Southside Parkway Corridor Plan

city of sutherlin
draft 1
May 2007

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This project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. This TGM grant is financed, in part, by federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), local government, and the State of Oregon funds.

The contents of this document do not necessarily reflect views or policies of the State of Oregon.

INTRODUCTION

The City of Sutherlin is a city of approximately 7,280 residents and is situated along Interstate 5 in southern Oregon. In its 2005 Transportation System Plan (TSP), the City identified a new, parkway-style arterial street alignment to serve as an east-west alternative to Highway 138/Central Avenue (Central). This new Southside Parkway would alleviate forecasted long-term traffic congestion along Central Avenue by serving intercity trips between Roseburg and the City of Sutherlin's existing and newly-developing east side neighborhoods. The purpose of the Southside Parkway Corridor Plan is to refine the conceptual alignment and design features introduced in the TSP, as well as to define and integrate future access controls and street improvements needed to create an effective alternative to Central Avenue. In addition, the City of Sutherlin will have a specific plan that can be used to guide the future land acquisition, design, and ultimate construction of the parkway.

Study Area

Throughout the development of the *Southside Parkway Corridor Plan*, the official study area was refined by the review committees and project team. Based on this refinement, the official study area (Figure 1) is roughly bounded by the Calapooya Street corridor to the west, the Waite Street/South Side Road corridor to the east, Central Avenue to the north, and the Cooper Creek watershed/ Scone Butte area to the south.

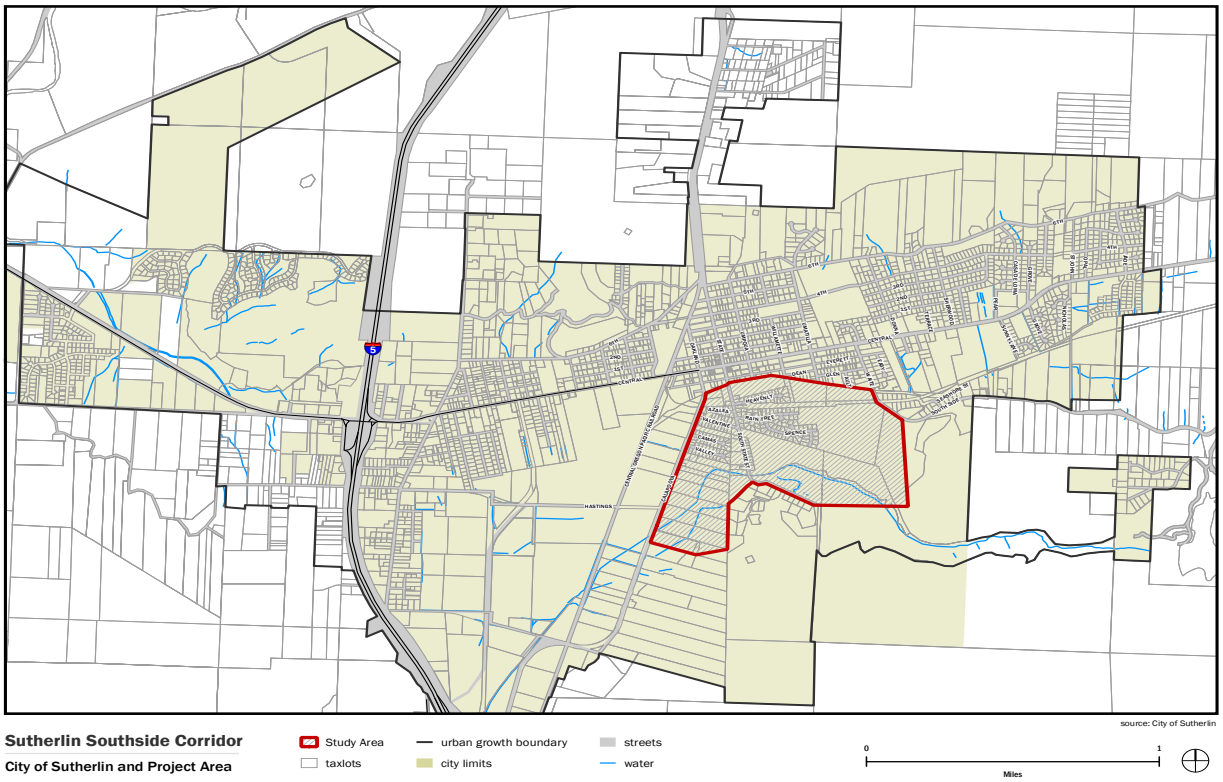

Figure 1. Southside Parkway Study Area

Development of the Southside Parkway Corridor Plan

The *Southside Parkway Corridor Plan* was guided by a Technical review committee made up of representatives from the City of Sutherlin, Douglas County, and ODOT. In addition, the plan was also guided by the Transportation Advisory Committee, a formal committee of citizens who hold an advisory role in relation to transportation planning efforts within the City of Sutherlin. Both the technical review and Transportation Advisory Committees periodically convened to review and guide the technical analysis and documentation prepared by the consultant team.

Southside Parkway Corridor Plan

The Southside Parkway Corridor Plan was developed in anticipation of the long-term circulation needs within the City of Sutherlin. At the heart of the plan is the preferred parkway alignment. This preferred conceptual alignment was developed based on an evaluation process that considered land use impacts, environmental impacts, social impacts, cost, and constructability of a number of different alignments. Through consultation with the technical and Transportation Advisory Committees, it was determined that the preferred conceptual alignment best integrates the strongest and most desirable circulation qualities while minimizing impacts (to the extent possible) to the social and environmental constraints that exist within the overall study corridor. While still preliminary in nature, the preferred conceptual alignment has been developed to reflect sound transportation engineering principles and known constraints that exist within the overall study corridor.

Preferred Parkway Alignment and General Design Characteristics

The preferred alignment, as developed through this planning process, is illustrated in Figure 2. Detailed illustrations of the alignment are subsequently provided in Figures 3-5. In general, the alignment begins at the Calapooya Street/ Hastings Avenue intersection at the west end of the study corridor and follows a curvilinear route to the east ultimately terminating at the Waite Street/South Side Road intersection. Coupled with the existing Hastings Avenue corridor, this new connection between the Calapooya Street and Waite Street corridors would effectively establish an east-west parallel roadway to serve as an alternative to Central Avenue for many of the existing and newly developing east side neighborhoods. In addition, the parkway would also provide more convenient access to/from the I-5/Wilbur-Umpqua Road interchange, further reducing reliance on Central Avenue

Figure 3. Section 1 - Calapooya/Hastings intersection to just west of South State Street

Figure 4. Section 2 - South State Street to western edge of School District property

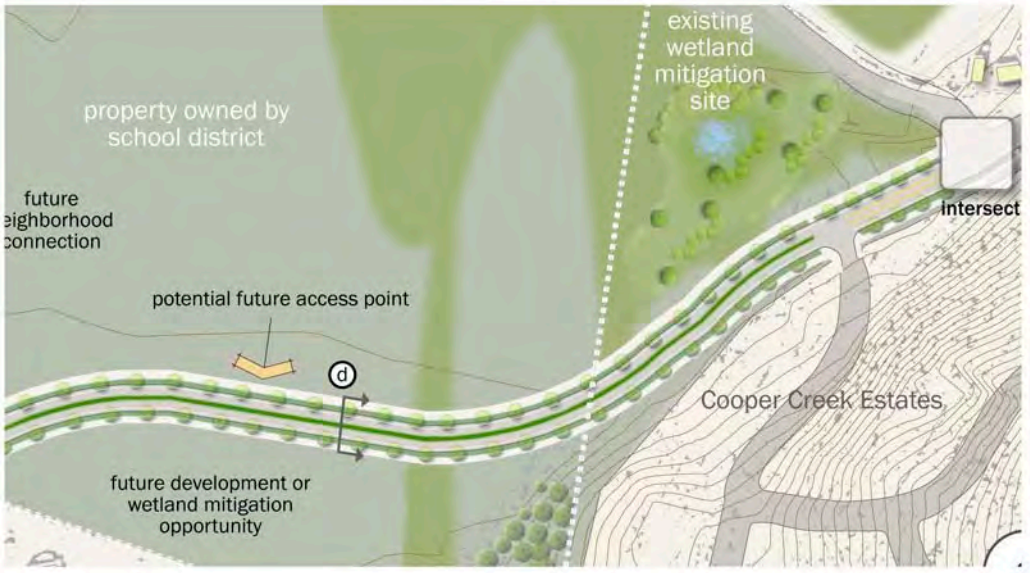

Figure 5. Section 3 - western edge of School District property to Waite Street

It is recognized that there will be different circulation needs and varying levels of environmental/social impacts along the preferred alignment. In an effort to accommodate these needs and minimize the impacts, the Plan envisions an alignment with different cross sections. These cross sections are located in Figure 2 and graphically illustrated in Figures 6 - 8. These different parkway design standards are based on the anticipated functional and operational characteristics such as travel volume, operating speed, safety, and the accommodation of emergency response vehicles. The specific features and characteristics of each are described below.

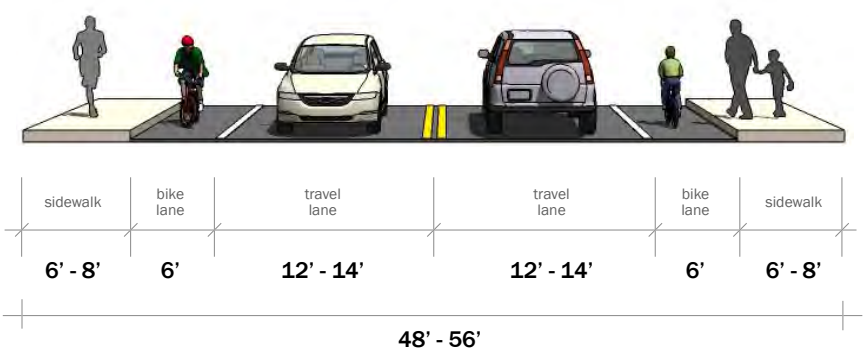

Figure 6. Cross Section A

Figure 6 illustrates the general parkway cross section between Calapooya Street and South State Street. Recognizing that this portion of the parkway corridor would traverse a significant wetland feature and that the potential for future access in this area is limited as a result, it is envisioned that the parkway would have a narrower two-lane cross section that does not incorporate a planted median or sidewalk buffer. This narrower cross section would still accommodate the anticipated vehicular and ped/bike circulation needs while minimizing the roadway "footprint" and the corresponding environmental impacts. At the future Calapooya Street and South State Street intersections, the parkway would widen to accommodate separate left-turn lanes.

Figure 7 illustrates the general parkway cross section between South State Street and Cooper Creek. The parkway alignment is envisioned to have a wider cross section in order to accommodate more "green" features, such as a planted median/center turn lane and bioswale. As the alignment would parallel the existing Cooper Creek watershed to the north, there are opportunities to combine the parkway alignment with the future pedestrian and walking trails that are envisioned along Cooper Creek.

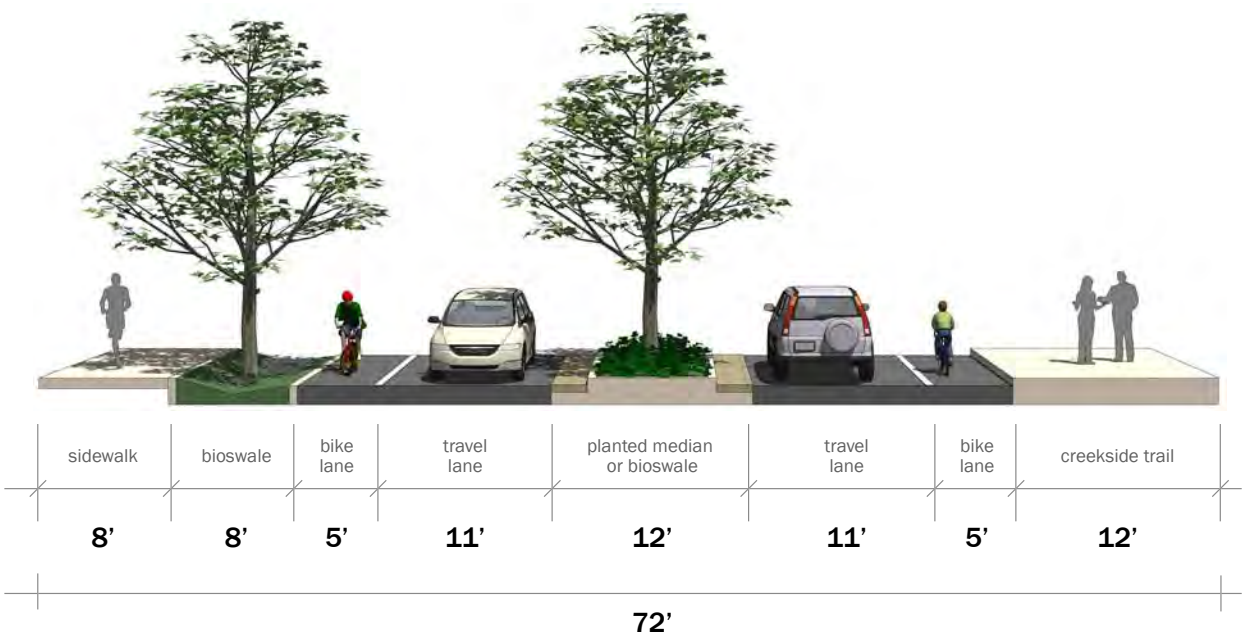

Figure 7. Cross Section B

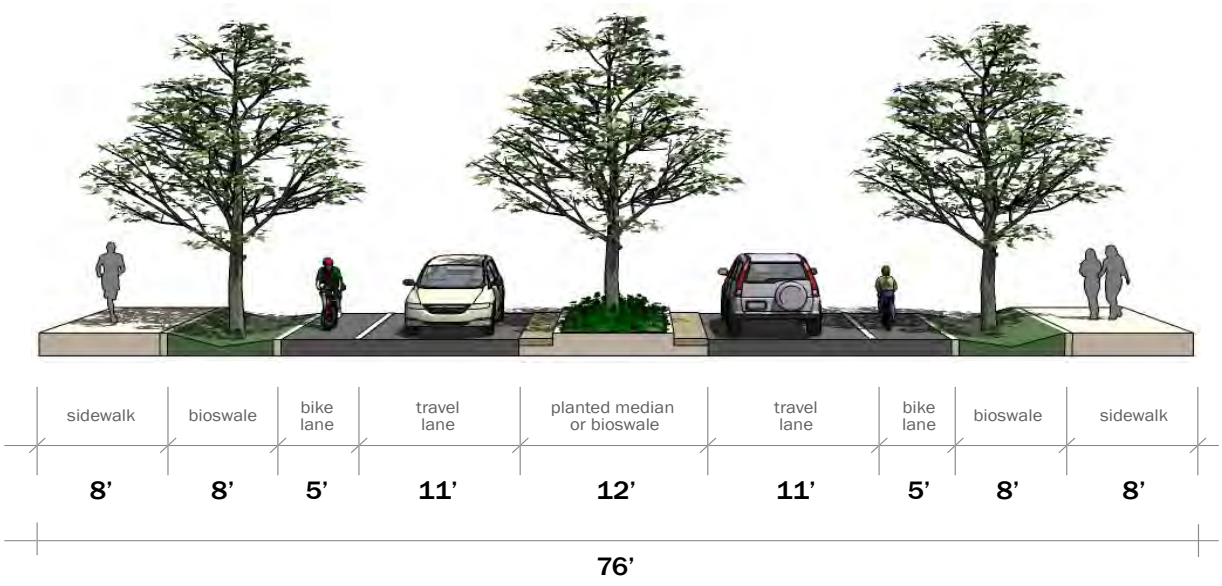

Figure 8. Cross Section C

Figure 8 illustrates the general parkway cross section along that section of the corridor that will traverse through the existing Meadows Park development. The alignment is envisioned to have a full roadway cross section with a planted median/center turn lane, bioswales, sidewalks, and bike lanes. Recognizing that the parkway will have some social impacts along this portion of the corridor, the plan envisions a wider right-of-way that would accommodate a green buffer and/or other barrier features that would soften the visual impacts of the parkway from the adjacent neighborhoods.

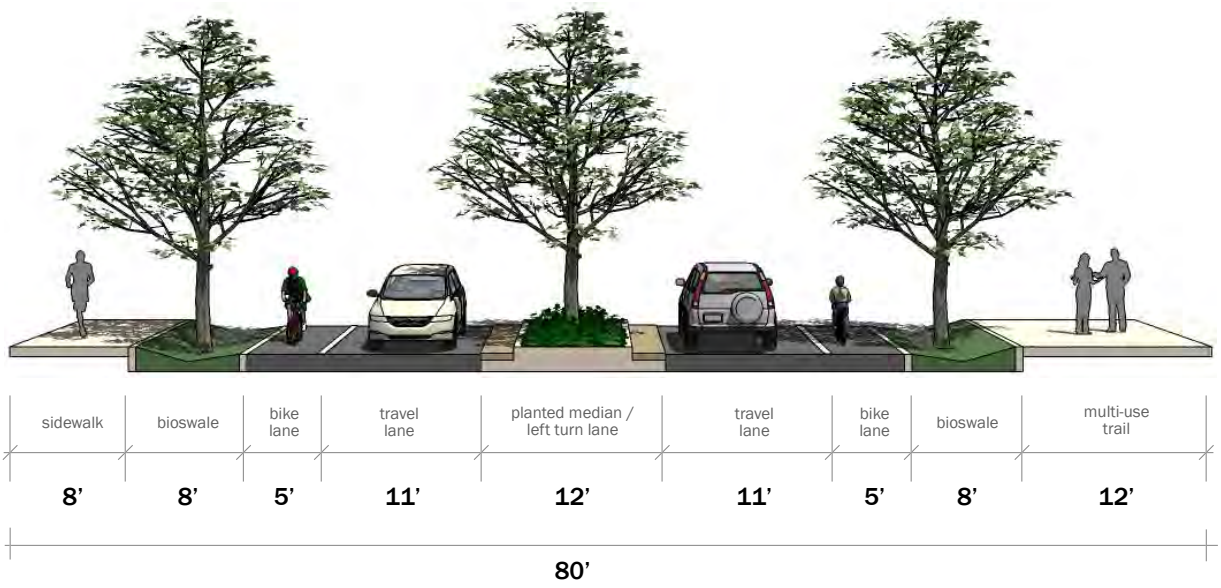

Figure 9. Cross Section D

Figure 9 illustrates the general parkway cross section along the undeveloped land currently owned by the Sutherlin School District. Given that this section has the fewest social, environmental, and topographical constraints, this portion of the corridor is envisioned to fully implement the parkway concept, as originally envisioned in the TSP. This includes the planted median, bioswales, bike lanes, sidewalks, and multi-use recreation trail (on one side of the parkway).

Parkway Access Plan

As part of the Southside Parkway Corridor Plan, a generalized access plan was developed to help identify where access would be provided to/from the preferred parkway alignment. As originally envisioned in the City's Transportation System Plan (TSP) and subsequently refined in the plan development process, the parkway alignment consists of a limited-access facility. Identified access points are provided at Calapooya Street, South State Street, a driveway serving the existing SKP Park, a connection to Meadows Park, a possible future connection to the large undeveloped parcel owned by the Sutherlin School District, and a connection to the Waite Street/South Side Road intersection.

To facilitate movements to/from the parkway at these access points, sufficient right-of-way should be acquired from adjacent properties to ultimately accommodate the following improvements at key parkway intersections:

Calapooya Street / Hastings Avenue/Parkway

- Provide separate left-turn lanes on all intersection approaches.
- Provide a northbound right-turn lane on Calapooya Street to facilitate right-turn movements onto the Parkway.
- When warranted, signalize the intersection. This improvement is consistent with the findings in the City's TSP.

South State Street / Parkway

- Provide separate eastbound and westbound left-turn lanes on the Parkway.
- Reconstruct and widen the north and south approaches of South State Street to provide better alignment geometrics and sidewalks/bike lanes.
- Depending upon potential future development density of Scone Butte, investigate the need for all-way stop control or signalization of the intersection.

Other Parkway Access Points

- Provide left-turn lane/center turn lane at all other points of access to the Parkway.

Parkway Landscaping

Landscaping features for the Southside Parkway should include an attractive mix of paving treatments, "green" stormwater features, and climate-appropriate plants that require little or no irrigation and minimal maintenance. The following are guidelines and recommendations for landscaping along the Southside Parkway Corridor:

- Drought tolerant and native plant materials are encouraged;
- Landscaping should enhance natural site elements through the careful use of flower and leaf color and texture, plant forms and plant masses.
- In an effort to reduce localized flood events and stormwater runoff impacts to the Cooper Creek watershed, the Plan recommends using linear bioswales in the median and between the roadway and the sidewalk/trail. Additionally, sidewalks and trails should be constructed of permeable pavement (i.e., permeable asphalt or concrete) to further reduce impacts. Permeable organic materials, like decomposed granite or crushed aggregate, may be suitable for walking areas along Cooper Creek but must be constructed to the highest possible standards to meet ADA access requirements and not require continual maintenance.
- Where possible, existing mature landscaping should be preserved and incorporated into the design of the roadway. Landscaping should be designed to effectively enhance existing views or provide new view corridor opportunities.
- Where the Parkway impacts adjacent residential development, dense vegetated buffers should be established to provide privacy and protection from parkway noise. Dense vegetated buffers are recommended over sound walls or other impenetrable barriers as they improve pedestrian safety by providing some transparency between the corridor and the adjacent buildings. Vegetated buffers also help filter harmful gases and particulates generated by vehicles along the Parkway.
- If used, perimeter fencing or walls visible to the public and neighboring properties shall avoid monotony by the use of recesses, planting materials and architectural features to visually "break up" their linear appearance.

Compatibility with Existing Plans

The elements of the Southside Parkway Corridor Plan are intended to be consistent with the City's current planning documents. From a circulation perspective, the more detailed refinement work for the parkway does not deviate from or require modifications to the long-term transportation improvements identified in the 2005 TSP. These compatible, long-term improvements include the following:

Roadway Projects

- Duke Avenue / Hastings Avenue – this identified improvement would realign the connection between Duke Avenue and Hastings Avenue and bring the entire corridor up to full collector street design standards.
- Signalize the Calapooya Street / Hastings Avenue / Parkway intersection.
- Signalize the Central Avenue / Waite Street intersection.

Bicycle and Pedestrian Projects

- Calapooya Street – add sidewalks and bike lanes to Sutherlin Creek Bridge.
- Duke Avenue / Hastings Avenue – add sidewalks and bike lanes.
- South State Street – add sidewalks and bike lanes from Central Avenue to Southside Parkway alignment.
- Waite Street – add sidewalks and bike lanes from Central Avenue to Southside Parkway.
- Construct a new multi-use path following Cooper Creek from the Southside Parkway to Cooper Creek Reservoir.

Implementation Plan

A planning level cost estimate was completed for the entire length of the parkway corridor. The estimate includes subgrade and pavement for travel lanes, curbs, gutters, subsurface drainage associated with the roadway, sidewalks, signing, and striping, and the need for drainage culverts and small bridges that would span Cooper Creek. In recognition of the need to construct portions of the parkway corridor in identified wetland areas, the cost estimate also includes allowances for special construction techniques and materials, such as subgrade stabilization, water quality features, retaining walls, and culverts. In summary, the cost to physically construct the parkway in 2007 dollars is approximately $7,000,000. Assuming that the City would need to acquire all of the right-of-way for the parkway (no dedication), right-of-way is estimated to cost an additional $4,000,000.

The Southside Parkway Corridor Plan is a long-term vision for ensuring alternative east-west travel ways within the east side area of the City of Sutherlin. As Sutherlin continues to grow and traffic continues to increase on Central Avenue, the need for the Southside Parkway will become increasingly important. However, given the size and magnitude of the parkway and the estimated costs to construct such a facility, it is likely that development of the parkway will need to occur over time, as funds become available to purchase right-of-way and construct the roadway. To assist with this, a possible phased implementation plan has been developed that would pace out the acquisition of right-of-way and construction over time. This implementation plan is illustrated in Figure 10.

Appendix

Memo 1: Existing Conditions Analysis
Memo 2: Transportation and Land Use Toolbox
Memo 3: Concept Plan Alternatives

Southside Parkway Corridor Plan

Memo 1: Existing Conditions Analysis

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Introduction

The City of Sutherlin is a city of approximately 7,280 residents situated along Interstate 5 in southern Oregon. In its 2005 Transportation System Plan (TSP), the City identified a new, parkway-style arterial street alignment as an east-west alternative south of Highway 138/Central Avenue (Central). This new Southside Parkway alignment would alleviate traffic congestion along Central Avenue by serving intercity trips between Roseburg and the City of Sutherlin's existing and newly-developing east side neighborhoods. The purpose of the Southside Parkway Corridor Plan is to refine the conceptual alignment and design features introduced in the TSP, as well as to define and integrate future land uses with the access controls and street improvements needed to create an effective local traffic alternative to Central Avenue. This memo summarizes existing land use, transportation, and environmental policies and conditions for the study area.

General Characteristics of the Study Area

The Southside Parkway Corridor Plan study area is roughly bounded by Calapooya to the west, the easternmost city limits to the east, Central Avenue to the north, and Cooper Creek to the south (figure 1). Straight-line distance from the Hastings/Calapooya intersection to the easternmost city limits is approximately two miles.

Existing land uses in the study area are predominantly low-density residential and large lot rural residential. Parcels on the north side of the study area are typically small (~7,000 sf) and have a urban/suburban character. Parcels in the southern portion of the study area have a more rural character and range in size from 5 - 12 acres. There are a considerable number of mobile home/manufactured home units in the study area. The City of Sutherlin owns approximately 46 acres in the study area; much of the City-owned property is parallel to or immediately south of Sutherlin Creek. The Sutherlin School District owns a 32-acre tract of land immediately east of the Rain Tree roadway stub (figure 2).

The topography is generally flat, with two pronounced landforms along the southern boundary of the study area (figure 3). Two waterways, Cooper Creek and Sutherlin Creek, and their associated wetlands and riparian areas, traverse the study area. Sutherlin Creek is a man-made channel that was created in 1906 to drain the valley for orchard cultivation. There are a number of wetlands throughout the study area, particularly in the vicinity of Cooper Creek. Additional information on wetlands is provided in the "Natural Resources" section of this document.

Land Use

The following section summarizes relevant state and city plans and policies that pertain to land use and the Southside Parkway Corridor study area.

