land uses are compatible with topography, geology, underlying soils, surface water, ground water, frequently flooded areas, wetlands, and other geological or biological factors.

Policy NR 2.1: Protect members of the public and community resources and facilities from injury, loss of life, or property damage due to landslides and steep slope failures, erosion, seismic events, volcanic eruptions, and flooding.

Policy NR 2.2: Encourage the use of native plantings to help prevent erosion and other environmental impacts during and after construction.

GROUNDWATER AND CRITICAL AQUIFER RECHARGE AREAS

Goal NR 3: Tenino maintains a high quality of drinking water with minimal contaminants and limited need to treat the water.

Policy NR 3.1: Continue to monitor the quality of the drinking water to understand if and when potential contamination occurs.

Policy NR 3.2: Clarify the extent of the wellhead protection area and continue to review projects in accordance with wellhead protection standards.

***Goal NR 4: Adequate water supplies are maintained within the aquifer.**

****Policy NR 4.1:*** Promote the preservation, restoration, and expansion of wetlands to aid in water filtration and recharge capabilities.

****Policy NR 4.2:*** Encourage the infiltration of water into the soil near where it falls to help replenish the aquifer.

****Policy NR 4.3:*** Continue to adopt and enforce standards and policies that limit unnecessary impervious surfaces, especially in critical aquifer recharge areas.

FREQUENTLY FLOODED AREAS

***Goal NR 5: Public property, private property, and natural resources are protected from losses associated with flooding.**

****Policy NR 5.1:*** Minimize development within the Tenino floodplain and known high groundwater hazard areas.

****Policy NR 5.2:*** Preserve the size and function of natural water storage areas, including wetlands, along Scatter Creek especially upstream from the City's wells.

Policy NR 5.3: Maintain flood standards, including building, mechanical and other codes, that are consistent with most recent FEMA standards and utilize best available science for floodplain construction practices.

Policy NR 5.4: Incorporate floodplain considerations and flood damage protection measures in the location, design, and construction of new development including public and infrastructure projects.

Policy NR 5.5: Develop a comprehensive stormwater management plan to better understand how stormwater flows through the community.

Policy NR 5.6: Consider adopting standards to assist in the review of stormwater treatment for construction projects.

WETLANDS

Goal NR 6: No net loss in the function and values of wetlands in Tenino occurs.

Policy NR 6.1: Make standards for wetland protection easy to understand and consistent with best available science.

Policy NR 6.2: Where a wetland may be impacted, require developers/property owners to perform a wetland delineation and to mitigate wetland impacts that will occur as a result of the development proposal.

Policy NR 6.3: Promote the clustering of homes away from wetlands.

FISH AND WILDLIFE CONSERVATION AREAS

***GOAL NR 7: Protect and enhance critical resources and habitats.**

***Policy NR 7.1:** Use best available science in preserving and enhancing resources for anadromous fish and other local endangered, threatened or sensitive species.

Policy NR 7.2: Monitor state and federal discussions regarding endangered, threatened, and protected species and habitats.

Policy NR 7.3: Take proactive steps to protect species and prepare for limitations on development associated with their protection.

LANDSLIDE AND EROSION HAZARDS

GOAL NR 8: Development in geologically hazardous areas is consistent with maintaining public health and safety.

Policy NR 8.1: Require engineering and or geotechnical investigations and certifications be made prior to approval of development permits or authorizations to proceed.

Policy NR 8.2: Require development of housing, roads, and other facilities to locate away from steep slopes where possible and practical.

Policy NR 8.3: Consider a variety of factors including soil instability, slopes, shrink/swell potential and other limitations for building and road construction in the processing of development applications.

Policy NR 8.4: Require revegetation and restoration of hillsides disturbed during development activities, consistent with the best available science.

OPEN SPACES

Goal NR 9: Significant open space in Tenino is preserved and will always be part of the City.

Policy NR 9.1: Work with non-profits, governmental agencies and other interested parties to preserve natural lands within Tenino.

***Goal 10: Retain properties adjacent to Tenino City Park as natural lands, forestry and/or habitat.**

***Policy NR 10.1:** Partner with adjacent land owners to best preserve natural lands around Tenino City Park.

Policy NR 10.2: Strive to appropriately manage habitat and the growth of any invasive species within the park, given limited available City maintenance budgets.

***Policy NR 10.3:** Improve connections between Tenino City Park and adjacent properties through better signage and trails.

Goal NR 11: Scatter Creek is a natural corridor that balances the needs for open space, recreation opportunities, and wildlife habitat.

Policy NR 11.1: Improve and maintain the health of Scatter Creek. Consider using the Shoreline Master Program's restoration plan to identify potential habitat restoration projects.

Policy NR 11.2: Strive to create a trail adjacent to the creek or riparian areas near the creek. Require the construction of the trail as part of future developments to create an amenity for residents.

Goal NR 12: In West Tenino, preservation of prairie habitat is balanced with commercial and residential development.

Policy NR 12.1: Require a habitat assessment to evaluate potential impacts to endangered, threatened or priority species as a result of any future development in West Tenino.

Policy NR 12.2: Prohibit habitat fragmentation wherever possible and practical.

Policy NR 12.3: Encourage clustered development patterns.

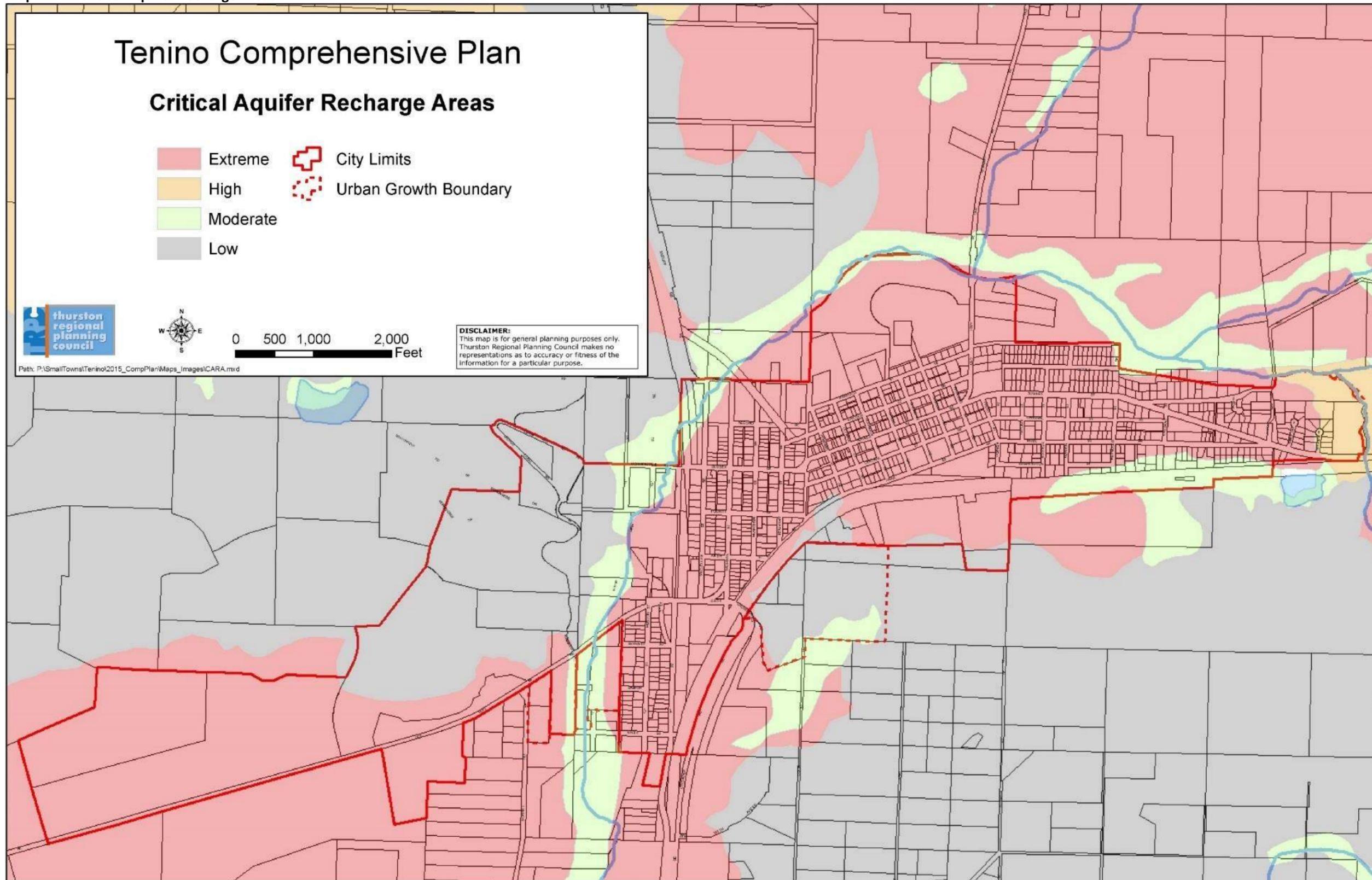
Goal NR 13: Tenino's scenic hillsides are protected.

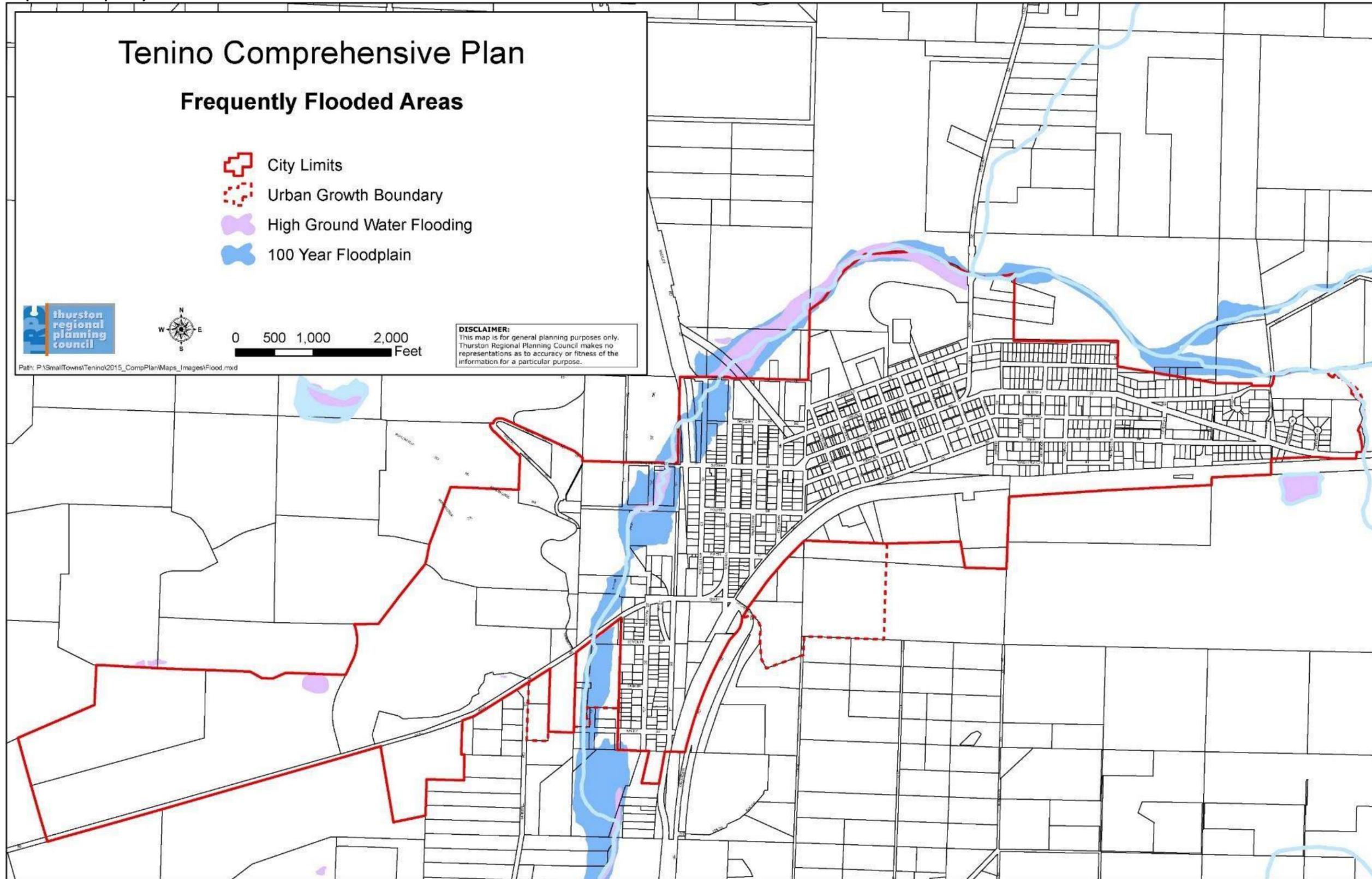
Policy NR 13.1: Encourage hillside developments to preserve trees.

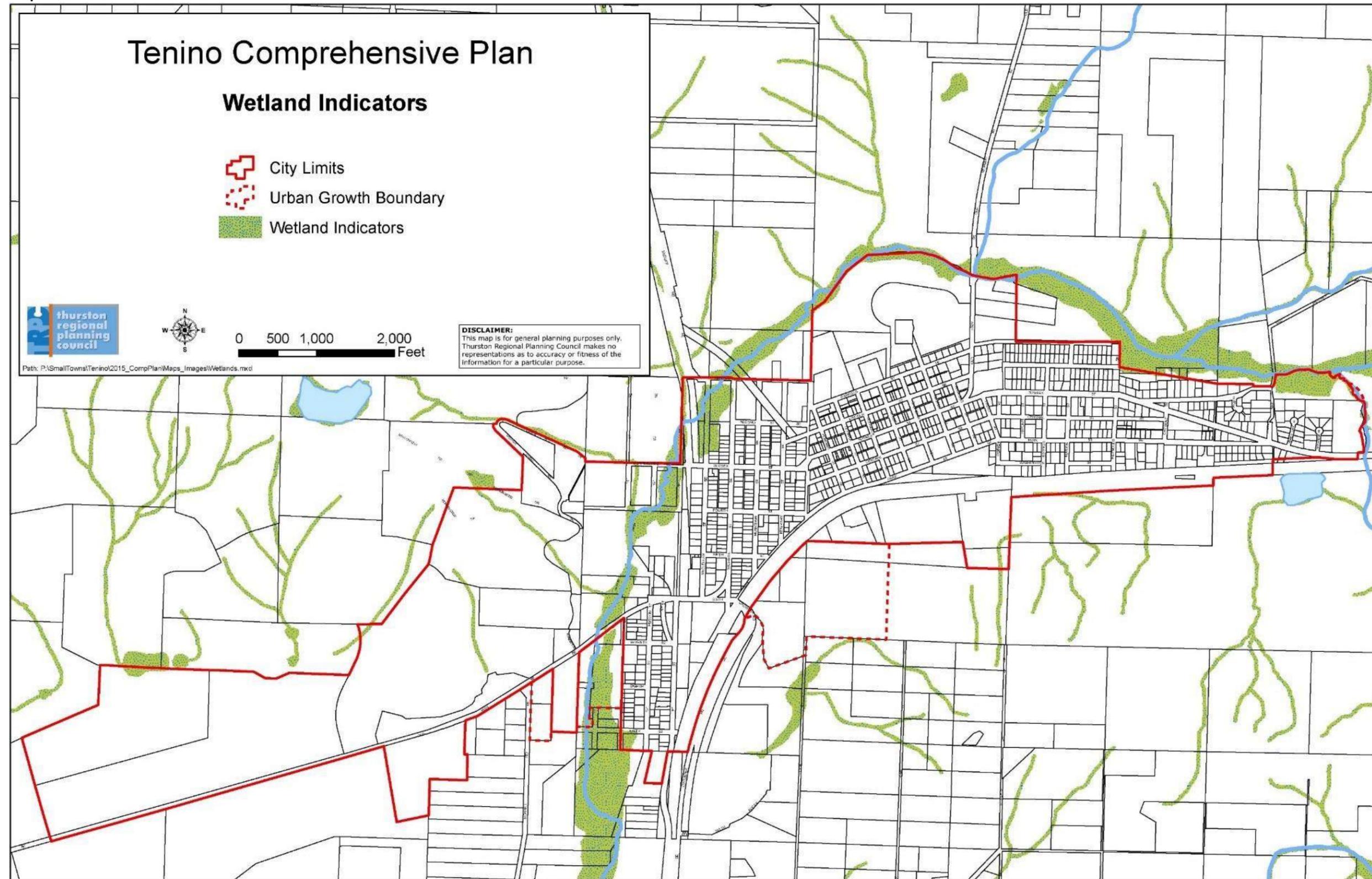
Policy NR 13.2: Consider developing standards for preserving treed skylines on Tenino's hills.

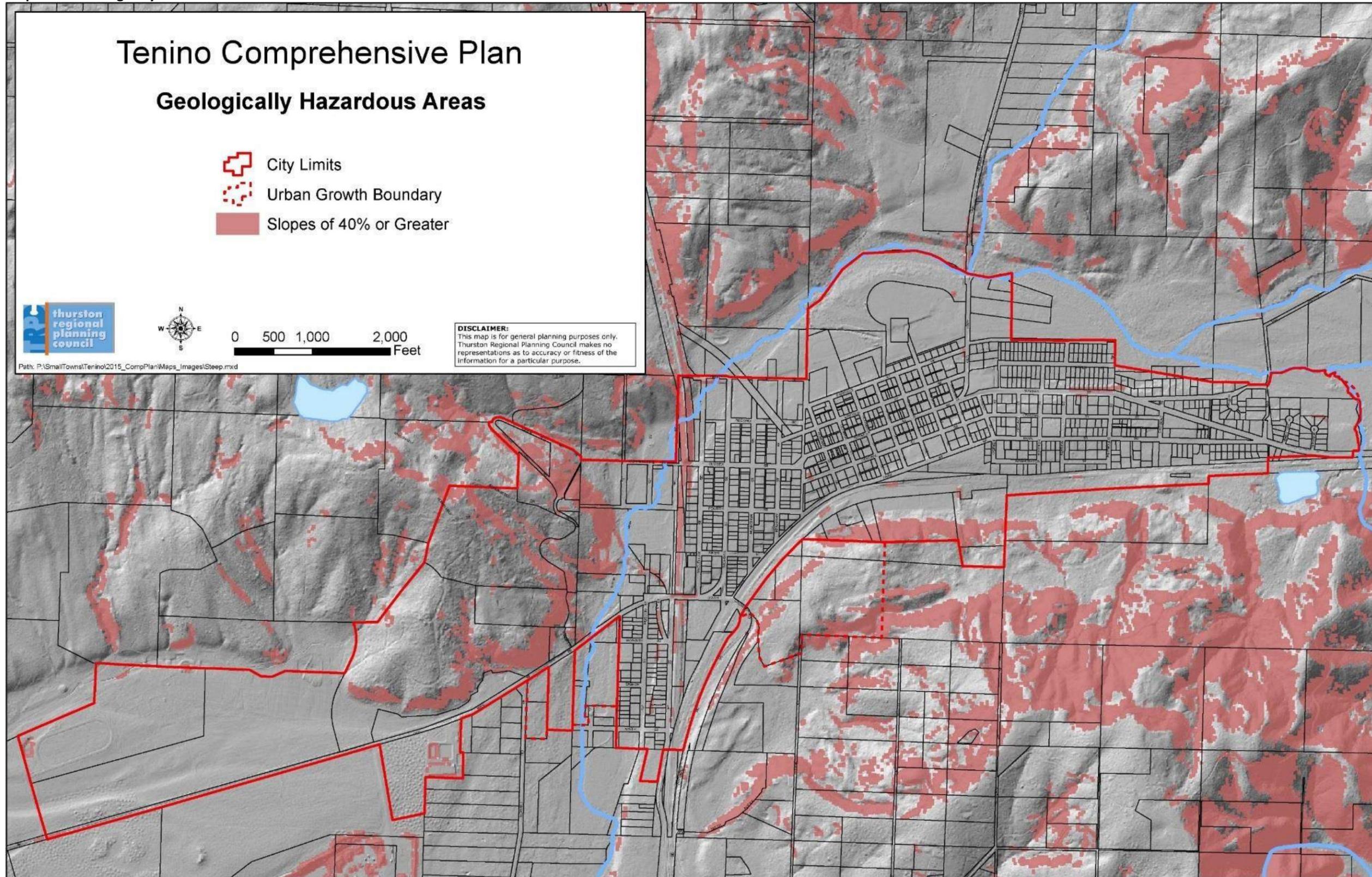
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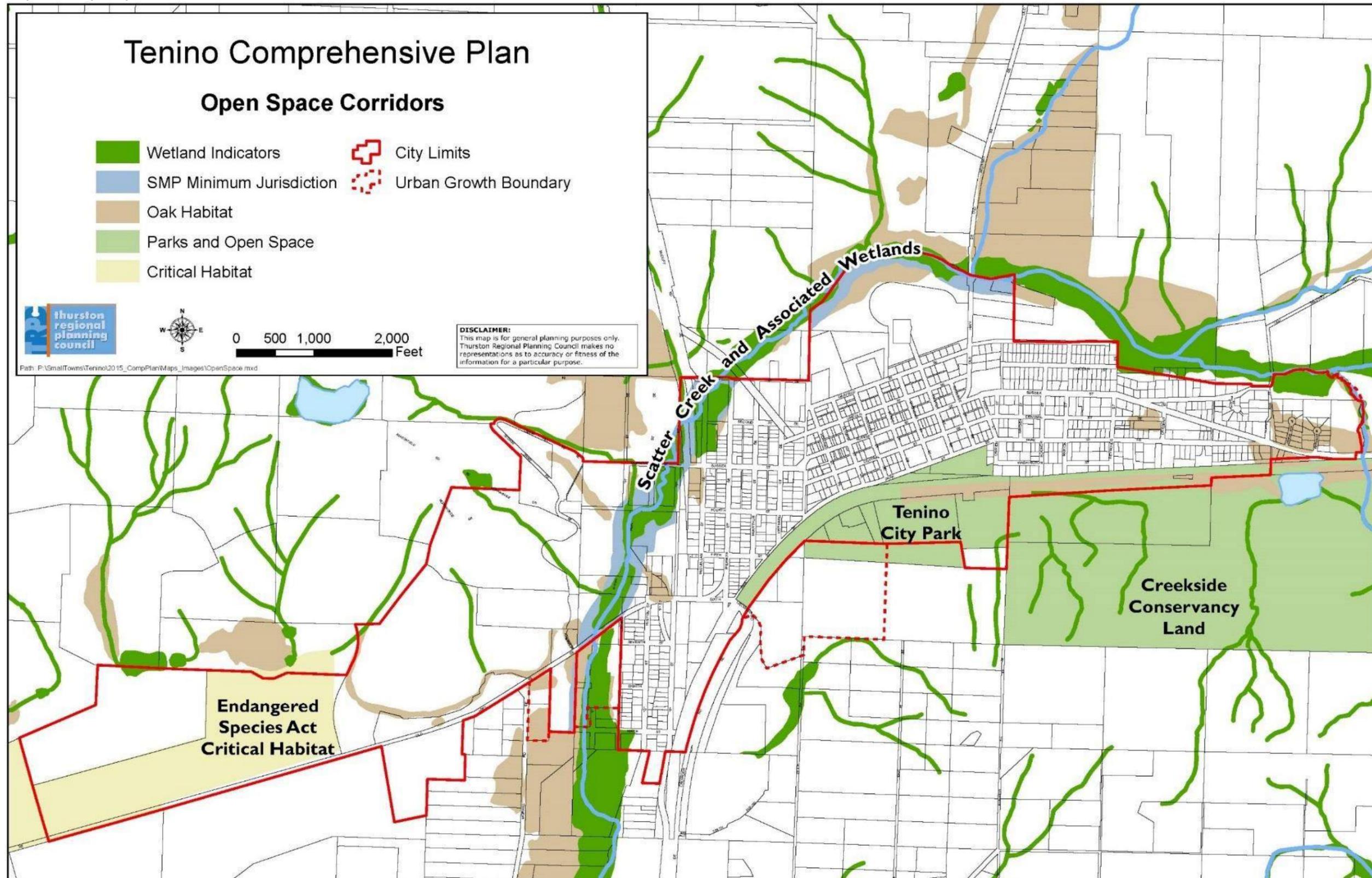
Map NR-1: Critical Aquifer Recharge Areas









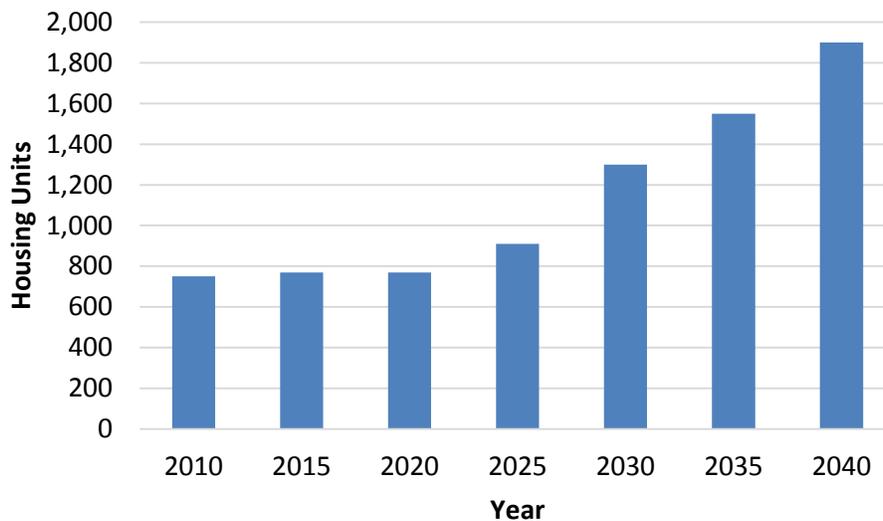


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CHAPTER 3. HOUSING

Tenino has a mix of housing types that have been built throughout the history of the community. During the next 20 years, it is estimated that the number of housing units in Tenino will double (see Figure 3.1 below). To evaluate housing needs and goals over the 20-year planning period, the community conducted an inventory of existing housing conditions as part of the 2016-2036 Comprehensive Plan update; findings of the inventory are presented below, and additional information is provided in Appendix B, Housing Types.

