

Bend Area General Plan

Chapter 7: Transportation Systems

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AMENDMENTS:

On October 11, 2000, the Bend City Council adopted the Bend Urban Area Transportation System Plan (TSP) by Ordinance No. NS-1756. City Council’s action included a simultaneous update of the General Plan, Chapter 7, Transportation Systems. For brevity’s sake, the entire TSP text has NOT been included in the updated General Plan. Only selected TSP text has been included in this document to provide the reader with the basic transportation planning framework that is envisioned by the Bend General Plan. For more detail and specifics concerning transportation planning for the community, the reader is directed to reference the entire Bend Transportation System Plan document.

Amendment History (since 2000): [Note: Updates within document are in **BLUE** text and are footnoted per the following list:]

<u>Ordinance</u>	<u>Date</u>	<u>Description</u>
1. ORDINANCE NO. NS-1852	12/18/2002	[Industrial Way, Bond and Wall streets] *
2. ORDINANCE NO. NS-1912	03/03/2004	[Arterial: Right-Turn Lanes]
3. ORDINANCE NO. NS-1915	03/03/2004	[Cooley Road/Hwy 97 Grade Separation]
4. ORDINANCE NO. NS-1953	12/15/2004	[Street Policy 21] *
5. ORDINANCE NO. NS-2013	06/21/2006	[Street Policy 21]*
6. ORDINANCE NO. NS-2026	10/18/2006	[Bicycle & Pedestrian Plan]*
7. ORDINANCE NO. NS-2032	11/15/2006	[Murphy Crossing Plan]
8. ORDINANCE NO. NS-2038	01/17/2007	[Misc. Street System Chapter 5 & 6] *
9. ORDINANCE NO. NS-2043	03/21/2007	[Transit: Chap. 3, 5 & 6, PLUS Chap. 6] *
10. ORDINANCE NO. NS-2047	05/16/2007	[Chapter 6 Policy] *
11. ORDINANCE NO. NS-2200	05/01/2013	[NEW: Chap. 7 & TSP Appendices: A-E] *
12. ORDINANCE NO. NS-2215	03/05/2014	[Chap.6., Appen. A, B & C and Map A Re: US 97 – North Corridor Amendments]
13. ORDINANCE NO. NS-2216	03/05/2014	[Chap 6 and MAPs re: Housekeeping Amendments]

* Indicates Amendments (all or in part) made to address the State of Oregon DLCDC Remand of TSP

The Bend Urban Area TSP, as amended by all of the above “remand” items, was *acknowledged* by LCDC on, 9/5/2013.

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PREAMBLE

Bend residents cherish the clean air, pristine mountain views, small town charm and livability of their city. Our community seeks to retain those assets for generations to come. The Transportation Plan for the urban area plays a major role in determining how well we sustain those qualities. This Plan delineates a balanced and well-designed transportation system that is integrated with the diverse goals of the community and provides citizens a range of choices. It seeks to ensure that residents and visitors, with or without an automobile, can enjoy all of the city's amenities and services. The transportation system must be attractive, convenient and preserve the qualities that make Bend a special place to live.

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5.0.1 TRANSPORTATION GOALS

5.0.1.1 Goal Statement

“The transportation system that serves the Bend urban area must meet a complex set of community needs. The interrelated success of the economy and livability of our community depends upon the ability of the transportation system to effectively move people and goods, and to provide access to services and places of employment, while not disrupting the continuity and aesthetics of the community. Completion of a multi-modal road network, trail, and transit system will help to achieve a balanced transportation system and reduce automobile reliance. This, combined with the development of compact community design and the integration of land uses, will provide a strategic approach to fulfilling the transportation needs of the future.

Implementation of the transportation plan must be coordinated so that resources are allocated in an equitable and cost-effective manner. The transportation system will be developed with enough design flexibility to meet the needs of the urban area, as well as to be sensitive to important community values such as aesthetics, preservation of neighborhoods, natural features and other quality of life criteria. It is therefore essential that the goals, objectives and policies of the Transportation Plan provide community assurance that safety, accessibility and mobility will be provided for all users.”

5.0.1.2 Plan Goals

Mobility and Balance:

- Develop a transportation system that serves all modes of travel and reduces the reliance on the automobile.
- Provide a variety of practical and convenient means to move people and goods within the urban area.

Efficiency:

- Address traffic congestion and problem areas by evaluating the broadest range of transportation solutions.
- Coordinate and design transportation improvements to assure the expenditure of resources in the most cost-effective manner.
- Encourage the development of land use patterns that provide efficient, compact use of land, and facilitate a reduced number and length of trips.