State Plans and Policies

The foundation of Oregon's land use planning program is a set of 19 statewide planning goals, which collectively express the state's policies on land use and related topics. Local governments, special districts, and state agencies' plans must all be consistent with these goals.

Relevant Oregon Statewide Planning Goals

Goal 1: Citizen Involvement

To develop and implement a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

Goal 2: Land Use Planning

To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual basis for such decisions and actions. Attempts to ensure coordinated planning among cities, counties, special districts and other

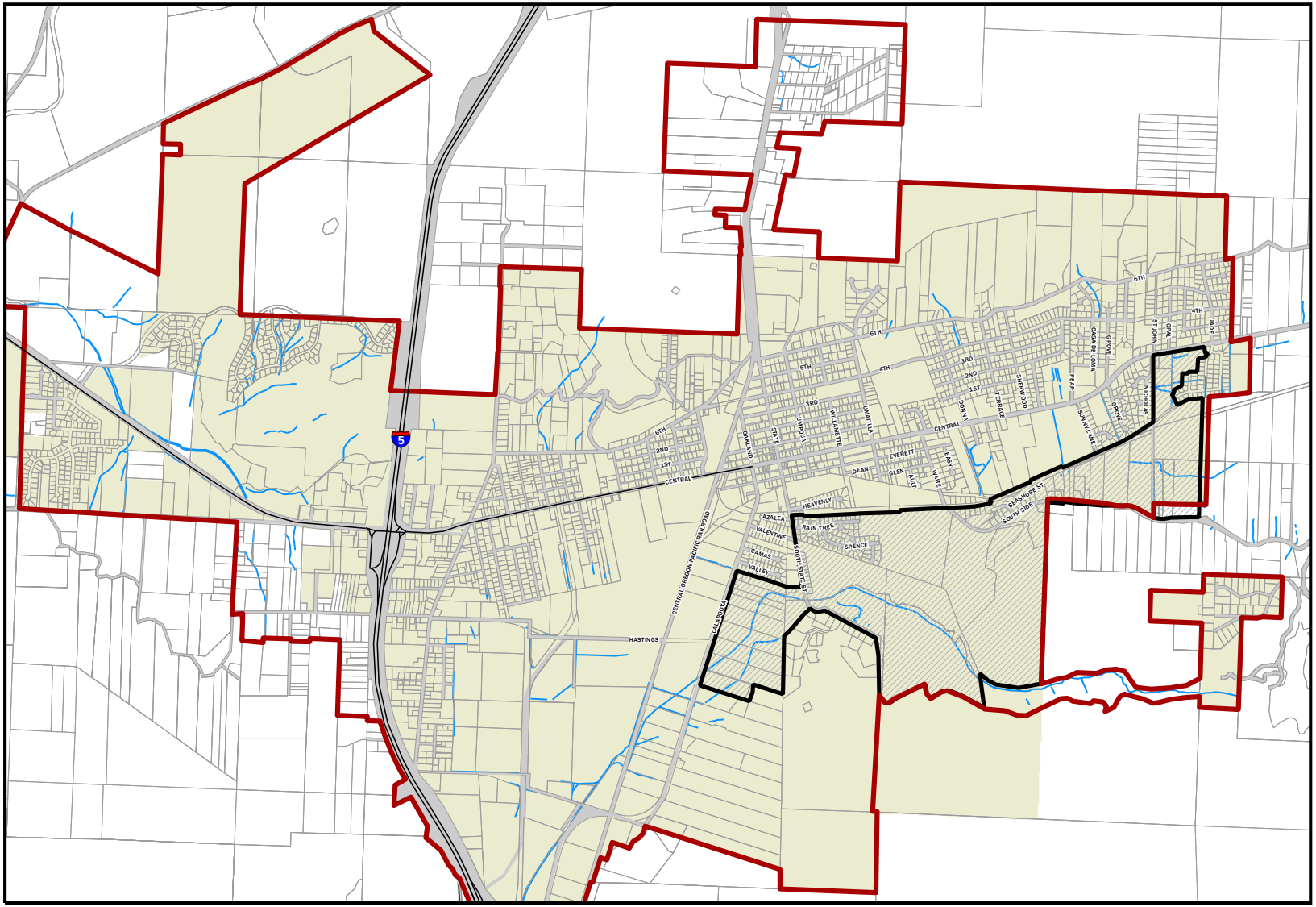


Figure 1. Study Area

interest groups.

Goal 5: Open Spaces, Scenic and Historic Areas, and Natural Resources

To protect natural resources and conserve scenic and historic areas as well as open spaces.

Goal 9: Economic Development

To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.

Goal 10: Housing

To provide for the housing needs of citizens of the state.

Goal 11: Public Facilities and Services

To plan and develop a timely, orderly, and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

Goal 12: Transportation

To provide and encourage a safe, convenient, and economic transportation system; includes provisions for freight, automobile, bicycle, and pedestrian use.

Goal 14: Urbanization

To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban residential and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.

City of Sutherlin Plans and Policies

Comprehensive Plan for the City of Sutherlin

The Comprehensive Plan for the City of Sutherlin (1991) is a legally–binding document that describes community goals, desired land uses, and policies. Descriptions of Comprehensive Plan elements relevant to the Southside Parkway Corridor Plan follow.

Population and Economy

The City's goal is to broaden, improve, and diversify the economy of Sutherlin while enhancing the environment.

Economic policies relevant to the Southside Parkway Corridor Plan include:

- The city shall maintain and expand the capacity of its water, drainage, sewerage, and transportation systems to ensure that a proper infrastructure attractive to industry is in place.
- The city shall encourage the revitalization of Sutherlin's central business district through a program designed to attract and retain a greater proportion of the area's retail trade.

Public Facilities / Transportation

The City's goals are:

- to provide efficient public facilities and services in an orderly, planned manner so as to meet the needs of Sutherlin's residents and businesses;
- to provide and encourage a safe, convenient, aesthetic, and economical transportation system; and
- to conserve energy resources and encourage utilization of renewable energy resources.

Policies relevant to the Southside Parkway Corridor Plan include:

- The city shall identify ways to reduce and eventually eliminate the community's existing subsurface drainage problems.
- Ensure that, as new development occurs, public facilities and services to support the development are available or will be

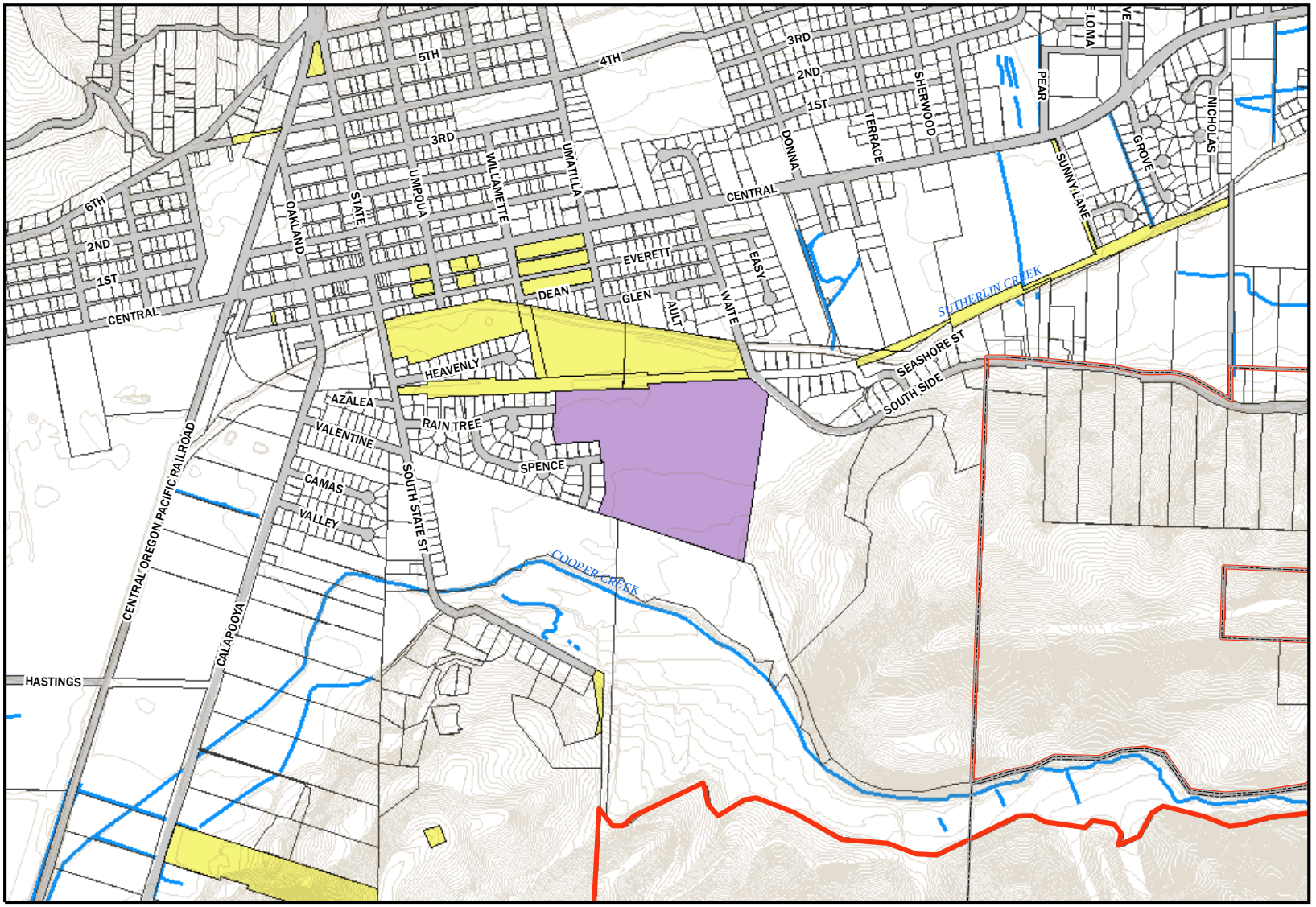


Figure 2. Public Ownership

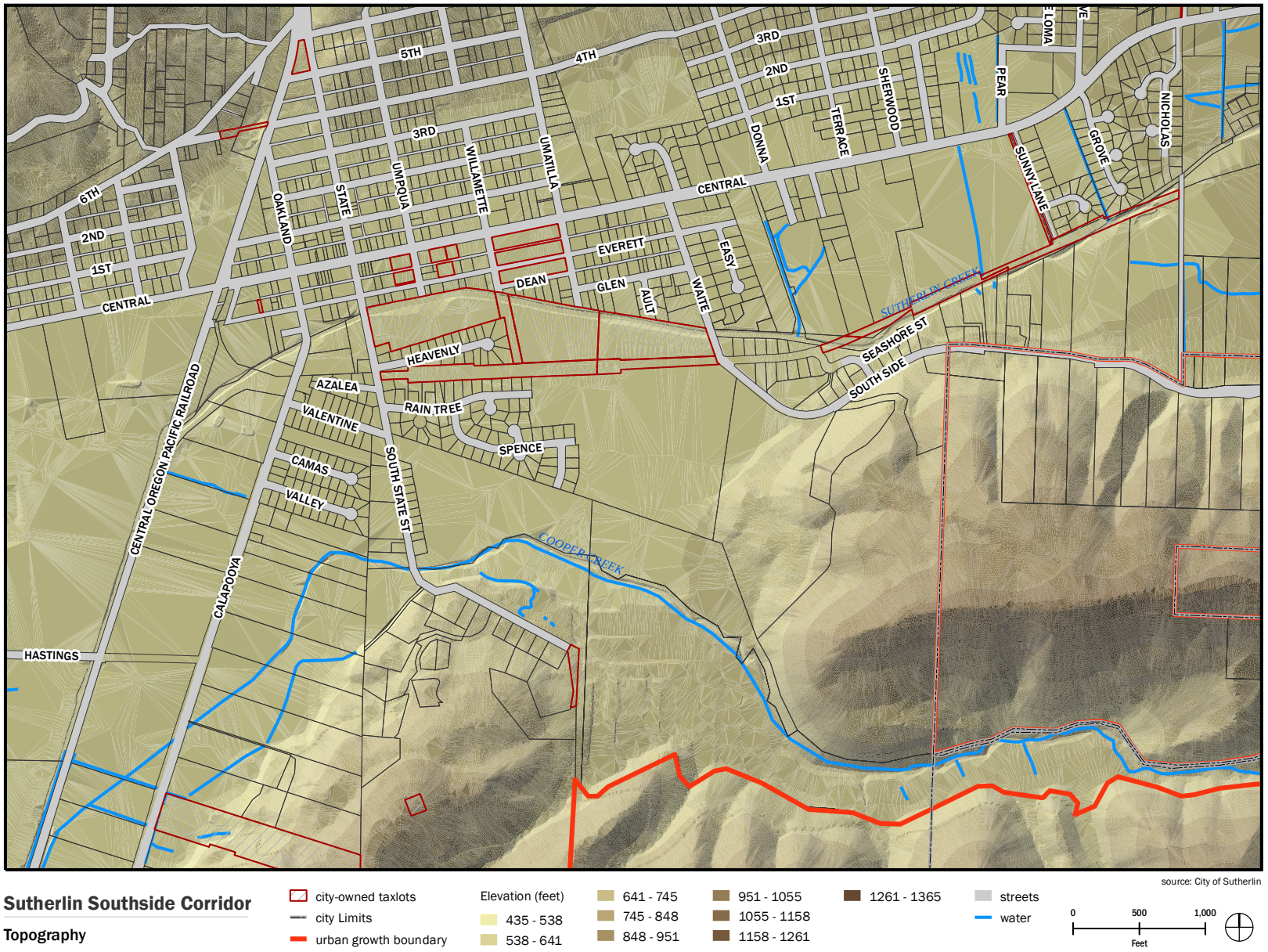


Figure 3. Topography

available within a reasonable time.

- Support the development of an additional east-west limited access arterial thoroughfare.
- Future streets and major improvements to existing streets shall satisfy the following applicable developmental criteria: (for arterial roads) minimum right-of-way of 102-feet; minimum pavement width of 70 to 82-feet.
- Discourage direct residential access onto existing and future arterials, in particular Central Avenue west of Sherwood Street.
- The city shall encourage the development of alternative modes of transportation to the automobile.
- The city shall work with the Oregon Department of Transportation and Douglas County to improve the city's transportation system to a level consistent with the goals and policies of the Comprehensive Plan and the Public Facilities Plan.
- The city shall require new development to install appropriate and pleasing landscaping along arterial streets.
- Mixed use areas that combine residential uses with neighborhood commercial activities will be encouraged.

Natural and Cultural Resources

The City's goals are (1) to protect Sutherlin's environment by conserving vegetation, wildlife, and water resources; and (2) to conserve open space and to promote the protection of lands with sites, structures, and objects of historic significance.

Natural and cultural resources policies relevant to the Southside Parkway Corridor Plan include:

- Protect Cooper, Calapooya, and Sutherlin Creeks within Sutherlin's Urban Growth Boundary by enforcing all applicable county, state, and federal watercourse regulations and by coordinating activities affecting Sutherlin Creek with the Sutherlin Water Control District.
- Residential, commercial, and industrial development should be designed and located where it will not burden the area's water resources or the community's water delivery system.
- New streets, bridges, and access rights-of-way should be designed to avoid restriction of channel capacity and to minimize removal of shoreline vegetation.
- Discourage radical changes to existing wildlife habitat.
- The city shall promote the conservation of open spaces that serve as buffer areas separating residential areas from wholesale, commercial, industrial, and other conflicting land uses through the establishment of development covenants and zone designations.
- With regard to historic sites and structures, the city shall discourage their unauthorized alteration, relocation, or demolition.

Land Use

The city's goal for land use is to ensure that the development of Sutherlin is properly phased and orderly so that urban sprawl is avoided, livability is enhanced, and enough suitable land is available for future development.

Relevant city policies that may affect the Southside Parkway Corridor Plan include:

- Advocate innovative development schemes, including planned unit developments, to provide varied housing types and densities on those large parcels of open land which have been identified as suitable for urban development.
- Support the retention of the Central Business District as the community's major commercial and service area.

- Require that infilling of vacant land in the areas designated for linear commercial be done in such a fashion so as to encourage the clustering of commercial activities, improve the visual attractiveness of the area, and minimize the points of ingress and egress on Central Avenue. Whenever possible, joint driveways to different commercial establishments would be encouraged.
- Provide public facilities in a timely manner to support industrial development in major manufacturing areas and other compatible locations.

Housing

Sutherlin has three goals for housing: (1) ensure that housing stock is maintained at a standard level, (2) enable all members of the community to live in housing appropriate to their needs and, (3) locate future housing so that available land is both used efficiently and developed for a high degree of livability.

Policies relevant to the Southside Parkway Corridor include:

- Encourage the quick replacement of all dilapidated or inadequate housing.
- Require new manufactured homes to be tied down and completely skirted or placed on a conventional foundation.
- As funds become available, the City shall actively pursue methods of undertaking a rehabilitation program for houses which need work in order to remain safe dwelling units.
- Encourage infilling of the existing residential areas by incentives for new construction in already-serviced areas.
- Provide buffer zones between residential areas and conflicting land uses in order to protect the overall livability of those areas.

Existing Zoning Code

Title 17 of the City of Sutherlin City Code implements the land use element of the Comprehensive Plan policies with zoning districts. The zoning map (figure 4) identifies zoning designations for parcels within the city, while the code provides standards and criteria for land use and development. The following zoning designations are in the study area:

Residential

R-H: Residential Hillside District

This district provides for very low density single-family residential with minimum 12,000 square foot lots. The intent of the district is to balance residential development with natural preservation and native geologic conditions. This zone is located in the south of the study area in the foothills flanking Cooper Creek.

R-1: Low Density Residential District

Low density single-family residential with conditional terms potentially allowing churches, duplexes, tennis courts, traditional home occupations, libraries, parks, playgrounds, schools, planned unit developments, residential facilities, and other similar uses. Minimum lot size is 7,500 square feet.

R-2: Medium Density Residential District

A residential district allowing single-family residences, duplexes, triplexes, fourplexes, residential homes, manufactured homes, and manufactured dwelling subdivisions. The same conditional uses for the R-1 district can be applied to the R-2 district. Minimum lot size is 6,000 square feet.

R-3: High Density Residential

This district allows any use permitted in R-1 and R-2 plus apartment houses, boarding, lodging or rooming houses, retirement homes, religious quarters, residential hotels, and nursing homes.

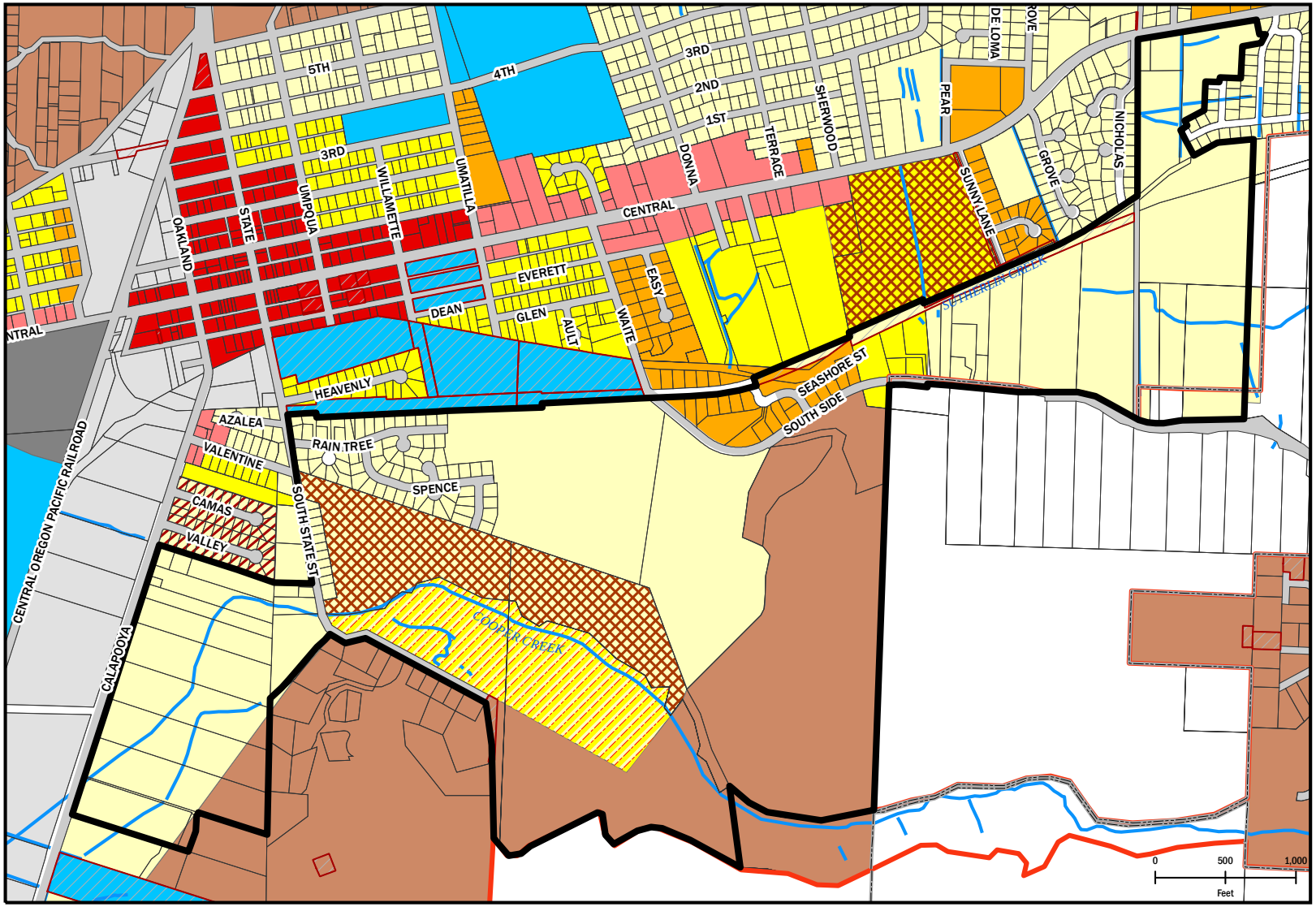


Figure 4. Existing Zoning

In addition to standard residential zoning districts, several overlay districts are present in the study area. They include an R-2 overlay, an R-2-SDMHP overlay, and SKP-PUD overlay.

Commercial

C-1: Commercial Downtown District

The C-1 Commercial Downtown district allows for a broad range of uses that strengthen the downtown core and provide more common everyday goods and services. Retail, services, public use facilities, and office uses are allowed outright in the C-1 zone.

C-3: Commercial Community District

The C-3 zone is intended to be a general commercial zone that provides a wide variety of goods and services to area residents and the traveling public. This zone is primarily for auto-oriented land uses and is found along Central Avenue outside the downtown district.

Industrial

M-1: Industrial Light District

Industrial Light District (M-1) areas are designated for non-noxious industries, which are generally compatible with residential and commercial activities. In a light industrial district, attention is given to the protection of surrounding areas from off-site impacts.

M-2: Industrial Heavy District

The purpose and function of an Industrial Heavy District (M-2) is to encourage the location of uses that have a strong industrial orientation while protecting the health, safety, and welfare of the public as well as the character of the area. Uses in the M-2 zone cannot create any noise, odor, smoke, or other nuisances that would have an effect on nearby non-industrial areas. These industrial uses are located in the western portion of the study area, paralleling Highway 99 and the Roseburg Highway.

Public/Semi-Public

CG/CS: General Community Services Special District (CS)

This district is intended to provide for the review and location of public facilities and related uses which by necessity, character, or effect will be compatible with surrounding uses. Uses permitted outright include churches, public and parochial schools, parks, playgrounds, municipal golf courses, government buildings or uses, or public utilities.

Parks and Open Space Plan

The City of Sutherlin Parks and Open Space Plan was adopted in June 2005. An important component of this plan addresses bike and pedestrian pathways to provide opportunities for increased physical activity, active recreation, and use of alternative travel modes. The plan illustrates opportunities for bicycle and pedestrian connections along Sutherlin Creek and the proposed east-west parkway. Additionally, the plan illustrates an opportunity to expand the current Timber Days park site to be a large Central Park for the community. This would involve using all or a portion of the adjacent school district property.

Planned Subdivisions

There are three planned subdivisions in the Southside Parkway Corridor study area: Forest Heights, Cooper Creek Estates, and Daffodil Estates. Forest Heights and Cooper Creek Estates subdivisions are located immediately south of South Side Road and are platted to accommodate roughly 160 single-family homes (figure 5). Daffodil Estates is located on the east end of the city between the stub of Sunny Lane and Nichols. The development proposal is for 18 single-family home lots and a significant portion of the site donated to the Douglas County Soil and Water Conservation District. These subdivisions are in various stages of development review and approval. Based on conversations with city staff, it is likely that initial construction of these development projects will commence in the near-term future. As such, the Southside Parkway Corridor planning study considers them as in-progress development.