Figure 3.1: Tenino Housing Forecast



Source: TRPC, Small Area Population Estimates and Population and Employment Forecast Work Program, 2014

A. FAMILY TYPE, HOUSING TENURE, AND DWELLING UNIT MIX

According to 2014 TRPC estimates, The City of Tenino contains approximately 765 housing units. Of these units, the majority are single family dwellings; 17 duplexes and 6 apartment complexes are also present.

Occupancy. Table 3.1 outlines the tenure of housing units in Tenino at the 2010 Census. Table 3.2 identifies the occupancy status of dwellings based on the age of the householder. 68.6% of the occupied housing units in Tenino were owner-occupied. Rentals accounted for approximately one third of the occupied homes in Tenino and provided an important housing option for younger individuals and families. Rentals represented 57.1% of the housing units for individuals aged 15 to 25 and 38.6% of the units for individuals aged 25 to 34. Older householders tended to own their homes.

Type of Housing	Total	Proportion
Occupied Housing Units	691	100.0%
Owner-Occupied	474	68.6%
Renter-Occupied	217	31.4%
Vacant Housing Units	49	
Total housing units	740	

Source: 2010 Census

Age of Householder	Occupancy Status (Total)		Occupancy Status (Proportion of Age Group)	
	Owner	Renter	Owner	Renter
15 to 24	9	12	42.9%	57.1%
25 to 34	78	49	61.4%	38.6%
35 to 44	76	36	67.9%	32.1%
45 to 54	104	45	69.8%	30.2%
55 to 64	92	29	76.0%	24.0%
65 to 74	48	25	65.8%	34.2%
75 to 84	55	18	75.3%	24.7%
85 and over	12	3	80.0%	20.0%
TOTAL	474	217	68.6%	31.4%

Source: 2010 Census

	Bucoda	Tenino	Rainier	Yelm	Thurston County
Total Households	222	656	691	2,299	100,650
Husband-wife family	41.9%	54.1%	42.3%	51.7%	49.9%
Male or Female Householder Family, No Spouse Present	24.8%	19.7%	21.4%	22.8%	15.8%
Nonfamily Household	33.3%	26.2%	36.3%	25.5%	34.3%
Family Households with Own Children Under 18 Years	22.5%	34.6%	30.5%	49.9%	28.9%
Nonfamily Households with Single Person over 65	7.2%	5.6%	12.4%	8.5%	8.6%

Source: 2010 Census

Family Type. Approximately 34.6% of the families in Tenino had children in the home (see Table 3.3 above), a rate significantly higher than Thurston County as a whole. Nonfamily households – households composed of a single individual or a group of unrelated individuals – accounted for a lower proportion of

households than the larger County. Nonfamily households are anticipated to grow in Tenino over the next 20 years, consistent with trends the County has seen since 1970.

B. HOUSING AGE AND QUALITY

Table 3.4 lists the year of home construction for dwellings in Tenino. According to the Thurston County Assessor, nearly 31% of the homes in Tenino (with known or estimated construction dates) were built before 1940. The majority of these homes are located near the historic downtown in the Hodgden’s Addition and Snyder and Stevens Addition plats (see Map HS-1 and Table 3.4). Acknowledging the age of many of the structures in the community, the City of Tenino considers home restoration a key priority.

Year Built	Number	Percentage
Before 1900	7	1.2%
1900 – 1919	115	19.2%
1920 – 1939	68	11.4%
1940 – 1959	29	4.8%
1960 – 1979	140	23.4%
1980 – 1999	119	19.9%
2000 and Later	121	20.2%
TOTAL	599	100.0%

Source: Thurston County Assessor

C. HOUSING AFFORDABILITY

According to 2014 Thurston County Assessor data, home values in Tenino tend to be more affordable than the County as a whole, typically ranging between \$80,000 and \$150,000 with some homes priced even more affordably (see Map HS-2). It should be noted that the assessed value of a property is not always consistent with market forces. Although housing is generally more affordable in Tenino than in Thurston County as a whole, Tenino households also have a smaller median income and must drive farther in order to acquire goods and services; households spending more than 45% of their income on housing and transportation expenses are considered cost-burdened. According to the Center for Neighborhood Technology, the average annual housing and transportation costs in 2009 for the greater Tenino area was \$28,416 or 48% of the area median income (TRPC, Fair Housing Equity Assessment).

D. GOALS, POLICIES, AND ACTIONS.

Tenino has the following goals, policies, and actions to address housing tenure, quality, and affordability in Tenino. Where the jurisdictions of unincorporated Thurston County and the City of Tenino intersect, the City encourages Thurston County to adopt those goals and policies denoted with an asterisk (*).

Goal HS 1: Tenino has a diversity of housing types and options.

Policy HS 1.1: Ensure that an adequate supply of land is zoned for a variety of housing types and budgets by periodically inventorying existing conditions and reviewing and amending the Comprehensive Plan and zoning code.

Policy HS 1.2: Encourage new larger residential developments to include a mix of housing types.

Policy HS 1.3: Ensure that zoning requirements do not hinder new developments intended for elderly residents or individuals subject to the Fair Housing Act.

Policy HS 1.4: Monitor state laws regarding housing and ensure these laws are addressed in local regulations.

Policy HS 1.5: Ensure that manufactured housing constructed on an individual lot continues to be regulated similar to a site-built home.

Policy HS 1.6: Cooperate with public and private housing agencies to promote a fair and equitable distribution of housing for all income groups throughout the region.

Goal HS 2: The structural and aesthetic integrity of the existing housing stock is preserved and enhanced.

Policy HS 2.1: Actively review building permits for home remodels and enforce life-safety requirements of the City's regulations.

***ACTION:** Coordinate with the Thurston County Housing Authority and other agencies for funding and administration of home rehabilitation and construction.

Policy HS 2.2: Participate in federal, state, and regional rehabilitation programs and actively pursue Community Development Block Grant (CDBG) monies and other funding sources to rehabilitate the existing housing stock.

Policy HS 2.3: Maintain information about and connections to housing agencies and services to assist property owners and renters in the rehabilitation of the existing housing stock.

Policy HS 2.4: Identify and showcase historic homes that remain in good condition.

Goal HS 3: Housing is available for households at all income levels.

Policy HS 3.1: Promote adequate maintenance of the existing housing stock as a means of preserving more affordable housing options for individuals and families.

Policy HS 3.2: Promote innovative housing types that may reduce the cost of housing, such as smaller-scale multifamily homes, small-lot housing, and accessory dwelling units.

Policy HS 3.3: Encourage public, private, and non-profit associations and joint public-private partnerships to build low- to moderate- income housing.

Policy HS 3.4: Evaluate local development standards and regulations for their effects on housing costs, and modify development regulations that unnecessarily add to the price of homes.

Policy HS 3.5: Facilitate home ownership by low- and moderate-income families through federal, state and local programs.

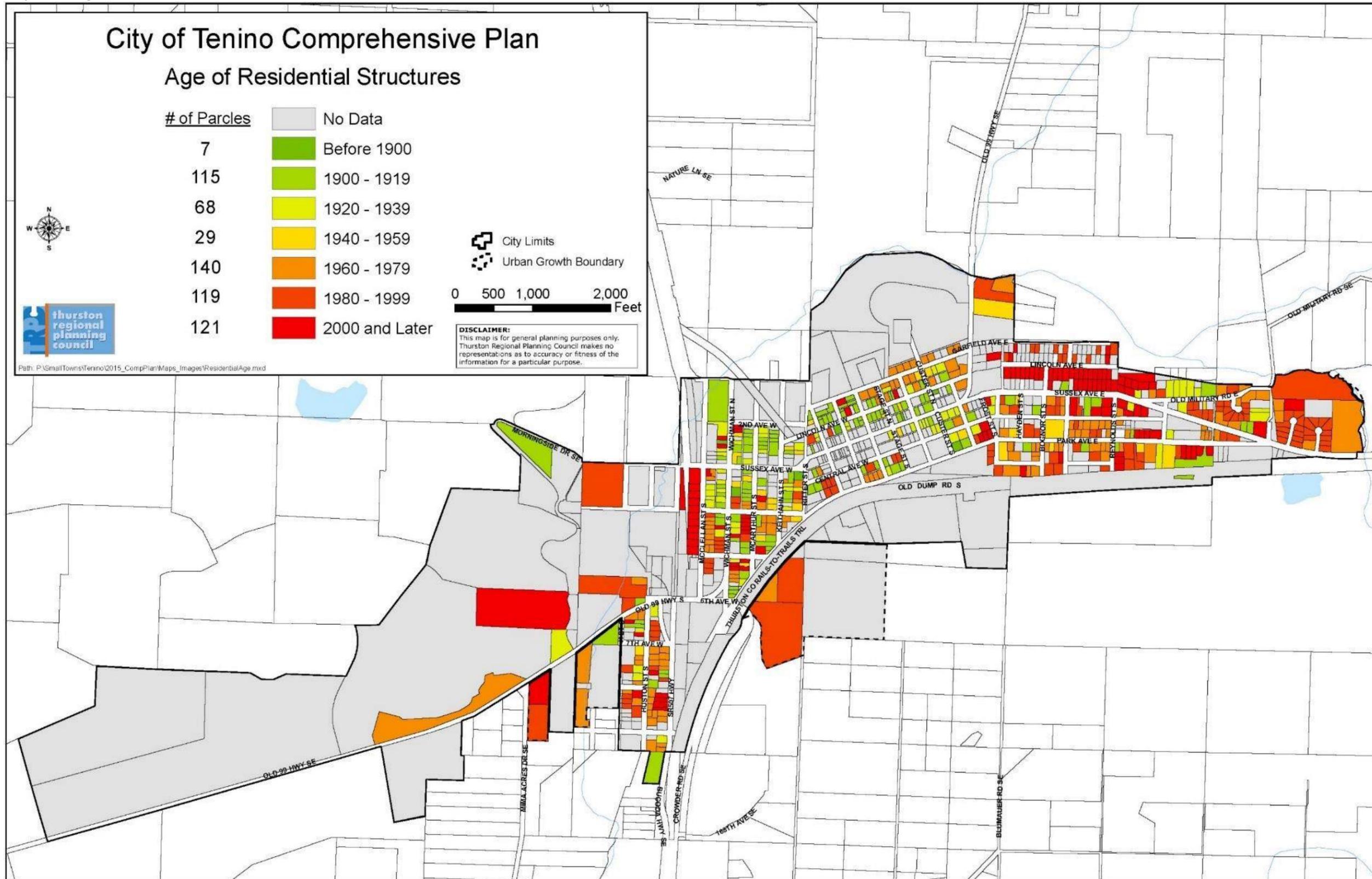
Goal HS 4: Indirect costs associated with living in Tenino are minimized.

Policy HS 4.1: Promote alternative means of transportation to help reduce the number of cost-burdened households in Tenino.

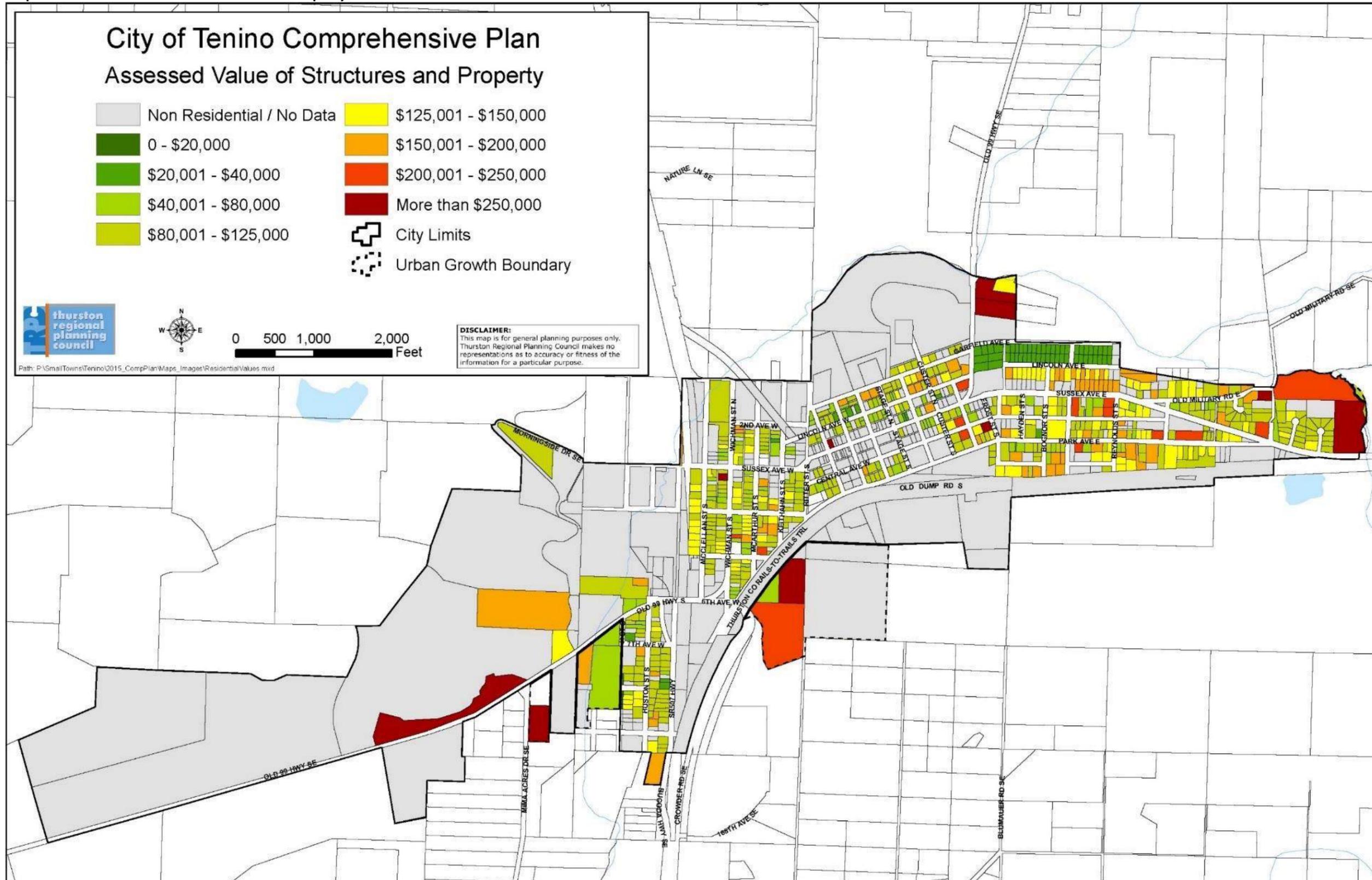
Policy HS 4.2: Find ways to reduce sewer rates whenever possible without jeopardizing the maintenance and operation of the wastewater treatment system.

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Map HS-1: Age of Residential Structures



Map HS-2: Assessed Value of Structures and Property



CHAPTER 4. TRANSPORTATION

In order to maintain and improve circulation, safety, and mobility for residents and businesses, the City of Tenino anticipates conducting several transportation improvements over the next 20 years. This chapter analyzes travel by personal automobiles, pedestrians, bicycles, buses, freight, and other vehicles as a means to help identify these necessary mobility enhancements.

A. COMMUNITY STREETS

The City of Tenino street system includes a variety of local, collector and arterial streets that are essential in maintaining an effective multimodal transportation system. Significant streets that traverse the community include State Route 507, Old Highway 99, Park Avenue, and Lincoln Avenue.

State Routes. Washington State Route 507 (also known as SR 507 or Sussex/Wichman Avenue) accommodates the majority of automobile traffic that travels through the community. SR 507 sees significant regional and freight traffic in addition to local travel. The highway, which is maintained by the Washington State Department of Transportation (WSDOT), is physically in good condition. However, the highway would benefit from enhancements that increase safety for motorists and pedestrians. Enhancements would improve the function and aesthetics of the corridor to better support economic development, particularly as it travels through downtown.

Over the last few years, the City has conducted a study to identify methods to improve vehicular and pedestrian mobility and safety on SR 507 while enhancing the aesthetics and vibrancy of downtown Tenino. The project deliverables included the Downtown Plan (see Chapter 1 of this Plan), design standards, a street tree plan, and a preliminary layout plan and cost estimates for improvements to SR 507. The preliminary design and cost estimates have been included as Appendix D.

Potential downtown improvements include regrading Highway 507 as it travels through downtown to accommodate wider sidewalks, street trees, and ADA accessible ramps; installing a gateway feature at the Ritter Street triangle; and constructing a roundabout at the Old Highway 99/SR 507 intersection. These improvements are projected to cost around \$5.6 million (in 2016 dollars) and will need to be funded by the City of Tenino in partnership with other agencies such as Thurston Regional Planning Council (TRPC), the Transportation Improvement Board (TIB), Washington State Department of Transportation (WSDOT), Washington State Department of Ecology, and the Federal Highway Administration. Although not included in the preliminary layout plan and cost estimates produced with the Main Street 507 effort, improvements at the Old Highway 99 and Wichman/McDuff intersections may also be necessary over the next 20 years in order to improve safety for pedestrians and motorists.

Local Roads. Tenino operates and maintains all other public roadways in the community. Garfield, Lincoln, Central, and Park are the major east/west routes for local traffic; other roads including Old Highway 99 and Wichman Avenue are the primary north/south routes in the community. East/west routes are generally in good condition, and several north/south routes have been repaired recently. Due to the

limited transportation funding available and the sheer number of roadways in the City, several roadways still require repair and improvement.

Bridges. The City of Tenino owns and maintains three bridges. These bridges, which cross Scatter Creek, are located on Old Highway 99 west of downtown Tenino, Morningside Drive, and McDuff Road. Each bridge has a sufficiency rating. Bridge sufficiency is a method to rate a bridge's fitness for the duty it performs. The rating is a percentage in which 100% represents an entirely sufficient bridge and 0% represents an entirely deficient bridge. A low sufficiency rating may be due to structural defects, narrow lanes, low vertical clearance, etc.

- **Old Highway 99.** The Old Highway 99 bridge west of downtown Tenino is Tenino's oldest bridge and has the lowest sufficiency rating of any of the community's structures (60.38%) due primarily to its narrow width. The bridge was constructed of concrete in 1923 as part of the early development of the Washington Highway System and has a curb-to-curb width of 24 feet. The bridge is 66 feet long and 27 feet wide.
- **Morningside Drive.** The bridge at Morningside Drive, built in 1995, is in good condition but has a low to moderate sufficiency rating of 74.18% due to its constricted width. This rating will likely decrease as development occurs on the west side of Tenino. The bridge allows one lane of traffic and sees low traffic volumes at present; additional traffic as Lemon Hill develops is likely. These anticipated volumes, in conjunction with the existing width of the bridge and the reduction in travel speeds necessary for the bridge approach, will reduce the suitability of the structure. The bridge is 36 feet long and 16 feet wide and made from precast concrete panels.
- **McDuff Road.** The McDuff Road Bridge has the highest sufficiency rating of Tenino's bridges at 99.4%. The facility, built in 1987, is constructed of precast concrete panels and is 62 feet long. The bridge is 37 feet wide and has a curb-to-curb width of 34 feet.

System Characteristics. Preparation of this plan has included consultation of Thurston County, Thurston Regional Planning Council and the State of Washington to ensure that policies are consistent across the jurisdictions.

- **Road Types.** The functional classification of roadways in the Tenino city limits are presented in Map TS-1 and Table 4.1. With the exception of SR 507, maintenance and improvements to most roadways within city limits are the responsibility of the City of Tenino. As public streets and the properties they serve are annexed into the city limits from the unincorporated Urban Growth Area, the City will accept the additional responsibilities associated with the maintenance and improvement of the new roads. Currently, there are no roads in the Urban Growth Area. Thurston County owns and maintains the majority of the roads outside of the city limits.
- **Truck Routes.** Two locally-maintained streets serve as key truck routes in Thurston County. Old Highway 99 from SR 507 to the west city limits carries truck traffic from SR 507 to the Interstate. Wichman north of SR 507 allows trucks to connect to State Route 121. Oversized truck traffic is limited from travelling north on Old Highway 99 as a result of the low clearance trestle located three miles north of Tenino near Offut Lake Road.

Table 4.1: Street Types			
CITY LIMITS	Length (Miles)	Maintenance Responsibility	Improvement Responsibility
Minor Arterial			
SR 507 (Old Highway 99 to East city limits)	2.03	WSDOT	City/WSDOT
Old Highway 99 (West city limits to SR 507)	1.62	City	City
Major Collector			
Wichman (North City Limits to SR 507)	0.29	City	City
Old Highway 99 (North City Limits to SR 507)	0.30	City	City
Park Avenue (6 th Street to SR 507)	1.39	City	City
6 th Street (SR 507 to Park Avenue)	0.07	City	City
SR 507/Bucoda Highway (Old Highway 99 to South city limits)	0.37	WSDOT	City/WSDOT
Garfield (Old Highway 99 to Howard)	0.41	City	City
Howard (Garfield to SR 507/Sussex)	0.12	City	City
Local Access			
All Other Public Streets	10.1	City	City

Sources: Washington State Department of Transportation Functional Classification Map and Thurston Regional Planning Council.