Accessibility and Equity:

- Provide people of all income levels with the widest range of travel and access options within the Bend urban area.
- Provide all transportation modes access to all parts of the community.

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Environmental:

- Recognize and respect the natural features over which transportation improvements pass to minimize adverse impacts.
- Design transportation improvements to preserve air and water quality, minimize noise impacts, and encourage energy conservation.

Economic:

- Implement transportation improvements to foster economic development and business vitality.

Livability:

- Design and locate transportation facilities to be sensitive to protecting the livability of the community.

Safety:

- Design and construct the transportation system to enhance travel safety for all modes.

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6.9 TRANSPORTATION SYSTEM PLAN OBJECTIVES, POLICIES, BENCHMARKS AND IMPLEMENTATION

6.9.1 TRANSPORTATION AND LAND USE

Objectives:

- To promote land use patterns that support fewer vehicle trips and shorter trip lengths
- To ensure that future development, including re-development will not interfere with the completion of Bend's transportation system

Policies:

1. Medium and high-density residential development shall be located where they have good access to arterial streets and be near commercial services, employment and public open space to provide the maximum convenience to high concentrations of population.

2. The City shall continue to use and develop performance standards and guidelines that can reduce vehicle trip lengths and/or promote non-vehicle transportation modes.

3. The City shall consider potential land needs for long-range transportation system corridor improvements and related facilities including transit during the review of subdivisions, partitions, and individual site applications.

4. Developments at the edge of the urban area shall be designed to provide connectivity to existing and future development adjacent to the urban area.

5. The Zoning Ordinance shall be revised so that building design, building orientation and site plans for commercial and public facilities promote pedestrian and bicycle access to and from nearby neighborhoods.

6. The City shall continue to explore mixed use zoning as one of the land use patterns that will promote fewer vehicle trips and shorter trip lengths.

7. The City should be receptive to innovative development proposals, including zone changes, plan amendments, and text changes that promote alternatives to vehicular traffic thus reducing vehicle trips and reduced trip lengths.

8. The City shall explore incentives for re-development of existing commercial strips in order to help reduce the need to expand the Urban Growth Boundary.

9. As areas that are currently beyond Bend's existing Urban Growth Boundary (UGB) are urbanized, the city, property owners, developers and all applicable service districts shall work cooperatively to develop appropriate plans for extensions and connections of the transportation system, including but not limited to; roads, sidewalks, trails and/or public transportation. The objective of this planning effort will be to ensure that the new areas promote and facilitate the development of urban land use densities and systems that will fulfill the goals and objectives of the Transportation System Plan – see also: 6.9.4, Policy 22.⁶

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10. The city of Bend shall continue public and interagency involvement with Deschutes County in the transportation planning process for projects within the URAs. ⁸
11. The lead agency for transportation project review in the URAs shall be Deschutes County. ⁸
12. The city of Bend shall coordinate the City Transportation System Plan with the Deschutes County Transportation System Plan. The City shall emphasize continuity in the classification of roads and appropriate design standards for roads that link urban areas with rural areas outside the urban growth boundary. The City and County shall agree on the functional classification and design standards of County roads within the URAs. ⁸
13. Road, pedestrian and bicycle projects occurring in the URAs shall be governed by the County's road and street standards. Those requirements shall be coordinated between the city of Bend, Deschutes County and the applicant during the land use process according to procedures identified in the Deschutes County Road Standards and Specifications document. ⁸
14. The city of Bend shall continue to work with ODOT and Deschutes County to coordinate solutions to highway and non-highway road issues that cross over jurisdictional boundaries. ⁸
15. The city of Bend shall work with Deschutes County and the Bend Metro Parks and Recreation District (where applicable) to acquire, develop and maintain those sections of trails that are located outside of the Bend UGB, but are inside a URA, and are part of a trail plan or map that has been adopted by the city of Bend. ⁸
16. The following transportation facilities, which are shown on the Bend TSP's Roadway System Plan map, but are located outside the Bend UGB and therefore not authorized by the TSP, shall not be constructed to an urban standard until approved by the County and the area is brought into the UGB. ⁸