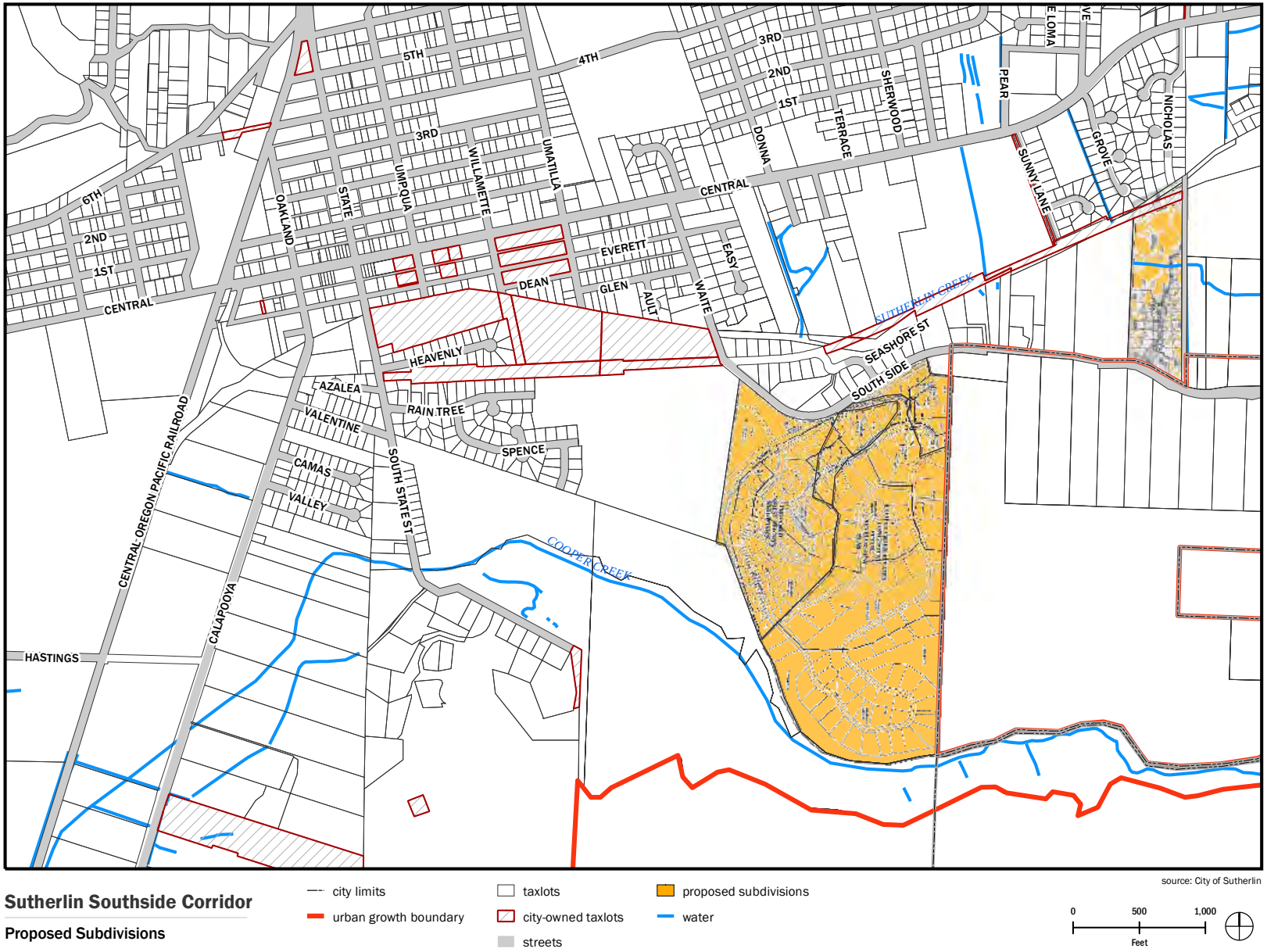


Figure 5. Proposed Subdivisions

Transportation

This section summarizes documents at the state, regional, and local level that govern transportation within the general planning boundaries of the Sutherlin Southside Parkway Corridor Plan.

State Plans and Policies

Transportation Planning Rule (TPR) OAR 660-12

In April 1991, the Land Conservation and Development Commission (LCDC), with the concurrence of ODOT, adopted the Transportation Planning Rule (TPR), OAR 660 Division 12. The TPR requires all local jurisdictions with a population of at least 2,500 residents to prepare and adopt a Transportation System Plan. Both the City of Sutherlin and Douglas County have adopted such plans. Specific components from these plans and how they impact the Sutherlin Southside Parkway Corridor planning area are highlighted later in this memorandum.

Oregon Transportation Plan

The Oregon Transportation Plan (OTP) was adopted in 1992 to guide multi-modal transportation planning in Oregon. According to the OTP, all transportation planning documents must be consistent with the OTP and must identify and evaluate multi-modal elements in the planning process.

Oregon Bicycle and Pedestrian Plan

The Oregon Bicycle and Pedestrian Plan was adopted to ensure the adequacy of bicycling and walking facilities in the state. The goal of the plan is to provide integrated bikeway and walkway systems that are safe and convenient to the bicycling and walking community. The overall multi-modal policies of this document will be applicable for the Sutherlin Southside Parkway Corridor Plan.

1999 Oregon Highway Plan

The 1999 Oregon Highway Plan (OHP) and its subsequent amendments guide the long-term development and management of Oregon's state highway system. The policies found within the OHP that apply to the Sutherlin Southside Parkway Corridor Plan include the following:

- Efficient management of the system to increase safety, preserve the system, and extend its capacity;
- Increased partnerships, particularly with regional and local governments;
- Links between land use and transportation;
- Access management;
- Links with other transportation modes; and,
- Environmental and scenic resources.

ORS 374 (Control of Access to Public Highways)

Oregon Revised Statutes (ORS) chapter 374 discusses the legal authority for jurisdictions to control access to public highways, roads, bridges, and ferries. This authority is relevant to the Sutherlin Southside Parkway Corridor Plan as the vision of the project is to establish a limited access travel way that emphasizes mobility over accessibility. As will be noted, the City of Sutherlin and ODOT have adopted access management policies that regulate the location and spacing of access to public roadways.

County Plans and Policies

Douglas County Transportation System Plan

The Douglas County Transportation System Plan was adopted in 2001. The plan was prepared in accordance with Oregon's Transportation Planning Rule and comprises several chapters from its Comprehensive Plan. Elements relevant to the Sutherlin Southside Parkway Corridor Plan include the following:

Roadway Functional Classification

Several roadways within the Sutherlin Southside Parkway Corridor planning area are owned and maintained by Douglas County. Douglas County maintains the following roadway functional classification system:

- Principal Highway
- Arterial
- Major Collector
- Minor Collector
- Local Street

Roadway/Intersection Operations Standards

The County has adopted roadway and intersection performance standards. These standards apply to all County-owned and maintained facilities, and include the following:

- Principal Highway – V/C = 0.70
- Arterial – V/C = 0.85
- Major Collector – V/C = 0.90
- Minor Collector – V/C = 0.95
- Local Street – V/C = 0.95

City of Sutherlin Plans and Policy Review

Public Facility Plan for the City of Sutherlin

The City of Sutherlin adopted the Public Facilities Plan in 1991 to ensure the adequacy of public facilities. Elements of the plan relevant to the Sutherlin Southside Parkway Corridor Plan include the following:

- Water;
- Sanitary Sewer;
- Transportation;
- Emergency Services; and
- Utilities.

Figure 6 illustrates the existing water, sewer, and stormwater system within the general planning area.

City of Sutherlin Transportation System Plan

The City of Sutherlin's Transportation System Plan (TSP) was adopted in 2005 and serves as the transportation element of the local comprehensive plan. It establishes a system of facilities and services to meet long-range transportation needs with a focus on integrating transportation and land use. The TSP must be consistent with the OHP and other required plans. The Sutherlin Southside Parkway Corridor Plan must be consistent with both the Sutherlin TSP and Douglas County TSP.

2025 Street Improvements

The 2025 Street Improvement Plan identifies specific 20-year improvements needed to maintain local traffic circulation and mobility. Descriptions of 2025 projects that are considered applicable to the Sutherlin Southside Parkway Corridor Plan include the following:

Corridor Improvements:

IAMPs

Two Interchange Area Management Plans (IAMP) have been included in the TSP to help identify long-term interchange improvements within the context of land use and access management planning. The I-5/Stearns Lane and I-5/Wilbur-Umpqua Road interchanges are included in this list. The I-5/Stearns Lane IAMP is currently underway.

Central Avenue

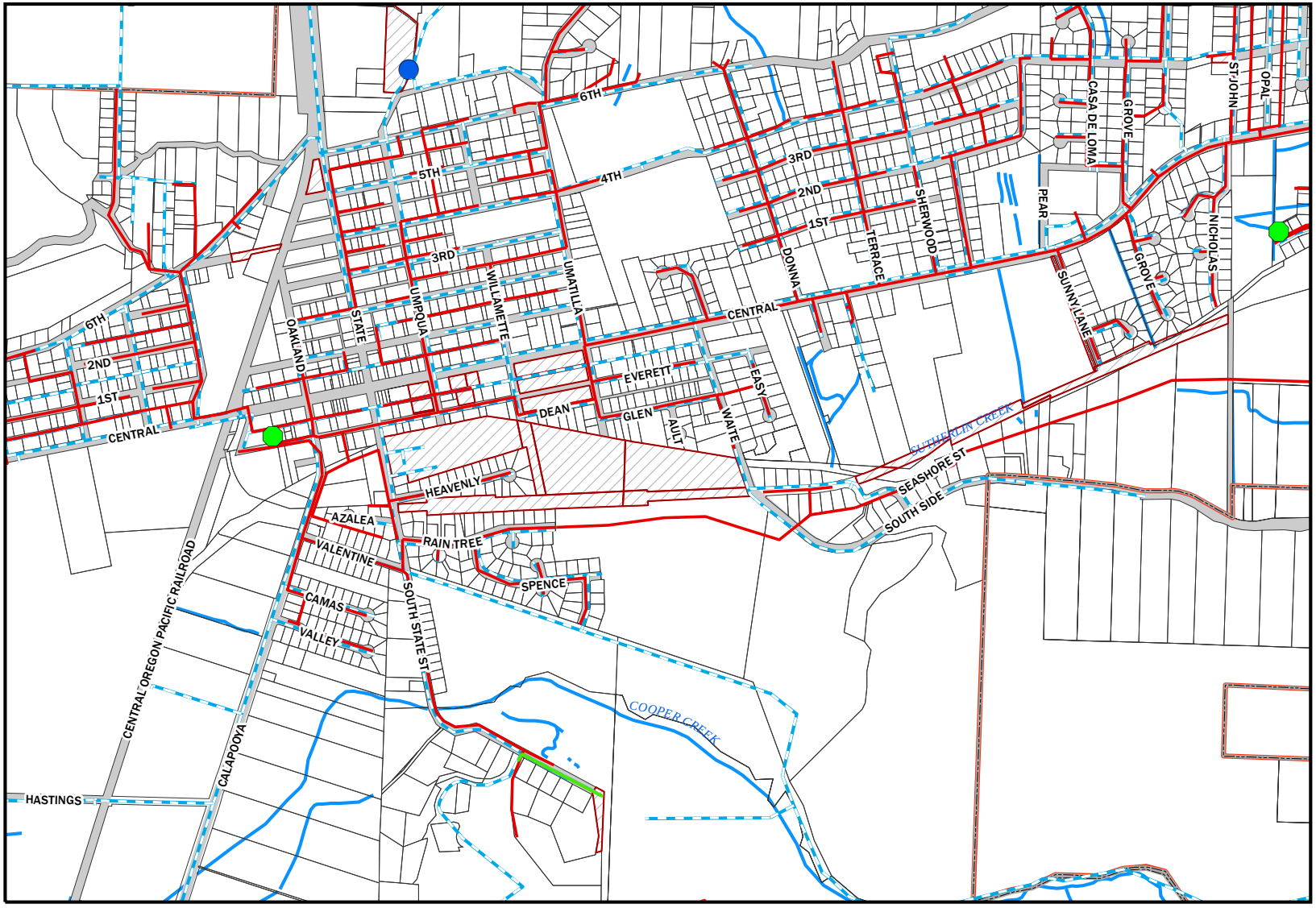


Figure 6. Existing Utilities

Central Avenue from Comstock Road to the eastern city limits is identified to be upgraded over time to full arterial street design standards. This upgrade would include bike lanes, sidewalks, access management treatments, and landscaping.

Duke Avenue/Hasting Avenue

This identified improvement would realign the connection between Duke Avenue and Hastings Avenue and bring the roadway corridor up to full collector street design standards. It is anticipated that this realignment will be completed as part of redevelopment along the Duke/Hastings corridor.

New East-West Parkway

The TSP identifies the need for a new east-west roadway that would provide an alternative to Central Avenue. As identified in the TSP, this roadway has been identified as a three-lane parkway facility that includes bike lanes, sidewalks, landscaping, and a multi-use path. The preliminary alignment would extend from S. Calapooya Street to Sunny Lane and eventually to the eastern City limits.

Sunny Lane

As part of the east-west parkway improvement, Sunny Lane would be improved south of Central Avenue and a new bridge constructed over Sutherlin Creek to connect to the east-west parkway.

Street Network Plan

Sutherlin's street system plan provides guidance on the long-term implementation of roadway travel.

City of Sutherlin's Functional Classification Plan

The functional classification plan for the City of Sutherlin includes five functional categories: principal highways, parkways, arterials, collectors, and local streets.

1. **Principal Highways** primarily include state-owned facilities that provide regional connections between communities, towns, and cities.
2. **Parkways** are primarily intended to accommodate through-movement travel along a landscaped corridor while providing limited access to adjacent land. The Parkway classification is characterized as having three to five travel lanes and accommodates pedestrian and bicycle movements.
3. **Arterials** are primarily intended to carry through traffic while connecting to principal highways, parkways, and collector streets. Arterials are characterized as having three to five travel lanes and accommodate bicycle and pedestrians.
4. **Collectors** are primarily intended to facilitate mobility within the city by connecting arterials and parkways to local streets. Collectors are characterized as having two or three travel lanes, bicycle lanes, and sidewalks.
5. **Local streets** are primarily intended to provide access to adjacent land uses. Local streets are characterized as having two travel lanes while accommodating on-street parking.

Street Cross Section Standards

Street design standards are used to establish key characteristics for arterials, parkways, collectors, and local streets. Specific design standards for each type of roadway are included in the Sutherlin TSP.

The adopted Parkway street design standard calls for an 80' right-of-way. Within the right-of-way, the standard calls for an 8' sidewalk, an 8' bio-swale, a 5' bike lane, an 11' travel lane, a 12' median/turn lane, an 11' travel lane, a 5' bike lane, an 8' bio-swale, and a 12' multi-use recreation path.

Access Management

The City of Sutherlin has identified a number of access management strategies as an important element for maintaining the traffic flows, mobility, and safety on the roadway network. These strategies include discouraging direct property access to arterials and collectors, consolidating driveways, use of medians on arterial routes, pedestrian refuge islands on arterials and collectors, and developing minimum traffic signal spacing standards on arterials and collectors.

Table 1 summarizes the adopted access management minimum spacing standards for different types of roadways within the City of Sutherlin. These standards will be applicable when evaluating the frequency and location of access to the Southside Parkway corridor.

Functional Classification	*Minimum Spacing (feet)*
Arterial	500
Parkway	400
Collector	250
Local Street	25

Table 1. Sutherlin Access Management Minimum Spacing Standards

It should be noted that ODOT has the authority to regulate access spacing on all state-owned facilities, such as portions of Central Avenue. The spacing standards for these facilities are outlined in the 1999 Oregon Highway Plan. In addition, Douglas County has the authority to regulate access spacing on all County-owned roadways, although the County has no formally-adopted spacing standards.

Mobility Standards

The City of Sutherlin has adopted operational performance standards for roadways and intersections. These standards apply to all City owned and maintained facilities. In general, all city streets and intersections must operate at a level of service "D" or better and a volume to capacity ratio not to exceed 0.90 during the weekday peak hours, as defined in the Highway Capacity Manual.

Bicycle Plan

The bicycle plan included in the Sutherlin TSP is intended to address and plan for the expansion of bicycle facilities and to provide connections between these facilities and major activity centers. The following bicycle elements, as they pertain to the Sutherlin Southside Parkway Corridor Plan, are included in the Sutherlin TSP:

- Calapooya Street – Add bike lanes to Sutherlin Creek Bridge.
- Central Avenue – Add bike lanes from the west to east city limits.
- Duke Avenue/Hastings Avenue – Add bike lanes as part of identified need to improve the corridor to a Collector standard.
- New east-west parkway – Include bike lanes as part of identified corridor.
- State Street – Add bike lanes from north city limits to new east-west parkway.
- Waite Street – Add bike lanes from Central Avenue to new east-west parkway.
- Comstock Road – Add bike lanes from W 6th Avenue to Wilbur-Umpqua Road.

Pedestrian Plan

The pedestrian plan included in the Sutherlin TSP is intended to ensure sidewalks are provided along all new roadways and roadway upgrade projects. The following pedestrian elements, as they pertain to the Sutherlin Southside Parkway Corridor Plan, are included in the Sutherlin TSP:

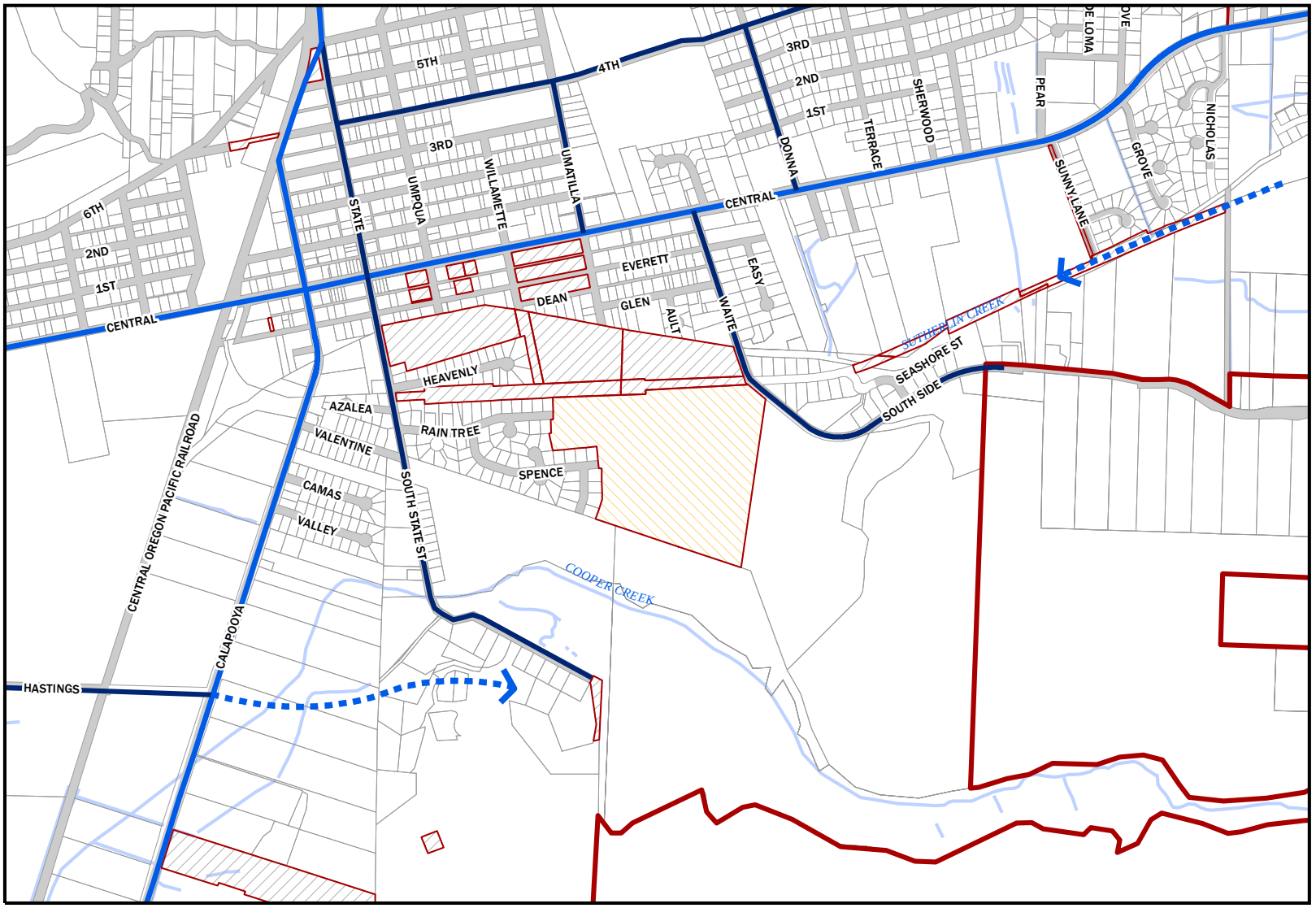


Figure 7. Proposed Roadway Classifications

- Calapooya Street – Add sidewalks up to Sutherlin Creek Bridge.
- Central Avenue – Add sidewalks from the west to east city limits.
- Duke Avenue/Hastings Avenue – Add sidewalks as part of the identified need to improve the corridor to Collector standards.
- New east-west parkway – Include sidewalks as part of the identified need to develop a new east-west corridor.
- State Street – Add sidewalks from north city limits to a new east-west parkway.
- Waite Street – Add sidewalks from Central Avenue to a new east-west parkway.
- Comstock Road – Add sidewalks from W 6th Avenue to Wilbur-Umpqua Road.
- Sunny Lane – Add sidewalks to an improved Sunny Lane from Central Avenue to a new east-west parkway.

Off-Street Path System

The Sutherlin TSP includes a plan for off-street multi-use paths to complement the bicycle street network. The proposed off-street path system, as is pertains to the Sutherlin Southside Parkway Corridor Plan, includes the following:

- A new multi-use path following Sutherlin Creek east from S. Calapooya Street, and paralleling the new east-west Parkway.
- A new multi-use path following Cooper Creek from the new east-west Parkway to Cooper Creek Reservoir.

Personal Electric Vehicle Plan

The Sutherlin TSP includes a plan for personal electric vehicles (PEV) to be used on the off-street multi-use paths.

Freight Plan

The freight route plan included in the Sutherlin TSP is intended to ensure good freight mobility throughout the City of Sutherlin. Identified truck routes, as they pertain to the Sutherlin Southside Parkway Corridor Plan, include the following:

- Calapooya Street from the north UGB to the south city limit.
- Wilbur-Umpqua from S. Calapooya Street to S. Comstock Road.
- Taylor Street from Hastings Avenue to S. Comstock Road.
- Hastings Avenue from Taylor Street to S. Calapooya Street.

Existing Transportation Inventory

The existing transportation inventory provides a summary description of all transportation facilities and travel modes within the study area. In addition, the inventory identifies the current operational, traffic control, and geometric characteristics of roadways and other transportation facilities. A detailed description of these facilities is provided in the following sections as summarized from the Sutherlin TSP.

Roadway Facilities

The general corridor planning area for the Sutherlin Southside Parkway Corridor Plan stretches along the south side of Central Avenue from S. Calapooya Street to the east city limits. Within this study area, Central Avenue and S. Calapooya Street are the only east-west and north-south arterial streets (figure 7). Other secondary roadways make up a larger system of collector street routes serving area residents and business establishments. A description of each roadway and its characteristics are provided in the following section.

Table 2. Existing Transportation Facilities and Roadway Descriptions

Roadway	*Functional Classification*	*Posted Speed (mph)*	*Sidewalks*	*Bicycle Lanes*	*On-street Parking*
Central Avenue	ODOT - Regional Highway (1) County - Arterial (2) City - Arterial Street (3)	20/30/35 (4)	Yes	No	Partial
S. Calapooya Street	County - Principal Highway City - Arterial Street	45/55	Partial	Partial	No
S. State Street	City - Collector	25	Yes (Central Ave to Cooper Creek)	No	No
Waite Street	City - Collector County - Major Collector	25/35	No	No	No
South Side Road	City - Collector County - Major Collector	35	No	No	No

1. ODOT owns and maintains Central Avenue west of Calapooya Street.

2. Douglas County owns and maintains Central Avenue from Calapooya Street to N. State Street.

3. The City of Sutherlin owns and maintains Central Avenue east of N. State Street to the city limits.

4. 30 mph from I-5 to Kruse Street, 20 mph from Kruse Street to Umatilla Street, and 35 mph from Umatilla Street to the east City limits.

Table 3. Existing Transportation Facilities and Roadway Descriptions, continued.

Roadway	*Cross Section*	*Surface Type*	*Surface Condition*
Central Avenue	3 lanes	Asphalt	Good
S. Calapooya Street	2 lanes	Asphalt	Good
S. State Street	2 lanes	Asphalt	Very Good
Waite Street	2 lanes	Asphalt	Good
South Side Road	2 lanes	Asphalt	Good

Central Avenue

Within the City of Sutherlin, Central Avenue is the only east-west arterial that links the east and west sides of I-5. Closer to the Sutherlin Southside Parkway Planning area, portions of Central Avenue are owned and maintained by three different agencies. West of S. Calapooya Street, Central Avenue is owned by ODOT. East of S. Calapooya Street to N. State Street, Central Avenue is owned by Douglas County. East of N. State Street to the east city limits, Central Avenue is owned by the City of Sutherlin. Posted speeds along Central Avenue range from 20 to 35 mph depending upon location. While significant portions of Central Avenue have sidewalks, there are no striped bike lanes.

S. Calapooya Street

S. Calapooya Street is a major north-south corridor within the City of Sutherlin that provides a connection between Central Avenue and the I-5 Exit 135 interchange in the southern part of the City. Douglas County owns and maintains S. Calapooya Street, which is classified as a Major Collector roadway. S. Calapooya Street is a two-lane roadway with a posted speed of 45 mph from Central Avenue to Hastings Avenue and a posted speed of 55 mph south of Hastings Avenue. As part of a recent upgrade project, a portion of S. Calapooya Street was reconstructed from the Central Oregon Pacific Railroad (CORP) railroad crossing to the Sutherlin Creek Bridge that improved the roadway alignment and added sidewalks and bike lanes.

Other Secondary Roadways

In addition to Central Avenue and S. Calapooya Street, the general planning area consists of a number of other roadways that serve adjacent businesses and residents. The major Collector roadways include S. State Street, Waite Street, and South Side Road. All other streets are local streets. Tables 2 and 3 summarize the characteristics of the general planning area primary and secondary transportation facilities. The Sutherlin TSP contains additional detail related to the other local streets.

Railroad Facilities

The Central Oregon Pacific Railroad (CORP) operates a short line route that traverses the City of Sutherlin on the east side of I-5. Within the vicinity of the Sutherlin Southside Parkway Corridor Planning area, the rail line enters the south city limits and parallels S. Calapooya Street up to Central Avenue before continuing north along N. State Street. At-grade rail crossings occur along Central Avenue, Hastings Avenue, and S. Calapooya Street.

Pedestrian and Bicycle Facilities

Within the Sutherlin Southside Parkway Corridor planning area, sidewalk facilities exist along Central Avenue, S. State Street, and along the reconstructed portions of S. Calapooya Street. Outside of these arterial and collector facilities, sidewalks are relatively limited and discontinuous amongst many of the neighborhoods and connecting local streets.

Bicycle lanes within the planning area are limited to the recently reconstructed portions of S. Calapooya Street. Bicyclists are required to share the roadway on all other local and regional roadway facilities within the City.

Truck Freight

Within the Sutherlin Southside Parkway Corridor planning area, local and regional truck freight is concentrated along the Central Avenue and S. Calapooya Street Corridors, as these corridors provide direct access to I-5. Based on recent volume counts, approximately 30 percent of all traffic on these facilities consists of truck traffic.

Existing Traffic Volumes and Peak Hour Operations

Recognizing that the development of a new parkway corridor in the City of Sutherlin will likely have a direct impact on other existing roadways, a summary of existing traffic volumes has been prepared as part of this memorandum. Utilizing select traffic counts obtained as part of the recent Sutherlin TSP planning effort, a summary analysis has been prepared that will serve as a basis of comparison to future alternatives that involve a parkway corridor in the City. The following sections outline the available traffic volume data and summarize the existing traffic operations on those facilities that reside within the general corridor planning area.