Level of Service Standards. The City utilizes Link (A-F) level of service standards to identify the quality of service provided at peak hours for roadway segments on all arterials and major collectors within the City. Level of service, or LOS, is a calculation of how much traffic a road can carry compared to how much traffic it actually carries or is projected to carry. This is referred to as the “V/C ratio” or “volume-to-capacity ratio.” The closer the V/C ratio gets to 1 – that is, the closer volumes get to 100% of the designed carrying capacity – the more congestion a driver is likely to experience during peak travel times. While time periods evaluated can vary from one hour to several hours, the adopted standard in the Thurston region is the two-hour peak period in late afternoon, typically from 4:00 to 6:00. Table 4.2 identifies the different levels of service and how they relate to driver comfort and traffic delays.

Table 4.2: Levels of Service		
LOS	V/C Ratio	Description
A	0.00-0.60	Highest driver comfort; free-flowing
B	0.60-0.70	High degree of driver comfort; little delay
C	0.70-0.80	Acceptable level of driver comfort; some delay
D	0.80-0.90	Some driver frustration; moderate delay
E	0.90-1.00	High level of driver frustration; high levels of delay
F	1.00+	Highest level of driver frustration; excessive delays

The City of Tenino has adopted Level of Service D for its arterials and major collectors. This standard is consistent with the regional standards adopted by Thurston Regional Planning Council and is used in the 2040 Regional Transportation Plan (adoption anticipated in 2016). This level of service is characterized by rush hour delays that cause decreases in speed and congestion at key intersections, although traffic typically continues to move.

Traffic Forecast. Maps TS-2 and TS-3 illustrate the existing (2015) and forecasted (2040) LOS for the City’s arterials and most of its major collectors. This information was derived from Thurston Regional Planning Council’s 2040 Regional Transportation Demand Model and reflects projected traffic volumes during the evening commute. Projections of future traffic volumes are based on regionally-adopted population and employment forecasts distributed according to locally-adopted land use plans. In 2015, the City’s arterials and major collectors had an LOS of A, meaning traffic is generally free-flowing. Traffic is expected to significantly increase between 2015 and 2040, but the majority of the City’s main roads will continue to have an LOS of A; only one arterial/collector segment is expected to fall below the City’s established level of service.

Although the LOS for these arterial and collector roads is not likely to shift over the next 25 years, Park Avenue will likely see an increase in through-traffic as SR 507 and Old Highway 99 become more congested. This is concerning for a number of reasons. Even though Park Avenue is classified as a major collector road, it is not designed to accommodate heavy traffic associated with an arterial road; significant improvements are necessary to keep the road in good working order and accommodate higher traffic volumes. The City would also like to improve pedestrian connections between the historic downtown, Tenino City Park, and the Yelm Tenino Trail. Increased traffic on Park Avenue bisects the downtown and Parkside Elementary from these other amenities and may pose a safety hazard to students and people who walk and bike.

Figure 4.1: Artist Rendering of Old Highway 99/Sussex Intersection



Source: KPG, Inc.

System Deficiencies and Potential Projects

- **Underperforming Intersections.** Over the planning period, the City of Tenino will work to improve the Old Highway 99 intersection with Sussex Avenue, and the intersection of Sussex Avenue and

Wichman Avenue (especially if additional development occurs west of the intersection). The Main Street 507 project considered a number of goals for the intersection improvements and the downtown corridor, including improving safety, beauty, walkability, and traffic flow. Based on this effort, the City believes that the best option to balance these goals is through the construction of roundabouts at these key intersections (see Figure 4.1 and Map TS-4).

The traffic forecast also suggest that the intersection of Old Highway 99 and SR 507 west of downtown Tenino may need to be improved. Additional intersection enhancements may be necessary on Old Highway 99 as West Tenino develops. The Crowder intersection with Park Avenue may also need to be improved if significant development occurs south of the community.

- **Street Connectivity.** Tenino has a well-established street grid with excellent connectivity, essential in gracefully accommodating new development. As the City continues to develop, Tenino will strive to achieve similar levels of street connectivity to aid in distributing local traffic through new developments and limit traffic funneling to distinct points. New residential and commercial development should include highly connected street networks that connect with nearby local and through streets and/or roadways in adjacent developments. Continued development of the road network should generally avoid the use of cul-de-sacs and loop roads.
- **Road Maintenance.** The City will work to find ways to fund ongoing maintenance of existing street facilities; this maintenance has proven to be a struggle for the community. Over the next 20 years the community will work to find methods to extend minimal paving dollars. Potential options include closing existing low-volume roads or minimizing road widths (and the associated paving requirements) on streets with minimal traffic.

Figure 4.2: Artist Rendering of Downtown Tenino Improvements



Source: KPG, Inc.

- **Downtown Streetscape.** Improvements to the Sussex Avenue streetscape through downtown Tenino are desirable and needed. At present, the road is primarily oriented toward automobile travel with few desirable pedestrian or aesthetic amenities that support economic vitality of the downtown business district. Over the planning period, the community will work with WSDOT and other transportation partners to implement the improvements included in the Downtown Plan and recommended as part of the Main Street 507 project (see Figure 4.2 and Map TS-4) to improve the aesthetics of the street and make the downtown more amenable to pedestrians. Federal, State, and other transportation funding options will be pursued by the City to help pay for these improvements.
- **Traffic Congestion.** To address changes in traffic on city streets, the City should consider lowering the speed limit on Park Avenue so that SR 507 through-traffic does not divert from the highway in an effort to bypass congestion in the downtown corridor. Installation of traffic-calming devices may also be appropriate. The City will also need to address congestion on SR 507, particularly at the Wichman/Sussex and Old Highway 99/Sussex intersections. Improvements at the intersection of Old Highway 99 and SR 507 west of downtown Tenino should also be considered. Options that encourage use of Park Avenue as a high-capacity bypass route, such as widening the road or adding additional travel lanes, should be considered only as a solution of last resort.

B. RAILROADS

BNSF Railway's mainline travels in a north-south direction near the western edge of Tenino between Lemon Hill and the historic city center. A high-speed two-track route, the line is heavily used for both freight and passengers with more than 48 trains passing through Tenino daily. According to WSDOT, rail traffic is projected to increase on the line over the next 20 years. Trains do not currently stop within the community.

Industrial, residential, and commercial uses are all located near and/or adjacent to the rail corridor. The June 2016 derailment of an oil train in Mosier, Oregon has highlighted the importance of maintaining safe railway corridors; given the proximity of development adjacent to the rail corridor, a derailment would have serious negative impacts on Tenino.

The main vehicle crossing is an underpass on SR 507 that is approximately 35 feet wide with a 14' 3" vertical clearance. A second underpass also exists on Morningside Drive, though the crossing serves only one lane of traffic at this time. No other vehicle crossings exist in the community. While current crossings are adequate for existing traffic levels, development west of the tracks could strain the capacity of these crossings.

C. PEDESTRIAN TRAVEL AND AMENITIES

The City of Tenino contains a variety of amenities for pedestrians and bicyclists. These amenities, along with the flat geography of the community, make Tenino ideal to explore by foot or bike.

Existing Sidewalks. Tenino contains a relatively well-developed sidewalk network that connects residential neighborhoods near the downtown to businesses on Sussex, the City Park, and nearby schools. The City's sidewalks vary significantly in condition with some in excellent condition and others considerably degraded. Sufficient curb ramps exist in several locations within the sidewalk network.

However, inadequate ramps, which limit the ability of elderly or handicapped pedestrians to navigate are present on some of the routes, particularly Lincoln Avenue.

Priorities for sidewalk improvements are shown on Map TS-5. Tenino will identify and prioritize projects to improve degraded facilities, concentrating on areas where sidewalk connections can be made. The City will also seek to construct sidewalks in existing commercial areas and along key school/pedestrian routes. The City will also work to ensure that new sidewalk facilities are included as part of new development.

Shared Streets. Although sidewalks represent an important element in a multimodal transportation system, a sidewalk is not always necessary to meet the needs of nonmotorized transportation. The City contains several roads where residents walk in the roadway. The community believes that sharing roadways is an efficient use of resources, especially considering new sidewalk construction is not possible on every street within existing residential neighborhoods. The City will continue to encourage drivers and pedestrians to share certain roadways and will work to address any safety issues. To address speeding and safety concerns on shared roadways, the City will explore using features such as speedbumps, chicanes, and other traffic-calming solutions. When comparing overall project costs, these minor improvements will be more cost-effective than installing a complete sidewalk.

Yelm-Tenino Trail. A significant local and regional amenity for pedestrians and bicyclists as well as other forms of non-motorized transportation, the Yelm-Tenino Trail complements the City's existing sidewalk system. The trail covers 14.5 miles from Yelm to Tenino and connects to nearby Creekside Conservancy land. The Chehalis-Western Trail, a significant north-south trail located approximately 8.5 miles east of the community, offers connectivity for those coming to or from Lacey, Olympia, and Tumwater. The Yelm-Tenino Trail sits on the bed of the historic Northern Pacific Prairie Line and travels through south Tenino adjacent to City Park.

The City anticipates improving connectivity of the Yelm-Tenino Trail to the Creekside Conservancy properties and emphasizing Tenino's proximity to the existing natural trails and features. Additionally, Tenino anticipates increasing access to the trail (a County-owned and -maintained facility) from surrounding neighborhoods by establishing new trailheads in conjunction with walking paths, shared streets, sidewalks and bicycle lanes. Some of the envisioned Yelm-Tenino Trail trail connections are shown in Map TS-5.

Existing Pedestrian Amenities in Downtown. The Yelm-Tenino Trail, the City's network of sidewalks, and the Tenino's flat topography make the community a great place to travel by foot. Emphasizing these strengths will aid downtown Tenino in its continued development as the City's economic and social heart and soul. Though it does not fully function in this manner at present, the downtown area features historic buildings designed in a time when travel by foot was common. The existing sidewalk system, parking arrangement, and speed of traffic on Sussex Avenue/SR 507 do not contribute to a welcoming experience for visitors. Existing crosswalks, which are unsignalized and dependent on stopping motorists and/or gaps in traffic on State Route 507, further diminish the pedestrian possibilities for the area. To address the issues highlighted above, the City of Tenino should pursue the following projects outlined in Table 4.3:

Table 4.3 Needed Pedestrian Improvements

Deficiency	Recommended Action/Improvement
Sidewalk System	
Few sidewalks in existing neighborhoods east and west of downtown Tenino	Enhance connections/create gateways to the Yelm-Tenino Trail for neighborhoods without sidewalks
Severely degraded sidewalks in certain areas	Prioritize sidewalk improvements in areas most likely to experience pedestrian travel (see Map TS-5)
Pedestrian amenities in the west portion of Tenino	Require new sidewalks, trails and bike paths as part of future development
Trail System	
Neighborhoods without sidewalks, but close to the Yelm-Tenino trail	Enhance connections/create gateways to the trail
Downtown	
Inadequate sidewalks/pedestrian space along Sussex	Determine the feasibility of expanding the width of the sidewalk on Sussex and pursue grants to construct the improvements (see Figure 4.2).
Unclear link between downtown and park, and limited spaces for pedestrians in downtown	Continue to improve Olympia Street as a downtown outdoor marketplace and pedestrian gateway between the park, regional trails and downtown.
Inadequate crosswalks along Sussex	Determine the feasibility of enhancing crosswalks in downtown and at the Old Highway 99 and Sussex intersection.

D. TRANSIT SERVICE, ALTERNATIVE TRAVEL MODES, AND TRANSPORTATION DEMAND MANAGEMENT

Many residents in the City of Tenino commute to other communities for work. According to data collected BY TRPC between 2011 and 2013, approximately 84% of survey respondents worked outside of the community with many traveling in their own vehicles north to Olympia or Tacoma. While these commutes do not significantly impact the roadways in Tenino itself, they do affect the road networks of other jurisdictions – especially facilities such as Old Highway 99 and SR 507. Commuting also contributes the number of residents that are cost-burdened.

To help reduce the need for new road construction in Tenino and the region as well as reduce the commuting costs for area residents, the City of Tenino will seek to enhance transportation demand management by increasing opportunities to utilize transit service, vanpools, carpools and telework in the community.

Transit Service. The City of Tenino is currently served by the Rural & Tribal Transit Program (RT), a program operated by Thurston Regional Planning Council and partners such as *Together!*. RT runs two routes (shown on Map TS-1) through Tenino and offers connections to Centralia and Tumwater. However, the service is currently under-utilized by Tenino and area residents.

Vanpools. Vanpools may be available to residents for commute trips. Vanpools allow residents with similar origins and destinations to share a ride in a van provided by Intercity Transit or another transit agency. Intercity Transit has approximately 150 vanpool groups with origins and destinations throughout the Thurston County area. Vanpool trips must either begin or end within the transit system’s Public

Transportation Benefit Area. Vans travel an average of 73 miles per day (round-trip) with an average individual vanpool fare of approximately \$65 per month. Considered a premium service, vanpool riders pay most of the operating costs. No vanpools are currently known to operate in Tenino.

Carpools. Residents also carpool to destinations outside of the community. According to data collected by TRPC between 2001 and 2013, between 6% and 8% of commute trips by Tenino residents occurred by carpool. Carpools tend to be informal in nature, though some websites link people with similar origins and destinations. Carpooling can be encouraged by providing links to rideshare websites, creating a carpool board, or creating a carpool lot.

Telework. Working from home or an alternate location closer to home is also an option for residents in Tenino. According to the data from TRPC, few individuals telework at this time.

E. FUNDING

The City of Tenino is committed to providing the best transportation system for its citizens within its existing funding capabilities. The projects listed in the six-year transportation improvement program (TIP) (see Table 4.4) represent investments that will improve the transportation system's function. These projects are also included in the Capital Improvement Program in the Capital Facilities Element. The TIP assumes that existing funding sources including the Rural Community Support Program and State and Federal funding opportunities will remain at the same level.

Securing adequate long-term funding for transportation projects is difficult. However, the City may consider a number of strategies, including encouraging public/private partnerships for financing transportation projects, taking advantage of state funds such as those offered through the Transportation Improvement Board (TIB) and the Public Works Trust Fund (PWTF); encouraging the use of Local Improvement Districts (LIDs) by property owners to upgrade roads; requiring impact mitigation payments or seeking voluntary contributions from developers; and seeking out federal funding opportunities.

The ability of some projects to proceed will depend on revenue from outside grants. Where funding is not available, the project is not done. If probable funding falls short of expectations, the City will work with partners such as the Washington State Department of Transportation and Thurston County to determine viable solutions to the issues.

Tenino does not currently have a concurrency management program that evaluates the adequacy of the City's road network or a financial mechanism for new development and redevelopment to pay for their fair share of impacts to the transportation system. A concurrency management program could be implemented to address this gap. Such a program could monitor key transportation facilities, and assess current levels of service, and determine the impact of any new development proposals on adopted level of service standards. The concurrency management program could also identify any facility deficiencies and those impacts attributed to new development; review the Comprehensive Plan and other related studies for necessary improvements; secure appropriate commitment to ensure that level of service standards will be restored; and make appropriate revisions to the Six-Year TIP.

Table 4.4: 2013-2018 TIP (in order of priority)

ID	Project	Anticipated Funding Source(s)			
		Local	State	Federal	Total
1	*South Custer Street – repair, install drainage, tree removal, water main replacement, chipseal, and safety improvements as needed.	\$1,600	--	\$10,400	\$12,000
2	Old Highway 99 Bridge Replacement – replace existing bridge and approaches, add pedestrian walkway, guardrails, add traffic lanes for future planned growth, elevation changes as needed, conduit chases, and safety improvements as needed.	\$400,000	2,100,000	\$2,000,000	\$5,000,000
3	South Hayden Street – repair, widen, chipseal, and safety improvements as needed	\$400	--	\$2,600	\$3,000
4	*North Wichman Street – repair, widen, install drainage, chipseal, ADA ramp realignment, and safety improvements as needed	\$2,025	--	\$12,975	\$15,000
5	*Olympia Street South – repair, install drainage, chipseal, and safety improvements as needed	\$810	--	\$5,190	\$6,000
6	Central Avenue East – repair, install drainage, chipseal, and safety improvements as needed	\$5,575	--	\$36,725	\$41,300
7	*Park Avenue East - grading, Install storm drains, chipseal, and safety improvements as needed.	\$8,290	--	\$53,130	\$61,420
8	O'Brien Street South – repair, widen, chipseal, and safety improvements as needed	\$405	--	\$2,595	\$3,000
9	*Washington Avenue East – repair, widen, chipseal, and safety improvements as needed	\$810	--	\$5,190	\$6,000
10	Bognor Street South – repair, widen, chipseal and safety improvements as needed	\$405	--	\$2,595	\$3,000

**Project has been started or completed*

F. GOALS, POLICIES, AND ACTIONS

The City of Tenino has the following goals related to transportation. Where the jurisdictions of unincorporated Thurston County and the City of Tenino intersect, the City encourages Thurston County to adopt those goals and policies denoted with an asterisk (*).

COMMUNITY STREETS

Goal TS 1: Maximizing limited funding, Tenino has a safe and well-maintained road system.

Policy TS 1.1: Pursue and utilize funding for road improvements strategically – seeking money for the highest priority projects first. Key factors to consider include: traffic volumes, safety issues, and overall hindrances to community economic development.

Policy TS 1.2: Identify creative methods to limit the costs associated with roadway construction and repair.

ACTION: Ensure that street improvements do not increase the width of existing roadways, especially for local access streets that run perpendicular to Sussex.

Policy TS 1.3: Evaluate and, where possible, implement alternative mechanisms to fund transportation projects, including transportation impact fees.

Policy TS 1.4: Require developers to fund their fair share of needed road improvements.

Policy TS 1.5: Partner with Thurston County and Thurston Regional Planning Council on projects of regional significance that are located within Tenino’s street network.

Policy TS 1.6: Evaluate improvement options for the intersection of Old Highway 99 and State Route 507 (just west of downtown Tenino).

Goal TS 2: New development supports the construction and expansion of complete streets.

Policy TS 2.1: Require road connections, half-street improvements and road stubs as part of new development.

Policy TS 2.2: Dead-end streets and cul-de-sacs should be used only on minor local streets where no other alternative design is possible

Goal TS 3: Sussex Avenue (SR 507) is an aesthetically-pleasing streetscape that has enhanced safety features for people who walk, bike, and travel by car.

Policy TS 3.1: Implement the improvements proposed as part of the Main Street 507 project.

ACTION: Seek out and obtain funding for the design and acquisition of right-of-way for the project.

ACTION: Improve the streetscape in downtown Tenino.

ACTION: Install gateway improvements at the Ritter Street triangle.

ACTION: Construct a roundabout at the intersection of Old Highway 99 and Sussex Avenue.

Policy TS 3.2: Seek out funding to improve the Wichman/Sussex intersection.

RAILROADS

Goal TS 4: Increasing rail traffic does not detract from the quality of life in Tenino.

Policy TS 4.1: Consider a variety of measures to minimize the impact of the railroad on Tenino including placing commercial or industrial land uses near the train tracks, sound proofing as part of future construction, and considering strategies for rail noise mitigation (given the proximity of the rail to nearby residences).

Policy TS 4.2: Develop a plan to address safety concerns on the rail corridor.

PEDESTRIAN TRAVEL AND AMENITIES

Goal TS 5: Tenino has a walking and bicycling system that makes it safe and easy for people to travel through Tenino without using their cars.

Policy TS 5.1: Identify areas of deficient sidewalks (due to either size or condition) and prioritize improvements in those areas.

Policy TS 5.2: Work to achieve the new sidewalks shown on Map TS-5.

Policy TS 5.3: Require new development to construct sidewalks unless the amenities are deemed unnecessary by the director of Public works and the City Planner.

Policy TS 5.4: Establish neighborhood pathways to improve access to the Yelm-Tenino Trail.

Goal TS 6: Tenino has a highly walkable downtown with great pedestrian amenities including wide sidewalks, safe crossings, and opportunities to sit outside.

Policy TS 6.1: Strive to implement the findings of the Main Street 507 study.

Policy TS 6.2: Work to establish Olympia Street as a link between downtown and Tenino City Park, a location for community events, and an outdoor marketplace.

Policy TS 6.3: Allow and encourage businesses to legally establish pedestrian amenities in the public right-of-way.

Goal TS 7: Tenino has a robust network of sidewalks and trails throughout the City.

Policy TS 7.1: Prioritize the improvement of sidewalks in the areas shown on Map TS-5.

Policy TS 7.2: Install traffic-calming improvements on certain shared roadways to increase pedestrian safety.

Policy TS 7.3: Require sidewalks along streets in new residential and commercial developments.

Policy TS 7.4: Ensure that new sidewalks connect to existing sidewalks and or trails in the community.

Policy TS 7.5: Seek to improve the comfort of pedestrians as they cross Sussex (SR 507) and walk through the downtown.

Goal TS 8: Tenino has complete streets designed to accommodate all users.

Policy TS 8.1: Consider adopting a complete streets ordinance.

TRANSIT SERVICE, ALTERNATE TRAVEL MODES, AND TRANSPORTATION DEMAND MANAGEMENT

***Goal TS 9: Rural & Tribal Transportation ridership by Tenino and area residents is robust and strong.**

****Policy TS 9.1:*** Collaborate with Thurston Regional Planning Council and Thurston County to ensure that RT receives continued funding for operations and is adequately funded into the future.

Policy TS 9.2: Explore options for constructing a transfer station in Tenino for RT riders.

****Policy TS 9.3:*** Continue to inform area residents about available bus routes.

****Policy TS 9.4:*** Continue to advocate for increased bus service to the Tenino area.

****Policy TS 9.5:*** Work with RT to ensure that low-income residents are well served by the system.

Goal TS 10: Tenino residents are carpoolers and vanpoolers.

Policy TS 10.1: Work to partner with a community business or organization to utilize their parking lot/vacant land as a park and ride or park and pool facility.

Policy TS 10.2: Distribute information about existing vanpool and carpool resources to encourage more shared trips.

Goal TS 11: Tenino residents take advantage of opportunities to telework.

FUNDING

Goal TS 12: Tenino anticipates needed transportation improvements and plans accordingly.

Policy TS 12.1: Attempt to secure adequate long-term funding sources for transportation through a variety of methods.

Policy TS 12.2: Ensure any transportation improvements or strategies that require impact mitigation are constructed and/or financed concurrently with development. This means that the necessary project will either be constructed at the time of development, or sufficient financial commitment will be available to ensure it will be constructed within six years.

Policy TS 12.3: Adopt a concurrency management program to ensure that the impacts of development on infrastructure are sufficiently addressed.

Policy TS 12.4: Require developers to contribute their fair share toward transportation improvements needed to mitigate the impacts of their development.

Policy TS 12.5: When deemed appropriate by the City Council, enter into latecomer agreements where substantial investments by one party may be legitimately reimbursed by others.