Street	From	To
Clausen Drive	Grandview Drive	URA Boundary
Grandview Drive	Hunnell Road	Clausen Drive
Hunnell Road	Cooley Road	URA Boundary
Cooley Road	Hunnell Road	OB Riley Road
North Loop Road	OB Riley Road	OB Riley Road
OB Riley Road	North Loop Road	URA Boundary
US 20 Frontage Road	Robal Lane	Cooley Road
Robal Lane	US 20	Britta Road
Britta Road	Robal Lane	UGB
US 20 Frontage Road	Britta Road	US 20
Tumalo Creek Road	UGB	URA Boundary
Skyline Ranch Road	Tumalo Creek Road	Century Drive
Shevlin Park Road	UGB	URA Boundary
Skyliners Road	UGB	URA Boundary
Metolius Drive	Skyline Ranch Road	Mt. Washington Drive
China Hat Road	US 97	URA Boundary
Knott Road	15 th Street	Rickard Road

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27 th Street	Rickard Road	Ferguson Road
Bear Creek Road	UGB	URA Boundary
US 20	UGB	URA Boundary
Neff Road	UGB	URA Boundary
Beal Road	UGB	URA Boundary
Butler Market Road	Deschutes Market Road	URA Boundary
Empire Avenue	Purcell Blvd.	UGB
Purcell Blvd.	UGB	Yeoman Road
Yeoman Road	UGB	URA Boundary
18 th Street	UGB	URA Boundary
Deschutes Market Road	UGB	URA Boundary
Hamhook Road	Deschutes Market Road	URA Boundary
Cooley Road	Deschutes Market Road	URA Boundary

17. The city of Bend shall seek approval from Deschutes County for the improvement of transportation facilities to urban standards that are located in URAs. ⁸

18. Transportation facilities currently located on rural lands shall not be constructed to an urban standard until the area is brought into the UGB. ⁸

Implementation:

1. In general, implementation of these objectives and policies will occur during the review and processing of individual land use applications.
2. Policies 1, 3, 4, and 5 will be implemented by reviewing and updating the standards in the General Plan, subdivision code and zoning code.
3. City staff shall review and update the General Plan amendment criteria and zone change criteria to encourage innovative developments that reduce motor vehicle trips or trip lengths and to encourage mixed-use development.
4. City staff will study the impact of new mixed-use developments in Oregon on reducing motor vehicle trip numbers and length of trips.
5. City staff will review development codes from other cities for examples of performance standards that continue to improve the transportation system. After review of standards from other cities, Bend has identified a set of performance standards that balances operations criteria with financial constraints, safety impacts, quality of living aspects and community values. These operations criteria are included in the City’ Development Code and included in this TSP by reference. ¹⁰

Benchmarks:

1. Separate from the current zoning ordinance update process, complete a draft proposal modifying the plan amendment and zone change criteria as soon as possible after TSP adoption. After the required public involvement and planning commission process it is

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anticipated that the recommended modifications be considered for Council action no later than the close of FY 01/02.

2. Concurrent with the current zoning ordinance update process, develop proposals, code changes or other measures that implement the TSP land use policies described above, no later than the close of FY 02/03.
3. Review and report to the Planning Commission on the effectiveness of new mixed-use centers in reducing motor vehicle trips/trip lengths. This task is required as part of the DLCD prescribed periodic review process.

Funding:

Evaluate the cost to meet the above benchmarks and add resources to the Development Services budget to address the needs. The first year cost (FY 00/01) is estimated to be \$75,000 to \$100,000 for developing ordinance changes and the new regulations necessary to facilitate the implementation of the land use policies described above.

6.9.2 TRANSPORTATION SYSTEM MANAGEMENT

Objective:

- Provide cost effective transportation improvements and implement strategies that will improve the efficiency and function of existing roadways

Policies:

1. The City shall adopt land use regulations to limit the location and number of driveways and access points, and other access management strategies on all major collector and arterial streets.
2. The City shall ensure that land use actions support the access management policies of the Oregon Department of Transportation along the state highways located in the urban area.
3. The City and State shall implement transportation system management measures to increase safety, reduce traffic congestion to improve the function of arterial and collector streets, and protect the function of all travel modes.

Implementation:

The City shall develop access management standards for all arterials and collector streets. Access Standards developed for principal arterials and expressways shall consider ODOT access management policies along state highways.

Benchmarks:

Develop or revise and implement access management standards and regulations within six months of adoption of the Bend TSP by the City Council.

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Funding:

The City shall allocate or budget sufficient staff resources, within the next budget year (2000-2001), to develop City ordinances and/or standards that will establish and implement TSM supportive land use regulations.