Average Daily Traffic Volumes

As part of the 2004 Transportation System Plan, daily traffic counts were obtained at select roadways throughout the City. Using these daily traffic counts, 2006 daily traffic volumes were developed for those roadways located within the Sutherlin Southside Parkway Corridor planning area. Where daily traffic counts were unavailable, peak hour intersection turning movement counts were utilized and factored to obtain daily traffic volume estimates. The resulting 2006 average daily traffic volumes are shown in Figure 8 and summarized in Table 4.

As shown in Table 3, Central Avenue is the most heavily traveled corridor located within the general planning area. This can be attributed to the fact that Central Avenue is the only continuous east-west corridor in the City of Sutherlin and it provides a direct connection to I-5. As the predominate north-south travel way, S. Calapooya Street is also a heavily utilized corridor that links Central Avenue with the south I-5 interchange at Wilbur-Umpqua Road. All other roadways in the general planning area tend to serve more localized travel and experience significantly lower daily traffic volumes.

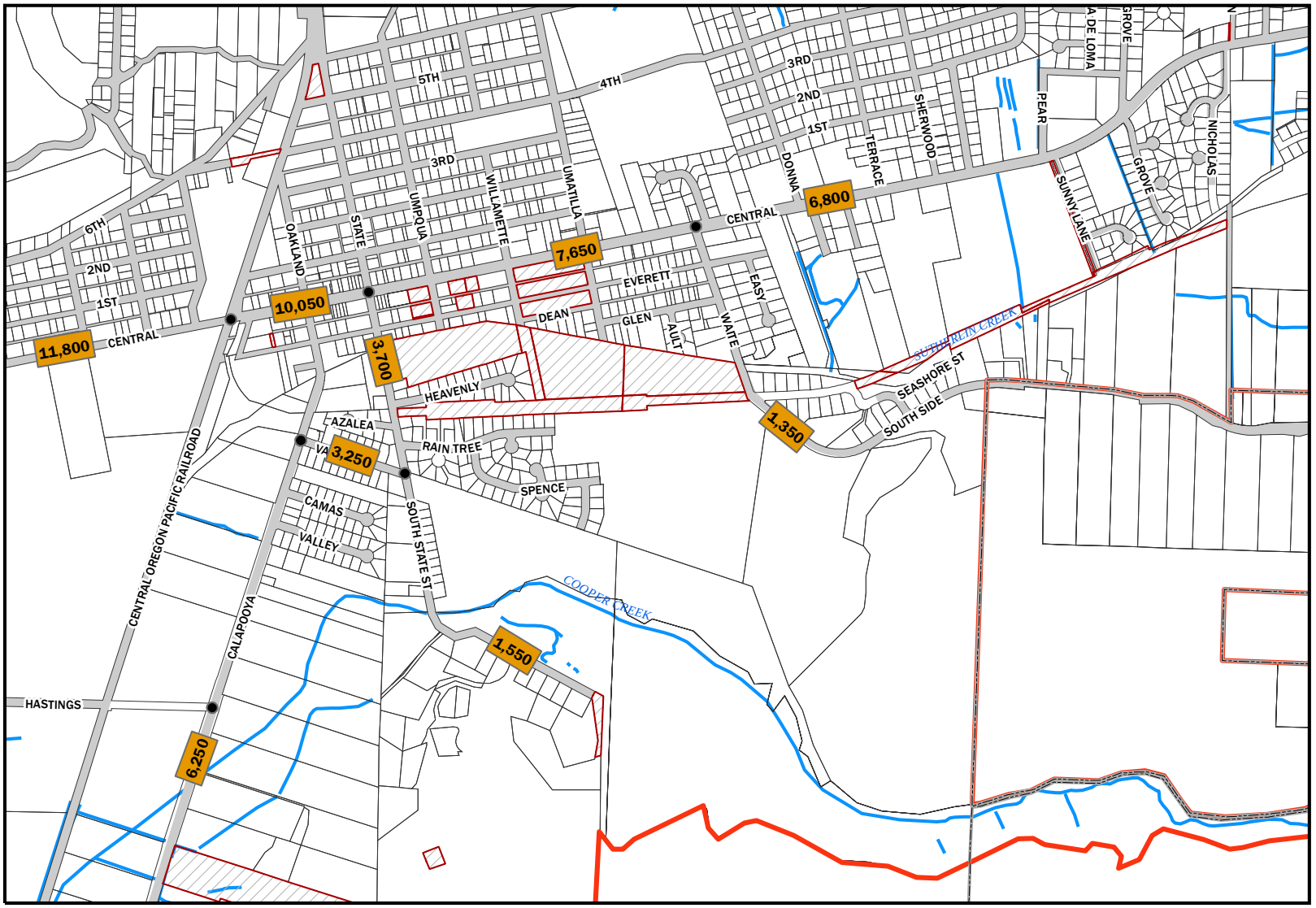


Figure 8. Existing Average Daily Traffic

Intersection Turning Movement Volumes

In addition to the average daily traffic volumes, the TSP obtained weekday p.m. peak hour turning movement counts at a select number of intersections. Several of these study intersections are located within the general planning area for the Southside Parkway Corridor. These intersections include:

- Central Avenue / Calapooya Street (signalized intersection);
- Central Avenue / State Street (signalized intersection);
- Central Avenue / Waite Street (unsignalized intersection); and
- Calapooya Street / Hastings Avenue (unsignalized intersection).

For base purposes, the 2004 turning movement count data at these intersections were factored as previously described to obtain estimated 2006 weekday p.m. peak hour traffic volumes. Figure 9 illustrates the 2006 weekday p.m. peak hour turning movement volumes at these intersections.

Traffic Operations Summary

Utilizing the weekday p.m. peak hour turning movement counts at the select study intersections, a traffic operations analysis was performed using the standard procedures outlined in the Highway Capacity Manual for signalized and unsignalized intersections. This operations analysis is summarized in Table 5.

As summarized in Table 5, each of the study intersections are currently operating acceptably as determined by the City of Sutherlin, Douglas County, and ODOT operational performance standards previously summarized in this memorandum.

Table 4. Average Daily Traffic Volumes

Location	*Average Daily Traffic (both directions)*
Central Avenue (west of Calapooya Street)	11,800
Central Avenue (Calapooya Street to State Street)	10,050
Central Avenue (east of State Street)	*7,650
Central Avenue (east of Waite Street)	*6,800
S. Calapooya Street (south of Hastings Ave)	6,250
S. State Street (north of Cooper Creek Bridge)	1,550
S. State Street (south of Central Avenue)	*3,700
Waite Street/South Side Road (near Sea Street)	1,350
Valentine	3,250
**Estimated from recent intersection turning movement counts at nearby intersections.*	

Figure 9. Existing Turning Movement Volumes, Weekday PM Peak Hour

Table 5. Existing Traffic Operations, Weekday PM Peak Hour

	Unsignalized Intersections				*Signalized Intersections*		
Intersection	Critical Approach	Critical V/C	Movement Delay (sec)	Movement LOS	V/C	Avg. Delay (sec)	LOS
Central Avenue / Calapooya Street					0.59	15.9	B
Central Avenue / State Street					0.69	16.9	B
Central Avenue / Waite Street	NB	0.22	28.5	D			
(1) Calapooya Street / Hastings	-	-	-	-			

v/c = volume to capacity ratio, LOS = level of service, NB = northbound

(1) At the time the intersection was counted, Hastings Avenue was closed while the Sutherlin Creek Bridge was being replaced. As such, there are no traffic volumes on the side street and a traffic operations analysis could not be prepared for this intersection.

Natural Resources

The Southside Parkway Corridor study area has a number of significant wetlands within its study boundaries. The following section summarizes relevant state, county, and local policies and ordinances for natural resources with a particular focus on wetlands.

State Plans and Policies

Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces

Cities are required by the statewide land use planning law to include protection for natural resources in their comprehensive plan.

Removal/Fill Law (OAR 141-085-0000)

Permanent and seasonal wetlands, streams, creeks, and some ditches are regulated by the federal government through the Clean Water Act and the state through the Removal/Fill Law. Division 85 of the Department of State Lands sets forth the administrative rules governing the issuance and enforcement of removal/fill authorizations within waters of Oregon including wetlands.

County Plans and Policies

Chapter 17.08: Development Code (Salmon Habitat Improvement)

At the county level, Douglas County has policies in place "to maintain, conserve and rehabilitate instream habitat and stream side vegetation for replenishing and increasing salmon and other anadromous fish which contribute to the economic and recreational well-being of the county and its citizens."

The County has ordinances in place to preserve, enhance, and restore riparian and instream habitat to support game and fish. These ordinances are outlined in Chapter 17.08 (Salmon Habitat Improvement) of the Douglas County Code. Douglas County has also adopted a Riparian Vegetation Corridor Overlay Zone that applies to lands located 50 feet from the bank of all identified perennial and intermittent water courses. This Overlay Zone requires all structural development to have a 50-foot setback from the streambank unless Oregon Department of Fish and Wildlife staff agree that this setback is unnecessary or a reduction in the setback would not jeopardize streambank, stability, water quality, etc. (City of Sutherlin Water Master Plan).

Local Plans and Policies

As mentioned in the Land Use section of this document, the City

of Sutherlin has established policies in the Comprehensive Plan to protect Sutherlin's environment by conserving vegetation, wildlife, water resources, and open space. However, to date, a local wetland conservation plan or local ordinances to protect or conserve existing wetlands and riparian corridors has been drafted by the City of Sutherlin. Wetland regulation within Sutherlin city limits is administered through the Department of State Lands (DSL).

Existing Conditions

A Local Wetland Inventory (LWI) for the City of Sutherlin was completed in 2001. The results of the inventory are presented in Figure 10. There are approximately 90 acres of significant wetlands in the Southside Parkway Corridor study area.

The Sutherlin LWI was developed according to standards adopted by DSL. Mapped wetlands typically have an accuracy of at least 25 feet but there may be areas where the boundary is less accurate, especially on large tracts with few geographic reference points, and areas where property access was denied. This level of information is sufficient for the purposes of the Southside Parkway Corridor Plan. However, it may be necessary to delineate certain area wetlands in the future to fully comprehend the impacts a parkway would have on the area and what level of mitigation is necessary.

Regulated activities in waters of the state (i.e., wetlands, streams, etc.) include placement of fill material, alteration of stream banks or stream course, ditching and draining, excavation or dredging of material, bank stabilization (e.g., riprap or retaining walls), and stump removal (large land-clearing projects). These activities will require a permit from the DSL.

Rare, Threatened and Endangered Species

The Oregon Natural Heritage Information Center provides data on rare, threatened, and endangered flora and fauna in the state of Oregon. The following are some species and their Federal and State protection status (e.g., **Species** (*latin name*) - *Federal status/State status*) that *may* be found in the Southside Parkway Corridor study area:

- **Foothill Yellow-Legged Frog** (*Rana boylii*) - *species of concern/ sensitive vulnerable*
- **Purple Martin** (*Progne subis*) - *species of concern/sensitive-critical*
- **Pacific Lamprey** (*Lampetra tridentata*) - *species of concern/ sensitive-vulnerable*
- **Coho salmon** (*Oncorhynchus kistuch*) - *listed threatened/ sensitive-critical*
- **Steelhead** (*Oncorhynchus mykiss*) - *candidate/sensitive-vulnerable*
- **Umpqua chub** (*Oregonichthys kalawatsei*) - *species of concern/ sensitive-vulnerable*
- **Columbian White-tailed Deer** (*Odocoileus virginianus leucurus*) - *listed threatened*
- **Northwestern Pond Turtle** (*Emys marmorata marmorata*) - *species of concern/sensitive critical*
- **Red-root Yampah** (*Perideridia erythrorhiza*) - s*pecies of concern/ sensitive-critical*
- **Rough Popcorn Flower** (*Plagiobothrys hirtus*) - *listed endangered/listed endangered*

Red Rock Road

The Red Rock Road ("Red Road") is a railroad grade that was constructed with mine tailings from the Bonanza Mine, which is located approximately six miles east of Sutherlin. Portions of the road (which are not continuous or completely accessible to the public) traverse the study area. The grade is used by some Sutherlin residents for driveway access and recreation. Red Road was recently determined to have some hazardous qualities by

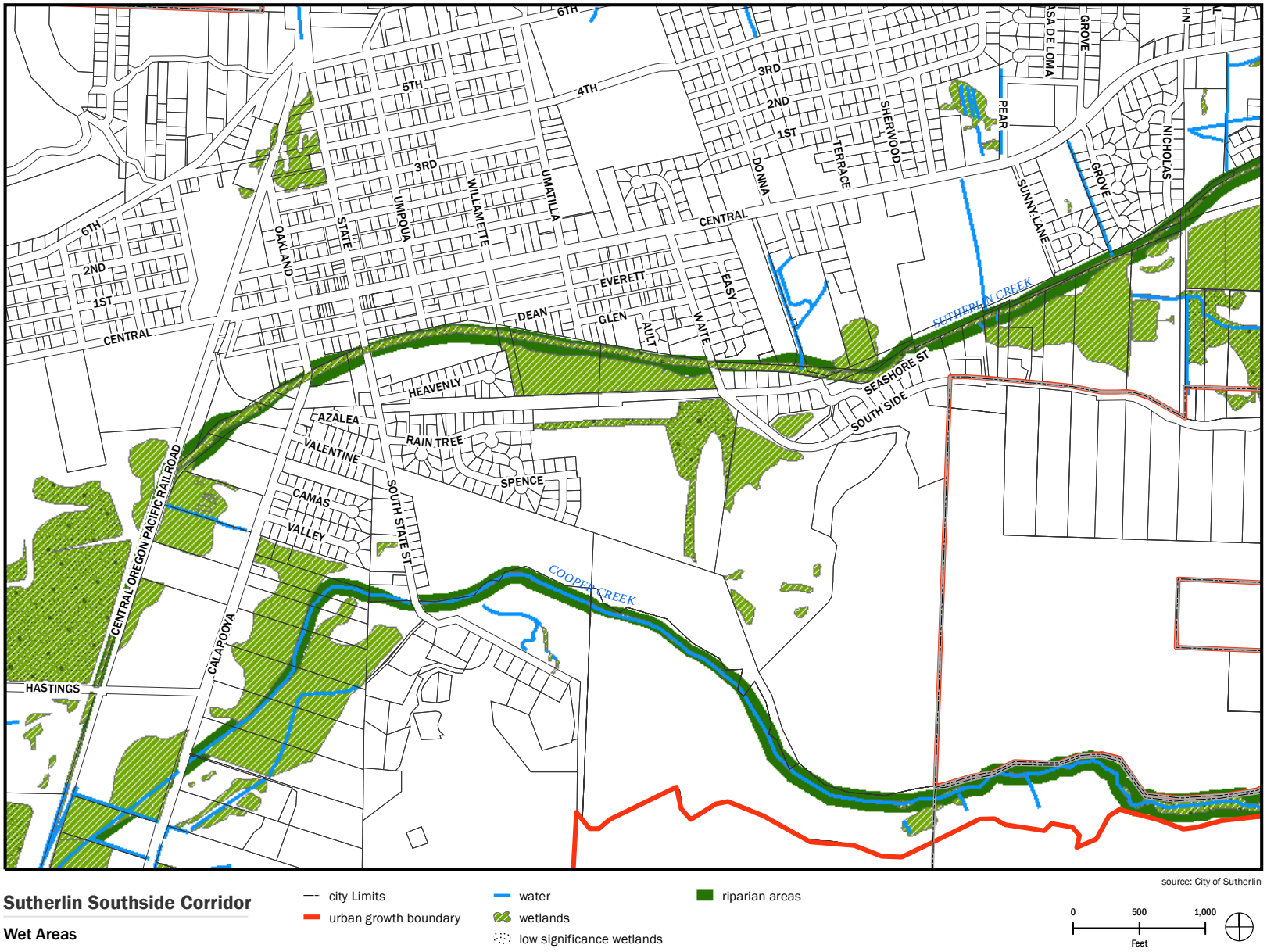


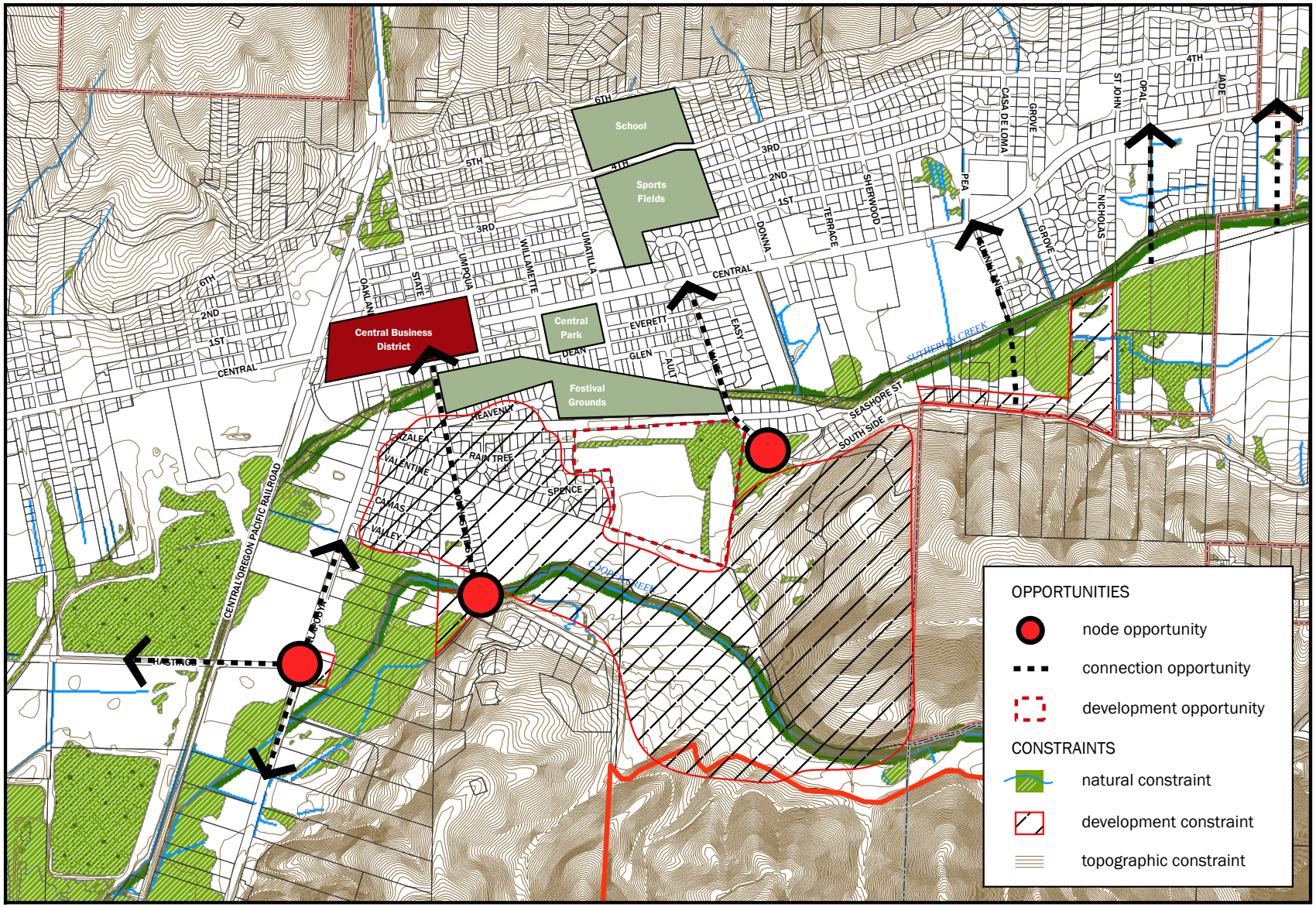
Figure 10. Existing Waterways, Wetlands, and Riparian Corridors

the Oregon Department of Environmental Quality (DEQ) and the Oregon Department of Human Services' Superfund Health Investigation and Education Program (SHINE) due to elevated levels of arsenic from the mine tailings. Recommendations from the State include the following to reduce risk of potential health effects from long-term exposure to arsenic:

- Remediation and or capping technologies be used along Red Rock Road where tailings are exposed at the surface, or where capping is wearing away.
- Residents avoid the areas of the road where tailings are exposed at the surface until those areas are adequately covered or cleaned up.

Opportunities and Constraints

The figure on the opposite page illustrates the various opportunities and constraints in the Southside Parkway Corridor study area. The biggest constraints to implementation are the presence of wetlands and impacts to private property. The greatest opportunities include taking advantage of existing rights-of-way, using the corridor to provide a framework for future growth, and linking key destinations in the community.



source: City of Sutherlin

Sutherlin Southside Corridor

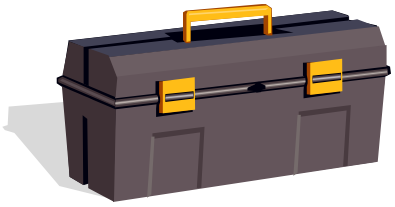
Opportunities and Constraints

city Limits
urban growth boundary
5-foot contours
water
wetlands
low significance wetlands
riparian areas

0 500 1,000
Feet

Southside Parkway Corridor Plan

Memo 2: Transportation and Land Use Toolbox



city of sutherlin
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Introduction

The main purpose of the Southside Parkway is to provide an east-west alternative travel corridor to Central Avenue in the eastern half of the City of Sutherlin. Planning for the Parkway provides an opportunity to explore how alternative land uses and development patterns can accommodate projected growth in innovative ways. This memo is intended to illustrate appropriate potential development patterns and integrated transportation/ land use concepts for discussion, evaluation, and refinement. It covers the following topics:

- A summary of existing conditions and Comprehensive Plan land uses anticipated for the study area;
- Planned improvements for the study area (as identified in the 2005 City of Sutherlin Transportation System Plan);
- A toolbox that illustrates different transportation and land use typologies and concepts that can be implemented within the study area; and,
- Traffic forecasts.

Existing Conditions

Single-family residential is the predominant existing land use in the Southside Parkway Corridor study area (Figure 1). There are a significant number of manufactured homes, located primarily on two large parcels to the north and south of Cooper Creek. Large lot single-family residential is prominent on the east and west side of the study area. These uses often are characterized by a single dwelling on a lot larger than three acres. The downtown commercial core is adjacent to the study area; general commercial is located along Central Avenue. Industrial uses are clustered east of Calapooya Street.

As identified in Memo 1: Existing Conditions, Title 17 of the City of Sutherlin City Code implements the land use element of the Comprehensive Plan with zoning districts. Low density, single-family residential is planned for the Southside Parkway Corridor study area. The zoning map (Figure 2) identifies zoning designations for parcels within the study area, while the code itself describes allowable uses, and provides standards and criteria for development. The following zoning designations are in or adjacent to the study area:

Residential

R-H: Residential Hillside District

This district provides for very low density, single-family residential with minimum 12,000-square-foot lots. The intent of the district is to balance residential development with natural preservation and native geologic conditions. This zone is located in the southern portion of the study area - in the foothills flanking Cooper Creek.

R-1: Low Density Residential District

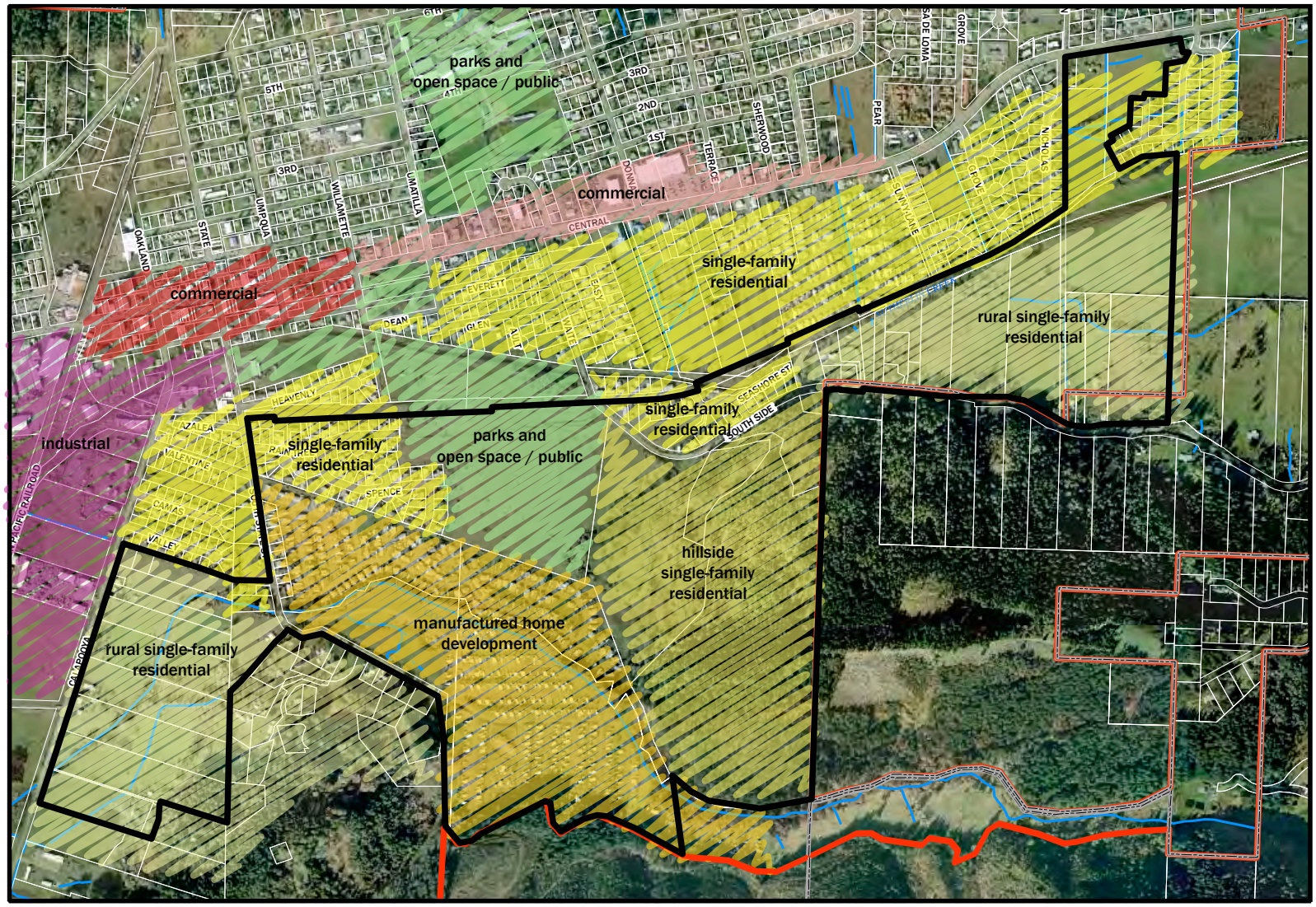
The R-1 zone allows for low density, single-family residential, with conditional terms potentially allowing churches, duplexes, tennis courts, traditional home occupations, libraries, parks, playgrounds, schools, planned unit developments, residential facilities, and other similar uses. Minimum lot size is 7,500 square feet.