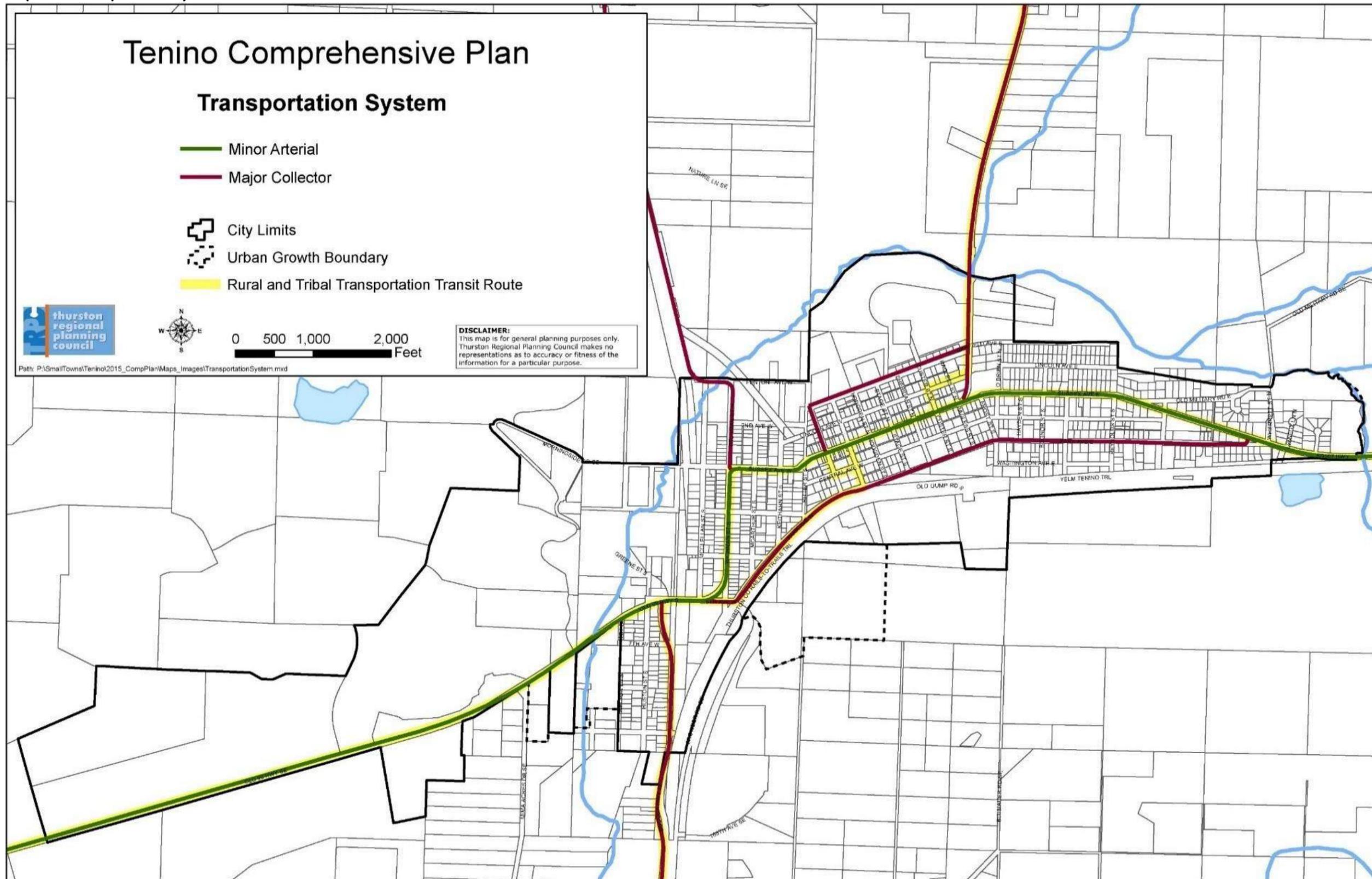
Policy TS 12.6: When necessary, adapt plans, policies, and projects if probable funding falls short of expectations.

***Goal TS 13: Tenino partners with neighboring cities, Thurston County, Washington State, and other transportation providers to provide a holistic multi-modal transportation system.**

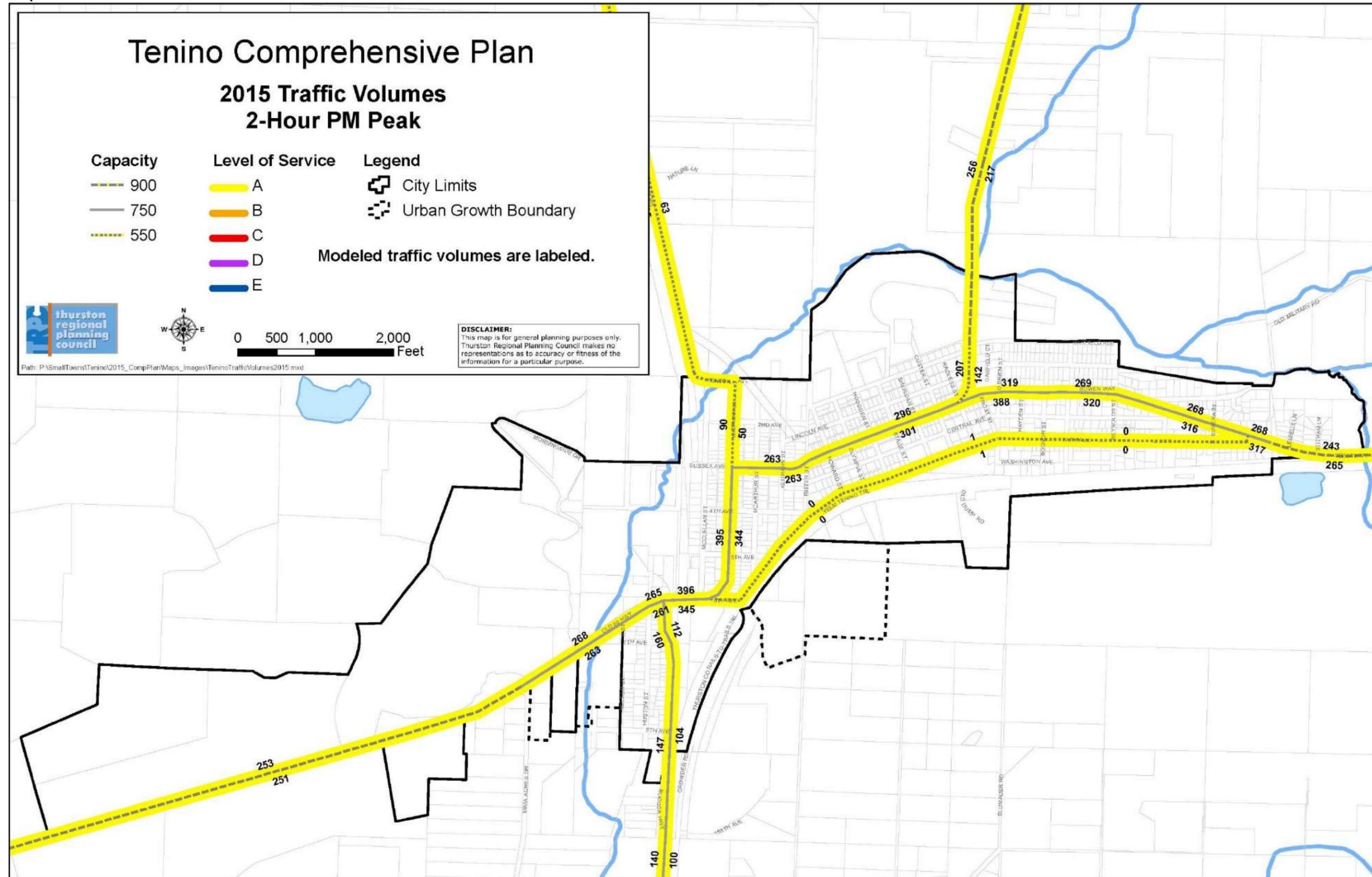
***Policy TS 13.1:** Work with other jurisdictions to plan, fund, and implement multi-jurisdictional projects necessary to meet shared transportation needs.

***Policy TS 13.2:** Thurston County's Capital Facilities Plan and any applicable levels of service shall govern in the unincorporated UGA.

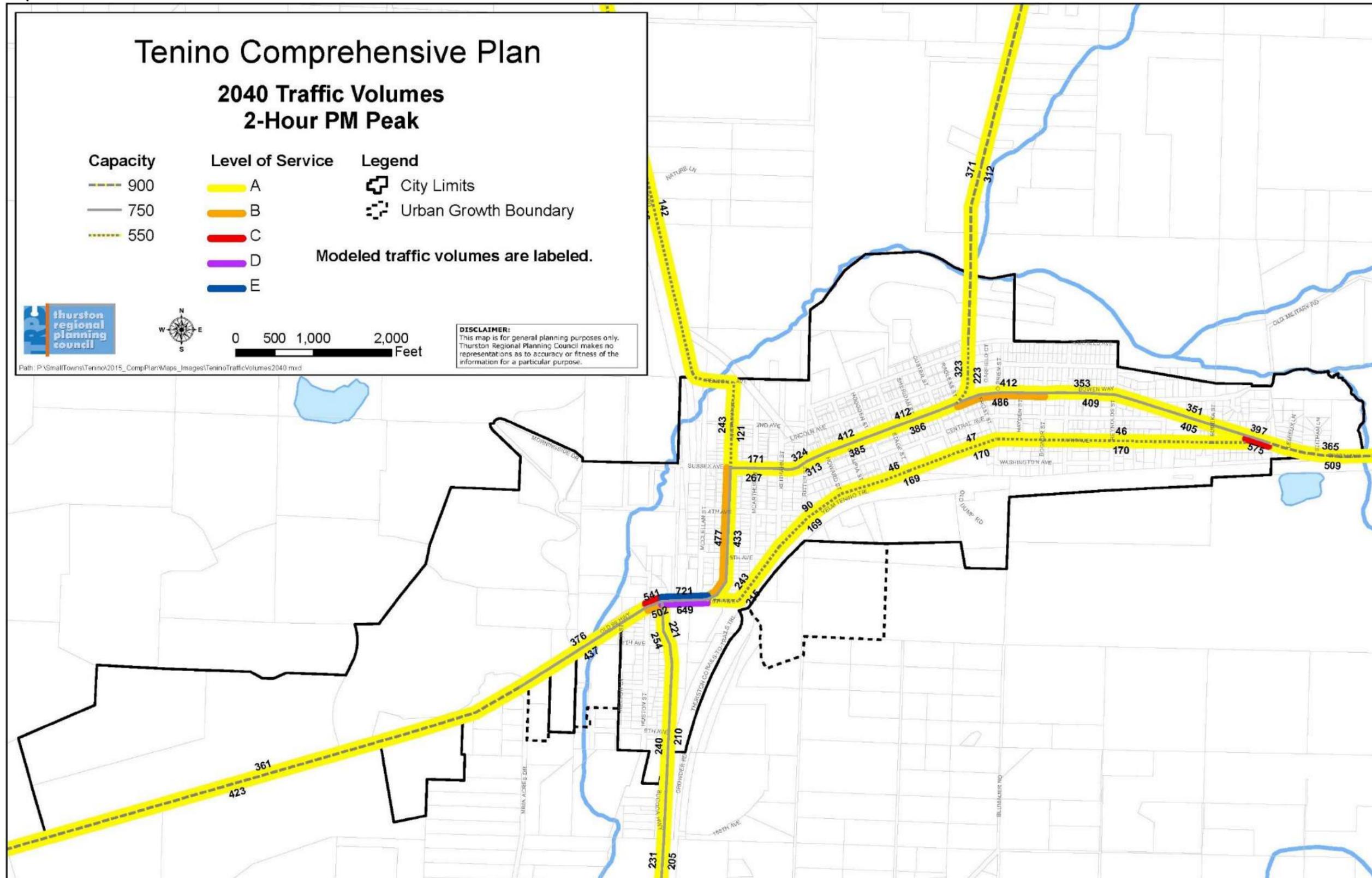
Map TS-1: Transportation System



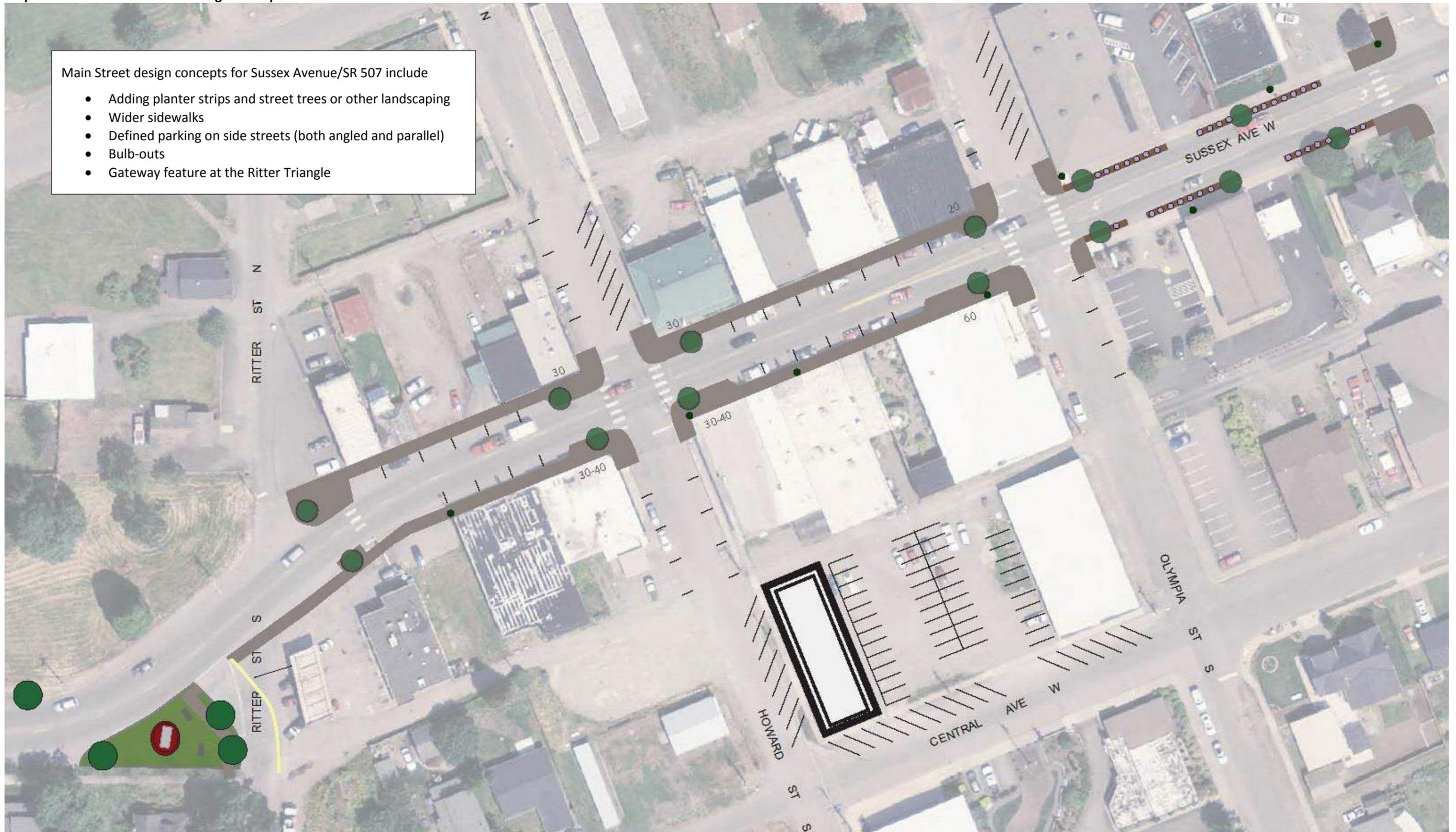
Map TS-2: 2015 Traffic Volumes



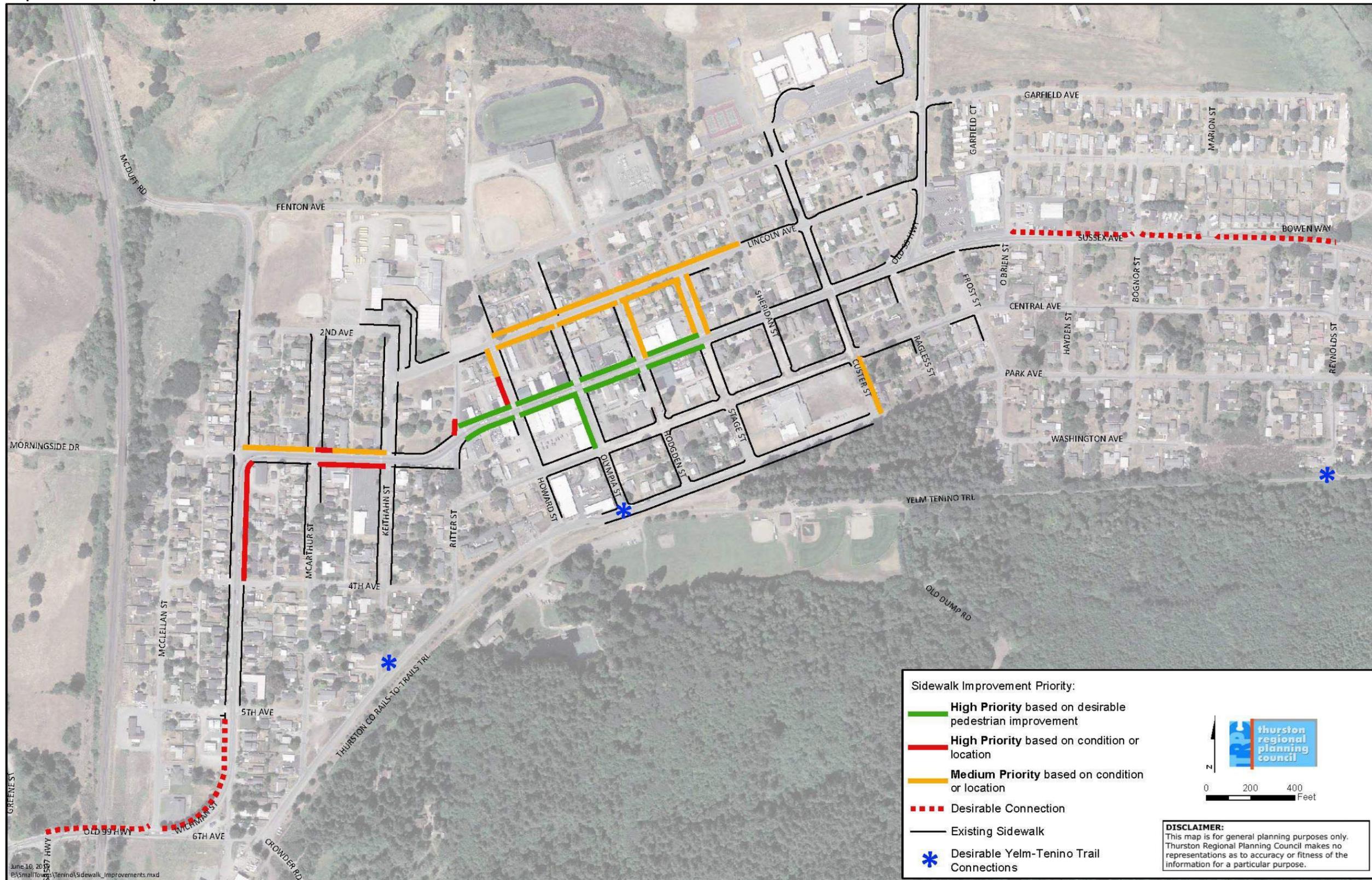
Map TS-3: 2040 Traffic Volumes



Map TS-4: Tenino Main Street Design Concepts



Map TS-5: Sidewalk Improvement Priorities



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CHAPTER 5. CAPITAL FACILITIES

In order to comply with state laws, maintain and improve City services and accommodate orderly growth, the City of Tenino anticipates significant investment in capital facilities over the next several years. A number of issues however, will make this necessary investment difficult. This plan is intended to identify anticipated capital facility costs over the next 20 years, and begin to chart a course towards the successful development and maintenance of the community's facilities.

Community streets and pedestrian facilities are generally addressed as part of Chapter 4, Transportation; however, transportation-related projects are also identified in the 6-year Capital Improvement Program contained in this chapter (see Table 5.8).

A. ISSUES AND STRATEGIES

After reviewing each of the necessary facility improvements required within the City of Tenino over the next 20 years, a number of issues became apparent. The following list of issues and strategies provides an overview of this Capital Facilities Plan.

Buildings and Tenino City Park (General Fund Expenditures)

- **Issue 1: Existing city-owned facilities and Tenino City Park do a poor job of paying for themselves. The General Fund is insufficient to provide for the needed improvements without the diligent pursuit of grants and/or the identification of other funding mechanisms.**

Strategy: Prioritize the expenditures for improvements and the pursuit of grants for particular structures/facilities.

Strategy: Identify methods to better balance the revenues and costs (including improvement costs) of City-owned facilities.

Strategy: Better advertise the ability to rent City-owned facilities, publish usage rates and establish a clear point of contact for the facilities.

Strategy: Establish mechanisms to ensure usage fees for the park and campground are collected.

Roads and Bridges (General Fund Expenditures)

- **Issue 2: Additional pass-through traffic is anticipated along Highway 507. Key intersections, such as those at Sussex/Old Highway 99 and Sussex/Wichman,**

are anticipated to become more difficult to navigate as additional traffic utilizes the route.

Strategy: Identify methods to enhance the character of Sussex Avenue and pursue grant funds to limit the impacts of pass through traffic on downtown Tenino.

Strategy: Identify desired improvements for the intersections of Sussex/Old Highway 99 and Sussex/Wichman and save grant-matching funds for the projects.

- **Issue 3 – Maintenance budgets for existing roads and streets are minimal and are insufficient to fund necessary improvements.**

Strategy: Prioritize the use of existing chip seal funds on streets that experience the highest volumes of traffic and are in the most need of repairs.

- **Issue 4 – At least one of Tenino’s three bridges is in need of replacement within the next 10 to 20 years.**

Strategy: Collaborate with Thurston County, Thurston Regional Planning Council, and the State of Washington to develop a strategy to repair or replace the Old Highway 99 Bridge on the west end of Tenino.

- **Issue 5 – Several sidewalks are in need of repair.**

Strategy: Pursue grants for priority sidewalk improvements in the community (see priorities on Map TS-5).

Stormwater, Water and Wastewater (Other Expenditures)

- **Issue 6 – Existing water rights are insufficient to accommodate the anticipated growth of Tenino.**

Strategy: Pursue new water rights and require individuals with water rights to transfer them to the City as a condition of development/annexation.

Strategy: Work to encourage or incentivize water conservation and reduce the per capita consumption of water.

- **Issue 7 – Municipal well sites are clustered near each other and run the risk of one pollutant source contaminating the community’s entire water supply.**

Strategy: Drill a new well in a location other than the existing well site.

- **Issue 8 – No methods to use the byproducts of wastewater treatment (sludge and reclaimed water) are currently being utilized.**

Strategy: Identify the best methods to utilize the byproducts of wastewater treatment.

- **Issue 9 – Strategies to treat stormwater and prevent flooding are unclear.**

Strategy: Pursue grant funding to develop a stormwater management plan to better understand how stormwater travels through the community.

Strategy: Consider creating a stormwater utility.

Strategy: Clarify the existing standards and review process for stormwater in Tenino.

B. COMMUNITY BUILDINGS

City-Owned Buildings. The City of Tenino contains a number of publically-owned buildings. These buildings are described below. Proposed expenditures for City buildings are presented in the Capital Improvement Program.

- **Tenino City Hall.** Tenino City Hall occupies the former quarry house for the Hercules Sandstone Company. Built in 1907 with local Tenino sandstone, the building was donated to the City and moved to its current location in 1922. In 1950, a concrete block addition on the south side of the building was constructed. The building features rough-cut sandstone masonry on the first floor with smooth-cut sandstone on the second floor, and the hipped roof has broad eaves.

City Hall contains many of the public offices, as well as the City Council Chambers and the municipal court for the community. The building was extensively renovated in 1987 and brought into compliance with the American Disabilities Act in 2011 and 2012. Over the next 20 years, the building will likely require a new roof, carpets and flooring, as well as improvements/repairs to the sandstone masonry.

- **Tenino Police Station (John Dowies Memorial Building).** Located on McClellan Avenue, the Tenino Police station was constructed in 1996 and is in good condition. Necessary improvements include security enhancements to the lobby and perimeter fencing to encourage visitors to only use the front door. Additional paving to improve ingress and egress to the parking lot may also be necessary.
- **Storage Building at Police Station.** The evidence storage building at the Tenino Police Station was constructed in 2011. The building is in good condition.
- **Tenino Library.** The Tenino Timberland Regional Library building was donated to the City and remodeled for its current use in 1987. The City expanded the building around 1990; a new roof was added to the structure in 2012 and new broadband cable was installed about the same time. Over the next 20 years, the building will require new heating and air conditioning, a new entrance, and new flooring. Additional electrical outlets would benefit computer facilities but is not a priority at this time.