6.9.3 TRANSPORTATION DEMAND MANAGEMENT

Objectives:

- To reduce peak hour traffic loading on the roadway system
- To reduce single occupant vehicle travel
- Implementation of a TDM Plan (Central Oregon Commute Options Program) for the city of Bend

Policies:

1. The City shall develop and implement a transportation demand management plan for its employees. This plan should be designed to serve as a model for the community.
2. The City shall work with businesses, especially those with more than 25 employees, to develop and implement a transportation demand management plan. These plans shall be designed to reduce peak hour traffic volumes by establishing trip reduction targets over five years.
3. The City and County shall work with business groups, schools, the Park District and other governmental agencies to develop and implement transportation demand management programs.
4. The City shall manage and regulate parking by:
 - a) Establishing programs to lower parking demand in commercial and business districts citywide by providing preferential parking for carpoolers, encouraging mass transit use, encouraging shuttle systems from external parking lots, and maintaining an adequate supply of strategically placed bike parking facilities.
 - b) Requiring business groups and employers to develop parking management strategies that support reduced roadway system demand during the peak motor vehicle travel times.
5. The City, County and State shall participate in the Central Oregon Commute Options Program by assisting in:
 - a) Development of park and ride facilities; and
 - b) Establishment of educational programs particularly those that will inform the public regarding the full costs of single occupant vehicle travel.
6. The City shall develop and utilize teleworking strategies as part of their business plan that will facilitate the movement of information and data rather than people.

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7. The City shall implement the measures outlined in the Central Oregon Commute Options Program and adopt ordinances as appropriate.

Implementation: Transportation demand management is aimed at altering driver behavior and more efficient use of the entire transportation system. This could be accomplished either by using alternative modes of transportation or lowering the demand during peak travel times. An important aspect of altering driver behavior is education. Several governmental and private jurisdictions cooperatively formulated *the Central Oregon Commute Options Program*. This program is a comprehensive plan to reduce traffic congestion and enhance the transportation choices in the city of Bend. The goals include:

- Less roadway congestion,
- Reduced pollution,
- More parking management strategies,
- Less money needed for development, maintenance and construction of roads and parking,
- Higher quality of life,
- Safer and more efficient travel while providing transportation options for all citizens.

Broader mobility needs are also addressed through TDM measures. Much of the unmet mobility need in Bend comes from people who are currently not contributing to reduced road capacity. These are people who are "transportation disadvantaged". Many citizens of Bend are physically challenged, without a drivers' license, elderly, or too young to drive. The city of Bend would benefit from a balanced transportation system by getting the transportation disadvantaged to and from work, conducting personal business around town or participating in community activities independently. The TDM measures discussed in this chapter are a good step in that direction. However, no amount of TDM measures will succeed unless other modes of transportation are developed to be as safe and practical as driving alone. The Central Oregon Commute Options Program is divided into three levels. These levels differ in the complexity and funding commitments.

Level A

The steps associated with Level "A" are considered to be of little cost and can be implemented quickly. Steps or projects to be taken include:

1. The City's Web site should include TDM information, a link to the Commute Options site and develop a more informational link to area TDM strategies (e.g., Dial-A-Ride, and park and ride lots).
2. Work with the Clean Air Committee to promote TDM including use of their newsletter.
3. Develop and implement a strategy for ensuring full compliance to bicycle ordinances and the Bicycle Parking guidelines.
4. Designate a TDM coordinator to work with Commute Options to encourage City employees to bicycle, walk, carpool or telework. This coordinator should establish a TDM program for City employees, which would serve as a model for the community. The City should:

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- Lead by example, which in turn could free up available parking in the downtown district and assist in educating the general public
 - Include Commute Options news in the City Newsletter
 - Offer TDM incentives to employees
 - Support flexible work schedules and teleworking
 - Support and participate in Commute Options Week
5. Implement TDM measures before or in conjunction with street widening and construction projects. Develop measures to determine TDM impact and cost-benefit analysis and consider businesses and other trip generators that are specific to the proposed project.
 6. Work with the Bicycle and Pedestrian Advisory Committee to identify intersections, roadways and other facilities that can be developed for improved bicycle and pedestrian uses on a yearly basis.
 7. Review other communities' responses to the same problems that Bend faces and discuss options for Bend. Host a TDM presentation for City staff, council and public.