R-2: Medium Density Residential District

The R-2 zone is a residential district allowing single-family residences, duplexes, triplexes, fourplexes, residential homes, manufactured homes, and manufactured dwelling subdivisions. The same conditional uses for the R-1 district can be applied to the R-2 district. Minimum lot size is 6,000 square feet.

R-3: High Density Residential

This district allows any use permitted in R-1 and R-2, plus apartment houses, boarding, lodging or rooming houses, retirement homes, religious quarters, residential hotels, and nursing homes.



source: City of Sutherlin

Sutherlin Southside Corridor

Existing Land Uses

study boundary
urban growth boundary
city limits

0 500 1,000
Feet

Figure 1. Existing Land Uses

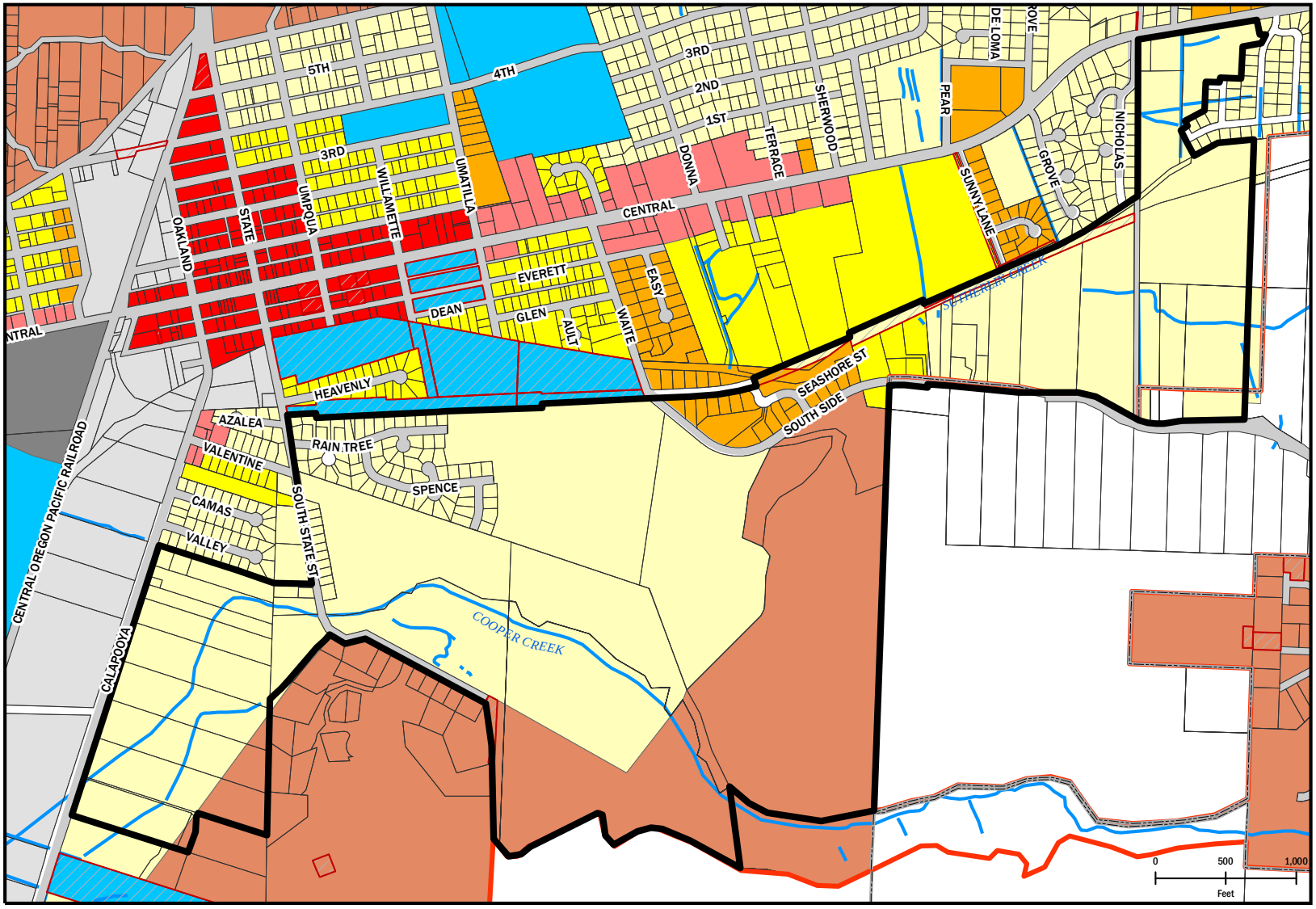


Figure 2. Existing Zoning

Commercial

C-1: Commercial Downtown District

The C-1 Commercial Downtown district allows for a broad range of uses that strengthen the downtown core and provide everyday goods and services. Retail, services, public use facilities, and office uses are allowed outright in the C-1 zone.

C-3: Commercial Community District

The C-3 zone is intended to be a general commercial zone that provides a wide variety of goods and services to area residents and to the traveling public. This zone is primarily for auto-oriented land uses and is found along Central Avenue outside of the downtown district.

Industrial

M-1: Industrial Light District

Industrial Light District (M-1) areas are designated for non-noxious industries, which are generally compatible with residential and commercial activities. In a light industrial district, attention is given to the protection of surrounding areas from off-site impacts.

M-2: Industrial Heavy District

The purpose and function of an Industrial Heavy District (M-2) is to encourage the location of uses that have a strong industrial orientation while protecting the health, safety, and welfare of the public as well as the character of the area. Uses in the M-2 zone cannot create any noise, odor, smoke, or other nuisances that would have an effect on nearby non-industrial areas. These industrial uses are located in the western portion of the study area, paralleling Highway 99 and the Roseburg Highway.

Public/Semi-Public

CG/CS: General Community Services Special District (CS)

This district is intended to provide for the review and location of public facilities and related uses which by necessity, character, or effect will be compatible with surrounding uses. Uses permitted outright include churches, public and parochial schools, parks, playgrounds, municipal golf courses, government buildings or uses, or public utilities.

Planned Transportation Improvements

The City of Sutherlin's Transportation System Plan (TSP) was adopted in 2005 and serves as the transportation element of the local comprehensive plan. It establishes a system of facilities and services to meet long-range transportation needs with a focus on integrating transportation and land use. The 2025 Street Improvement Plan portion of the TSP identifies specific 20-year improvements needed to maintain local traffic circulation and mobility. Descriptions of those improvement projects that are applicable to the Southside Parkway Corridor Plan include the following:

Corridor Improvements

Three Interchange Area Management Plans (IAMP) have been included in the TSP to help identify long-term interchange improvements within the context of land use and access management planning. The I-5/Stearns Lane, Exit 136 at I-5/OR 138, and Exit 135 at I-5/Wilbur-Umpqua Road interchanges are included in this list. The Exit 136 at I-5/OR 138 IAMP is currently underway.

Central Avenue

Central Avenue from Comstock Road to the eastern city limits is identified to be upgraded over time to full arterial street design standards. This upgrade would include bike lanes, sidewalks, access management treatments, and landscaping.

Duke Avenue/Hasting Avenue

This identified improvement would realign the connection between Duke Avenue and Hastings Avenue and bring the roadway corridor up to full collector street design standards. It is anticipated that this realignment will be completed as part of redevelopment along the Duke/Hastings corridor.

New East-West Parkway

The TSP identifies the need for a new east-west roadway that would provide an alternative to Central Avenue. As listed in the TSP, this roadway has been identified as a three-lane parkway facility that includes bike lanes, sidewalks, landscaping, and a multi-use path. The preliminary alignment is shown to extend from the Calapooya Street/Hastings Avenue intersection and eventually connect back to Central Avenue in the vicinity of the eastern City limits.

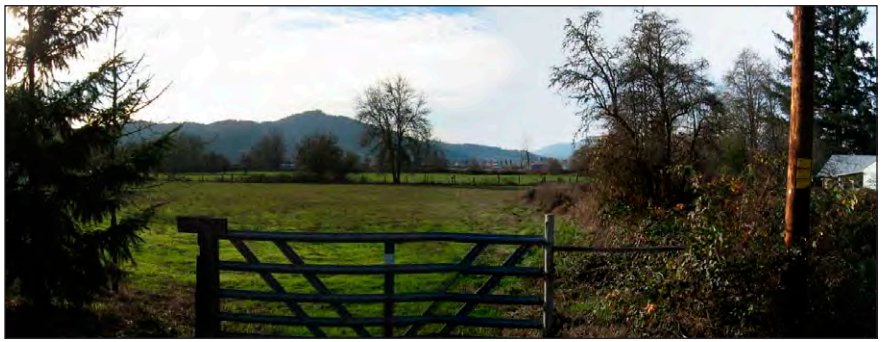
Sunny Lane

As part of the east-west parkway improvement, Sunny Lane would be improved south of Central Avenue and a new bridge constructed over Sutherlin Creek to connect to the east-west parkway.

Future Year Traffic Forecasts

The 2005 City of Sutherlin Transportation System Plan developed future forecast traffic volume estimates. These future traffic volumes were estimated using trending historical growth patterns and an examination of existing and planned land uses. In addition, a buildable lands estimate was utilized to account for future residential, commercial, and industrial development in the City. Figure 3 illustrates the resulting forecast traffic volume projections at select intersections located near or within the Southside Parkway Corridor study area. These traffic volume forecasts are reflective of all the identified transportation improvements noted above.

On Waite Street looking southeast to the new Cooper Creek Estates development and Sutherlin School District property



On South State Street looking southwest to intersection of Hastings Avenue and Calapooya

Looking southwest from the base of the Cooper Creek Estates / Forest Heights development to South State Street

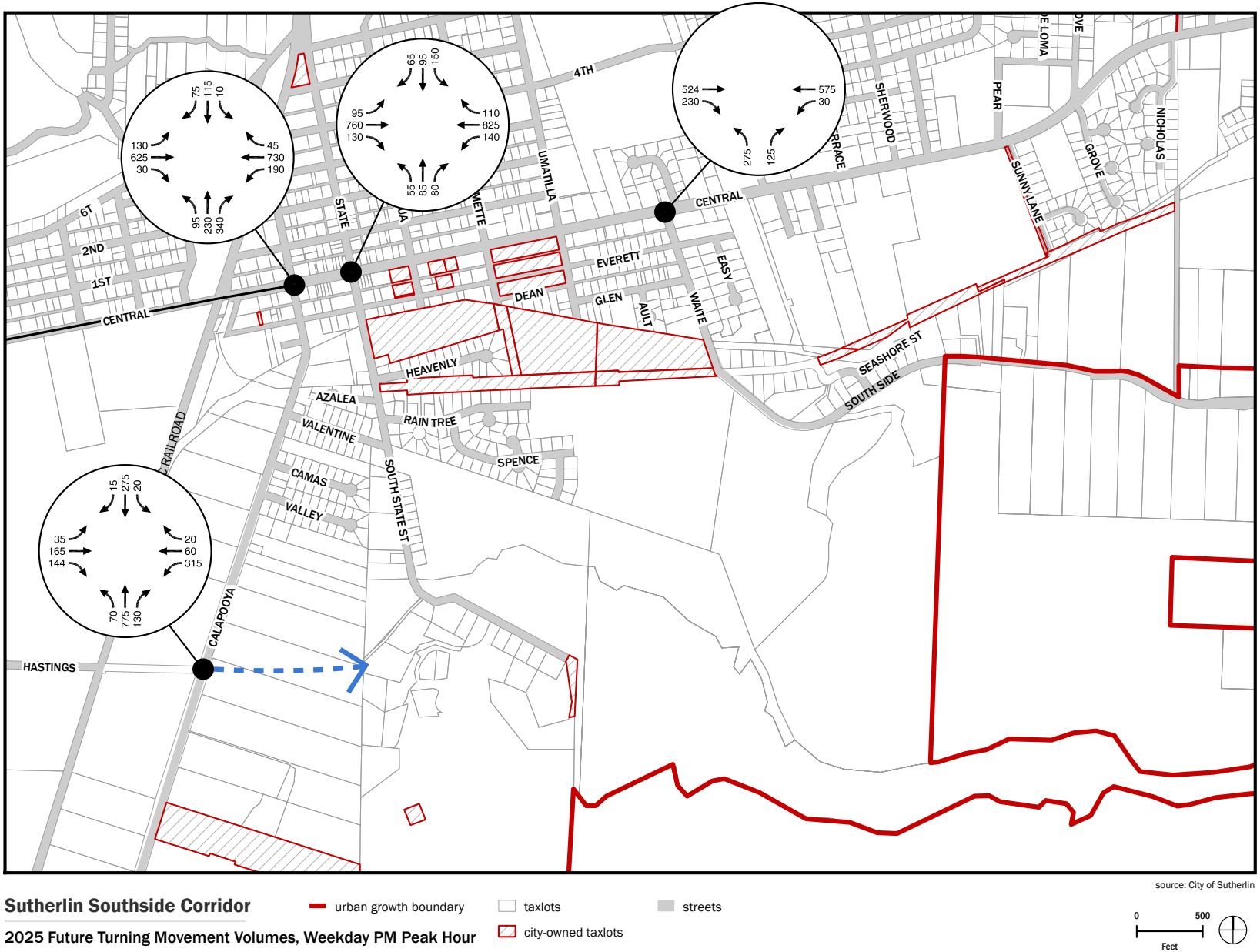


Figure 3. 2025 Future Turning Movement Volumes, Weekday PM Peak Hour

Transportation and Land Use Toolbox

The Southside Parkway Corridor Transportation and Land Use Toolbox provides transportation and land use concepts that can be used to help shape how the corridor develops as the City continues to grow. The intent of the Toolbox is to present a range of feasible transportation and land use strategies so that the City, its citizens, and area stakeholders can engage in a dialog about the future of the Southside Corridor. The Toolbox illustrates possible cross-sections for the parkway, alternative access spacing, different intersection treatments, a variety of roadway-land use edge conditions, and alternative land use/development schemes.

Parkway Cross-Sections

The Sutherlin TSP provides some guidance on the street design standard for a Parkway. This is illustrated in Figure 4 below (Cross-Section 1) and calls for 11' travel lanes in each direction, a 12' planted median/center turn lane, 5' bicycle lanes, an 8' bioswale, an 8' sidewalk on one side, and a 12' multi-use path on the other side. The planted median can be as narrow as 8' to allow for wider travel lanes, if necessary.

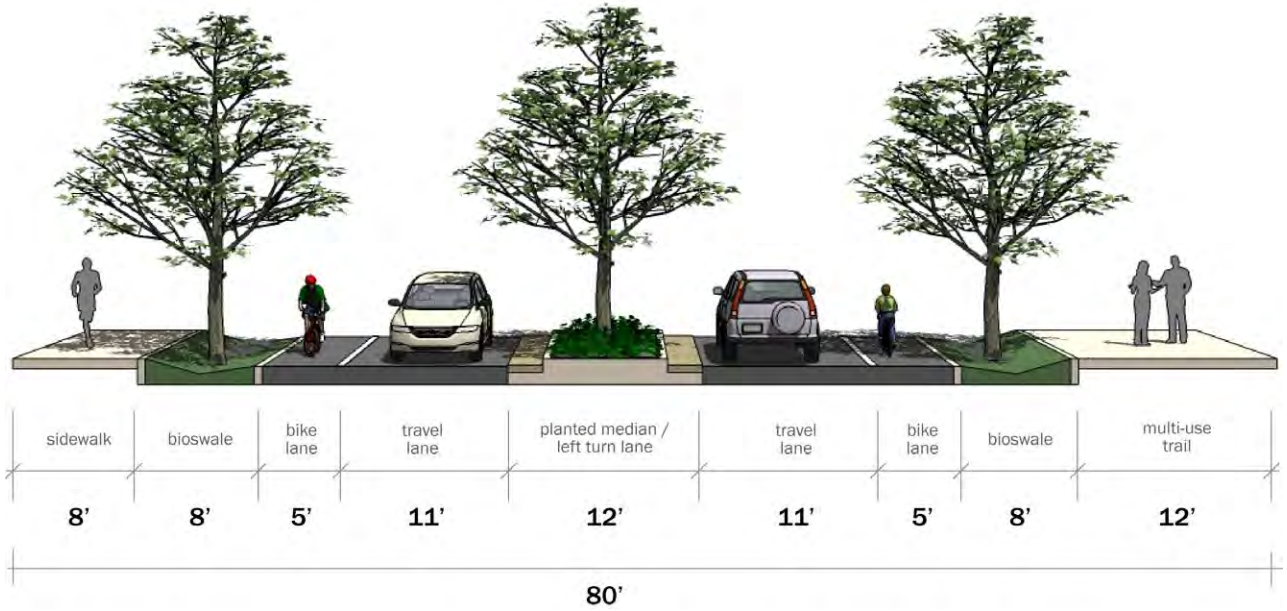


Figure 4. Cross-Section 1: As proposed in the Transportation System Plan

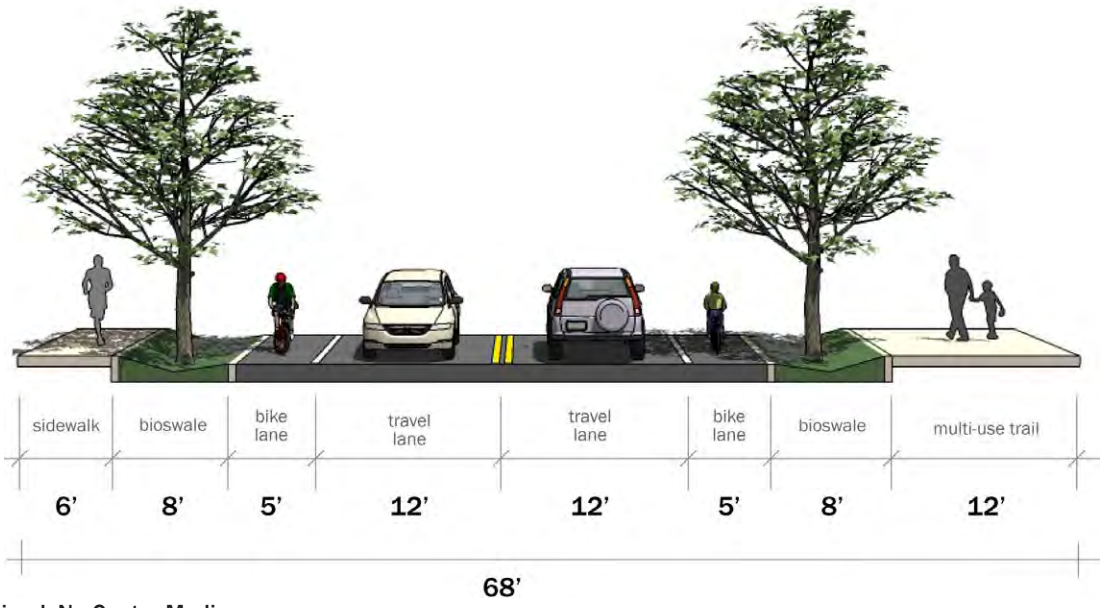


Figure 5. Cross-Section 2: Constrained, No Center Median

Cross-Section 2 (Figure 5, above) illustrates a potential variation of Cross-Section 1 that would remove the planted median/center left-turn lane. This cross-section could be utilized in right-of-way constrained portions of the corridor.

Cross-Sections 3 and 4 (Figures 6 and 7, at right) represent different treatments to the pedestrian and landscaping treatments that could be considered near intersections or in right-of-way constrained portions of the corridor. Cross-Section 4 illustrates a bioswale in the center turn lane, which would help detain and pretreat stormwater from adjacent impervious surfaces.

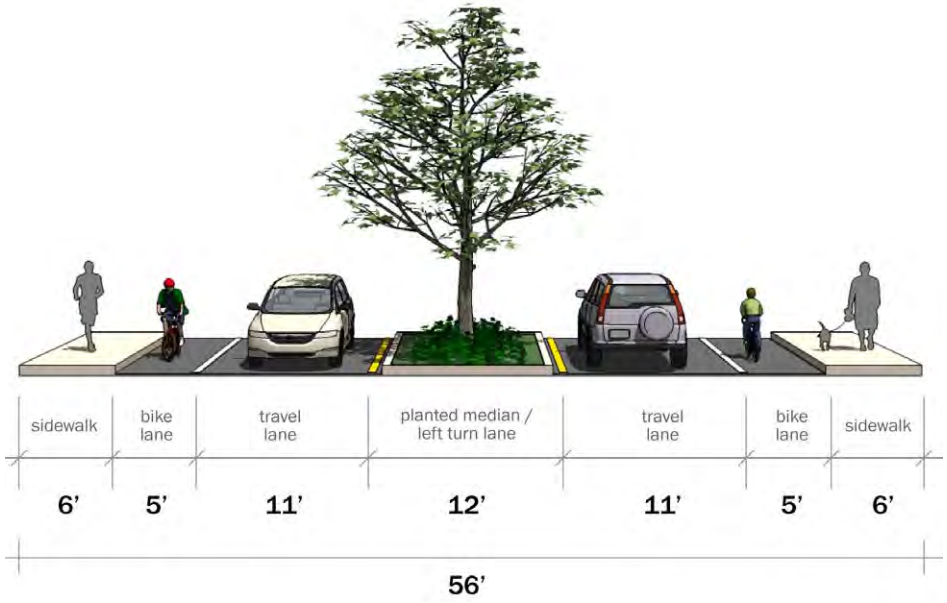


Figure 6. Cross-Section 3: Constrained, No Bio-Swale or Multi-Use Trail

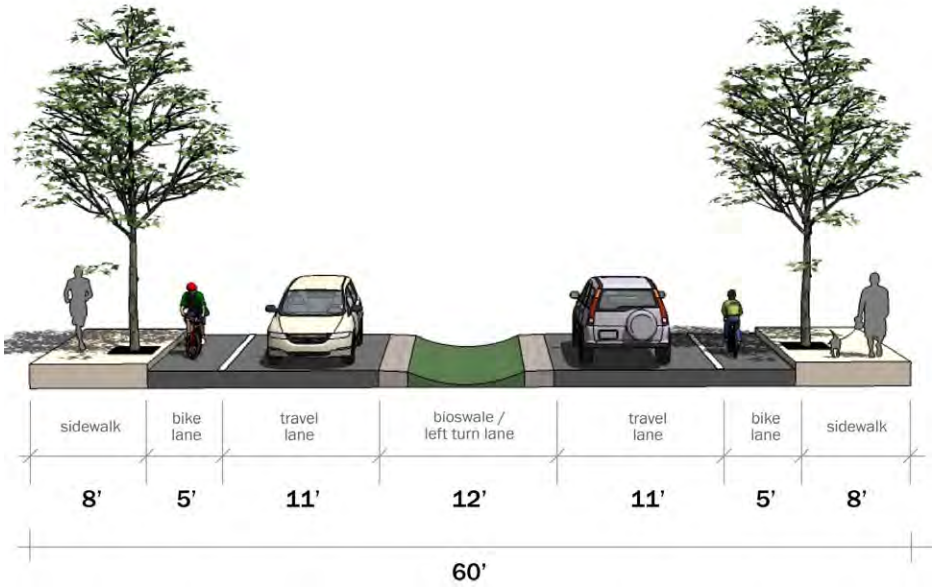


Figure 7. Cross-Section 4: Constrained, No Multi-Use Trail / Combined Sidewalk Landscape Treatment

Access

Managing access to the City's road system is necessary to preserve the overall safety and capacity of the transportation network. This is accomplished by minimizing the number of points where traffic flow may be disrupted by traffic entering and exiting the roadway, and to enhance the safety by minimizing the number of potential conflict points. Access management is particularly important on high volume roadways such as Arterials, Collectors, and Parkways.

As part of this planning process, it is important to establish a vision for how the Southside Parkway will be accessed via adjacent properties and the local and regional street network. For illustration purposes, a variety of access spacing standards are diagramed to the right.

The first diagram (Figure 8) illustrates a spacing standard of less than 400 feet where individual properties would have direct access to the Parkway itself. This access spacing concept is not consistent with the adopted TSP or a typical vision for a parkway type facility; however it was included for comparison purposes.

The second diagram (Figure 9) illustrates a 400-foot spacing standard between points of access to the Parkway. This standard is consistent with the adopted spacing standard for Parkways as outlined in the TSP. The third and fourth diagrams (Figures 10 and 11) illustrate potential spacing standards that would increase the spacing between points of access to 800 feet and a ¼ mile respectively.