Operational costs of the Tenino Timberland Regional Library, including staffing and materials, are funded by the Timberland Regional Library system. The City of Tenino owns the building and funds utilities, janitorial service, and maintenance of the structure.

- **Tenino Train Depot Museum.** The Tenino Train Depot, a structure on the National Register of Historic Places, was constructed in 1914 along the Northern Pacific railroad line. The building was moved to its present location in City Park in 1975 and has been operated as a volunteer-run

museum since 1979. The building was recently upgraded with a new electric heat pump and insulated flooring as part of a grant the City received. The structure also needs a new roof in the next 15 to 20 years.

The Tenino Train Depot is owned by the City of Tenino, and the museum is operated by a non-profit 501(c)3 organization. The City of Tenino funds building insurance and utilities for the structure and does not collect any rent for the use of the building.

- **Ticknor School.** The historic Ticknor one-room school house was built in the Skookumchuck Valley in 1934. The building was moved near the Tenino Train Depot Museum in 2002, and extensively renovated between 2002 and 2012. The historic school opened to visitors in 2012 and is available for tours by Tenino Train Depot Museum patrons.
- **Quarry House.** The Quarry House, constructed as the office of the Tenino Sandstone Company (in approximately 1900), is located at the west end of Tenino City Park, near the Tenino Train Depot Museum and War Memorial (Quarry) Pool. The building is a rectangular one-story wood frame structure with a hipped roof that extends over the northwest portion of the building to cover a front porch. Stairs to the porch are made of sandstone and the roof of the entryway is supported by round rough-cut sandstone pillars.

The Quarry House functions as a community gathering space for Tenino and is rented by individuals interested in utilizing the space. In the early 2000s, the City spent \$50,000 for a new foundation, linoleum and paint for the structure, and in 2013 the City received a grant to add insulation to the attic and improve the heat pump. Over the next 6 to 20 years, the building will require a new kitchen; insulation in the walls; updated electrical; new plumbing; and a new roof. Current rents for the facility are unlikely to provide the funding necessary for these improvements given the current fee structure and usage rates.

- **Tenino Park Restrooms.** Two restroom facilities serve Tenino City Park. These restrooms are not heated, are not designed for ADA accessibility, and are currently in poor condition. The facilities are small and contain a single toilet in the female bathroom and one toilet and a urinal in the male restroom. Over the next 20 years, the City anticipates replacing the structures with facilities that contain additional toilet stalls, and shower facilities in the restroom nearest the campground.
- **City Park Concession Stand.** The City Park concession stand, constructed in 1995, offers a location to sell food to park patrons. The concession stand also houses some maintenance equipment and includes restroom facilities. The facility is rented out for a nominal price during the baseball and soccer season. Although it is in good condition, the roof will likely need to be replaced in the next 20 years. Converting an existing toilet stall to a shower facility to promote camping at the park should also be considered before funding is pursued to construct new park restrooms.
- **Public Works Shop on Park.** The Park Avenue Public Works shop was constructed in 2007. The pole framed structure houses machinery and workspace for public works employees and is in good condition, though another building for equipment storage may be desirable in the future.
- **Public Works Shop on Morningside Drive.** The Morningside Drive Public Works shop was constructed in 1950 and expanded in 1980. The building houses city equipment and is used to repair grinder pumps for the sewer system. The building is in fair condition and will likely need a new roof, garage doors, and concrete in the maintenance bays over the next 20 years. In the future, the City may want to consider selling the facility to invest further in the Public Works shop along Park Avenue; combining the use of the facility and the food warehouse; or renting or utilizing the building for some other purpose.

- **Food Warehouse.** The food warehouse, constructed in 2007, offers space for non-profit organizations to store food in the community. The pole framed structure is in good condition, though the facility does not contain any water or bathroom facilities. The warehouse is located directly east of the Public Works Shop on Morningside, and experiences little use at present, though improvements such as bathrooms or a sink could encourage the further use of the facility. An asphalt parking lot may be desired in the future should the use of the facility increase or change.
- **Well and Pump Houses.** Municipal wells and pumps are situated in buildings located near Tenino Middle School. These buildings are in good condition, but installing new safety harnesses on the roof of Well 3 and new electrical service may be necessary over the next 20 years. Additional ventilation in areas where treatment chemicals are stored should also be considered.
- **Wastewater Treatment Buildings.** Two buildings constructed in 2009 support the operation of the Tenino Wastewater Treatment Plant. One of the buildings houses the laboratory needed to test water treated at the wastewater treatment plant and the other houses the mechanical equipment necessary to run the plant. The structures are relatively new and are not anticipated to need significant upgrades over the next 20 years.
- **Dog Kennel at Reservoir.** The dog kennel at the reservoir was constructed in the 1990s. The facility houses lost dogs and will require better lighting, heat and potentially some outdoor kennels over the next 20 years.

Buildings Owned by Other Agencies. In addition to these structures, the following public agencies have buildings in the City of Tenino.

- **Fire Protection.** Thurston Fire District #12 provides the City of Tenino with EMS and Fire Protection on a contract-basis. The current contract is valid until the year 2017. The district has four stations serving a 44 square mile area, including a main station located directly south of Tenino City Hall. The district is approximately 75% volunteer firefighters and is overseen by three elected Fire Commissioners.
- **Tenino Schools.** The Tenino School District consists of Parkside Elementary (K-2), Tenino Elementary (3-5), Tenino Middle School (grades 6-8), and Tenino High School (grades 9-12). Parkside Elementary was built in the 1930s and extensively remodeled in the late 1980s. The other three schools were built in the 1970s. The schools are in various states of disrepair and the school district recently passed a bond that will help cover needed maintenance to the facilities and any necessary enhancements to accommodate the anticipated growth of the school district.

C. CITY EQUIPMENT

Existing City Equipment. The City of Tenino owns a variety of equipment for city operations. Existing equipment and its condition is summarized in Table 5.1. Equipment quality ranges from very good to poor and much of it will need to be repaired or replaced over the next 20 years. Key pieces of equipment, such as pickups, backhoes, dump trucks, and police cars, are essential to city functions and should especially be budgeted for and replaced as the equipment begins to deteriorate. The City of Tenino has historically purchased used vehicles and equipment or rented specialty equipment for certain tasks in order to limit replacement costs. These solutions should continue to be utilized, though they do have drawbacks.

Purchasing used equipment allows the City to obtain equipment at a less expensive rate compared to buying new equipment but often requires Tenino to incur additional repair and maintenance costs. The likelihood of necessary repairs given known facts about the make of the vehicles and the prior use of the equipment should be considered before purchasing items.

Renting or borrowing should be considered for equipment that is not used frequently or is not important for the day-to-day operations of the City. The availability of nearby rental equipment and the cost to rent the apparatus should be evaluated prior to purchasing equipment.

Table 5.1: Existing City Equipment				
Equipment	Type	Importance for City Operations	Frequency of Use	Condition
Public Works				
1960 Huber Road Grader	Grader	Medium	Monthly, Irregular	Poor
1986 Street Sweeper	Street Sweeper	Medium	Irregular	Poor
1990 Kenwo/Dump Truck	Dump Truck	High	Monthly, Irregular	Fair
1992 Ford VACCULNR LT9/TM	Vacuum Truck	High	Monthly	Fair
1997 Ford F-150	Truck		Weekly	Fair
1997 Bubba - Trailer/Well-Generator	Trailer	High	Irregular	Good
2000 Ford F-350	Truck	High	Weekly	Good
2001 New Holland TS110 Tractor	Tractor	Low, Medium	Irregular	Fair
2001 Chevy	Truck	Medium	Irregular	Fair
2005 Chevy Extended Cab	Truck	High	Daily	Fair
2005 Ford Ranger	Truck	High	Daily	Fair
2006 Vermeer Chipper	Chipper	Low	Irregular	Good
2008 Kubota Lawn Mower	Mower	High	Weekly	Good
2009 Komatsu/PC35MR-3	Mini-Excavator	High	Monthly	Good
2010 Kimbel - Trailer	Trailer	High	Monthly	Good
2013 Caterpillar Backhoe/Loader	Backhoe/Loader	High	Weekly	Good
John Deere Tractor with Rotary Cutter	Tractor/Mower	Medium	Monthly	Fair
Police				
2003 Ford Crown Victoria	Police Car	High	Daily	Good
2006 Ford Crown Victoria	Police Car	High	Daily	Good
2007 Ford Crown Victoria	Police Car	High	Daily	Good
2007 Ford Crown Victoria	Police Car	High	Daily	Good
2008 Ford Crown Victoria	Police Car	High	Daily	Good

Anticipated Expenditures. Anticipated equipment purchases over the next six years are listed in the Six-Year Capital Improvement Program (see Table 5.8, located at the end of this chapter).

D. STORMWATER MANAGEMENT

Tenino sits lower in elevation than much of the surrounding area. Storms generate heavy runoff from the surrounding hillsides, straining the capacity of Scatter Creek, raising groundwater tables, and causing localized flooding. Flooding and drainage problems carry surface pollutants into Scatter Creek and Tenino’s aquifer as well as damage streets, sidewalks, and buildings.

The City maintains a variety of storm drainage facilities to address these issues, but additional improvements can be made. Flows along Scatter Creek are impeded at the Burlington Northern rail line, where an inadequate culvert causes water to flow above the stream bank and onto Morningside Drive. Drainage issues are also present at Huston Street, Park Avenue, and Fifth Street.

Level of Service. Tenino’s stormwater management standards do not provide clear guidance for the City or developers and property owners. While standards are being developed, all new housing, commercial developments, and major remodels in the City of Tenino are required to provide stormwater management on site. Stormwater collection and disposal systems are required to be capable of containing a water volume equivalent to a 25-year, 24-hour storm event.

Concurrency ensures consistency in land use approval and the development of adequate public facilities as plans are implemented. It also prevents development that is inconsistent with the public facilities necessary to support the development. Concurrency for stormwater purposes is established at the point in the development process when impervious street surfaces are installed. Best management practices for water quality are required for all new stormwater outfalls and systems.

Proposed Projects and Sources of Funding. To address stormwater issues, a variety of stormwater system improvements should be pursued (see Table 5.2).

Table 5.2: Needed Stormwater System Improvements	
Deficiency	Recommended Action/Improvement
Stormwater System	
Storm Drainage on Morningside	Install drainage to accommodate stormwater along the roadway.
Flooding at Fifth and Park	Install a facility to store stormwater traveling from the hillside behind City Park to Fifth and Park.
Flooding at Huston Street	Install a facility to reduce flooding in the area.
Peak flows and pollutants associated with stormwater system from Marion/Bognor to Scatter Creek	Add retention facility(s) to slow stormwater flows and allow pollutants to settle from the water.
Impediments on Scatter Creek	
Inadequate culvert along Scatter Creek at the BNSF mainline	Attempt to collaborate with BNSF to install an adequately-sized culvert.
Inadequate culverts and other stream-flow impediments along Scatter Creek	Collaborate to remove impediments to Scatter Creek flows to help reduce flooding.

In addition to these projects, the City of Tenino should consider the development of a stormwater management plan that identifies potential projects; this would represent a major component in establishing a stormwater utility should the City decided to pursue one. A Community Development Block Grant could be an appropriate source of funding for this type of project.

Tenino has identified the following are goals and policies for stormwater management.

E. WATER SYSTEM

The City of Tenino water system serves 710 customers and pumps roughly 4.1 million gallons of water per month. The community has groundwater rights for 270 acre-feet per year, with a maximum instantaneous pumping rate of 700 gallons per minute. Existing water rights are approved by the Department of Health to serve approximately 1,236 equivalent residential units (ERUs). An ERU represents the average amount of water used by a single-family dwelling. The measurement permits the comparison between commercial and multi-family water usage to that of a typical detached single-family dwelling.

As discussed in Chapter 3 of this plan, the number of dwelling units is anticipated to double over the 20-year planning period, exceeding the City’s existing water rights. Without the acquisition of additional water, the City’s continued growth will be impacted.

System Characteristics

- Water Source.** The City of Tenino currently owns and operates two wells (Well No. 1 and Well No. 3) located near Tenino Middle School. Well No. 2 is located in the vicinity of the other two wells but is no longer used due to excessive sand production. Information about the wells are provided in Table 5.3 and Map CF-1. The wells pump water associated with Tenino’s water rights which allow a maximum annual withdrawal of 270 acre-feet of water (approximately 87,979,886 gallons) at a maximum instantaneous withdrawal rate of 700 gallons per minute.

	Well No. 1	Well No. 3
Installation Date	1967	1994
Depth	94 feet	93 feet
Installed Pump Capacity	300 gallons per minute	400 gallons per minute
Maximum Instantaneous Flow Rate	300 gallons per minute	400 gallons per minute
Maximum Annual Volume	196 acre-feet per year	74 acre-feet per year 196 secondary
Treatment	Sodium hypochlorite, pH adjustment for corrosion control	Sodium hypochlorite, pH adjustment for corrosion control

- Water Storage.** The City of Tenino has two existing glass-lined steel tanks located on Lemon Hill, west of downtown Tenino. The tanks, built in 1994, are in good condition and have a combined storage volume of approximately 550,000 gallons; storage capacity is likely adequate for the next 15 years. If a significant amount of development occurs in western Tenino as is anticipated additional storage capacity will likely be needed by 2028.

- Water Distribution.** The City of Tenino water system includes 14.4 miles of distribution pipes (see Table 5.4 and Map CF-1). Of these pipes, approximately 85% are asbestos cement (AC), 16% are polyvinyl chloride (PVC) or high-density polyethylene (HDPE), and around 4% of the pipes are galvanized iron less than 4 inches in size; the galvanized iron pipes have a tendency to corrode and leak.

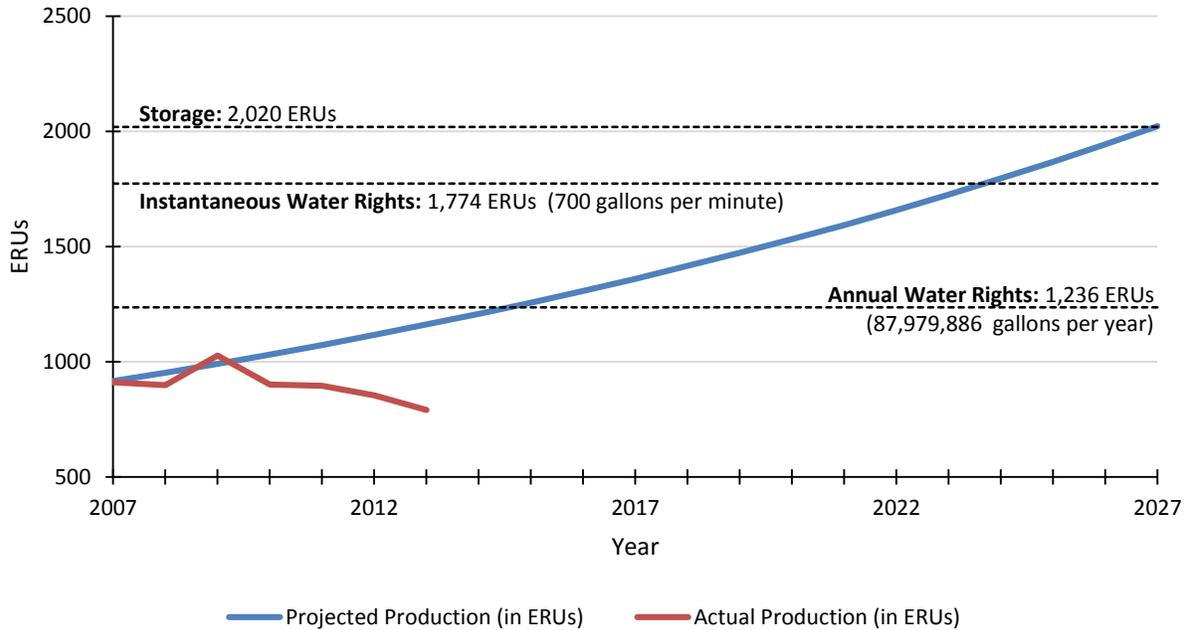
Table 5.4. Water Distribution System Characteristics					
Pipe Size (inches)	Type of Pipe (in lineal feet)				Total
	PVC and HDPE	Asbestos Cement	Ductile Iron/Cast	Galvanized Iron	
14	-	-	160	-	160
12	-	-	1,990	-	1,990
10	-	-	-	-	-
8	3,132	21,102	-	-	24,234
6	1,993	30,140	-	-	32,133
4	344	12,339	-	-	12,683
< 4	1,398	-	-	3,213	4,611
TOTAL	6,867	63,581	2,150	3,213	75,811

Projected Water Demand. Figure 5.1 shows the relationship between the projected and actual production of Tenino City water. Water consumption in Tenino has generally decreased since 2004. However, additional residential and commercial development combined with a reduction in the number of residential unit vacancies will see the water usage approach the City’s allowed annual water right. Conservation measures may extend the available supply of water, but new water rights also need to be pursued in order to accommodate anticipated growth and demand. This is especially true of West Tenino.

- Instantaneous Water Rights.** Instantaneous water rights are sufficient for the next 15 years or so but is likely inadequate to address long term needs. Washington State law requires the instantaneous withdrawal rate (or total source capacity) to meet or exceed the estimated Maximum Day Demand for a community. According to the 2010 Comprehensive Water System Plan, the Maximum Day Demand for Tenino is anticipated to be 755 gallons per minute by 2028 – 55 gallons more than the current water right.
- Pursuing Additional Water Rights.** The City of Tenino is located within the Upper Chehalis Watershed (Water Resource Inventory Area 23). According to the Washington State Department of Ecology (Ecology), “the Chehalis watershed is one of the most intensely farmed basins in Western Washington, and much of the water has already been spoken for.” (Ecology Publication Number 11-11-027). In order to maintain and ensure adequate water quality and fish migration, water usage has been further restricted. In 2015, a severe drought caused Ecology to limit water rights holders from withdrawing water from the Chehalis basin. Although this affected primarily agricultural users, it highlights the difficulty in obtaining new water rights, even in an urban environment. If water rights are not secured in time to serve the additional growth, the City will work with the Washington State Department of Ecology to identify a solution, which may include water conservation projects and system improvements that reduce water leakage. Development

of West Tenino relies on the developer bringing in water rights; this may slow the pace of development.

Figure 5.1: Water System Limitations



Deficiencies and Recommended Improvements. Tenino’s the water system has a number of deficiencies that must be addressed over the next 20 years. Many of these deficiencies are reviewed in Table 5.5. For a complete list of system deficiencies, please reference the most recent City of Tenino Water System Plan, adopted herein by reference.

Table 5.5: Water System Deficiencies and Recommended Improvements	
Deficiency	Recommended Action/Improvement
Water Quality	
No deficiency is currently present. However, an additional well should be developed to ensure that no contamination of the water source occurs.	Drill an additional well in a location other than near Wells 1 and 3. Wells could potentially be located on city-owned land in the Park Trail Subdivision and the Ragless First Addition to Tenino Subdivision.
Source of Supply	
Annual water withdrawal is not likely to be sufficient for the six-year planning period. Instantaneous withdrawals are likely sufficient for the six-year period, but not for the coming 20 years.	Acquire new annual and instantaneous water rights. Implement at least 200 to 300 gallons per minute of additional source capacity as part of any significant development in the western portion of the community, in addition to acquiring sufficient rights for yearly use. New wells constructed in West Tenino will also increase overall water system reliability.

Table 5.5: Water System Deficiencies and Recommended Improvements (continued)

Deficiency	Recommended Action/Improvement
Storage	
Storage volume is adequate for the majority of the 20-year period. However, storage is recommended as part of any significant development in West Tenino to accommodate future demands related to fire flow service.	Construct a new reservoir in west Tenino.
Distribution	
Galvanized pipes with tendency to leak.	Systematically replace all galvanized small diameter distribution pipe.
No distribution system is present in the western portion of Tenino.	Install distribution grid as part of development in west Tenino.
Buildings	
Metal corrosion in well houses due to insufficient venting in areas where treatment chemicals are stored.	Add ventilation fans, repaint corroded piping/valves or store chemicals elsewhere.

Potential Projects. The projects found in Table 5.6 have been identified as the primary capital improvement projects to be completed over the next 20 years within the City of Tenino Water System Plan. For a complete explanation of these projects, please refer to the plan adopted herein by reference.

Table 5.6: Needed Water System Improvements

Improvement	Purpose	Priority	Planning Period
Small Diameter Pipe Replacement	Needed to reduce distribution system leakage and prevent future problems associated with emergency repairs and localized contamination from small cast iron and steel pipe	Moderate	6-Year 20-Year
Southwest UGA Source and Storage	Needed to establish water serve to West Tenino	Moderate	6-Year
Southwest UGA Primary Distribution Grid	Needed to establish water serve to West Tenino	Moderate	6-Year
Lemon Hill Booster Station	Needed to establish water serve on portions of Lemon Hill	Moderate	20-Year
Water Right Acquisition	Needed to ensure sufficient water is available for future growth projections	High	20-Year
Fourth well	Needed to ensure a clean water source if Wells 1 and 3 become contaminated	High	6-Year
Ventilation of Chemical Storage Areas	Needed to prevent corrosion of well head piping and pumps	Moderate to High	6-Year

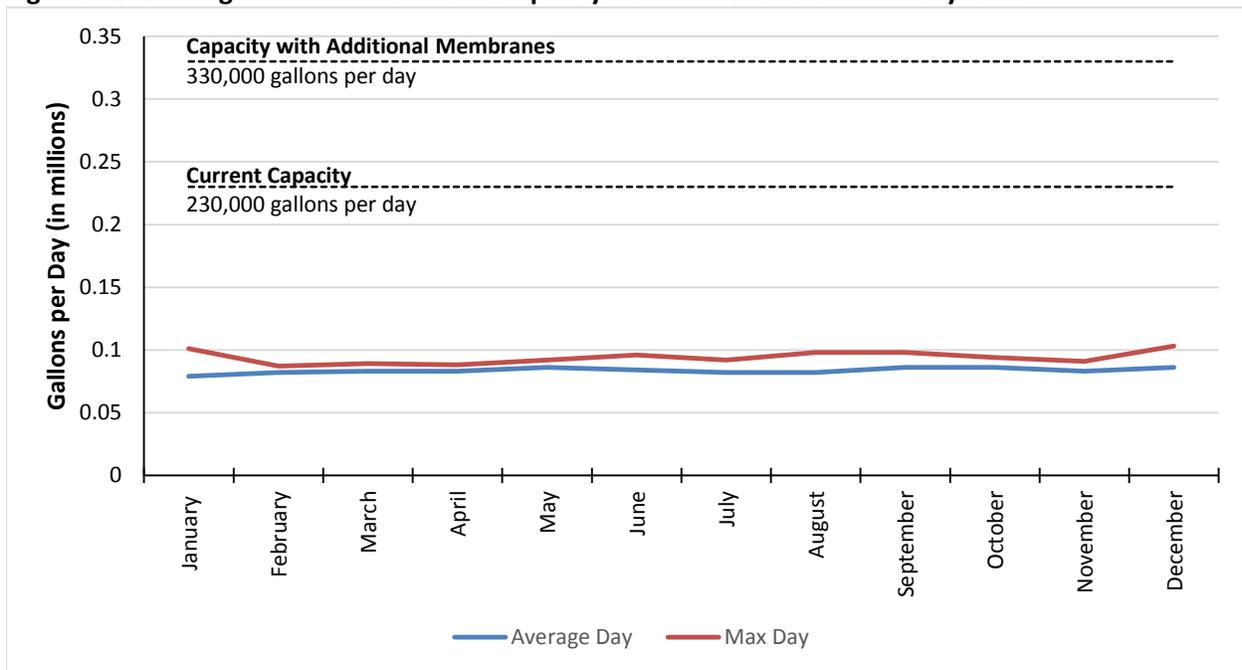
Level of Service. The acceptable level of service for water utilities should be governed by the fire flow requirements found in the Uniform Fire Code. Concurrency for water supply purposes is established at the point in the development process when combustible materials are first introduced to the development site. In addition to these above projects, the Water System Plan contains additional information associated with water rates and conservation. These items are noted in the Goals and Policies for the City’s capital facilities.