Level B

The second level of the program is Level "B". This level requires a medium to moderate financial commitment by the City. The steps in the level are as follows:

1. Hire a Transportation Demand Management Coordinator.
2. Continue all Level "A" efforts.
3. Print coupon books as business incentives or contribute to Commute Options for this purpose. Coupon book incentives for leaving the car at home would help accomplish the trip reduction goals.
4. Coordinate efforts and provide educational opportunities with the Bend-LaPine School District to reduce student and staff trips. This could be accomplished by:
 - Providing trail access to schools and top-flight bicycle parking for students and staff
 - Work with the schools on student parking management plan
 - Work with administrators and students to develop incentives and disincentives
 - Encourage that new schools are sited convenient for walking and bicycling within the neighborhood and that the schools contribute to land cost for locating adjacent paths
 - Work with the school district and developers to identify school bus stops and reasonable amenities including, shelters or road enhancements to make the stops safer for children. (These stops designed as potential local transit bus stops.)
5. Work with developers to create more bicycle and pedestrian friendly developments by:
 - Encouraging bicycle and pedestrian friendly developments (e.g. property tight sidewalks on both sides of neighborhood streets, narrow streets, grid system, trails and accessways).
 - Providing standards for storefronts close to the sidewalk with easy pedestrian access.

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- Providing standards for those developers who do develop these community friendly features (e.g. parking reductions).
 - Encouraging urban mixed-use development).
 - Redeveloping existing streets with a streetscape that is more attractive to pedestrians, transit and bicyclists (e.g., the redevelopment of Third Street).
 - Separating sidewalks from roadways with appropriate landscaping.
6. Coordinate efforts with the Bend Downtowners to reduce employee trips and develop parking guidelines to promote TDM strategies.
 7. Assist with development and promotion of area Park and Ride lots and encourage City and other employees to "park and ride" into downtown Bend.
 8. Continue to partner with Commute Options.
 9. Encourage removal of pedestrian barriers (e.g. cinder and snow removal from road shoulders and sidewalks, installation of handicapped ramps).
 10. Work with the Parks and Recreation District to plan and implement a trail system.
 11. Provide staff with TDM training.

Level C

Continue all efforts in Levels "A and B" and in addition the City shall:

1. Support and coordinate with shuttle services to and from Bend
2. Support and coordinate with shuttle systems within the City of Bend
3. The coordinator will support funding for sidewalks, bicycles, trails and transit by advocating for their inclusion in the Capital Improvement Program (CIP).
4. Ensure that the design of street intersections accommodates all travel modes
5. Develop a prioritized list of bicycle and pedestrian projects for the Capital Improvement Program:
 - Work with the Bicycle and Pedestrian Advisory Committee
 - Seek input from other groups
 - Allocate adequate funds to tackle several projects each year
6. Improve efficiency of Dial-A-Ride services. It is envisioned that with improved efficiency the Dial-A-Ride service would be expanded into an operating and functional public transit system.

Benchmarks:

- A measurable reduction in single occupant vehicle miles traveled. This is to be measured by the efforts of the TDM Coordinator each year.

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- Develop a TDM plan for city of Bend employees, that shows a reduction in single occupant vehicle miles traveled by June of 2002.
- At least 10 businesses will develop TDM programs for their employees, which shows a reduction in single occupant vehicle miles traveled by June of 2003.
- All businesses with 100 or more employees will be given a TDM presentation by June of 2004.
- All business with 25–100 employees will be contacted by June of 2005.
- TDM Coordinator will make a yearly presentation to the City Council.

Funding:

Year 2001

- \$55,000
 - \$5,000 is the projected program cost to implement all of Level A by June 2001.
 - \$50,000 is the projected cost to hire a TDM coordinator by June 2001 and have the City to continue to implement Level A. This will also allow the City to get started on implementing Level B.

Year 2002

- \$75,000
 - \$55,000 to maintain the program at level described above.
 - \$20,000 is the projected program cost to implement all of Level B by June 2002.

Year 2003

- \$100,000
 - \$75,000 to maintain program at level described above.
 - \$25,000 is the projected program cost to implement all of Level C by June 2003.

Year 2004-2020

- \$100,000 per year to be increased as needed.
 - There needs to be a funding amount per year that will allow the City to efficiently maintain the efforts of this program.

6.9.4 PEDESTRIAN AND BICYCLE SYSTEMS

Objectives:

- To support and encourage increased levels of bicycling and walking as an alternative to the automobile
- To provide safe, accessible and convenient bicycling and walking facilities

Policies:

1. The City, County, State, Forest Service, Park District and public agencies shall work together to acquire, develop and maintain a series of trails along the Deschutes River, Tumalo Creek, and the canal system so that these features can be retained as a community asset. Connections between the Bend Urban Area Bicycle and Trails System should be made to the USFS trail system.