In the consideration of an access spacing standard for the Sutherlin Parkway, a greater distance between points of access is most desirable for a Parkway facility for the following reasons:

- Provides greater roadway capacity for the accommodation of trucks and vehicles.
- Minimizes the number of conflict points along the Parkway, improving its overall safety
- Can improve overall travel time along the corridor

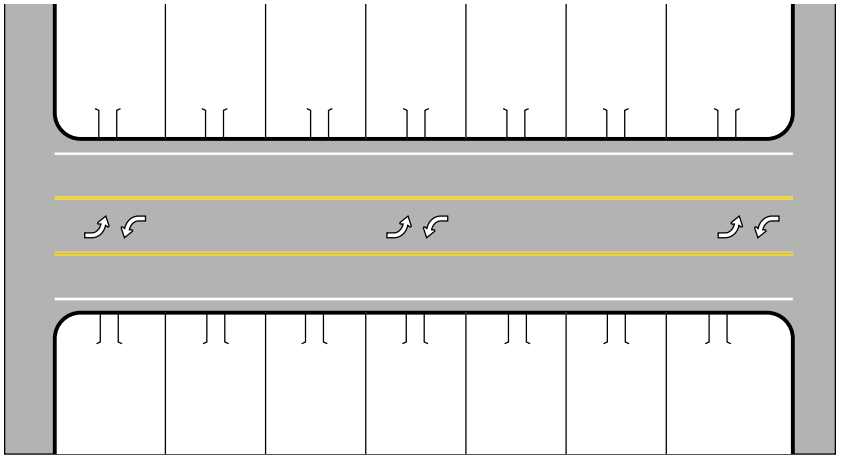


Figure 8. Frequent Access - Less than 400-feet

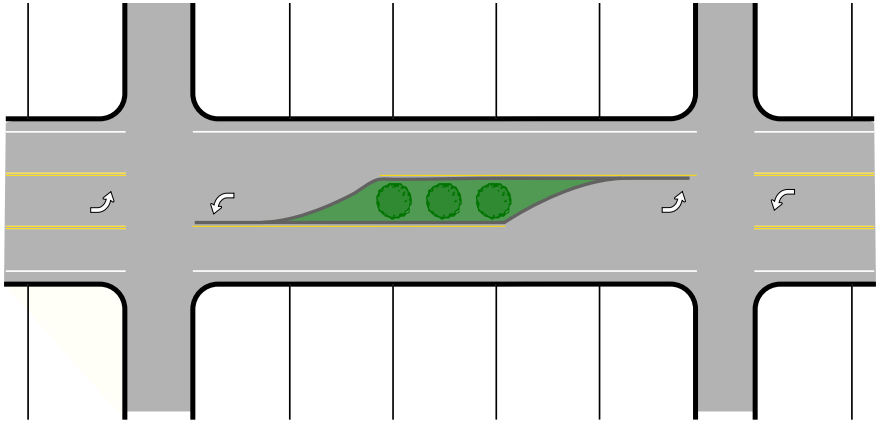


Figure 9. 400-feet spacing

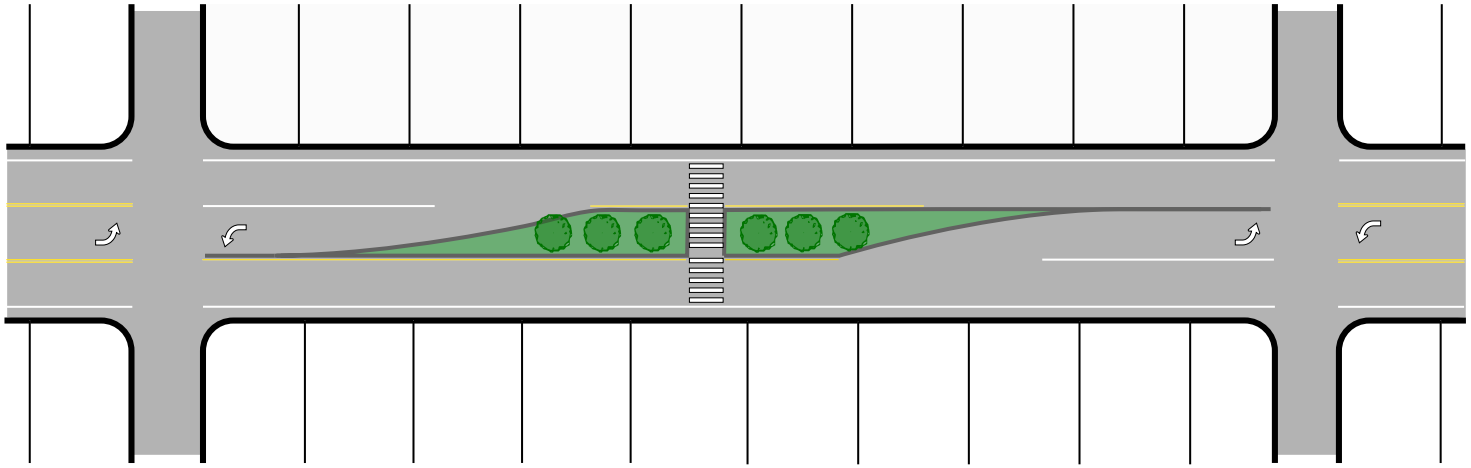


Figure 10. 800-foot spacing

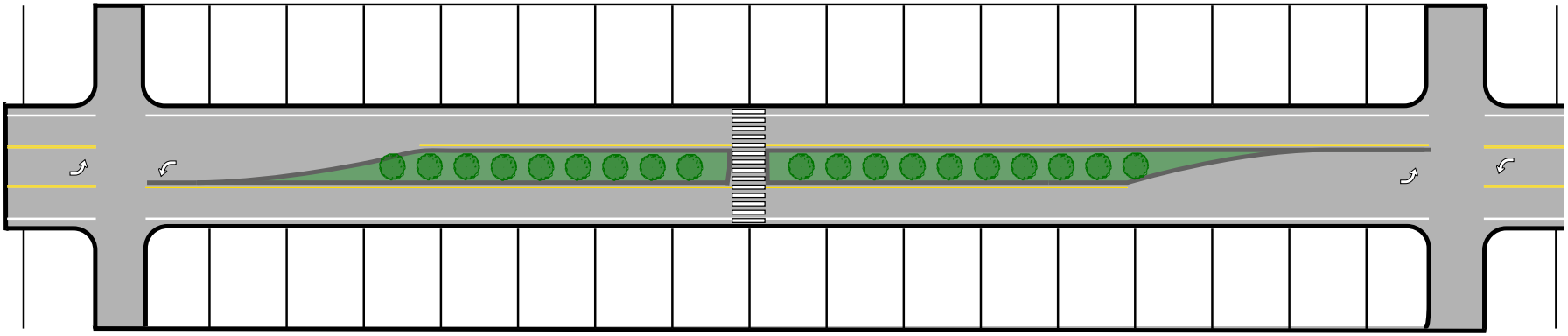


Figure 11. 1/4 mile spacing

Intersection Treatments

Depending upon how access to the Sutherlin Parkway is treated, there will likely be a number of public street intersections along Parkway. These intersections can be treated in several different ways including at-grade (stop controlled or signalized), roundabouts, and grade separated intersections.

At-grade intersections (Figure 12) are the most common form of intersection treatment. Depending upon traffic volumes, they can either be stop controlled or signalized.

Roundabouts (Figure 13) are an emerging form of intersection treatment. In essence, a roundabout is a circular intersection where all of the approaches are yield controlled and median islands are used to separate flows of traffic from each other and from pedestrians. Operationally, roundabouts have a number of beneficial properties in that they often experience lower travel delays compared to traffic signals, there are fewer conflicts between vehicle movements, and travel speeds are reduced through the roundabout. Compared to at-grade intersections, roundabouts typically have a larger footprint and require more right-of-way.

Grade-separated intersections (Figure 14) are designed to provide uninterrupted travel to higher speed higher volume roadways. Access at grade-separated intersections may or may not be provided. Grade separation typically improves the overall capacity on the intersecting roadways and can significantly minimize travel delay. Grade separation is the most costly intersection treatment and it typically requires the greatest amount of right-of-way.

Figure 12. Stop Controlled Intersection

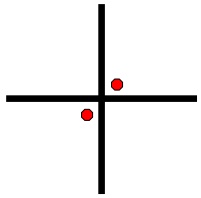
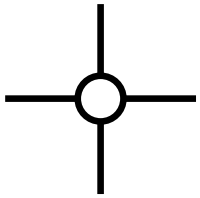
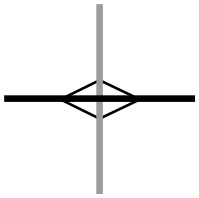


Figure 13. Roundabout

Figure 14. Grade-Separated (Overcrossing/Undercrossing)





Edge Conditions

"Edge Conditions" is a term used describe how adjacent land uses and the public right-of-way (roadway) interact with one another. Different edge conditions provide dramatically different experiences for both pedestrians and vehicles along the corridor. Some examples of different edge conditions are provided on this and the following page.

Figure 15 illustrates how a sound wall or impervious edge may look as the buffer between the public right-of-way and adjacent land uses. A sound wall maximizes privacy and noise mitigation for adjacent lands uses. However, the presence of the sound wall and orientation of the adjacent buildings limits the number of "eyes on the street" and contributes to a potentially unsafe pedestrian condition along the corridor. Additionally, when land uses face away from the primary street, there is a tendency to neglect maintenance of the landscape strip (i.e., bioswale) and sidewalk, which can contribute to the corridor being unsightly and an undesirable place for pedestrians and bicyclists.

Figure 16 shows a vegetated buffer between the public right-of-way and the adjacent land uses. A vegetated buffer still provides privacy and buffers some noise but dramatically improves pedestrian safety by providing some transparency between the corridor and the adjacent buildings.

Figure 17 shows the adjacent land uses oriented to the street, which provides maximum safety for pedestrians using the corridor and promotes good urban design and community interaction, but limits privacy and protection from corridor noise.

Figure 15. Sound wall

Figure 16. Vegetated Buffer

Figure 17. Land Uses Fronting Corridor

Land Use - Development Patterns

The following diagrams and photographs illustrate how the land adjacent to the Parkway could develop over time. The Low Density diagram illustrates what is currently in place per Sutherlin's zoning code and Comprehensive Plan. The Medium and High Density diagrams illustrate how more intensive development patterns could be realized with changes to existing zoning. The Medium and High Density diagrams display how higher density residential housing can be clustered around a small commercial node. The photos help to illustrate the quality and level of development for each zone.

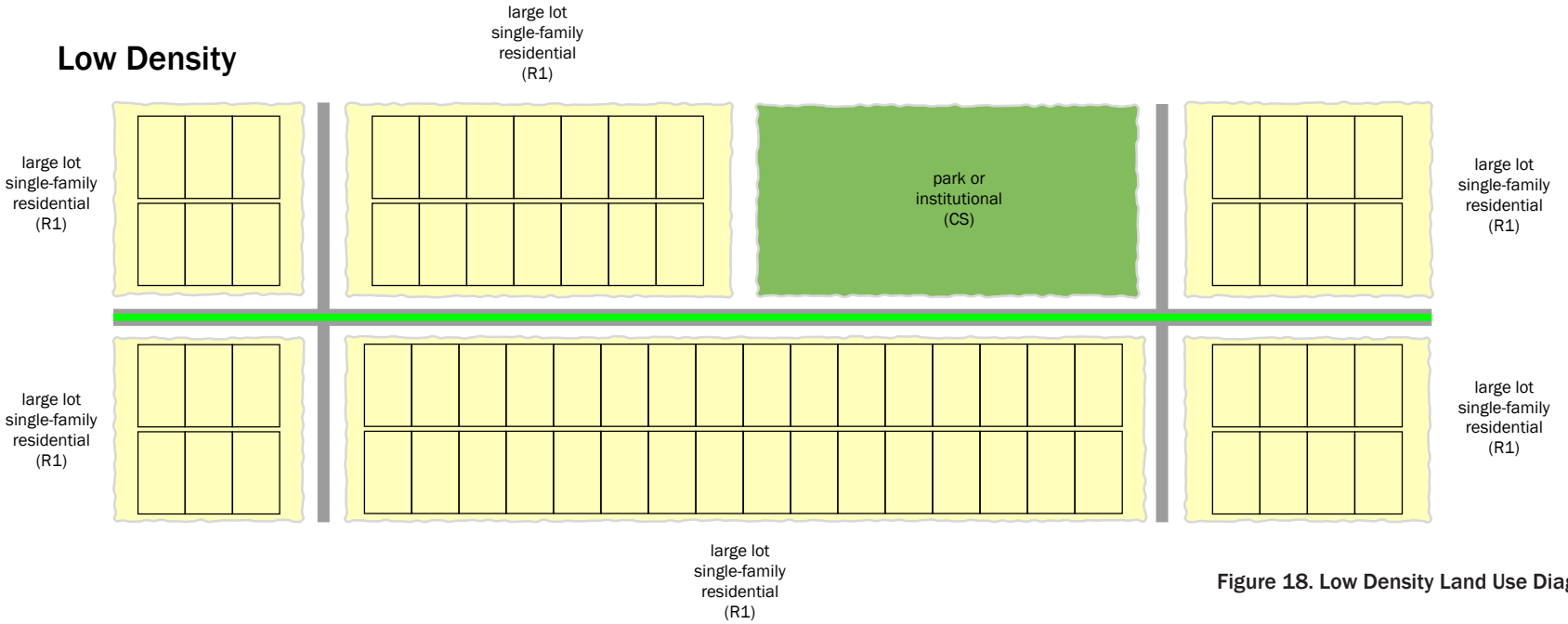
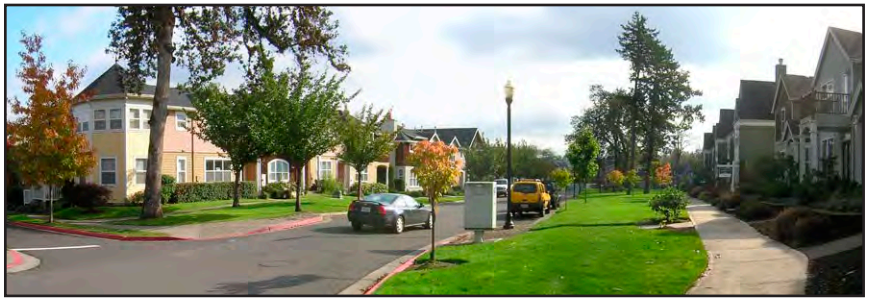


Figure 18. Low Density Land Use Diagram



single-family homes on lots larger than 7,500 sf

Medium Density

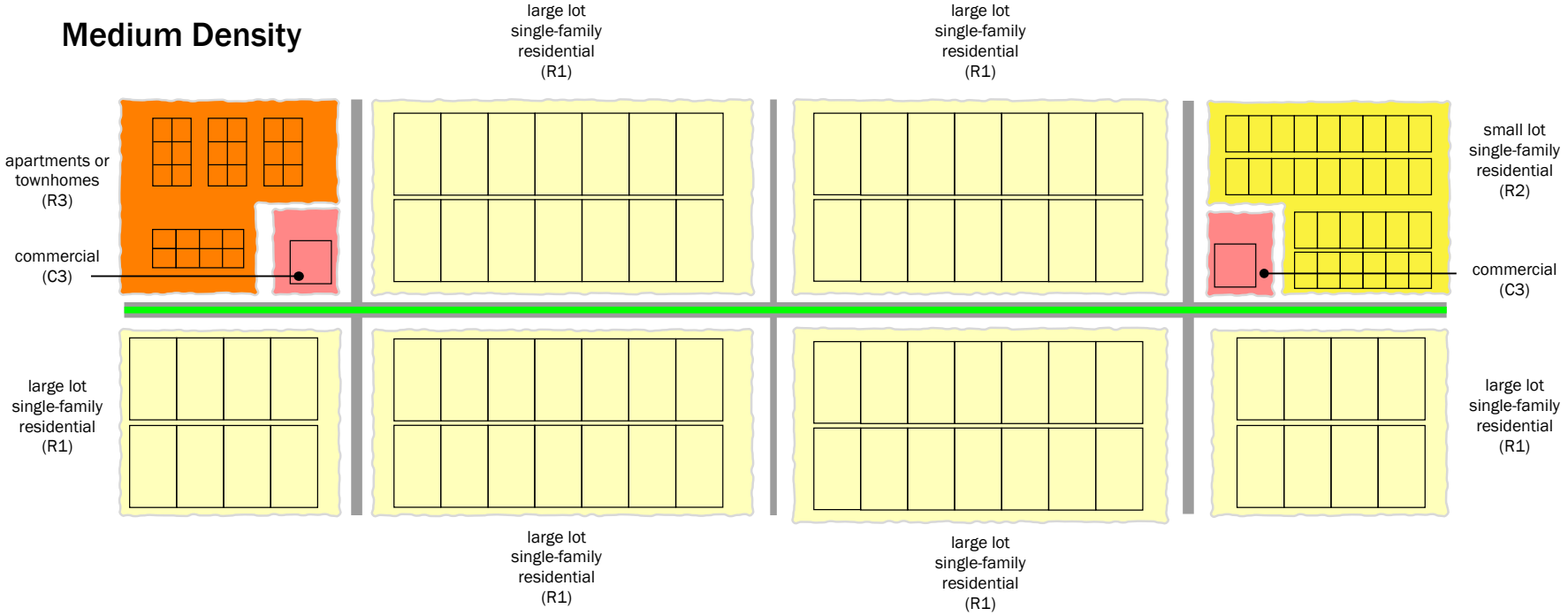
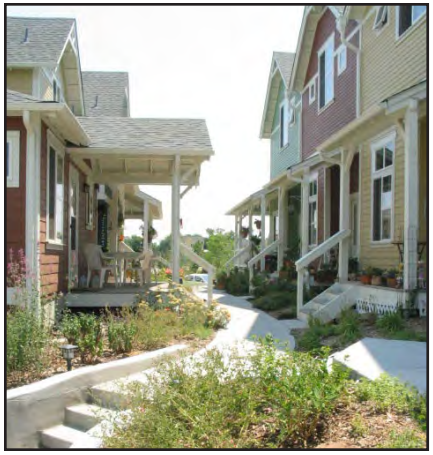


Figure 19. Medium Density Land Use Diagram

Example land uses

pedestrian-oriented commercial



walk-up townhomes

duplex

small lot single-family homes

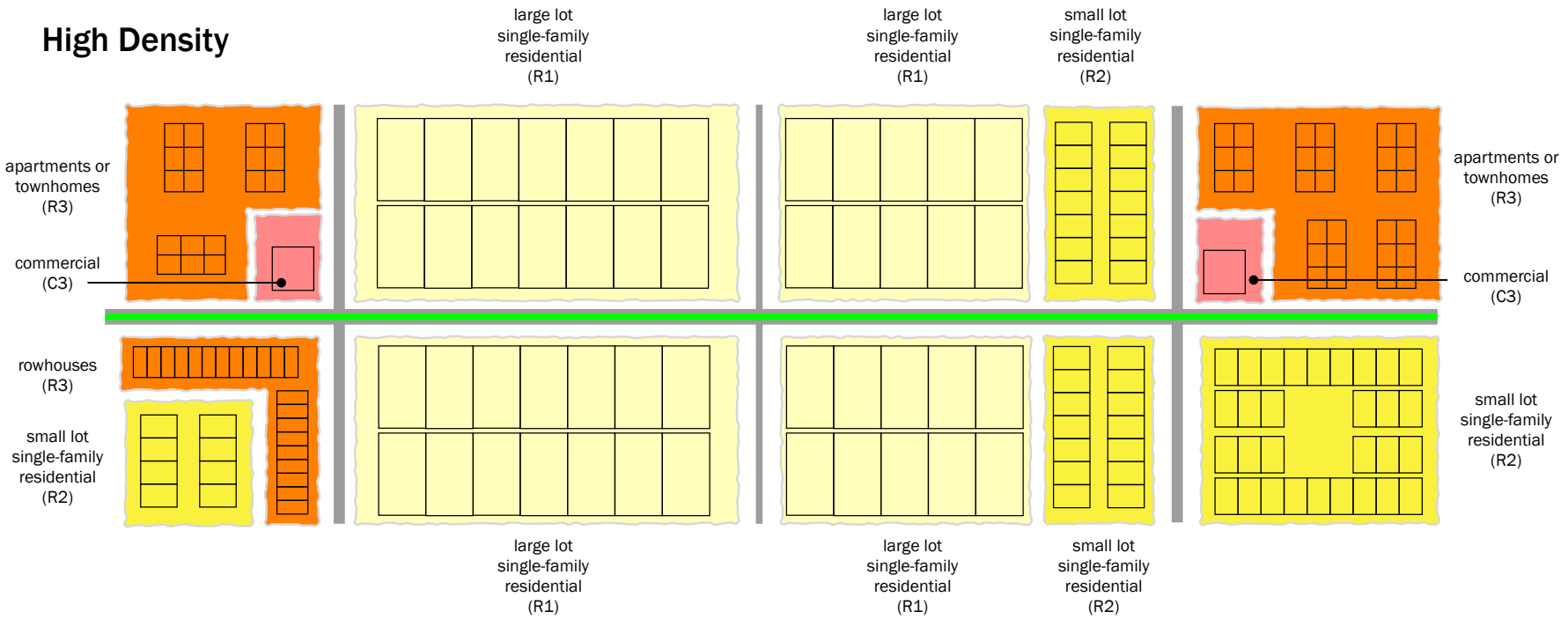


Figure 20. High Density Land Use Diagram

Example land uses

townhomes or cluster housing

small lot single-family homes with front porches and alley access

cottage clusters (small lot single-family homes clustered around a shared greenspace)

rowhouses

Growth Estimate Scenarios and Traffic Projections

Based on the land use density and development patterns outlined in the previous section, an attempt was made to determine how much development could potentially occur within the Southside Parkway study area under a low growth, moderate growth, and high growth estimate. To complete this analysis, information was obtained from City staff, the TSP, the 2005 Sutherlin Buildable Lands Inventory, and an assessment of GIS inventory/land use information.

Low, moderate, and high growth estimates represent the assumed level of buildout within the Sutherlin Parkway study area. Based on conversations with City staff, it was assumed for the purposes of this analysis that the low growth estimate represents a 30 percent buildout of the developable lands[1] within the study area. This figure is consistent with the development assumptions utilized in the TSP. The moderate and high growth estimates represent 50 percent and 70 percent buildout of the developable lands, respectively.

Within each of the three growth estimate scenarios, assumptions were made with respect to overall housing density. These assumptions are outlined in Table 1. As shown in the table, the low growth estimate assumes the majority (90 percent) of residential development would occur as low density (5 dwelling units per acre). The remaining 10 percent would occur as medium density (9 dwelling units per acre). Under the moderate and high growth scenarios, the percentages of low density residential decrease in favor of higher percentages of medium and high density (15 dwelling units per acre) residential.

[1] Developable lands include those properties that are either vacant or underdeveloped based on the underlying zoning. It does not include wetlands or areas designated as riparian areas.

Table 1. Growth Estimate Assumptions

Growth Scenarios	*Base Density Assumptions*		
	Low Density: 5 dwelling units per acre	Medium Density: 9 dwelling units per acre	High Density: 15 dwelling units per acre
Low Growth Estimate (30% Buildout of developable lands)[1]	90% = 225 single family residential homes	10% = 45 townhomes	0% = 0 apartment units
Moderate Growth Estimate 50% (Buildout of developable lands)	75% = 308 single family residential homes	20% = 147 townhomes	5% = 38 apartment units
High Growth Estimate (70% Buildout of developable lands)	60% = 342 single family residential homes	30% = 308 townhomes	10% = 171 apartment units

[1] 30% buildout is consistent with the assumed development utilized in the TSP.

Table 1 also shows the assumed number of dwelling units that could be generated for each growth scenarios according to the respective low, medium, and high density assumptions. These residential figures were calculated by determining the total number of developable acres within the Southside Parkway study area. With a total of 164 acres of developable land (factoring in a 20 percent reduction for streets and infrastructure), the buildout percentages were calculated for the low (30 percent), moderate (50 percent), and high (70 percent) growth scenarios. Within each growth scenario, the resulting net acreage was then divided into the respective low, medium, and high density assumptions. Single family homes were assumed for low density residential, townhomes were assumed for medium density residential, and apartment were assumed for high density residential.

Based on the development figures outlined in Table 1, trip generation figures were prepared for each of the three growth scenarios. The daily and weekday p.m. peak hour trip generated estimates are outlined in Table 2.

As shown in Table 2, the low growth scenario is estimated to generate approximately 2,410 daily trips. By contrast, the high growth scenario is estimated to generate almost three times the number of daily trips at 6,220.

Table 2. Trip Generation Estimates

Land Use	ITE Code	Size (Units)	Daily Trips	Weekday PM Peak Hour Trips		
				Total	In	Out
Low Growth Estimate						
Single Family Homes	210	225	2,150	225	140	85
Townhomes	230	45	260	25	15	10
Apartments	220	0	0	0	0	0
Total			2,410	250	155	95
Moderate Growth Estimate						
Single Family Homes	210	308	2,950	310	195	115
Townhomes	230	147	830	430	290	140
Apartments	220	38	260	25	15	10
Total			4,040	765	500	265
High Growth Estimate						
Single Family Homes	210	342	3,270	345	215	130
Townhomes	230	308	1,800	160	105	55
Apartments	220	171	1,150	105	70	35
Total			6,220	610	390	220

Southside Parkway Corridor Plan

Memo 3: Concept Plan Alternatives

city of sutherlin
final
April 2007

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Introduction

This memorandum is the third in a series of memoranda associated with the Sutherlin Southside Parkway Corridor Plan. The intent of this document is to present and fully evaluate different parkway alignment concepts that could potentially be implemented in the Southside Parkway Corridor Plan.

Prior to the development of the alignment concepts presented in this document, the project team met with the Technical Advisory Committee and Citizens Advisory Committee in December 2006 to discuss an overall vision for the Southside Parkway Corridor project. This visioning exercise was intended to provide a toolbox of integrated land use/transportation concepts that could be explored as part of the Southside Parkway Corridor Plan. Discussion in these committee meetings focused on elements such as the parkway cross section, frequency of access to the parkway, parkway intersection forms, edge conditions, and land use patterns. Memorandum #2, Transportation and Land Use Toolbox, presents a summary of these transportation/land use discussion elements.

Based on the feedback from these committee meetings as well as a number of individual meetings with local stakeholders, the project team developed a number of different parkway alignment concepts. These concepts and the process by which they were evaluated are presented in the remainder of this memorandum.

Committee and Stakeholder Feedback

As briefly noted above, the development of the parkway alignment concepts was based on feedback provided by the Technical and Citizens Advisory Committees as well as key property owners located within the overall planning study area. A summary of feedback from the committees is outlined below as they pertain to the main transportation/land use topics outlined in Memorandum #2.

Land Use

- Given the surrounding land uses, low density residential is most likely to develop in the parkway study area. However, it was recognized that the housing market could potentially move toward smaller lots and more medium density housing.
- Sutherlin should consider potential pockets of higher density housing within study area.

Parkway Cross-Section

- Parkway design should be large enough to adequately accommodate emergency vehicles.
- The parkway cross-section standard should be flexible in order to minimize impacts to existing land use and natural features.

Parkway Intersection Treatments

- Conventional intersection treatments (i.e., stop controlled intersections) were preferred over less conventional treatments such as roundabouts.

Access Spacing Along the Parkway

- Access to the parkway should be cognizant of the overall desire to provide an efficient east-west alternative to Central Avenue without negatively impacting properties adjacent to the parkway.
- Access spacing requirements of 400-800 feet were favored.

Miscellaneous Comments

- The parkway alignment should be cognizant of a longer-term vision to extend the Duke/Hastings corridor to the west side of I-5. Integration of the parkway plan and the Duke/Hastings corridor vision is important.