F. WASTEWATER TREATMENT SYSTEM

Wastewater treatment is provided to the majority of properties within the Tenino city limits. Grinder pumps, located on individual properties, grind the solids in the wastewater and pump the sewage to the wastewater treatment plant. Once the wastewater reaches the treatment facility, the sewage is filtered through the plant headworks to remove grit, an anoxic basin, aeration basins, and finally a series of membranes that separate the solid and liquid wastes and treat the water. Sludge is stored within a storage basin, and hauled to an appropriate disposal area as necessary. Treated water is placed in groundwater recharge basins.

The wastewater treatment system is designed to treat inflows between 230,000 and 330,000 gallons per day (see Figure 5.2). Pumps and basins have been sized to handle 330,000 gallons per day, but existing membranes are only sufficient to handle 230,000 gallons per day, the anticipated maximum monthly average flow at the time of development of the system. In 2012, average inflows ranged from approximately 78,000 to 87,000 gallons per day, with the maximum day reaching approximately 103,000 gallons in December 2012.

Figure 5.2: Existing Demand and Current Capacity of Wastewater Treatment System



As of February 26, 2013, the City of Tenino had 630 active sewer connections, including commercial and residential properties. Assuming a maximum day demand at the sewer treatment plant of 103,000 gallons, a similar proportion of future uses (when compared to existing uses), and a maximum day demand of 163.5 gallons per day (the maximum day demand/630), the system has the potential to add 777 connections before reaching the capacity of 230,000 gallons per day.

As inflows near 230,000 gallons per day, Tenino will need to purchase and install more membranes to increase the capacity of the wastewater system.

Deficiencies and Recommended Improvements. Table 5.7 briefly describes the wastewater improvements likely needed over the 20-year planning period. While the system generally functions well, the City should consider how best to utilize the byproducts of the treatment system. These considerations should include how to best utilize the Class A reclaimed water generated by the wastewater treatment plant and dispose of the sludge created as a result of the cleaning process.

Table 5.7: Needed Wastewater System Improvements	
Deficiency	Recommended Action/Improvement
Collection System	
No Deficiency	Collection system is currently adequate, though improvements as a result of typical operations will likely be necessary over time
Treatment	
Treatment capacity limited to 230,000 gallons per day, due to the existing number of membranes	Install new membrane bioreactors to expand capacity of existing wastewater treatment system to 330,000 gallons per day
Treatment capacity limited to 330,000 gallons per day due to the overall capacity of the treatment plant	Expand plant to accommodate wastewater flows beyond 330,000 gallons per day (when necessary)
Sludge Treatment and Utilization	
No method for sludge treatment and utilization, beyond trucking off-site	Study viability of system to dewater sludge and/or turn sludge into Class A Biosolids and pursue the approach if appropriate
Reclaimed Water	
No method to store or distribute reclaimed water for future reuse	Install a reclaimed water storage tank and distribution lines
No use of reclaimed water, beyond groundwater recharge	Pursue methods to utilized reclaimed water

Level of Service. The acceptable level of service for the sanitary sewer collection system is a maximum of 75% of capacity. The acceptable level of service for treatment capacity for the wastewater treatment plant is a maximum 80% of capacity. Concurrency for wastewater treatment systems is established at the point in the development process when the system is installed and operational at the time of occupancy of the development.

G. GOALS, POLICIES, AND ACTIONS

Goals and policies related to pedestrian amenities and City streets are found in Chapter 4, Transportation of this plan. The following are goals and policies the City of Tenino has for capital facilities. Where the jurisdictions of unincorporated Thurston County and the City of Tenino intersect, the City encourages Thurston County to adopt those goals and policies denoted with an asterisk (*).

CAPITAL FACILITIES - GENERALLY

***Goal CF 1: Expansion and location of public facilities are coordinated and timed to meet present and future demand.**

Policy CF 1.1: Prioritize capital improvements for facilities where development is unlikely to fund future improvements. Improvements within these areas should consider the importance of the structure or facility to determine improvement priorities.

ACTION: Regularly amend the Capital Facilities Plan and Capital Improvement Program to identify high priority projects that are important for the community to conduct over both the next 6- and 20-year planning periods.

ACTION: Consult the Capital Improvement Program to determine priorities for City expenditures during the preparation of budgets and the pursuit of grant funds.

Policy CF 1.2: Require new development to assume the costs of providing on-site public facilities and services such as road improvements, sidewalks, street lights, connection to water mains, and connection to sewer mains.

Policy CF 1.3: Allow new development only when and where all public facilities are adequate and does not reduce the level of service elsewhere.

ACTION: Route information about new housing developments to the Tenino School District, Thurston County Fire District 12, Washington Department of Transportation, and other applicable facility providers to aid in their facility planning.

ACTION: Enter into an Interlocal Agreement with the Tenino School District to implement the collection of school impact fees for new development.

***Policy CF 1.4:** Guarantee new development within Tenino's urban growth area builds water and other public facility systems to City standards to ensure efficient transition to City public facilities in the future.

***ACTION:** Work with Thurston County to ensure common standards are developed and employed during the permit review process.

***Policy CF 1.5:** In the unincorporated UGA, Thurston County's Capital Facilities Plan and any applicable levels of service shall govern.

Goal CF 2: Utility installations, road improvements and other facility upgrades/repairs are made in a manner sensitive to the environment and the desired community aesthetics.

Policy CF 2.1: Ensure that all developer-led and City construction projects are consistent with the State Environmental Policy Act, the Tenino Critical Areas Ordinance, and best management practices for the protection of the environment.

ACTION: Effectively route all projects to affected agencies to gather information about the potential impacts and necessary mitigation for the proposal.

ACTION: Ensure that projects meet the provisions of the Tenino Critical Areas Ordinance.

Policy CF 2.2: Encourage utility installations and system upgrades in a manner that enhances the appearance of the community.

ACTION: Require the under-grounding of utilities in new developments where feasible.

ACTION: Encourage the under-grounding of utilities in system upgrades.

ACTION: Encourage the planting of appropriate street trees wherever possible.

Goal CF 3: The Capital Facilities Plan is consistent with other chapters of the Comprehensive Plan and coordinates with other jurisdictions.

Policy CF 3.1: Update the Capital Improvement Program at least every six years.

Policy CF 3.2: Review the Capital Facilities Plan whenever changes are made to other chapters of the Comprehensive Plan to ensure that the entire plan remains internally consistent.

Policy CF 3.3: Reassess the Capital Facilities Plan and other chapters of the Comprehensive Plan to ensure consistency if probable funding falls short of meeting existing needs.

***Policy CF 3.5:** Coordinate with Thurston County to ensure consistency between Tenino's capital facility plan and Thurston County's.

COMMUNITY BUILDINGS

Goal CF 4: Tenino has a wide range of buildings that house essential public services and that can be used by the community with minimal impact to the City's General Fund.

Policy CF 4.1: Make cost-effective decisions regarding city-owned structures.

Policy CF 4.2: Consider the Quarry House, War Memorial (Quarry) Pool, and the Tenino Train Depot Museum as the City's community center. These structures are a priority for pursuing grants.

Policy CF 4.3: Continually work to identify methods to increase revenues and reduce the costs associated with existing community buildings.

ACTION: Establish effective mechanisms to promote community facility rentals.

ACTION: Establish a facility operation cost matrix to enable a realistic fee schedule.

Policy CF 4.4: Prioritize and plan improvements for existing and needed structures.

ACTION: Budget for necessary improvements to community buildings.

ACTION: Identify and seek out funding for necessary improvements.

Policy CF 4.5: Establish reasonable maintenance budgets to extend the useful life of community facilities.

Policy CF 4.6: Communicate to the public the true cost of community facilities.

Goal CF 5: Tenino has community buildings that are well utilized for a range of activities.

CITY EQUIPMENT

Goal CF 6: Tenino makes cost-effective decisions related to City equipment.

Policy CF 6.1: Create and maintain a database that tracks the useful life and replacement costs for all city equipment.

Policy CF 6.2: Where practical and feasible, establish agreements with other entities – such as cities, schools, fire authorities, and for-profits – to share necessary equipment.

Policy CF 6.3: Develop a budget for anticipated equipment expenditures.

Policy CF 6.4: Review costs and benefits before purchasing equipment. Utilize rentals or contracted services for infrequently used equipment when it is a greater benefit to the City than owning the equipment outright.

STORMWATER MANAGEMENT

Goal CF 7: Flooding in the City is minimized through the use of stormwater best management practices, further protecting Tenino's drinking water from contamination.

Policy CF 7.1: Treat stormwater on-site or as near as possible to the location where rain falls.

ACTION: Clarify the existing development standards and review process for stormwater management to ensure consistency with this policy.

ACTION: Work to better understand how water flows through the City of Tenino and appropriate methods to slow flows and/or prevent flooding.

Policy CF 7.2: Utilize best management practices to minimize the impact of pollutants that infiltrate into the ground as a result of stormwater.

Policy CF 7.4: Require adequate stormwater collection and disposal facilities be provided by developers in accordance with Level of Service standards.

Policy CF 7.5: Develop a stormwater management plan and consider developing a Stormwater utility to collect funds for the development and maintenance of stormwater facilities.

ACTION: Research and apply for grant funding.

WATER SYSTEM

Goal CF 9: The Tenino Comprehensive Water Plan, adopted herein by reference, is fully implemented.

Policy CF 9.1: Ensure consistency between the Comprehensive Plan and the Comprehensive Water Plan as amendments to either plan is made.

Goal CF 10: Tenino maintains a high quality of drinking water.

***Policy CF 10.1:** Cooperate with Thurston County on groundwater monitoring and management issues to maximize the effectiveness of aquifer and wellhead protection. This cooperation should extend at least to groundwater mapping, monitoring, data management, and may extend to other issues of mutual interest.

ACTION: Continue to monitor land use activities within the wellhead protection area.

Goal CF 11: Tenino has sufficient water rights to accommodate the community's projected population growth.

Policy CF 11.1: Aggressively pursue new water rights to ensure that sufficient water is available for new residents and businesses.

Policy CF 11.2: Require properties with water rights within the Unincorporated Urban Growth Area to transfer their water rights prior to annexation as a means of providing water for future development.

Policy CF 11.3: Work to reduce demands on existing water supplies in order to increase the number of residents and businesses that can be served by available water resources.

ACTION: Implement a water conservation plan.

ACTION: Ensure water rate structures encourage conservation.

ACTION: Establish methods to utilize reclaimed wastewater that reduce the overall need for potable water.

***Goal CF 12: All new development meets City of Tenino water system standards.**

Policy CF 12.1: Ensure that an adequate water supply is available for development in Tenino.

Policy CF 12.2: All new water distribution mains will have a minimum diameter of 8-inches in order to minimize future fire flow restrictions.

WASTEWATER TREATMENT SYSTEM

Goal CF 18: Tenino provides efficient and cost-effective sewer service for all of Tenino.

Policy CR 13.1: Require all new development to connect to the wastewater treatment system unless extenuating circumstances do not allow sewer treatment.

Policy CF 14.2: Only allow the expansion of sewer to properties that are within the city limits.

Goal CF 15: New development meets the City's sanitary sewer standards.

Policy CF 15.1: Ensure wastewater treatment is used by development wherever feasible inside the City limits.

Map CF-1: Existing Water Infrastructure

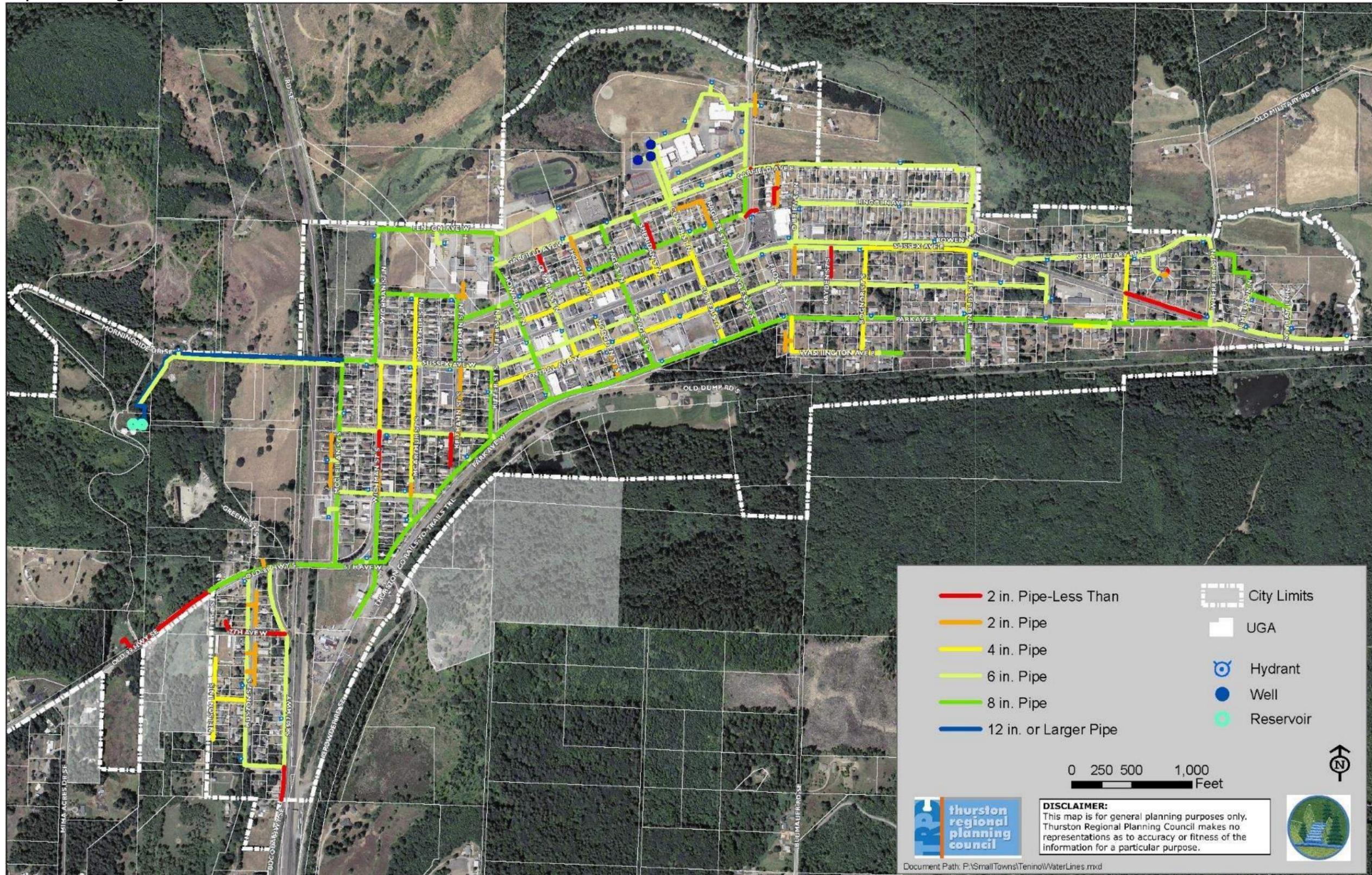


Table 5.8: Capital Improvement Program							
Key:		CDBG = Community Development Block Grant	PWTF = Public Works Trust Fund	RCSP = Recovery Community Services Program	TIB = Transportation Improvement Board		
		DWSRF = Drinking Water State Revolving Fund	RCO = Recreation and Conservation Office	STP = Surface Transportation Program	USDA = United States Department of Agriculture		
Project Type	Anticipated Project Start	Project	Estimated Cost	Fund Account	Fund Mix	Potential Grant	Grant Details
GENEARL PROJECTS							
City Equipment	As needed	Pickup	\$20,000	General/Utilities	General fund, CI fund, Utilities funds		
City Equipment	As needed	Pickup	\$20,000	General/Utilities	General fund, CI fund, Utilities funds		
Pedestrian	Annual	Sidewalk repair/replacement or new sidewalk	\$250,000 citywide; \$5,000 per year	General	General Fund, CI fund, grants/loans	CDBG	
Wastewater	As needed	Acquire additional membranes to accommodate plant treatment capacity up to 0.33 mgd	\$100,000 per membrane	Wastewater/Development	City funds - Wastewater Capital Improvement, grants		
Wastewater	As needed	Conduct plant upgrades to expand treatment capacity beyond 0.33 mgd	No Estimate	Wastewater/Development	City funds - Wastewater Capital Improvement, grants		
Water	Annual until Complete	Fire hydrant installations	\$7,500 per year	Water	City funds - Water Capital Improvement		
Water	Annual until Complete	Service Meter Replacement/AMR	\$31,520 per year	Water	City funds - Water Capital Improvement		
2016 PROJECTS							
City Buildings	2016	Library - new flooring	\$10,000	General	General fund, CI fund, grants/loans		Library Grants
City Buildings	2016	Library - add circuits for computers	\$5,000	General	General fund, CI fund, grants/loans		Library Grants
City Equipment	2016	Patrol Car (3)	\$30,000-\$60,000 each	General	General fund, CI fund		
2017 PROJECTS							
City Buildings	2017	Public Works (Morningside) - New concrete in maintenance bays	\$2,500	General/Utilities	General fund, CI fund, Utilities funds		
City Buildings	2017	Public Works (Morningside) - New Roof	\$5,500	General/Utilities	General fund, CI fund, Utilities funds		
Streets and Bridges	2017	McClellan Street South (Fifth to Sussex)	\$51,000	General		RCSP	No match required
Wastewater	2017	Pursue sludge treatment if viable	Determined based on study	Wastewater	City funds - Wastewater Capital Improvement, grants	PWTF	PWTF, loan typically with 1% interest
Wastewater	2017	Conduct study to determine viability of dewatering sludge and changing the material to Class A compost	\$75,000	Wastewater	City funds - Wastewater Capital Improvement, grants	PWTF Planning	PWTF, Loan with 0% interest.
2018 PROJECTS							
City Buildings	2018	Concession Stand - new roof	\$7,500	General	General fund, CI fund, grants/loans, RCO		
City Buildings	2018	City Hall - carpets/flooring	\$10,000	General/Utilities	General fund, CI fund, grants/loans		
City Buildings	2018	Quarry House - new flooring	\$10,000	General	General fund, CI fund, grants/loans		

Table 5.8: Capital Improvement Program							
Key:		CDBG = Community Development Block Grant	PWTF = Public Works Trust Fund	RCSP = Recovery Community Services Program	TIB = Transportation Improvement Board		
		DWSRF = Drinking Water State Revolving Fund	RCO = Recreation and Conservation Office	STP = Surface Transportation Program	USDA = United States Department of Agriculture		
Project Type	Anticipated Project Start	Project	Estimated Cost	Fund Account	Fund Mix	Potential Grant	Grant Details
City Buildings	2018	Park Restrooms replacement	\$120,000 per building (two buildings)	General	General fund, CI fund, grants/loans, RCO	RCO	50% match required for RCO
City Equipment	2018	Grader	\$15,000	General/Utilities	General fund, CI fund, Utilities funds		
City Equipment	2018	Street Sweeper	\$50,000	General	General fund, CI fund, grants/loans		
City Equipment	2018	Dump Truck	\$20,000	General/Utilities	General fund, CI fund, Utilities funds		
Pedestrian	2018	New sidewalk from Old Highway 99 to Old Military Road (along Sussex) to improve safety for people walking from neighborhood into downtown	\$45,000	General	General Fund, CI fund, grants/loans	State and Federal Transportation Grants (State TIB, Regional STP, Transportation alternatives)	10% to 13.5% for State and Federal Transportation Grants
Stormwater	2018	Prepare a stormwater plan	\$50,000	General	General fund, CI fund, grants/loans	Department of Ecology-Centennial Clean Water	
Streets and Bridges	2018	Ritter Street South (Sussex to Park)	\$23,000	General		RCSP	No match required
Streets and Bridges	2018	Ritter Street North (Sussex to Lincoln)	\$11,400	General		RCSP	No match required
Streets and Bridges	2018	Frost Street South (Sussex to Central)	\$11,590	General		RCSP	No match required
Streets and Bridges	2018	Frost Street South (Central to Park)	\$11,590	General		RCSP	No match required
Wastewater	2018	Implement reuse of reclaimed water	\$500,000 +/- (dependent on Evaluation of alternative uses for reclaimed water)	Wastewater	City funds - Wastewater Capital Improvement, grants	PWTF, Ecology	PWTF, Loan with 0% interest. Ecology, loan with 1.1% to 2.3% interest
Water	2018	Install additional security at wells	\$2,000	Water	City funds - Water Capital Improvement	Homeland Security, Insurance Grant Provider	
Water	2018	Establish a fourth well	\$200,000	Water	City funds - Water Capital Improvement	PWTF, DWSRF	PWTF-Loan with 0.25% to 2% interest. DWSRF loan with 1% interest
Water	2018	New electrical in pump house	\$40,000	Water	City funds - Water Capital Improvement		
2019 PROJECTS							
Streets and Bridges	2019	Stage Street North (Sussex to Lincoln)	\$16,000	General		RCSP	No match required
Streets and Bridges	2019	Stage Street North (Lincoln to Garfield)	\$12,970	General		RCSP	No match required
Streets and Bridges	2019	Olympia Street North (Sussex to Lincoln)	\$16,330	General		RCSP	No match required
Streets and Bridges	2019	Olympia Street North (Lincoln to Garfield)	\$14,370	General		RCSP	No match required
2020 PROJECTS							
City Buildings	2020	Police Station - new roof	\$7,500	General	General fund, CI fund, grants/loans	Police Grants	
City Buildings	2020	Quarry House - new roof	\$15,000	General	General fund, CI fund, grants/loans	CDBG, USDA-Community Facilities	