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2. The City and Park District shall work together to acquire, develop and maintain the *primary* trails designated on the *Bend Urban Area - Bicycle and Pedestrian System Plan – TSP: Map Exhibit B*. New development shall be required to construct and dedicate Primary Trails for public use according to this plan. The alignments depicted are general in nature and shall be located according to criteria defined in TSP Section 6.3.1.3.⁶ These trails, and future trail additions, shall support the need for non-motorized travel in the community.
3. The City and Park District shall adopt standards for trail system right-of-ways and trail improvement that are based on the type of planned trail use.
4. The City shall develop safe and convenient bicycle and pedestrian circulation to major activity centers, including the downtown, schools, shopping areas and parks. East-west access to the downtown area needs particular emphasis across major obstacles, such as 3rd Street, the Bend Parkway and the railroad.
5. The City shall facilitate easy and safe bicycle and pedestrian crossings of major collector and arterial streets. Intersections shall be designed to include pedestrian refuges or islands, curb extensions and other elements where needed for pedestrian safety. Also, bike lanes shall be extended to meet intersection crosswalks.
6. Bike lanes shall be included on all new and reconstructed arterials and major collectors, except where bikeways are authorized by the TSP.¹ Bike lanes shall also be provided when practical on local streets within commercial and industrial areas.¹ Bike lanes shall be added to existing arterial and major collector streets on a prioritized schedule. Specific effort shall be made to fill the gaps in the on-street bikeway system. An appropriate means of pedestrian and bicyclist signal actuation should be provided at all new or upgraded traffic signal installations.
7. Property-tight sidewalks shall be included on both sides of all new streets except where extreme slopes, severe topographical constraints, or special circumstances exist. Landscape strips shall separate curbs and sidewalks on new and reconstructed roads. Sidewalks shall be added to all existing arterial and collector streets to fill the gaps in the pedestrian system.
8. The City shall develop a program to ensure timely maintenance and repair of all sidewalks, including but not limited to assigning responsibility for maintenance and repair. The City shall also include removing sidewalk obstructions or barriers that might otherwise not comply with Americans with Disabilities Act (ADA).
9. The City's top priorities for pedestrian improvements are:
 - a) Sidewalks and trail system in-fill and school walking routes,
 - b) Retro fitting existing sidewalks along select collectors and arterials into property tight sidewalks and
 - c) The construction of pedestrian-oriented improvements (other than regular sidewalks, e.g., curb extensions) and elimination of pedestrian barriers.These projects will be identified and prioritized in the CIP.
10. Bicycle and pedestrian facilities shall be designed and constructed to minimize conflicts between transportation modes.

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11. Bicycle and pedestrian facilities shall be maintained in a manner that promotes use and safety. The City shall analyze the impacts of the use of cinders and consider alternatives to mitigate the impacts. Street repair and maintenance shall be performed in a manner that does not negatively impact bicycle and pedestrian facilities and their use.
12. The City shall repair and maintain, including but not limited to striping, snow plowing, sweeping, stenciling and signing, all bike lanes in a timely manner.
13. Bicycle parking facilities shall be provided at all new multifamily residential, commercial, industrial, recreational, and institutional facilities, major transit stops, all transit stations and park and ride lots. The City shall support a “Bikes on Transit” program and work to increase the number of bicyclists using transit when the transit system is established.
14. Establishing or maintaining accessways, paths, or trails must be considered prior to vacating any public easement or right-of-way.
15. The City, school and park districts shall work together to inventory, designate and protect access corridors and connector trails. City standards will be developed for such trail corridors.
16. The City shall develop local standards for the construction of bicycle and pedestrian facilities. The state of Oregon - Bicycle and Pedestrian Plan shall serve in the interim as a guide in development of these facilities and standards.
17. The City shall refer to the Park District, for its review and recommendation, all development proposals that include or are adjacent to existing or proposed parks or trails.
18. The City should support bicycle and pedestrian education and safety programs. The City shall establish and promote a comprehensive program for the reporting of and responding to bicycle and pedestrian hazards.
19. The City shall work with the Burlington Northern – Santa Fe (BNSF) Railroad to determine where, if possible, railroad right-of-ways could be used also as trail corridors. Provided this joint-use agreement can be reached with the Railroad company, the City shall evaluate the entire Rails with Trails Corridor in light of opportunities to augment the local primary trail system and future amendments to the TSP should be considered to establish those corridors as a part of the Transportation System Plan.⁶
20. There are expansion plans for the city domestic water storage and supply facilities on the Overturf Butte Reservoir site, therefore the existing “connector trails” *alignments* shown on the plan shall be considered temporary in nature. These trails shall be subject to relocation if conflicts arise relative to future plans to expand or alter the water storage facilities on the Butte. Relocation of these trails to alternative alignments shall not require a Transportation System Plan amendment. In the event that these trails cannot be relocated to an alternative location that serves the same trail function on the Butte and therefore the affected trail(s) must be closed to public use, this type of action *shall* require an amendment to the TSP.⁶