Land Use Concepts

It is inevitable that the Southside Parkway will influence land use in the study area and beyond. Some alignment concepts provide excellent access to currently vacant or under-developed parcels, which may stimulate new development. Most alignments require procuring right-of-way and splitting parcels, which presents an opportunity to examine those sites and determine if the existing zoning is appropriate in its new context. With these considerations in mind, three land use concepts were developed to accompany the parkway alignments based on input from the stakeholders and advisory groups. They include:

No Change (Figure 1). This land use concept does not propose changing the existing zoning base.

Low Impact (Figure 2). This land use concept assumes that a new school will be built on the school district property, precluding any new residential or commercial development. This concept also recognizes that the area located between South State and Calapooya is environmentally constrained by wetlands and that higher-density residential or commercial is not likely to occur on these parcels without considerable expense. This area is shown as having no development in the wetland areas on the south side of Cooper Creek. Low-density residential is shown in the areas north and west of Cooper Creek along Calapooya.

High Impact (Figure 3). This land use concept assumes that Sutherlin's population will continue to increase and that there will be demand for more diverse housing, including smaller single-family residential homes, duplexes, and manufactured homes, to provide affordable home-ownership opportunities. This concept shows the school district property as medium density residential (R2), acknowledging that student enrollment in Sutherlin has been flattening and that the majority of the City's new residents are older and do not have school-aged children.

The area between South State and Calapooya is shown as medium density residential. Again, this area is extremely environmentally constrained and will likely be costly to develop. Unless the market can support development of the entire area (or the City subsidizes the development), it is likely that only the least-constrained parts of the area would be developed.

A small mixed-use commercial node is shown at the intersection of Hastings and Calapooya. This node can serve as a gateway to the Downtown and provide services to the residential and industrial areas in its vicinity. Mixing uses (i.e., retail/commercial on the ground floor, apartments above) is a good way to maximize use of the unconstrained portions of the site and provide an attractive housing alternative.

Figure 1. No Change Land Use Concept

Figure 2. Low Impact Land Use Concept

Figure 3. High Impact Land Use Concept

Parkway Alignment Concepts

The project team developed three preliminary parkway alignment concepts that reflect the feedback received from the advisory committees and stakeholders and the project evaluation criteria. A fourth alignment concept was developed after meeting with the Technical Advisory Committee (TAC) and the Citizen Advisory Committee (CAC) and presenting the first three alignment concepts. This subsequent alignment is presented as the preliminary Preferred Alternative.

The alignments vary in scope and nature to illustrate the various trade-offs between cost and constructability, environmental impacts, and social impacts. The nature of the parkway corridor requires context-sensitive design and may warrant using a modified cross-section in constrained areas. It is important to note that all proposed alignments would safely accommodate all roadway users (including bicyclists, pedestrians, and emergency vehicles) and would be constructed to the highest possible standard.

The final parkway concept likely will be a hybrid alternative that integrates the strongest or most desirable elements from each of the alternative parkway alignments. A brief description of these alignment concepts is summarized below. Each alternative is fully explored with respect to the project evaluation criteria in the following section. The evaluation criteria and evaluation matrix are in the Appendix of this document.

Parkway Alignment Concept 1

Parkway Alignment Concept 1 begins at the Calapooya Street/Hastings Avenue intersection in the west end of the study corridor and takes a relatively direct east-west alignment connecting to the South Side Road/Waite Street intersection. This alignment is representative of the general parkway alignment discussed and adopted in the Sutherlin Transportation System Plan.

Parkway Alignment Concept 2

Parkway Alignment Concept 2 is similar to Concept #1; however portions of the corridor have been aligned in an effort to minimize impacts to certain properties and geographic features. The result is a slightly longer and more curvilinear alignment.

Parkway Alignment Concept 3

Parkway Alignment Concept 3 connects to Calapooya Street in the west end of the study corridor and to Waite Street in the east end of the study corridor. This alignment attempts to minimize wetland impacts and Cooper Creek crossings by taking a more northerly alignment between Calapooya Street and Waite Street. The result is a parkway alignment that is offset from other existing corridors such as Hastings Avenue and South State Street.

Parkway Alignment Concept 4

Since Parkway Alignment Concept 4 was developed after meeting with the TAC and CAC, it incorporates the strongest elements of the three previous alternative alignments and tries to mitigate impact on existing private property and homes to the greatest extent possible. Parkway Alignment Concept 4 uses the same western alignment from Hastings to South State Street as Alignment 2; it intersects Calapooya at a right-angle and traverses a property line across the existing wetlands to the base of Scone Butte. From South State Street, the Alignment travels east through the SKP Park, Meadowpark development, and Sutherlin School District property to Waite Street and South Side Road.

Parkway Concept Alignment 1

Alignment 1 Summary Table	
Length	4,962 ft
ROW needed	9.2 acres
Wetlands impacted	3.7 acres
Private properties impacted	12
Structures impacted	19
Relative cost ($-$$$$)	$$$

Parkway Alignment Concept 1 (Figure 4A) begins at the Calapooya Street/Hastings Avenue intersection in the west end of the study corridor and takes a relatively direct east-west alignment connecting to the South Side Road/Waite Street intersection. This alignment is relatively straight, provides route continuity, and creates an extensive east-west parallel route to Central Avenue.

Circulation and Access

The parkway alignment would cut through the existing Meadow Park and SKP Park developments, requiring some fairly significant local street modifications (Figure 4B). These modifications would require displacement of a number of existing homes in the Meadow Park development.

Parkway access would be provided at South State Street, a new connection to the SKP Park, and a new connection to Meadows Park. Future access could also be provided to the undeveloped school property at some point in the future. This alignment would likely reduce travel demand along Valentine Street.

Traffic Operations and Emergency Access

Alignment 1 can accommodate existing and projected vehicle demand and would reduce the need to rely upon Central Avenue for east-west travel within the City. Connecting South State Street and South Side Road would improve emergency vehicle response times to all existing and new development in the southeast part of Sutherlin, particularly to the easternmost portion of Meadows Park.

Bicycle and Pedestrian Accommodation

The parkway alignment is consistent with the bicycle and pedestrian facilities master plan and would provide direct access to the proposed Cooper Creek multi-use path/greenway.

Environmental Impacts

Alignment 1 would require two separate crossings of Cooper Creek and would traverse a large wetland area between Calapooya Street and South State Street. The area of impacted wetlands and riparian areas is approximately 3.7 acres.

Consistency with Previous Plans

Alignment 1 and connection points are consistent with the vision for the parkway as adopted in the 2005 Transportation System Plan.

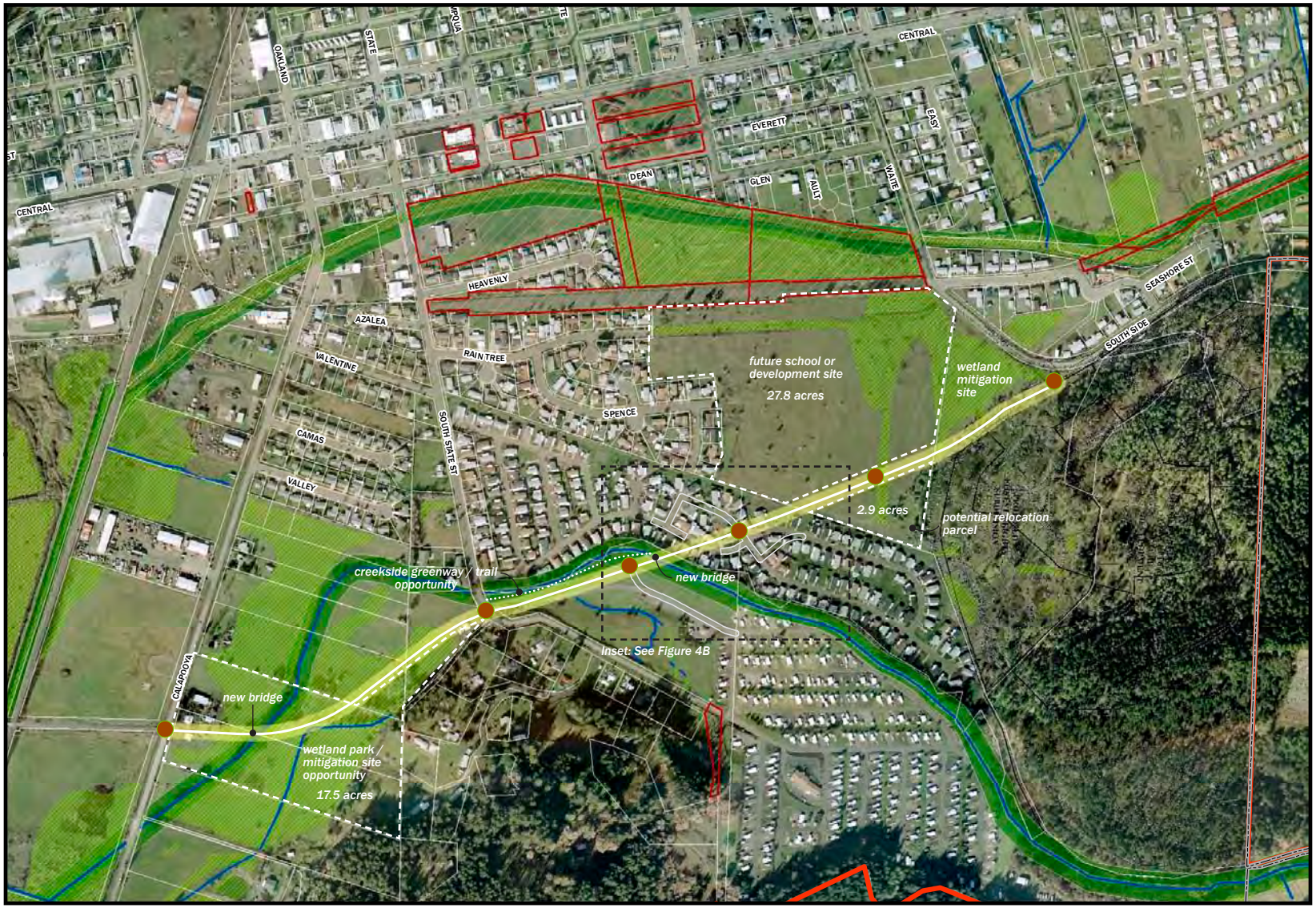
Social Impacts

This alignment would cross over 12 separate private parcels (7 owners) and one public parcel with an estimated right-of-way need of 9.22 acres. Approximately 19 existing structures would be physically impacted by the alignment.

Alignment 1 would bisect the existing Meadow Park development. Local street modifications would be required to provide safe and efficient access to the eastern half of the development.

Constructability

Alignment 1 is straight with little or no vertical curvature, making it relatively simple to build. Special construction techniques would need to be employed to construct portions of Alignment 1 that travel through wetland areas and across Cooper Creek. This alignment option is likely to have the second highest construction costs of all the options presented.



source: City of Sutherlin

Sutherlin Southside Parkway Corridor

Proposed Alignment Option 1

Parkway right-of-way (80') - Alignment 1
New Local Roads - Alignment 1
potential intersection location
water
wetlands
riparian areas
low significance wetlands

500 Feet

Figure 4A. Proposed Alignment 1

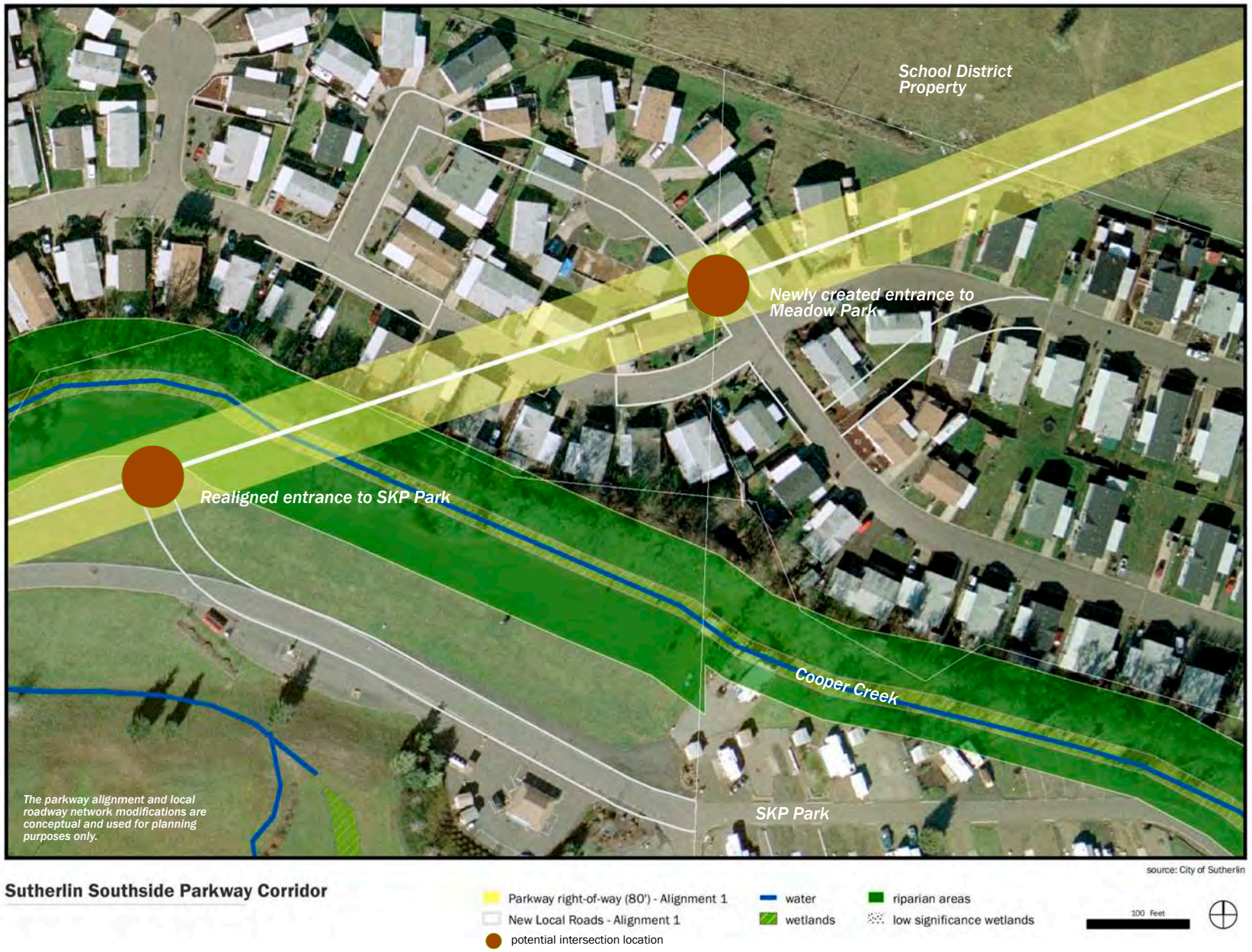


Figure 4B. Potential Local Street Modifications - Parkway Alignment 1

source: City of Sutherlin

Sutherlin Southside Parkway Corridor

Proposed Alignment Option 1

Parkway right-of-way (80') - Alignment 1
New Local Roads - Alignment 1
water
wetlands
riparian areas
low significance wetlands

500 Feet

Figure 4C. Potential Roadway Cross-Sections - Parkway Alignment 1

Parkway Concept Alignment 2

Alignment 2 Summary Table	
Length	6,010 ft
ROW needed	11 acres
Wetlands impacted	3.8 acres
Private properties impacted	14
Structures impacted	14
Relative cost ($-$$$$)	$$$$

Parkway Concept Alignment 2 (Figure 5A) is generally similar to Alignment 1, however portions of the corridor have been aligned to minimize impacts to certain properties and geographic features. This condition makes Alignment 2 the longest of the four conceptual alignments but still provides route continuity and an effective east-west parallel route to Central Avenue.

Circulation and Access

Like Alignment 1, Alignment 2 would cut through the existing Meadow Park and SKP Park developments. However, Alignment 2 bisects the property at a sharper angle to reduce its impact on existing homes. Significant local street modifications (Figure 5B) are needed to provide access through the neighborhood. Access to/from the parkway would be provided at South State Street, a new connection to the SKP Park, and a new connection to Meadows Park. Future access could also be provided to the undeveloped school property at some point in the future.

Traffic Operations and Emergency Access

Alignment 2 can accommodate existing and projected vehicle demand and would reduce the need to rely upon Central Avenue for east-west travel within the City. Connecting South State Street and South Side Road would improve emergency vehicle response times to all existing and new development in the southeast part of Sutherlin, particularly to the easternmost portion of Meadows Park.

Bicycle and Pedestrian Accommodation

Alignment 2 is consistent with the bicycle and pedestrian facilities master plan. Like Alignment 1, Alignment 2 would provide direct access to the proposed Cooper Creek multi-use path/greenway.

Environmental Impacts

Similar to Alignment 1, Alignment 2 would require two separate crossings of Cooper Creek and have an impact on the large wetland area between Calapooya Street and South State Street. The area of impacted wetlands and riparian areas is approximately 3.8 acres.

Consistency with Previous Plans

Alignment 2 and its connection points are consistent with the vision for the parkway as adopted in the 2005 Transportation System Plan.

Social Impacts

Alignment 2 would cross over 14 separate private parcels (eight owners) and one public parcel with an estimated right-of-way need of 11.15 acres. Approximately 14 existing structures would be physically impacted by the alignment.

Alignment 2 would bisect the existing Meadow Park development. Local street modifications would be required to provide safe and efficient access to the eastern half of the development. The parkway alignment would be realigned at Calapooya Street in order to avoid impacting the Stanley residence and completely bisecting the Stanley property.

Constructability

Alignment 2 has little or no vertical curvature, making it relatively simple to build. Special construction techniques would need to be employed to construct portions of Alignment 2 that travel through wetland areas and across Cooper Creek. This alignment option is likely to have the highest construction costs.

source: City of Sutherlin

Sutherlin Southside Parkway Corridor

Proposed Alignment Option 2

Parkway right-of-way (80') - Alignment 2
New Local Roads - Alignment 2
potential intersection location
water
wetlands
riparian areas
low significance wetlands

500 Feet

Figure 5A. Proposed Alignment 2

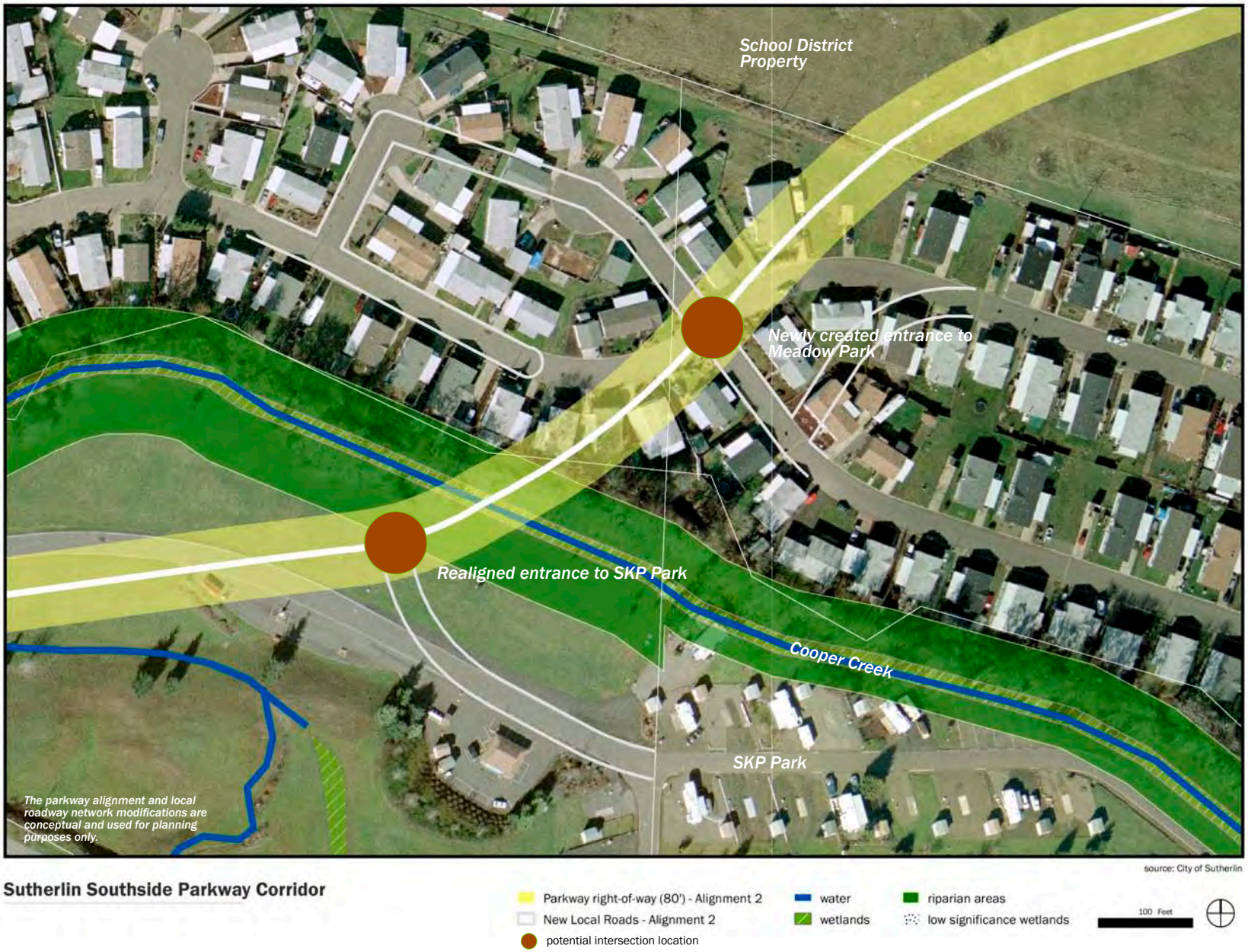
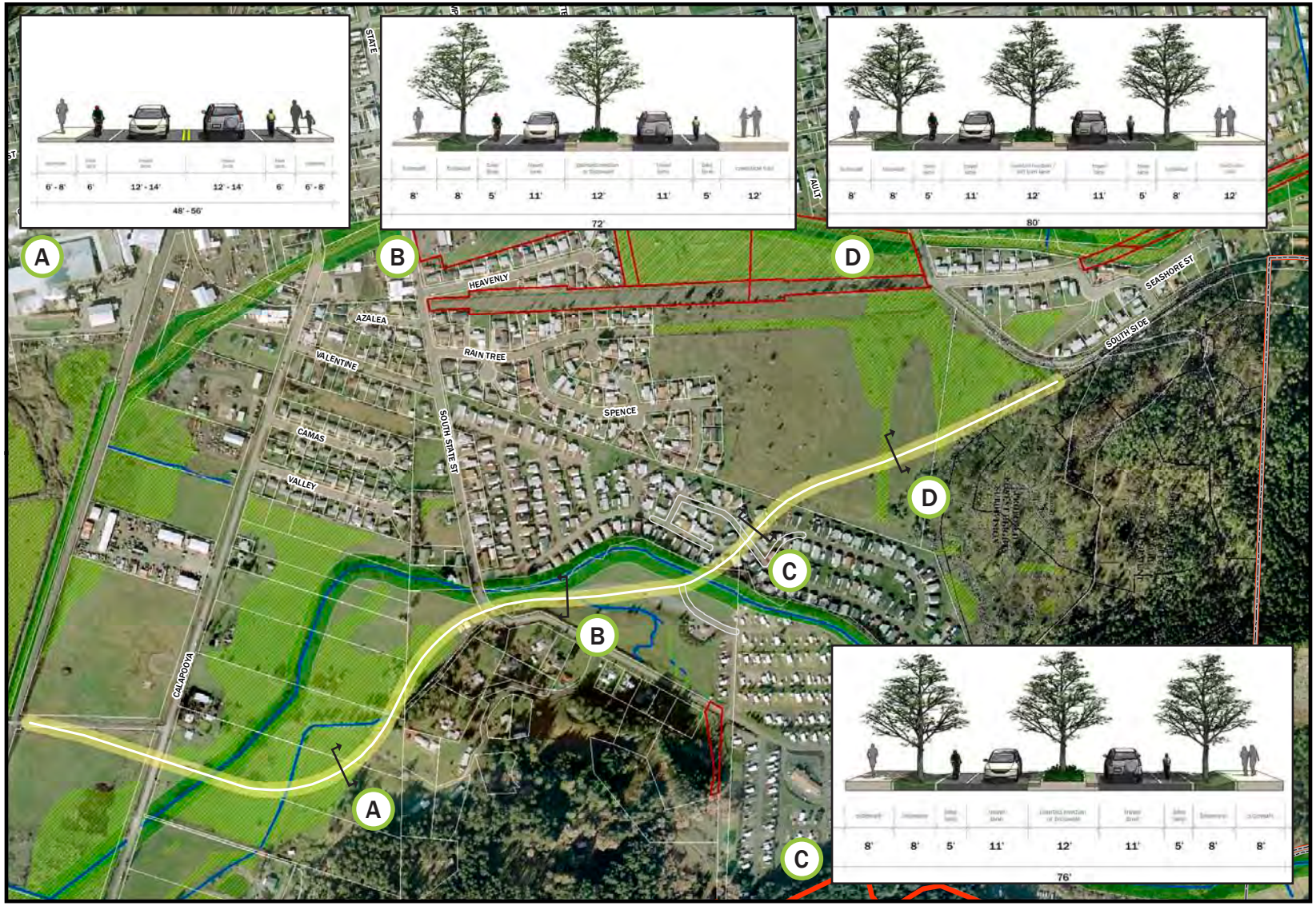


Figure 5B. Potential Local Street Modifications - Parkway Alignment 2



source: City of Sutherlin

Sutherlin Southside Parkway Corridor

Proposed Alignment Option 2

Parkway right-of-way (80') - Alignment 2
New Local Roads - Alignment 2
water
wetlands
riparian areas
low significance wetlands

500 Feet

Figure 5C. Potential Roadway Cross-Sections - Parkway Alignment 2

Parkway Concept Alignment 3

Alignment 3 Summary Table	
Length	4,305 ft
ROW needed	8.0 acres
Wetlands impacted	1.7 acres
Private properties impacted	16
Structures impacted	29
Relative cost ($-$$$$)	$$

Parkway Concept Alignment 3 (Figure 6A) connects to Calapooya Street in the west end of the study corridor and to Waite Street in the east end of the study corridor. The overall alignment is more northerly and circuitous when compared to Alignments 1 and 2 and is perhaps less effective in alleviating travel demand along Central Avenue.