Table 5.8: Capital Improvement Program							
Key:		CDBG = Community Development Block Grant	PWTF = Public Works Trust Fund	RCSP = Recovery Community Services Program	TIB = Transportation Improvement Board		
		DWSRF = Drinking Water State Revolving Fund	RCO = Recreation and Conservation Office	STP = Surface Transportation Program	USDA = United States Department of Agriculture		
Project Type	Anticipated Project Start	Project	Estimated Cost	Fund Account	Fund Mix	Potential Grant	Grant Details
City Buildings	2020	Police Station - gutters	\$3,500	General	General fund, CI fund, grants/loans	Police Grants	
City Buildings	2020	Library - new siding	\$5,000	General	General fund, CI fund, grants/loans	Library Grants	
City Buildings	2020	Police Station - perimeter fencing	\$10,000	General	General fund, CI fund, grants/loans	Police Grants	
City Equipment	2020	Pickup	\$20,000	General/ Utilities	General fund, CI fund, Utilities funds		
City Equipment	2020	Vactor Truck	\$150,000	General/ Utilities	General fund, CI fund, Utilities funds		
Streets and Bridges	2020	Eureka Street South (Park to Sussex)	\$6,500	General		RCSP	No match required
Streets and Bridges	2020	Eureka Street North (Sussex to Old Military)	\$9,500	General		RCSP	No match required
Streets and Bridges	2020	Old Military (Sussex Ave to Bridge)	\$68,590	General		RCSP	No match required
Streets and Bridges	2020	Wherrett Street South (Sussex to Old Military)	\$30,000	General		RCSP	No match required
2016-2021 PROJECTS							
Wastewater	2016-2021	Replace existing membranes as needed	\$200,000	Wastewater/ Development	City funds - Wastewater Capital Improvement, grants		
Wastewater	2016-2021	Sludge pumping	\$200,000	Wastewater/ Development	City funds - Wastewater Capital Improvement, grants		
2016-2026 PROJECTS							
City Buildings	2016-2026	Public Works (Park) - new storage building	\$40,000	General/ Utilities	General fund, CI fund, Utilities funds		
City Buildings	2016-2026	Food Warehouse - add bathrooms to promote wider use	\$30,000	General	General fund, CI fund, grants/loans	Agriculture/Food Production Grants	
Streets and Bridges	2016-2026	Old Highway 99 Bridge Replacement - preliminary engineering	\$650,000	General	\$500,000 - federal funds \$100,000 - State funds	State and Federal Transportation Grants (State TIB, Regional STP, Transportation Alternatives)	
City Buildings	2016-2026	Quarry House - remodel (major remodel based on evaluation of facility)	\$250,000 +/- (Dependent on Evaluation of Building)	General	General fund, CI fund, grants/loans	CDBG, USDA-Community Facilities	
Streets and Bridges	2016-2026	Fifth Avenue (Wichman to Park)	\$20,000	General		RCSP	No match required
City Buildings	2016-2026	City Hall - new roof	\$7,500	General/ Utilities	General fund, CI fund, grants/loans		
City Buildings	2016-2026	Concession Stand - new paving to access facility	\$20,000	General	General fund, CI fund, grants/loans, RCO	RCO	50% match required for RCO
City Buildings	2016-2026	Dog Kennel - better lighting, heat, outdoor kennels	\$5,000	General	General fund, CI fund, grants/loans	Animal Control Grants	

Table 5.8: Capital Improvement Program							
Key:		CDBG = Community Development Block Grant	PWTF = Public Works Trust Fund	RCSP = Recovery Community Services Program	TIB = Transportation Improvement Board		
		DWSRF = Drinking Water State Revolving Fund	RCO = Recreation and Conservation Office	STP = Surface Transportation Program	USDA = United States Department of Agriculture		
Project Type	Anticipated Project Start	Project	Estimated Cost	Fund Account	Fund Mix	Potential Grant	Grant Details
Pedestrian	2016-2026	Enhance pedestrian space/aesthetics on Sussex Avenue	\$1,000,000 +/- (dependent on study)	General	General Fund, CI fund, grants/loans	State and Federal Transportation Grants (State TIB, Regional STP, Transportation alternatives)	10% to 13.5% for State and Federal Transportation Grants
Streets and Bridges	2016-2026	Sussex Avenue Improvements (dependent on results of Main Street 507 project)	\$2,000,000 +/- (Dependent on Study)	General	General fund, CI fund, grants/loans	State and Federal Transportation Grants (State TIB, Regional STP, Transportation Alternatives)	10% to 13.5% for State and Federal Transportation Grants
Streets and Bridges	2016-2026	Parking lot improvements (dependent on results of Main Street 507 project)	\$50,000 +/- (Dependent on Study)	General	General fund, CI fund, grants/loans	Port of Olympia	50% match requested
2016-2031 PROJECTS							
Streets and Bridges	2026-2031	Old Highway 99 Bridge Replacement - construction	\$4,350,000	General	\$2,000,000 - federal funds \$2,000,000 - State funds \$350,000 - Local funds		10% to 13.5% for State and Federal Transportation Grants
OTHER PROJECTS							
Streets and Bridges	With Development	Morningside Drive widening	\$2,500,000	Development	General fund, CI fund, state or federal grants, developer contributions		
Streets and Bridges	With Development	Morningside Drive Bridge Enhancements	\$750,000	Development	General fund, CI fund, state or federal grants, developer contributions		10% to 13.5% for State and Federal Transportation Grants
Water	With Development	West Tenino Mainline extension to newly annexed areas	TBD	Development	City funds - Water Capital Improvement, developer contributions		
Water	With Development	West Tenino Southwest Area Projects (additional water rights, storage, distribution grid)	\$2,662,700	Development	Implemented by development		

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CHAPTER 6. UTILITIES

This utilities chapter has been developed in accordance with Section 36.70A.070 of the Growth Management Act (GMA) to address utility services in the City of Tenino for the 20-year planning period. The Growth Management Act (GMA) defines electricity, gas, telecommunications, and cable TV as “utilities.” It defines water and sewer systems separately as “capital facilities.” As used in the Comprehensive Plan, “utility” and “capital facilities” are not interchangeable terms. Sewer and water are considered “capital facilities” and are addressed in Chapter 5 of this Plan.

This chapter articulates policies for existing and future utility services and describes the location and capacity of significant existing and proposed utilities including electric, gas, and telecommunication facilities.

A. ELECTRICITY

Electricity is provided to the City of Tenino by Puget Sound Energy (PSE). PSE is a private investor-owned utility responsible for providing electrical service to approximately 1.1 million customers in parts of western and central Washington.

In accordance with State law, PSE has an obligation to provide electricity upon demand and in accordance with "tariffs" on file with the Washington Utilities Trade Commission (WUTC). PSE has a duty to serve, meaning it is required to provide service to customers within its service territory as service is requested. Consistent with its duty to serve, PSE will provide electrical service as needed for development both within and outside of the urban growth area of Tenino. Increased demand for electricity is expected within the community as development occurs.

System Inventory and Forecast of Future Needs. The Blumaer Distribution Substation on Garfield Street serves the City of Tenino. Three 115 kV transmission lines extend from the station to the north along Old Highway 99, east along SR 507, and southwest. The southwest line splits near the intersection of Crowder Road and 6th Street into two lines extending to the west along Old Highway 99 and south along SR 507. Existing transmission lines have the capacity to meet the current and projected demand for electricity in the Tenino service area.

As growth occurs in the area served by the Blumaer Substation, power can be reallocated among the three feeders that distribute electricity to customers. A future fourth line will also help with distribution needs. According to demand forecasts made by PSE, the amount of new development projected within the next 20 years in the Tenino Urban Growth Area will not warrant new transmission facilities in the area. The three 115 kV lines are planned to be upgraded to a higher capacity in the next five years.

Energy Conservation Programs for Customers. To encourage efficient use of electricity among customers, PSE operates a variety of conservation programs. Conservation offerings and incentive levels change from time to time and interested businesses and residents can explore available programs on the PSE website. Additional programs through governmental agencies such as the Department of Commerce and

organizations such as Thurston Energy and the Community Action Council also provide home weatherization assistance to local governments, business owners, and residents.

B. NATURAL GAS

The City of Tenino is not currently served by the regional natural gas distribution system operated by PSE. Unlike electricity or basic telephone service, PSE is not obligated to provide gas service to all customers upon request as natural gas is considered a convenience and not a necessity. PSE is also prohibited from passing on the cost of new distribution lines to existing customers, and only extends lines where demand warrants the extension.

It is unlikely that an extension of natural gas service to Tenino will be feasible in the next 20 or more years. The cost of constructing a new gas main to Tenino would be in excess of \$10 million, (not including the price of connecting the service to each household), and it would involve the extension of a pipeline approximately 10 miles from the existing Rainer Gate Station located northeast of Tenino. Long-term factors that might influence the prospect of natural gas availability within the community include the relative costs of gas and electricity, regional power planning priorities, and trends in growth and economic development.

C. TELECOMMUNICATIONS SERVICES

Standard Telephone Service. Considered a necessity, basic telephone service providers have a duty to deliver service as requested within their service areas. Tenino Telephone Company provides basic telephone services to Tenino as well as Bucoda and the surrounding rural areas and has operated in the area since 1905.

Tenino Telephone has miles of fiber optics cables running through its service area as well as a number of other services and technologies available. Major fiber optic cables extend through Tenino along SR 507 and on the south side of Park Street, and feeder lines serve a number of homes and businesses. Internet service through Tenino Telephone is provided by Scatter Creek InfoNet, an affiliate of the Tenino Telephone Company, with locations in Cowlitz and Thurston counties. Long-distance services are offered by Scatter Creek Communications (another division of Tenino Telephone), as well as AT&T, Sprint and a number of other providers.

Telecommunications and Cellular Telephone Service. The speed of technological advancements in the telecommunications industry makes it difficult to project how services will be provided in the future. The Federal Communications Commission (FCC) regulates internet and cellular providers in each geographic service area, and there are several FCC-licensed providers that serve Tenino.

At the state level, cellular telecommunication companies are regulated by the Washington Utilities and Transportation Commission. The Commission still considers cellular technology a utility of convenience and not a necessity, and cellular providers are not required to provide service upon demand. Cellular technology is, however, used increasingly as a reliable backup communication system during emergencies.

Two cellular towers serve Tenino. Verizon maintains a tower in the old park; AT&T has a tower in the northwest corner of Tenino just outside the city limits.

Cable Service. Comcast is Tenino’s sole cable service provider. Customers can purchase service packages with a variety of options including access to various television channels and internet services. Comcast’s high speed Internet cables run through Tenino along SR 507 and Old Highway 99. Exclusive right-of-way permits and other mechanisms that may limit competition between companies and should be discouraged.

D. GOALS AND POLICIES

Tenino has identified the following goals and policies for utilities. Where the jurisdictions of unincorporated Thurston County and the City of Tenino intersect, the City encourages Thurston County to adopt those goals and policies denoted with an asterisk (*).

Goal UT 1: Tenino coordinates with utility providers to ensure that sufficient service is available for development.

Policy UT 1.1: Share information about new developments with Puget Sound Energy, Tenino Telephone, Comcast, and other service providers to help them plan how they will serve the development.

Policy UT 1.2: Ensure that development regulations are consistent with and do not otherwise impair the fulfillment of public service obligations imposed upon utilities by State and Federal law.

Goal UT 2: Utilities for new development are placed underground wherever possible.

Policy UT 2.1: Assist in coordinating between developers and service providers during the development process so that the long-term aesthetics of the community are taken into consideration.

Policy UT 2.2: Review utility permits simultaneously with the proposal requesting the service.

****Policy UT 2.3:*** Coordinate with Thurston County and utility providers to ensure consistency between utilities and planned growth.

***Goal UT 3: Coordinate with providers on utility improvements in currently built out areas.**

****Policy UT 3.1:*** Encourage the joint use of transportation rights-of-way and easements for utilities.

****Policy UT 3.2:*** Provide timely and effective notification about road construction and maintenance to facilitate coordination of public and private utility trenching activities in Tenino and its urban growth area.

Goal UT 4: Tenino maintains up-to-date information on existing and proposed utilities within the Tenino urban growth area.

Policy UT 4.1: Work to maintain up-to-date information about utility provider’s plans for the future within the Tenino Comprehensive Plan.

Policy UT 4.2: Where possible, work with utility providers to understand their facility needs, recognizing that planning for utilities is primarily the responsibility of the provider.

Goal UT 5: Utility services are environmentally sensitive, safe, and reliable.

Policy UT 5.1: Consistent with their public service obligations, require utilities to be reasonably compatible with surrounding land uses and that their environmental impacts are minimized.

Goal UT 6: Tenino reduces its per capita energy use, with more renewable energy being produced locally.

Policy UT 6.1: Partner with Puget Sound Energy and other efficiency programs to weatherize existing buildings, install solar panels, and/or conduct other energy efficiency and renewable energy programs.

Goal UT 7: Puget Sound Energy extends natural gas service to Tenino.

Policy UT 7.1: Inform Puget Sound Energy as large-scale development occurs.

Goal UT 8: Tenino residents and businesses have access to a variety of high-quality options for phone, internet, and cable services.

Policy UT 8.1: Encourage competition among phone, internet and cable providers to get the best services available in Tenino.

Policy UT 8.2: Promote the development of cheap internet access in Tenino.

Policy UT 8.3: Promote additional teleworking opportunities among area residents.

Policy UT 8.4: Consider internet as a facility that is as important as sewer and water for commercial and industrial development.

Policy UT 8.5: Promote the construction of a high-quality internet infrastructure in downtown and major new employment areas.

Policy UT 8.6: Work with organizations such as the Tenino Chamber of Commerce, the South Thurston Economic Development Initiative, and the Thurston Economic Development Council to build the capacity of area businesses to reach online markets.

APPENDICES

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Table A-1: Essential Public Facilities Use Schedule

Key: P = Use allowed without use permit C = Conditional Use Permit required
 PF = Public Facilities Use Permit required -- = use not allowed
 MP = Master Plan required to determine if use is allowed

Essential Public Facility Type (Listed Type)	Zone (see TMC Chapter 106.10 for zone description)									
	SF-ES	SF	SF-D	MF	C-1	C-2	C-3	I	P/SP	WT
Group Home (Level 2 and 3 Group Homes)	--	--	--	--	--	C	C	C	--	MP
Secure Community Transition Facility (Level 2 and 3 Group Homes)	--	--	--	--	--	C	C	C	--	MP

APPENDIX B. HOUSING TYPES

The City of Tenino allows a variety of housing types in zones throughout the City, as required by state law. These housing types, as well as the zones where the types are allowed, are presented in Table B-1. Sufficient land is available at present to accommodate each of these housing types.

Table B-1: Allowance of Various Housing Types in Tenino	
Type of Housing	Zones Allowed
Government-Assisted Housing	Permitted in all zones, so long as the type of housing proposed (Single-Family, Duplex, Multifamily, Mixed Use) is consistent with the allowed uses in the zone.
Housing for Low-Income Families	Permitted in all zones, so long as the type of housing proposed (Single-Family, Duplex, Multifamily, Mixed Use) is consistent with the allowed uses in the zone.
Manufactured Housing	Allowed as a single-family home in all zones where single-family housing is allowed
Multifamily Housing	Allowed in the Multi-Family Residential and C-3 zone. Mixed-use apartments are also allowed within the C-2 zone.
Group Homes	Allowed as a permitted residential use in zones that allow housing. For juveniles and other individuals in the correctional system, the housing is allowed in the Industrial Zone as a conditional use.
Foster Care Facility	Allowed in all zones where housing is allowed.

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APPENDIX C. DEMOGRAPHICS

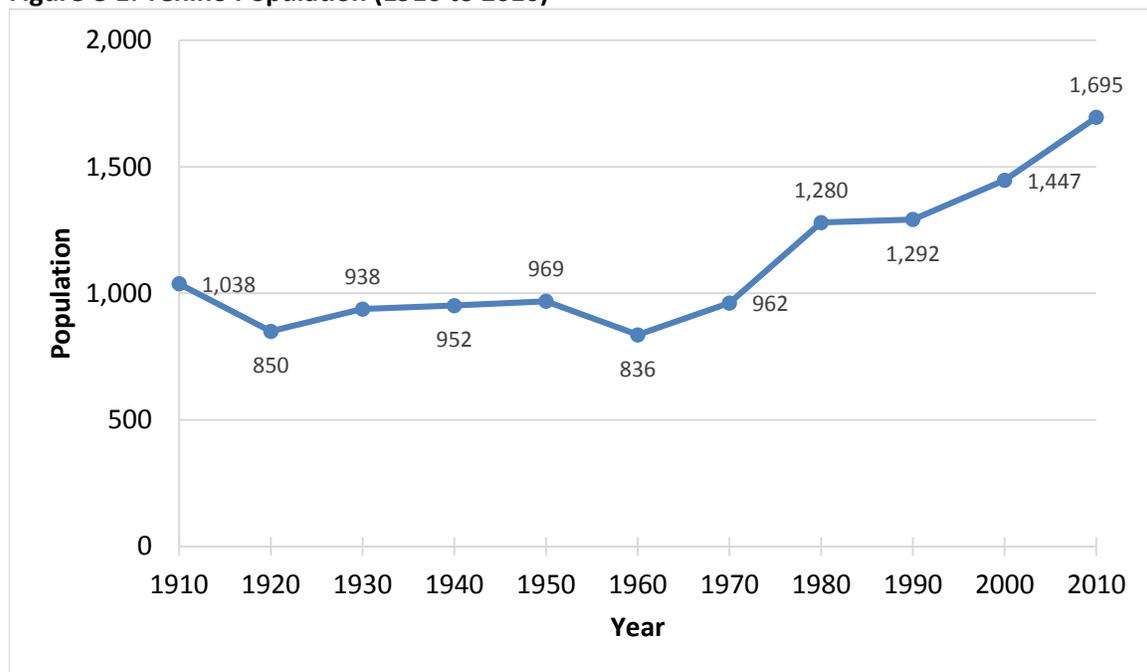
In order to forecast land use, capital facility, and quality of life needs over a 20-year planning horizon, population trends and characteristics must be considered. This appendix looks at past trends and future projections and attempts to forecast scenarios for future growth in Tenino.

Historic Growth Trends. When Tenino incorporated in 1906, it was a bustling community powered by the railroad and the sandstone quarries. In 1910, there were 1,038 people living in the community, comprising 5.9% of Thurston County’s population (see Figure C-1). As these formative industries declined, so did the job market and the population. By 1920, Tenino’s population had decreased to 850.

Between 1920 and 1950, the population of the community grew at a relatively slow rate but never reached the population levels of 1910. The population decreased in the 1950s once Interstate 5 opened. This reduced automobile travel through Tenino and eliminated jobs serving passing motorists and freight trucks.

The City’s population began to increase in the 1960s and has continued to do so since. Between 1970 and 1980, Tenino grew by 2.9% annually, its fastest growth rate over the last 100 years. Population growth slowed significantly in the 1980s, but steady population growth occurred over the last two census periods.

Figure C-1: Tenino Population (1910 to 2010)



Population Forecasts. Thurston Regional Planning Council (TRPC) projects future population growth for Tenino and its Urban Growth Area as part of their regional projections. The most recent forecast was completed in 2015 and is shown in Table C-1. This forecast projects that the population of Tenino will increase by roughly 2,000 people between 2010 and 2040, with the majority of the population increase expected to occur after 2020 after West Tenino is developed.

Table C-1: TRPC Population Forecast for Tenino and its Urban Growth Area (2010 to 2040)

Year	Population	Average Annual Rate of Change
2010	1,710	--
2015	1,745	0.4%
2020	1,760	0.2%
2025	2,035	2.9%
2030	2,750	6.2%
2035	3,185	3.0%
2040	3,785	3.5%

Source: TRPC – Population and Employment Forecast, 2015.

These population trends and projections present a baseline for planning future land use, transportation improvements and capital facilities in Tenino over the next 20 years. While population growth may occur in a different manner than projected, this population forecast has informed the bulk of the facility and land use priorities within the Comprehensive Plan.

APPENDIX D. MAIN STREET 507 – PRELIMINARY LAYOUT PLAN AND COST ESTIMATES

Appendix D consists of a memo from the project’s engineering consultant (KPG, Inc.), preliminary cost estimates, and the preliminary layout plan.

Memorandum

To: Katrina Van Every and Paul Brewster, Thurston Regional Planning Council
From: Olivia Buban, KPG
Date: May 3, 2016
Re: **City of Tenino SR507/Main Street Improvements – Phasing Strategy and Funding Sources**

KPG completed a preliminary layout plan and cost estimate for the SR507/Main Street Improvements for the City of Tenino in July, 2015. And on March 7, 2016, this information was presented in a Technical Session held at the Tenino Quarry House, hosted by Thurston Regional Planning Council. Comments and input from stakeholders were obtained. From that meeting, it was determined that the project needs to be completed in several phases in order to be economically feasible for the City. This memo summarizes a phasing strategy, and a list of several state and federal funding sources available for this type of roadway improvement project, so that the City can continue to pursue design and construction of the SR507/Main Street Improvements.

Phasing Strategy for Tenino

The preliminary project cost estimate developed for the City of Tenino SR507/Main Street Improvements from Kiethahn Street to O’Brien Street, approximately 3,270 linear feet, came to a total of approximately \$5.7 million (see attached Preliminary Project Estimate). Recognizing that the total project cost is too high for the City to undertake as one big project, the project was divided into phases. Three possible phases were identified and summarized in the tables below with costs rounded up to the nearest thousand, along with a list of possible funding sources for each task. The cost estimates presented here reflect what is shown on the preliminary layout plan from July, 2015.

WEST PHASE (Downtown Core) Kiethahn St to Hodgden St	Approximate Cost	Possible Funding Source
Design & Right-of-Way	\$ 317,000	TIB SCSP, WSDOT Ped and Bike
Construction	\$ 1,775,000	TIB SCSP and Relight Washington, WSDOT Ped and Bike and Safe Routes to School, FHWA STP, EDA, CDBG

MIDDLE PHASE Hodgden St to Custer St	Approximate Cost	Possible Funding Source
Design & Right-of-Way	\$ 241,000	TIB SCSP, WSDOT Ped and Bike
Construction	\$ 1,490,000	TIB SCSP and Relight Washington WSDOT Ped and Bike, FHWA STP

EAST PHASE (Roundabout) Custer St to Obrien St	Approximate Cost	Possible Funding Source
Design & Right-of-Way	\$ 328,000	TIB SCAP, WSDOT Ped and Bike
Construction	\$ 1,499,000	TIB SCAP and Relight Washington, WSDOT Ped and Bike, WSDOT Safe Routes to School, FHWA STP

According to the Transportation Improvement Board (TIB) representative at the Technical Session meeting, the typical award amount for Small City projects has been between \$350,000 and \$750,000. It is a prudent strategy to first apply for a grant to complete the design and right-of-way for each phase and then separately apply for one or more construction grants as the project is nearing design completion. The project will be more competitive and likely to receive funding if design is complete and right-of-way has been acquired.

The construction for each phase currently falls in the range of \$1.5 to \$1.7 million. That cost includes a 30% contingency to account for the unknowns. As the design is developed further, cost cutting opportunities can be identified. For example, these ideas were discussed in the Technical Session:

- Minimize impact to existing infrastructure that is in good condition.
- Shorten the project extents.
- Alternative design for curb extensions and crosswalk treatments.
- Identify and partner with potential private developers.
- During construction, consider using detour routes and closing SR507, so that the construction period and impacts are lessened.

West Phase (Downtown Core)

Kiethahn Street to Hodgden Street

The stretch of SR507 between Kiethahn Street to Hodgden Street is considered to be Tenino’s downtown core where there is the greatest concentration of businesses, along with public facilities such as City Hall, the US Post Office, Tenino High School and Tenino City Park. Between Kiethahn Street and Ritter Street, there are opportunities to create a gateway feature into town because of the wider right-of-way width available; encourage slower traffic speeds by installing a new median and curb extensions; and continue the sidewalk network to make businesses more accessible.

Middle Phase

Hodgden Street to Custer Street

This 3-block section connects the west entry and east entry into town. It is less dense than the other two phases. Project improvements will include curb extensions, improved crosswalks, and wider sidewalks.

East Phase (Roundabout)*Custer Street to O'Brien Street*

The main feature of this phase is a new roundabout at the intersection of SR507, Old Highway 99, and Ragless Street. At the Technical Session, some participants expressed safety concerns because there is a lack of sidewalks and pedestrian crossings, especially for students at nearby Tenino Elementary School and Tenino Middle School. This phase requires the most right-of-way acquisition because of the large footprint needed for the roundabout, however, it also presents a great opportunity to create a gateway and traffic calming into town with the roundabout design.

Funding Sources

The funding sources listed below are all available for the City of Tenino to pursue for the design and construction of the SR507/Main Street Improvements project.

The most common and applicable grants for this type of roadway improvement project are those administered by the Transportation Improvement Board, Washington State Department of Transportation, and Thurston Regional Planning Council.

When applying for grants, identifying local match money is very important. Though some grants may not require a local match for small cities like Tenino, having local match money always makes the project competitive and likely to win a grant above others. For the construction phase, it is very likely that the City will need to apply for more than one grant to secure the range of \$1.5 to \$1.7 million needed for each phase.