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21. The city of Bend and Bend Metro Park and Recreation District shall develop a Memorandum of Understanding (MOU) or an Intergovernmental Agreement (IGA) to define respective agency roles and responsibilities relative to the network of trails on Overturf Butte.⁶

22. As land areas that are currently beyond Bend's existing Urban Growth Boundary (UGB) are urbanized and as it relates specifically to the Bend Primary Trail System, external destinations (beyond the UGB) and specific connection points (within the existing UGB) have been delineated on the Bend Urban Area Bicycle and Pedestrian System Plan [Map B] – see also: 6.9.1, Policy 9.⁶

Implementation:

1. The City shall implement the TSP trail policies in cooperation with the Bend Metro Parks and Recreation District (BMPRD) as described in the joint agency intergovernmental agreement Resource Document A.11, 2003, and any subsequent amendments.⁶ The City and BMPRD shall meet to review the intergovernmental agreement and make appropriate amendments to allocate responsibility for trail construction and maintenance.

2. The Bend Urban Trails Plan, or subsequent updates, shall be implemented as a part of the Bend Urban Area TSP.

3. New trails shall be built generally following the priority of trails listed in the Bend Urban Trails Plan, or subsequent updates. New *accessways* shall be built following the system defined by the *Bend Urban Area - Bicycle and Pedestrian System Plan* (TSP: Map Exhibit B) *Assessment of Bicycle and Pedestrian Needs Report* ^[Resource Document 2.3], as much as practical.⁶

4. The City shall consider amendments to the appropriate ordinances in order to facilitate trail right-of-way acquisition and improvements, and trail connections in new development that contain a Primary Trail as shown on the Bend Urban Area Bicycle and Primary Trail System Plan Map.

5. The City shall identify funding options for right-of-way acquisition, design, construction and maintenance of priority trails (e.g., The Deschutes River and Larkspur trail systems).

6. New and existing trails and accessways shall be created and maintained following the design standards described in the State of Oregon Bicycle and Pedestrian Plan, the Bend Metro Park and Recreation District (BMPRD) Parks, Recreation and Green Spaces Comprehensive Plan, the Bend Urban Trails Plan, the City of Bend Standards and Specifications or subsequent updates of those documents.⁶ Local design standards shall have precedence over state standards, where there are conflicts – The BMPRD standards shall apply to the Primary Trail System and the city of Bend Standards shall apply to all other non park, related public improvements.⁶

7. The City shall meet with BMPRD and the school district to establish a process to inventory, designate and protect access corridors and connector trails which will create a network of trails for safe access to schools, parks and other activity centers.

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8. The City shall update inventories of existing bike lanes, accessways and sidewalks, and identify gaps and missing system segments, and, in conjunction with the Deschutes County Pedestrian and Bicycle Advisory Committee, prioritize these for input into the annual City of Bend Capital Improvement Program planning process as indicated in the Council adopted Transportation Implementation Plan (TIP).⁶
9. The City shall identify hazardous, potentially hazardous, and substandard bicycle and pedestrian facilities and intersections, and prioritize needed repairs and improvements, and implement repairs and improvements in order of priority.
10. The City shall establish a timely and regular maintenance and repair program for all bicycle and pedestrian facilities, which may include enforcement of the responsibility for sidewalk maintenance by adjacent property owners and/or the City assuming the responsibility for sidewalk maintenance.
11. The City shall educate builders, architects and developers concerning city design regulations for bicycle and pedestrian facilities (including bicycle-parking facilities). The City shall require a specific inspection of bicycle and pedestrian facilities (i.e., bicycle racks) as a part of the commercial building construction inspection process.
12. The City shall adopt a methodology for prioritizing new bicycle and pedestrian facilities for construction, and build new bicycle and pedestrian facilities according to the priority plan. This shall include the provision of bike parking facilities at public transportation facilities or other activity centers as described in Policy 6.9.4 (13).
13. The City shall construct, stripe and stencil bike lanes as a part of street overlays and widening, and simultaneously adjust all catch basin grates to grade that are located within bike lanes.
14. Work with private property owners to open-up existing, public accessway easements and make improvements to accommodate public use.⁶
15. The City shall work with the BNSF Railroad to determine the feasibility of the “Rails-with-Trails” concept.⁶ If this trail corridor is feasible, then the City shall develop acceptable trail designs and details for implementation of this part of the primary trail system.⁶ The City should consider subsequent amendments to the TSP to incorporate those corridors as a part of the *Bend Urban Area - Bicycle and Pedestrian System Plan* (TSP: Map Exhibit B).⁶
16. The city of Bend shall include the Bend Metro Parks and Recreation District and the general citizenry in the planning and design of Transportation related river crossings.⁸