Circulation and Access

Alignment 3 connects to Calapooya Street approximately 1,000 feet north of Hastings Avenue in an attempt to minimize impacts to the large wetlands area between Calapooya Street and South State Street. In doing so, it does not directly connect to Hastings Avenue and does not work towards a long-term vision of providing for a continuous east-west corridor that parallels Central Avenue on the east side of I-5.

Alignment 3 would cut through a significant portion of the existing Meadow Park development, requiring local street modifications (Figure 6B). These modifications would displace a large number of existing homes.

Traffic Operations and Emergency Access

Alignment 3 can accommodate existing and projected vehicle demand, however it is less effective in alleviating travel demand along Central Avenue due to the fact that it lacks city-wide route continuity. The alignment would create a connection between South State Street and Waite Street, but the lack of a connection to Hastings Avenue does not provide for continuous and efficient east-west travel for emergency vehicles. Emergency response time to the easternmost portion of Meadows Park would improve.

Bicycle and Pedestrian Accommodation

Alignment 3 is consistent with the bicycle and pedestrian facilities master plan as it would tie into and provide a regional connection to the identified Cooper Creek multi-use path/greenway.

Environmental Impacts

Alignment 3 has the second fewest impacts to the natural environment as it does not cross Cooper Creek and minimizes impact to the large wetland area located between Calapooya Street and South State Street. A portion of the parkway alignment would utilize the Red Road corridor, a corridor with noted environmental hazards.

Consistency with Previous Plans

Alignment 3 does not connect to Hastings Avenue. The Duke/Hastings Avenue corridor is seen as a long-term future corridor to I-5 and the west side of the City of Sutherlin.

Social Impact

The alignment would cross over 16 separate private parcels and two public parcels with an estimated right-of-way need of 8.02 acres. Approximately 29 structures would be physically impacted by the alignment, the most of any concept. The parkway alignment would traverse and bisect the existing Meadow Park development. Home displacement and right-of-way needs through Meadow Park would be significant compared to the other Alignments.

Constructability

Alignment 3 would parallel a significant portion of Cooper Creek, potentially requiring special construction techniques to avoid impacts to the riparian corridor and waterway. Right-of-way needed is lower than Alignments 1 and 2, however a large majority of right-of-way is through the existing Meadows Park development.

source: City of Sutherlin

Sutherlin Southside Parkway Corridor

Proposed Alignment Option 3

Parkway right-of-way (80') - Alignment 3
New Local Roads - Alignment 3
potential intersection location
water
wetlands
riparian areas
low significance wetlands

500 Feet

Figure 6A. Proposed Alignment 3

Figure 6B. Potential Local Street Modifications - Parkway Alignment 3

source: City of Sutherlin

Sutherlin Southside Parkway Corridor

Proposed Alignment Option 3

Parkway right-of-way (80') - Alignment 3
New Local Roads - Alignment 3
water
wetlands
riparian areas
low significance wetlands

500 Feet

Figure 6C. Potential Roadway Cross-Sections - Parkway Alignment 3

Parkway Concept Alignment 4

Alignment 4 Summary Table	
Length	5,149 ft
ROW needed	9.5 acres
Wetlands impacted	3.2 acres
Private properties impacted	7
Structures impacted	11
Relative cost ($-$$$$)	$$$$

Parkway Concept Alignment 4 is the preliminary Preferred Alignment for the Sutherlin Southside Parkway Corridor. The Alignment (Figure 7A) was developed after meeting with the project's Technical Advisory Committee and Citizen Advisory Committee. It integrates the strongest features of the previous alignments and has the least impact to private property in the corridor.

The Alignment connects to Hastings Street in the west end of the study corridor and to Waite Street in the east end of the study corridor. The alignment is the longest of all the alignments in order to circumnavigate sensitive lands.

Circulation and Access

Alignment 4 would cut through the existing Meadow Park and SKP Park developments. The Alignment travels through these properties in a manner that limits its impact on existing homes and existing open space. Compared to the other alignments, no major modifications to the local street network are necessary (Figure 7B) to provide access to the alignment from the neighborhood. Access to/from the parkway would be provided at South State Street, a new connection to the SKP Park, and a new connection to Meadows Park. Future access could also be provided to the undeveloped school property at some point in the future.

Traffic Operations and Emergency Access

Like other alignments, the Alignment 4 can accommodate existing and projected vehicle demand and would reduce the need to rely upon Central Avenue for east-west travel within the City. Connecting South State Street and South Side Road would improve emergency vehicle response times to all existing and new development in the southeast part of Sutherlin, particularly to the easternmost portion of Meadows Park.

Bicycle and Pedestrian Accommodation

Alignment 4 is consistent with the bicycle and pedestrian facilities master plan as it would tie into and provide a regional connection to the identified Cooper Creek multi-use path/greenway.

Environmental Impacts

Alignment 4 would require two separate crossings of Cooper Creek and have an impact on the large wetland area between Calapooya Street and South State Street. The area of impacted wetlands and riparian areas is approximately 3.2 acres.

Consistency with Previous Plans

Alignment 4 and its connection points are consistent with the vision for the parkway as adopted in the 2005 Transportation System Plan.

Social Impact

The alignment would cross ten separate private parcels (seven owners) and one public parcel with an estimated right-of-way need of 9.5 acres. Approximately 11 structures would be physically impacted by the alignment, the fewest of any concept.

Constructability

Alignment 4 requires special construction techniques for portions that travel through wetland areas and across Cooper Creek. This alignment option is likely to have some of the highest construction costs due to its length and wetland mitigation requirements.

source: City of Sutherlin

Sutherlin Southside Parkway Corridor

Preferred Alignment - Local Roads
Parkway right-of-way (80') - Preferred
potential intersection location
water
wetlands
riparian areas
low significance wetlands

500 Feet

Figure 7A. Alignment 4

Figure 7B. Potential Local Street Modifications - Alignment 4

Figure 7C. Potential Roadway Cross-Sections - Alignment 4

Evaluation of Alternatives Summary Matrix

The following table summarizes each Parkway Alternative relative each of the project's evaluation criterion.

Evaluation Criterion		Alignment 1	Alignment 2	Alignment 3	Alignment 4
Traffic Considerations	*Circulation*	Good	Good	Poor	Good
	Traffic Operations	Good	Good	Fair	Good
	Emergency Vehicle Access and Circulation	Good	Good	Fair	Good
Bicycle and Pedestrian	*Compatibility with Bicycles and Pedestrians*	Good	Good	Good	Good
Environment and Planning	*Environmental Impacts*	Poor	Poor	Fair	Poor
	Consistency with Other Planning Efforts	Good	Good	Poor	Good
	Social Impacts	Poor	Fair	Poor	Fair
Practical Considerations	*Constructability*	Poor	Poor	Poor	Poor
	Construction Costs	Poor	Poor	Poor	Poor

Traffic Analysis

This section provides a summary of the 2025 traffic analysis for each of the four alignment concepts. The 2025 future year traffic volume forecasts from the 2005 Transportation System Plan were utilized in this analysis.

Parkway Alignment Concepts 1, 2 and 4

Given that Alignments 1, 2, and 4 are consistent with the parkway vision in the Transportation System Plan (connecting to Hastings Avenue and South Side Road), all of the improvements identified in the TSP are still applicable. Those identified improvements that are necessary as a result of the parkway include the following:

- Install a traffic signal at the Calapooya Street/Hastings Avenue/Parkway intersection when warranted. Along Calapooya Street, develop a northbound right-turn lane and a southbound left-turn lane at the Hastings Avenue/Parkway intersection. In addition, the east and west Hastings Avenue/Parkway approaches to Calapooya Street will require separate left, through, and right-turn lanes.
- The development of the Parkway will add a significant amount of additional traffic to the Waite Street corridor and the Central Avenue/Waite Street intersection. As such, this intersection will need to be signalized when warranted. In addition, an eastbound right-turn lane on Central Avenue will better accommodate eastbound right-turn movements onto Waite Street.
- Widen and improve Waite Street south of Central Avenue to its full Collector street standard. This improvement will better accommodate a projected increase in traffic volumes using Waite Street to access the parkway from Central Avenue.
- Widen and improve State Street south of Central Avenue to its full Collector Street standard.

Due to a projected increase in traffic volumes that the parkway will bring to the I-5/Wilbur Umpqua Road interchange, the following improvements would be needed:

- Add a southbound left-turn lane at Wilbur-Umpqua Road/SB I-5 on/off ramp intersection.
- Signalize the Wilbur-Umpqua Road/Highway 99 intersection and add an eastbound right-turn lane on Wilbur-Umpqua Road.

In addition to these previously identified improvements from the TSP, the parkway itself will need separate left-turn lanes at all points of access including South State Street, access points to the SKP Park and Meadow Park, and the Wait Street/South Side Road intersection.

Parkway Alignment Concept 3

Alignment 3 is less consistent with the previous analysis work from the TSP. As such, some of the necessary improvements differ from the improvements identified under Alignments 1 and 2. These improvements include the following:

- Develop a northbound right-turn lane and southbound left-turn lane at the new parkway intersection with Calapooya Street. The westbound parkway approach to Calapooya Street will require separate left- and right-turn lanes.
- Since the parkway and Hastings Avenue are now offset, a separate southbound right-turn lane would need to be developed to serve southbound right-turns onto Hastings Avenue.
- At the Waite Street/Parkway intersection, a northbound left-turn lane and southbound right-turn lane would be needed.
- All other improvements listed under Alignments 1 and 2 would be necessary under Alignment 3.

Memo 3: Appendix

Evaluation Criteria

Evaluation Matrix

Evaluation Criteria

With guidance from the project's Technical Advisory Committee, the project team assembled a broad range of evaluation criteria to address the overall project goal, as well as address consistency with local and state policies, previous planning efforts, and community aspirations. The evaluation criteria were developed to provide assessments specific enough so that the project team and technical review committees could adequately gauge the overall merits of each parkway concept. These criteria have been applied in a qualitative fashion for determining the most viable alternatives and have been grouped into four general categories to facilitate discussion. They include: Traffic Considerations, Bicycle and Pedestrian Accommodation, Environment and Planning, and Practical Considerations.

Traffic Considerations

This category consists of those criteria that assess the ability for motor vehicles to travel through and within the study area. Considerations in this category include the effectiveness of the parkway as a viable alternative to Central Avenue, meeting local circulation needs, and minimizing impacts on other transportation facilities.

Circulation - Potential questions that could be answered through this evaluation process include the following:

- *Does the corridor alternative provide an effective east-west alternative to Central Avenue?*
- *Are local access needs being met by the corridor alternative?*
- *Does the corridor alternative create negative impacts on other transportation facilities?*

Traffic Operations - Potential questions that could be answered through this evaluation process include the following:

- *Can the corridor alternative accommodate the projected vehicle demand?*
- *Does the corridor alternative improve long-term traffic operations on Central Avenue?*

Emergency Vehicle Access and Circulation – Potential questions that could be answered through this evaluation process include the following:

- *Does the corridor alternative accommodate emergency vehicles in the study area?*

Bicycle and Pedestrian Accommodation

This category consists of those criteria that assess the ability for non-motorized modes (pedestrians and bicycles) to travel through and within the study area.

Compatibility with Bicycles and Pedestrians – Potential questions that could be answered through this evaluation process include the following:

- *Does the corridor alternative accommodate safe and desirable access and circulation for bicyclists, pedestrians, and other forms of non-vehicular travel?*
- *Is the corridor alternative consistent with the long-term bicycle and pedestrian vision for Sutherlin?*

Environment and Planning

This category consists of those criteria that assess the degree to which an alternative is compatible with the natural and built environment and the degree to which it is compatible with the long-term vision for the area.

Environmental Impacts – Potential questions that could be answered through this evaluation process include the following:

- *Does the corridor alternative minimize impacts to Sutherlin Creek and Cooper Creek?*
- *Does the corridor alternative minimize impacts to existing*

wetlands and other natural resources?

Consistency with Other Planning Efforts - Potential questions that could be answered through this evaluation process include the following:

- *Is the corridor alternative consistent with the Sutherlin Comprehensive Plan, the Parks and Open Space Master Plan, and Transportation System Plan?*

Social Impacts – Potential questions that could be answered through this evaluation process include the following:

- *Does the corridor alternative minimize impacts to existing neighborhoods and businesses?*
- *Does the corridor alternative facilitate opportunities for new businesses and/or community spaces?*
- *Does the corridor alternative minimize impacts to developable land?*

Practical Considerations

This category consists of those criteria that assess the practicality of an alternative, both from constructing the alternative as well as the cost to acquire right-of-way.

Constructability - Potential questions that could be answered through this evaluation process include the following:

- *Can the corridor be physically constructed?*

Construction Costs – Potential questions that could be answered through this evaluation process include the following:

- *What are the physical cost implications of the corridor alternative?*

Assessment of Parkway Alignment Concepts

Evaluation Criteria		Concept #1	Concept #2	Concept #3	Concept #4
		Parkway alignment Concept #1 begins at the Calapooya Street/Hastings Avenue intersection in the west end of the study corridor and takes a relatively direct east-west alignment connecting to the South Side Road/Waite Street intersection.	*Parkway alignment Concept #2 is generally similar to Concept #1, however portions of the corridor have been aligned to minimize impacts to certain properties and geographic features.*	*Parkway alignment Concept #3 connects to Calapooya Street in the west end of the study corridor and to Waite Street in the east end of the study corridor. The overall alignment is more northerly when compared to Concepts #1 and #2.*	*Parkway alignment Concept #4 is similar to Concept #2 but with additional alignment and geometric variations to specifically minimize impacts to the Meadow Park community.*
Traffic Considerations	Circulation	- The parkway alignment between South Side Road and Calapooya Street is relatively straight, providing an efficient east-west alternative to Central Avenue for properties within the vicinity of the study corridor. - The parkway alignment would cut through the existing Meadow Park and SKP Park developments, requiring some fairly significant local street modifications. These modifications would require displacement of a number of existing homes in the Meadow Park development. - Access to/from the parkway would be provided at South State Street, a new connection to the SKP Park, and a new connection to Meadows Park. Future access could also be provided to undeveloped school property at some point in the future. - Connection to Hastings Avenue would provide route continuity and create an extensive east-west parallel route to Central	- The parkway alignment employs more horizontal curvature, creating a slightly longer travel corridor in comparison to Concept #1. - Like Concept #1, the parkway alignment would cut through the existing Meadow Park and SKP Park developments, requiring some fairly significant local street modifications. These modifications would require displacement of a number of existing homes in the Meadow Park development, although that number would be slightly less than Concept #1. - Access to/from the parkway would be provided at South State Street, a new connection to the SKP Park, and a new connection to Meadows Park. Future access could also be provided to undeveloped school property at some point in the future. - Connection to Hastings Avenue would provide route continuity and create an extensive east-west parallel route to Central	- The parkway alignment connects to Calapooya Street approximately 1,000 feet north of Hastings Avenue in an attempt to minimize impacts to the large wetlands area between Calapooya Street and South State Street. In doing so, it does not connect to Hastings Avenue and does not work towards a long-term vision of providing for a continuous east-west corridor that parallels Central Avenue on the east side of I-5. - The Parkway alignment is more circuitous when compared to Concepts #1 and #2 and is likely to be less effective in alleviating travel demand along Central Avenue. - The parkway alignment would cut through a significant portion of the existing Meadow Park development, requiring local street modifications. These modifications would require displacement of a large number of existing homes. - Would reduce travel demand	- The parkway alignment employs the most horizontal curvature compared to all other concepts, resulting in a longer travel corridor. - Unlike other concepts that cut through the existing Meadow Park, the alignment does not necessitate the need for any local street modifications to the community. - Access to/from the parkway would be provided at South State Street, a new connection to the SKP Park, and a connection to Meadow Park. Future access could also be provided to undeveloped school property at some point in the future. - Connection to Hastings Avenue would provide route continuity and create an extensive east-west parallel route to Central Avenue. This connection would also reduce travel demand along Valentine Street.

Evaluation Criteria		Concept #1	Concept #2	Concept #3	Concept #4
		Parkway alignment Concept #1 begins at the Calapooya Street/Hastings Avenue intersection in the west end of the study corridor and takes a relatively direct east-west alignment connecting to the South Side Road/Waite Street intersection.	*Parkway alignment Concept #2 is generally similar to Concept #1, however portions of the corridor have been aligned to minimize impacts to certain properties and geographic features.*	*Parkway alignment Concept #3 connects to Calapooya Street in the west end of the study corridor and to Waite Street in the east end of the study corridor. The overall alignment is more northerly when compared to Concepts #1 and #2.*	*Parkway alignment Concept #4 is similar to Concept #2 but with additional alignment and geometric variations to specifically minimize impacts to the Meadow Park community.*
		Avenue. - Would reduce travel demand along Valentine Street.	Avenue. - Would reduce travel demand along Valentine Street.	along Valentine Street.	
	Traffic Operations	- The parkway Concept can accommodate existing and projected vehicle demand while reducing the need to rely upon Central Avenue for east-west travel within the City.	- The parkway Concept can accommodate existing and projected vehicle demand while reducing the need to rely upon Central Avenue for east-west travel within the City.	- The parkway Concept can accommodate existing and projected vehicle demand, however it is less effective in alleviating travel demand along Central Avenue due to the fact that it lacks city wide route continuity.	- The parkway Concept can accommodate existing and projected vehicle demand while reducing the need to rely upon Central Avenue for east-west travel within the City.
	Emergency Vehicle Access and Circulation	- The parkway alignment would create a connection between South State Street and South Side Road, thereby improving emergency vehicle response times to all existing and new development in the southeast part of Sutherlin. - With the local street modifications noted above, emergency response time to the easternmost portion of Meadows Park would improve.	- The parkway alignment would create a connection between South State Street and South Side Road, thereby improving emergency vehicle response times to all existing and new development in the southeast part of Sutherlin. - With the local street modifications noted above, emergency response time to the easternmost portion of Meadows Park would improve.	- The parkway alignment would create a connection between South State Street and Waite Street, however the lack of a connection to Hastings Avenue does not provide for continuous and efficient east-west travel for emergency vehicles. - With the local street modifications noted above, emergency response time to the easternmost portion of Meadows Park would improve.	- Like Concepts #1 and #2, the parkway alignment would create a connection between South State Street and South Side Road, thereby improving emergency vehicle response times to all existing and new development in the southeast part of Sutherlin. - A connection to Meadow Park would improve emergency response time to the easternmost portion of this community.
Bicycle and Pedestrian Accommodation	Compatibility with Bicycles and Pedestrians	- The parkway alignment is consistent with the bicycle and pedestrian facilities master plan. The parkway alignment would tie into and provide a regional connection to the	- The parkway alignment is consistent with the bicycle and pedestrian facilities master plan. Like Concept #1, the parkway alignment would tie into and provide a regional	- The parkway alignment is not inconsistent with the bicycle and pedestrian facilities master plan. The parkway alignment would tie into and provide a regional connection	- The parkway alignment is consistent with the bicycle and pedestrian facilities master plan. Like Concepts #1 and #2, the parkway alignment would tie into and provide a regional

Evaluation Criteria		Concept #1	Concept #2	Concept #3	Concept #4
		Parkway alignment Concept #1 begins at the Calapooya Street/Hastings Avenue intersection in the west end of the study corridor and takes a relatively direct east-west alignment connecting to the South Side Road/Waite Street intersection.	*Parkway alignment Concept #2 is generally similar to Concept #1, however portions of the corridor have been aligned to minimize impacts to certain properties and geographic features.*	*Parkway alignment Concept #3 connects to Calapooya Street in the west end of the study corridor and to Waite Street in the east end of the study corridor. The overall alignment is more northerly when compared to Concepts #1 and #2.*	*Parkway alignment Concept #4 is similar to Concept #2 but with additional alignment and geometric variations to specifically minimize impacts to the Meadow Park community.*
		identified Cooper Creek multi-use path.	connection to the identified Cooper Creek multi-use path.	to the identified Cooper Creek multi-use path.	connection to the identified Cooper Creek multi-use path.
Environment and Planning	Environmental Impacts	- The parkway alignment would require two separate crossings of Cooper Creek. - The parkway alignment would traverse a large wetland area located between Calapooya Street and South State Street. - The approximate number of wetlands and riparian areas traversed by the parkway alignment totals 3.7 acres.	- Like Concept #1, the parkway alignment would require two separate crossings of Cooper Creek. - Would have similar impacts to the large wetland area located between Calapooya Street and South State Street. - The approximate number of wetlands and riparian areas traversed by the parkway alignment totals 3.8 acres.	- The parkway alignment would not cross Cooper Creek. - Impacts to the large wetland area located between Calapooya Street and South State Street would be minimized due to a more northerly alignment. - A portion of the parkway alignment would utilize the Red Road corridor, a corridor with noted environmental hazards. - The approximate number of wetlands and riparian areas traversed by the parkway alignment totals 1.7 acres.	- Like Concepts #1 and #2, the parkway alignment would require two separate crossings of Cooper Creek. - Would have similar impacts to the large wetland area located between Calapooya Street and South State Street. - The approximate number of wetlands and riparian areas traversed by the parkway alignment totals 3.21 acres.
	Consistency with Other Planning Efforts	- The overall parkway alignment and connection points are consistent with the vision for the parkway as adopted in the 2005 Transportation System Plan.	- The overall parkway alignment and connection points are consistent with the vision for the parkway as adopted in the 2005 Transportation System Plan.	- The parkway alignment does not connect to Hastings Avenue. The Duke/Hastings Avenue corridor is seen as a long-term future corridor to I-5 and the west side of the City of Sutherlin.	- The overall parkway alignment and connection points are consistent with the vision for the parkway as adopted in the 2005 Transportation System Plan.

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		Parkway alignment Concept #1 begins at the Calapooya Street/Hastings Avenue intersection in the west end of the study corridor and takes a relatively direct east-west alignment connecting to the South Side Road/Waite Street intersection.	*Parkway alignment Concept #2 is generally similar to Concept #1, however portions of the corridor have been aligned to minimize impacts to certain properties and geographic features.*	*Parkway alignment Concept #3 connects to Calapooya Street in the west end of the study corridor and to Waite Street in the east end of the study corridor. The overall alignment is more northerly when compared to Concepts #1 and #2.*	*Parkway alignment Concept #4 is similar to Concept #2 but with additional alignment and geometric variations to specifically minimize impacts to the Meadow Park community.*
	Social Impacts	- The parkway alignment would cross over 12 separate private parcels (7 owners) and 1 public parcel with an estimated right-of-way need of 9.22 acres. - Approximately 19 existing structures would be physically impacted by the alignment. - The parkway alignment would bisect the existing Meadow Park development. Local street modifications would be required to provide safe and efficient access to the eastern half of the development. - The Stanley property would be bisected by the parkway alignment.	- The parkway alignment would cross over 14 separate private parcels (8 owners) and 1 public parcel with an estimated right-of-way need of 11.15 acres. - Approximately 14 existing structures would be physically impacted by the alignment. - The parkway alignment would bisect the existing Meadow Park development. Local street modifications would be required to provide safe and efficient access to the eastern half of the development. - The parkway alignment would be realigned at Calapooya Street in order to avoid impacting the Stanley residence and completely bisecting the Stanley property.	- The parkway alignment would cross over 16 separate private parcels and 2 public parcels with an estimated right-of-way need of 8.02 acres. - Approximately 29 structures would be physically impacted by the alignment, the most of any concept. - The parkway alignment would traverse and bisect the existing Meadow Park development. Local street modifications would be required to provide safe and efficient access to the eastern half of the development.	- The parkway alignment would cross over 14 separate private parcels (8 owners) and 1 public parcel with an estimated right-of-way need of 9.56 acres. - Approximately 11 existing structures would be physically impacted by the alignment, the fewest of any alignment concept. - The parkway alignment would bisect the existing Meadow Park development. However, no local street modifications would be required to accommodate the parkway. - The parkway alignment would be realigned at Calapooya Street in order to avoid impacting the Stanley residence and completely bisecting the Stanley property.
Practical Considerations	Constructability	- The parkway alignment is straight with little or no vertical curvature, making it relatively simple to build. - Special construction techniques would need to be employed to construct those portions of the alignment that	- The parkway alignment has little or no vertical curvature, making it relatively simple to build. - Special construction techniques would need to be employed to construct those portions of the alignment that	- Home displacement and right-of-way needs through Meadow Park would be significant compared to the other Concepts. - The parkway would parallel a significant portion of Cooper Creek, potentially requiring special construction	- The parkway alignment has little or no vertical curvature, making it relatively simple to build. - To accommodate reasonable design speeds, portions of the corridor would need some roadway super elevation.

Evaluation Criteria		Concept #1	Concept #2	Concept #3	Concept #4
		Parkway alignment Concept #1 begins at the Calapooya Street/Hastings Avenue intersection in the west end of the study corridor and takes a relatively direct east-west alignment connecting to the South Side Road/Waite Street intersection.	*Parkway alignment Concept #2 is generally similar to Concept #1, however portions of the corridor have been aligned to minimize impacts to certain properties and geographic features.*	*Parkway alignment Concept #3 connects to Calapooya Street in the west end of the study corridor and to Waite Street in the east end of the study corridor. The overall alignment is more northerly when compared to Concepts #1 and #2.*	*Parkway alignment Concept #4 is similar to Concept #2 but with additional alignment and geometric variations to specifically minimize impacts to the Meadow Park community.*
		traverse wetland areas.	traverse wetland areas.	techniques to avoid impacts to the riparian corridor and waterway.	- Special construction techniques would need to be employed to construct those portions of the alignment that traverse wetland areas.
	Costs	- Likely to have 2nd highest construction costs. - 2nd longest parkway length (4,962 feet), 2nd most acres of right-of-way needed (9.22 acres), and high number of acres of wetlands impacted (3.7 acres). - Will require two bridge crossings of Cooper Creek.	- Likely to have the highest construction costs. - 2nd longest parkway length (6,010 feet), 2nd most acres of right-of-way needed (11.05 acres), and most acres of wetlands impacted (3.8 acres). - Will require two bridge crossings of Cooper Creek.	- Parkway length is shorter than Concepts #1 and #2 (4,305 feet). - Right-of-way needed is lower than Concepts #1 and #2, however a large majority of right-of-way is through the existing Meadows Park development. - Would not require any bridge crossings of Cooper Creek.	- Along with Concept #2, the alignment is likely to have the highest construction costs. - Longest parkway length (6,136 feet), most acres of right-of-way needed (11.3 acres), and 2nd most acres of wetlands impacted (3.6 acres). - Will require two bridge crossings of Cooper Creek.