Federal funds have many more requirements and procedures to follow throughout the design, permitting, right-of-way acquisition, and construction phases, as compared to state funds. It is advised if federal funding is pursued, that the City is aware of these requirements. For example, once a federal grant has been acquired for a project, it must be ready for construction within 10 years.

Transportation Improvement Board (TIB) Grants*Small City Sidewalk Program*

The Small City Sidewalk Program (SCSP) provides funding for projects that address safety, access to generators and system continuity. All projects must be transportation related on a federally classified route. This is a competitive grant process, with award amounts ranging typically from \$350,000 to \$750,000. The requirement for local match varies based on the City's population. Tenino has a population of over 1,000, so there is a 5% local match required.

Small City Arterial Program

The Small City Arterial Program (SCAP) is funded with the intention of rehabilitating TIB-classified arterials. This program fits well with the proposed roundabout at the intersection of SR507 and Old Hwy 99. Since Tenino has a population of over 1,000, there is a 5% local match required.

Relight Washington Program

Tenino is eligible to receive funds under the Relight Washington Program. This program's goal is to move small cities to the front of the line in cost saving LED streetlight replacement.

Federal Match Program

If the City obtains a federal grant which requires a 13.5% local match, TIB can cover this match requirement with their Federal Match Program. There is approximately \$1 million available each year, and it is distributed statewide on a first come first served basis until funds are depleted.

Washington State Department of Transportation (WSDOT) grants

Safe Routes to School Program

Safe routes to school is a competitive grant offered by WSDOT with the purpose to improve safety and mobility for children by enabling and encouraging them to walk and bicycle to school. Funding is for projects within two-miles of primary, middle and high schools which the Tenino SR507/Main Street project falls within. This would require coordination with the school district to determine the student travel tally, as well as district administration support. The portion of the project would also need to be located on the school walk route plan. Based on the location of the various intersections and the school locations, there is an opportunity to fund a portion of the project with this grant. In the last Biennium Safe routes funded \$13 million dollars and a variety of projects throughout the state with funding amounts varying from \$100,000 to almost \$1 million. There is no required match, however providing a match does help in the project's competitiveness in getting the grant. This program is funded with either state or federal funds.

Pedestrian and Bicycle Program

This program's purpose is to reduce pedestrian and bicycle collisions and increase the number of people who choose to walk and bike for transportation. This program funds both design only and construction projects. While the proposed improvements do not include bicycle facilities (because of the proximity of the Yelm-Tenino Trail), the project does provide for sidewalk connectivity and accessibility, as well as improving pedestrian safety with traffic calming elements.

Federal Grants

HSIP/MAP-21 or Surface Transportation Funds (STP)

Highway Safety Improvement /Moving Ahead for Progress in the 21st Century Act (HSIP/MAP-21) are federal funds provided to the state to distribute to jurisdictions to use engineering countermeasures to reduce fatal and serious injury collisions. To receive these grants the project must meet specific crash criteria to apply for funding. While we do not have specific crash data for the project at this time, this is readily available from WSDOT.

These funds are distributed to Municipal Planning Organizations (MPO) in the form of Surface Transportation Program (STP) funds; this is one of the most flexible of highway construction funding mechanisms and provides the most financial support to local agencies.

Economic Development Administration

This process would involve applying to the Economic Development Administration (EDA) for a grant for Economic Adjustment Assistance. EDA's programs provide economically distressed communities and regions with comprehensive and flexible resources to address a wide variety of economic needs, and are designed to lead to the creation and retention of jobs and increased private investment. EDA's programs support local and regional economic development efforts to establish a foundation for vibrant economies throughout the United States. Through these programs, EDA supports bottom-up strategies that build on regional assets to spur economic growth and resiliency. EDA encourages its grantees throughout the country to develop initiatives that present new ideas and creative approaches to advance economic prosperity in distressed communities.

To meet the hardship/distress criteria of the EDA grant, the municipality must show with third party data that the unemployment rate is for a 24 month period at least one percentage point higher than the national average unemployment rate, per capita income that is eighty percent or less of the national average per capita income or a special need as determined by the EDA. Between the years 2008 to 2012, the per capita income for Tenino it was \$20,676. For the United States the per capita income was approximately \$40,725. So we believe that these projects could fall under the economic hardship rule.

Community Development Block Grants

Tenino is located within Thurston County, which is considered an Entitlement County, which means the City is not eligible for the state Community Development Block Grant (CDBG) program. However, the City can apply for CDBG funds directly available from the U.S. Department of Housing and Urban Development (HUD). HUD CDBG grants can be used for infrastructure improvements including but not limited to streets, curbs, water and sewer lines and streetscapes including safe and secure street lighting, signage and landscaping, as well as parks and recreational facilities. This is done under a grant used in creating a suitable living environment, as well as creating economic opportunities. This program requires that the project be within a low to moderate income (LMI) area. An LMI service area does not need to have coterminous boundaries with Census tract borders or other officially recognized boundaries, but must be primarily residential in nature and the project must benefit all residents of an area where at least 51% of the residents are LMI. More research and information would be necessary to determine if the City would fall within these limits, but there could possibly be grant opportunities within this funding mechanism.

Washington State Department of Ecology Grants

Stormwater Financial Assistance Program

The Stormwater Financial Assistance Program is for projects that address existing pollution problems and provide a high level of water quality benefit. Based on the soil conditions, some green techniques could be implemented that are low maintenance and would fit. The requirement for this grant is a 25% match or a 15% match for communities that meet hardship criteria.

Currently the City of Tenino appears to own a well north of the project site, south of Scatter Creek and there are several private wells located throughout the City. This Ecology grant could be used to pay for construction of green infrastructure or a storm drain system that outfalls to a Low Impact Development (LID) treatment facility which results in the protection of these wells.

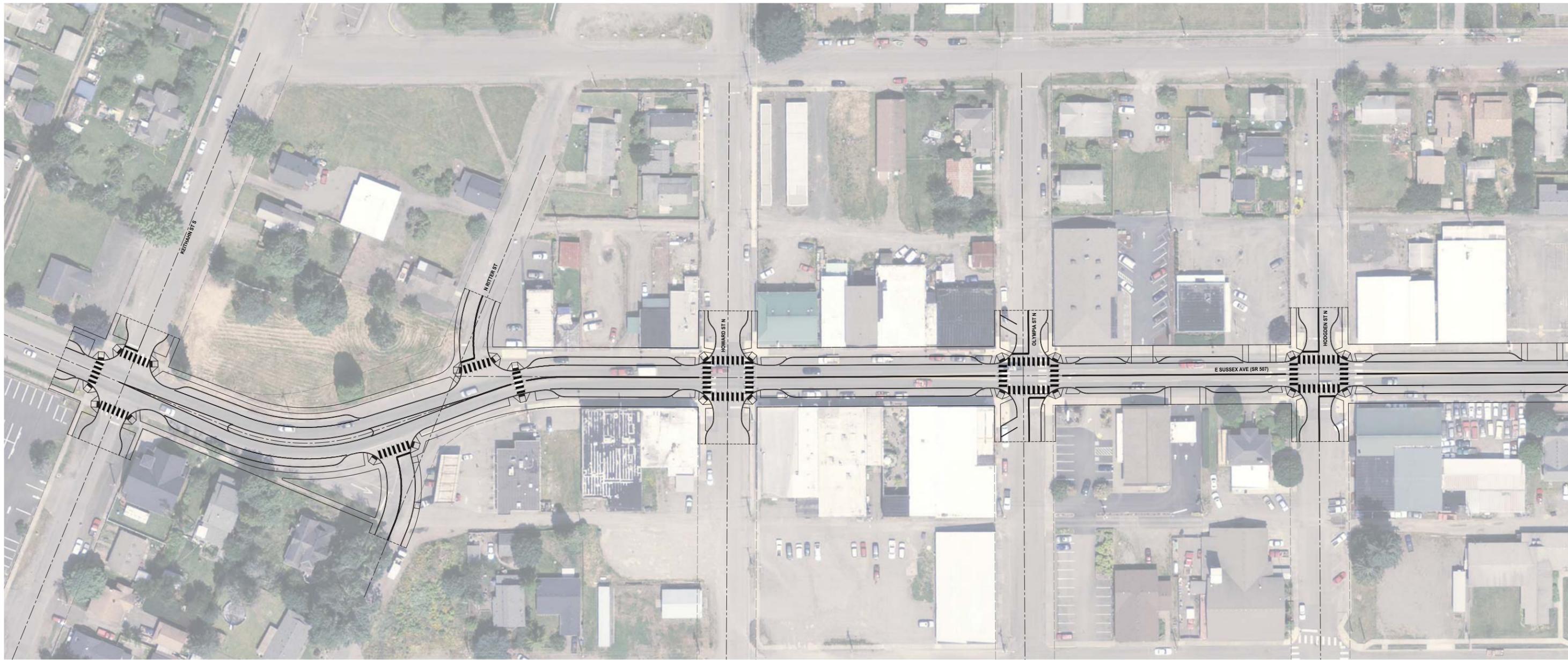
Thurston Regional Planning Council
City of Tenino SR 507/Main Street Improvements
Preliminary Project Estimate
May 3, 2016

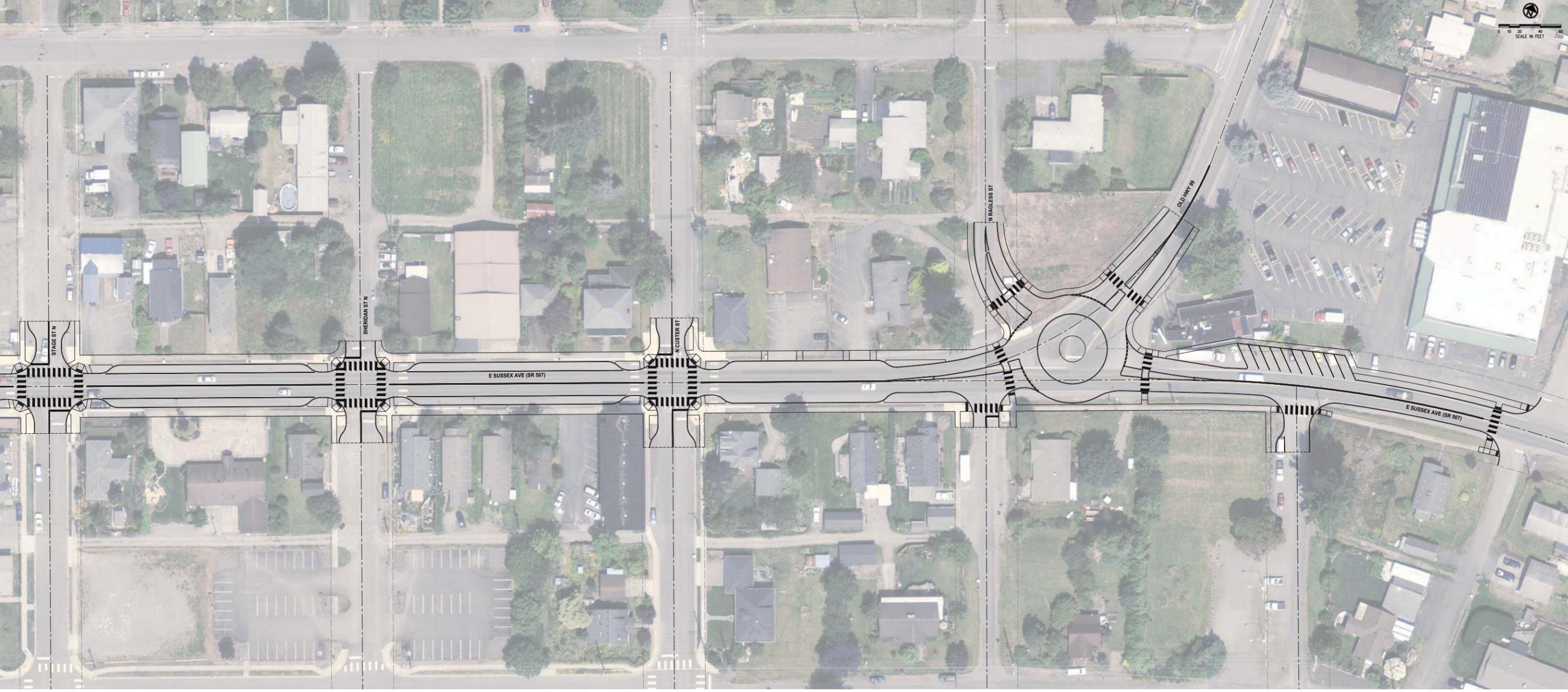


DESIGN & RIGHT OF WAY COST ESTIMATE					WEST PHASE (Downtown Core) Kiethahn St to Hodgden St		MIDDLE PHASE Hodgden St to Custer St		EAST PHASE (Roundabout) Custer St to Obrien St	
Description	Quantity	Unit	Unit Cost	Total	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
ROW - Commercial	2,960	SF	\$ 15.00	\$ 44,400.00	400	\$ 6,000.00	-	\$ -	2,560	\$ 38,400.00
Construction Easement	20	EA	\$ 1,500.00	\$ 30,000.00	8	\$ 12,000.00	4	\$ 6,000.00	8	\$ 12,000.00
Settlement Costs	1	LS	\$ 20,000.00	\$ 20,000.00	1	\$ 10,000.00	-	\$ -	1	\$ 10,000.00
R.O.W. Administration	1	LS	\$ 16,050.00	\$ 16,050.00	1	\$ 4,760.00	1	\$ 1,020.00	1	\$ 10,270.00
R.O.W. Agent	4	Parcel	\$ 7,500.00	\$ 30,000.00	1	\$ 7,500.00	-	\$ -	3	\$ 22,500.00
TOTAL RIGHT OF WAY COST				\$ 140,450.00		\$ 40,260.00		\$ 7,020.00		\$ 93,170.00
Preliminary, Design, Survey (15%)				\$ 714,410.00		\$ 266,200.00		\$ 223,490.00		\$ 224,720.00
WSDOT Review Fees				\$ 30,000.00		\$ 10,000.00		\$ 10,000.00		\$ 10,000.00
TOTAL ENGINEERING / MANAGEMENT COST				\$ 744,410.00		\$ 276,200.00		\$ 233,490.00		\$ 234,720.00
TOTAL DESIGN & RIGHT OF WAY COST				\$ 884,860.00		\$ 316,460.00		\$ 240,510.00		\$ 327,890.00

CONSTRUCTION COST ESTIMATE					WEST PHASE (Downtown Core) Kiethahn St to Hodgden St		MIDDLE PHASE Hodgden St to Custer St		EAST PHASE (Roundabout) Custer St to Obrien St	
No. Description	Quantity	Unit	Unit Cost	Total	Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1 Mobilization (8%)	1	LS	\$ 206,990.00	\$ 206,990.00	1	\$ 77,130.00	1	\$ 64,750.00	1	\$ 65,110.00
2 Construction Surveying (2%)	1	LS	\$ 51,760.00	\$ 51,760.00	1	\$ 19,290.00	1	\$ 16,190.00	1	\$ 16,280.00
3 Project Temporary Traffic Control (8%)	1	LS	\$ 206,990.00	\$ 206,990.00	1	\$ 77,130.00	1	\$ 64,750.00	1	\$ 65,110.00
4 Roadway Excavation Incl Haul	2,640	CY	\$ 28.00	\$ 73,920.00	900	\$ 25,200.00	810	\$ 22,680.00	930	\$ 26,040.00
5 Removals	50,640	SF	\$ 0.50	\$ 25,320.00	19,420	\$ 9,710.00	19,810	\$ 9,905.00	11,410	\$ 5,705.00
6 Sidewalk	6,760	SY	\$ 35.00	\$ 236,600.00	2,850	\$ 99,750.00	2,770	\$ 96,950.00	1,140	\$ 39,900.00
7 Planter Strip	2,950	SY	\$ 35.00	\$ 103,250.00	1,500	\$ 52,500.00	550	\$ 19,250.00	900	\$ 31,500.00
8 Hot Mix Asphalt	2,160	TON	\$ 100.00	\$ 216,000.00	740	\$ 74,000.00	660	\$ 66,000.00	760	\$ 76,000.00
9 Crushed Surfacing Top Course	1,130	TON	\$ 30.00	\$ 33,900.00	350	\$ 10,500.00	400	\$ 12,000.00	380	\$ 11,400.00
10 Crushed Surfacing Base Course	3,310	TON	\$ 28.00	\$ 92,680.00	1,150	\$ 32,200.00	1,030	\$ 28,840.00	1,130	\$ 31,640.00
11 Cement Conc. Traffic Curb and Gutter	7,800	LF	\$ 25.00	\$ 195,000.00	3,070	\$ 76,750.00	2,800	\$ 70,000.00	1,930	\$ 48,250.00
12 Cement Conc. Traffic Curb	1,190	LF	\$ 20.00	\$ 23,800.00	320	\$ 6,400.00	-	\$ -	870	\$ 17,400.00
13 Cement Conc. Driveway Entrance	250	SY	\$ 75.00	\$ 18,750.00	120	\$ 9,000.00	90	\$ 6,750.00	40	\$ 3,000.00
14 Cement Conc. Sidewalk Ramp	50	EA	\$ 2,000.00	\$ 100,000.00	16	\$ 32,000.00	20	\$ 40,000.00	14	\$ 28,000.00
15 Back of Walk Restoration & Landscaping	3,100	LF	\$ 110.00	\$ 341,000.00	1,200	\$ 132,000.00	1,200	\$ 132,000.00	700	\$ 77,000.00
16 Remove and Reinstall Existing Lighting	23	EA	\$ 4,000.00	\$ 92,000.00	8	\$ 32,000.00	7	\$ 28,000.00	8	\$ 32,000.00
17 Wiring for Existing Lighting	3,200	LF	\$ 40.00	\$ 128,000.00	1,200	\$ 48,000.00	1,200	\$ 48,000.00	800	\$ 32,000.00
18 Roundabout at SR 507 and Old Hwy 99 SE	1	EA	\$ 125,000.00	\$ 125,000.00	-	\$ -	-	\$ -	1	\$ 125,000.00
19 Miscellaneous Utilities	1	LS	\$ 65,000.00	\$ 65,000.00	1	\$ 25,000.00	1	\$ 15,000.00	1	\$ 25,000.00
20 Storm Drainage - New	1	LS	\$ 445,000.00	\$ 445,000.00	1	\$ 185,000.00	1	\$ 160,000.00	1	\$ 100,000.00
21 Urban Design Features	1	LS	\$ 150,000.00	\$ 150,000.00	1	\$ 60,000.00	1	\$ 30,000.00	1	\$ 60,000.00
22 Channelization and Signage	3,100	LF	\$ 20.00	\$ 62,000.00	1,200	\$ 24,000.00	1,200	\$ 24,000.00	700	\$ 14,000.00
23 School Crossing RRFB	2	EA	\$ 30,000.00	\$ 60,000.00	1	\$ 30,000.00	-	\$ -	1	\$ 30,000.00
Subtotal Construction Cost				\$ 3,052,960.00		\$ 1,137,560.00		\$ 955,065.00		\$ 960,335.00
Construction Management, Administration, and Inspection (20%)				\$ 610,592.00		\$ 227,512.00		\$ 191,013.00		\$ 192,067.00
30% Contingency				\$ 1,099,090.00		\$ 409,530.00		\$ 343,830.00		\$ 345,730.00
TOTAL CONSTRUCTION COST				\$ 4,762,642.00		\$ 1,774,602.00		\$ 1,489,908.00		\$ 1,498,132.00

TOTAL PROJECT COST				\$ 5,647,502.00		\$ 2,091,062.00		\$ 1,730,418.00		\$ 1,826,022.00
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THURSTON REGIONAL PLANNING COUNCIL
CITY OF TENINO SR507 / MAIN STREET IMPROVEMENTS
JULY, 2015



APPENDIX E. PUBLIC PARTICIPATION

Since this Comprehensive Plan is adopted in its entirety by the City of Tenino, and in part by Thurston County, different processes for amending the plan must be followed depending on the nature of the proposed amendment.

Amendment Process. For proposed amendments to Plan text, goals, policies, actions and maps that affect only the incorporated areas within Tenino’s urban growth boundary, Tenino alone will consider the proposed amendment. The City’s process for considering such amendments will involve public notification and a public hearing as well as a recommendation by the Planning Commission and final approval by the City Council.

For proposed amendments to Plan text, goals, policies, actions, and maps that affect the unincorporated areas within Tenino’s urban growth boundary, the City and County will each consider the proposed amendments. Per the Thurston County County-wide Planning Policies, the City will assume lead responsibility for preparing the joint plan amendments for the urban growth area in consultation with the County and adjoining jurisdictions. Thurston County will consider any amendments proposed by the City, and their process for considering such amendments will involve a public hearing and approval by both the Thurston County Planning Commission and Board of County Commissioners. This process will take place either concurrently or after the City of Tenino’s process.

In accordance with RCW 36.70A.130, proposed amendments to or revisions of the Comprehensive Plan will be considered no more frequently than once every year, except as ordered by an agency or court with authority. The City and County may also adopt amendments or revisions to the Comprehensive Plan that conform to RCW 36.70A.130 under the following circumstances:

- During initial adoption of a subarea plan.
- Due to the adoption or amendment of a Shoreline Master Program.
- As part of an amendment to a Capital Facilities Chapter (if it occurs concurrently with adoption or amendment of a City budget).

Notification. The City of Tenino will notify property owners or other affected or interested parties of proposed amendments to the Comprehensive Plan or development regulations in a manner similar to the notification requirements under the State Environmental Policy Act (SEPA).

The City will further:

- Notify the Washington State Department of Commerce at least 60-days prior an intended date of adoption for any changes to the Comprehensive Plan or development regulations.
- Provide copies of the Comprehensive Plan and development regulation amendments to affected jurisdictions and those parties that have expressed an interest in reviewing the documents.
- Submit a signed copy of adopted Comprehensive Plan and development regulations will to the Department of Commerce within 10 days of the adoption of the ordinance.

Public Participation Plan. Amendments to Comprehensive Plans under the Growth Management Act require cities and counties to develop a Public Participation Plan. In Tenino, public participation in the update of Comprehensive Plans will meet the requirements in 36.70A.035(1) at minimum, and will include:

- Public participation early and often throughout the update.

- Posting of information pertaining to the amendments in conspicuous locations in the community (including the Post Office and Town Hall).
- Publishing information in the newspaper of general circulation.
- Providing notice to individual property owners about site-specific changes.

The purpose of these items is to provide citizens with information about, and an opportunity to comment on the City's Comprehensive Plan. Potential additional methods of notification include:

- Including information on the reader board entering town.
- Inserting informational flyers into water bills.
- Holding open houses hosted by Planning Commission or City Council.
- Posting notification to the City's website.

APPENDIX F. REGULATORY TAKINGS

Government agencies within Washington State are required to ensure that their regulatory or administrative actions do not result in an unconstitutional taking of private property. The Washington State Attorney General's office published an advisory memorandum that provides a recommended process for evaluating proposed regulatory or administrative actions to avoid unconstitutional takings of private property (December 2015). The memorandum identifies five 'warning signals' cities should take note of when considering a regulatory taking:

1. *Does the regulation or action result in a permanent or temporary physical occupation of private property?*
2. *Does the regulation or action deprive the owner of all economically viable uses of the property?*
3. *Does the regulation or action deny or substantially diminish a fundamental attribute of property ownership?*
4. *Does the regulation or action require a property owner to dedicate a portion of property, to grant an easement, or to undertake some independent financial obligation?*
5. *Does the regulatory action have a severe impact on the landowner's economic interest?*

Whenever a regulation or action is proposed by the City that may have a detrimental effect on a property owner, the City will consult with its staff and legal counsel to determine whether or not the taking is reasonable and constitutional, and whether there are reasonable and financially viable alternatives available to the City.