Benchmarks:

1. Develop a plan, in coordination with BMPRD, to identify funding for and implementation of Primary Trail system projects within six months after adoption of the TSP by the Bend City Council.

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2. Update sidewalk, trail and bike lane systems inventories and identify gaps and missing system segments and prioritize these for completion, within six months after adoption of the TSP by the Bend City Council.
3. Remediate the needs of prioritized bicycle and pedestrian facilities as follows:
 - a) Hazards – immediately
 - b) Potential hazards – as soon as practicable
 - c) Substandard conditions – at the rate of 20 percent per year for the next five years
4. Add four miles of in-fill sidewalks per year.
5. Add designated bike lanes to roads with substandard shoulders at the rate of 20 percent per year for the next five years.
6. Public right-of-ways or easements for trails shall be secured and trails constructed at a rate of at least 2 miles each year (on average), starting with the trail priority list depicted in the Bend Urban Trails Plan, or subsequent updates.
7. Incorporate the specific inspection of bicycle and pedestrian facilities (including bicycle-parking facilities) as a part of the commercial building construction inspection process within six months after adoption of the TSP by the Bend City Council.
8. Develop a detailed bicycle and pedestrian facility maintenance program within twelve months after adoption of the TSP by the Bend City Council.
9. Update the City bicycle and pedestrian facility hazard reporting and responding system within twelve months after adoption of the TSP by the Bend City Council.
10. Fund a coordinator to implement the City’s bicycle and pedestrian programs within six months after adoption of the TSP by the Bend City Council.

6.9.5 PUBLIC TRANSPORTATION SYSTEM

Objectives:

- Continue to develop public transportation services for the transportation disadvantaged
- Reduce reliance on automobiles and develop public transportation facilities
- Increase mobility and accessibility throughout the urban area
- Continue to provide infrastructure and land use planning to support transit

Policies:

1. The City shall preserve and improve the existing Dial-A-Ride service (efficiency, expanded ridership and routes, zone destination) and develop a strategic plan for its future expansion that results in the initiation of a citywide public transportation system.
2. The City shall develop a public transportation system that accommodates the needs of Bend residents and visitors in order to reduce reliance on the automobile.

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3. The City shall coordinate with the State and other jurisdictions to evaluate funding alternatives and seek appropriate resources to support a public transportation system. Effort should be made to evaluate creative funding techniques that may include the combination of public and private transportation resources in coordination with other agencies and transportation providers.

4. The City shall work together with Central Oregon communities and the State to develop inter-urban public transportation services. Priority shall be given to high load ridership corridors.

5. To accommodate a fixed-route transit system, land use ordinances and other regulations shall be implemented that establish pedestrian and transit-friendly design along potential or existing transit routes.

6. The City shall work with other governmental agencies to develop a 20-year transit master plan. The plan shall include but is not limited to routing maps, the type and location of required infrastructure, marketing/public education plan, development/ redevelopment requirements for transit, and funding mechanisms. Ordinances shall be adopted that implement the Master Plan.

Implementation:

1. Develop a strategic plan for public transportation that results in the initiation of a citywide public transportation system.

2. Develop an improved public transportation system for the urban area by:

- a) Forming a Transit Advisory Group
- b) Expanding the existing Dial-A-Ride system for the general public using existing funding resources,
- c) Expanding the existing Dial-A-Ride system and implementing a fixed-route bus system* for the general public using additional funding resources. (*To be developed as ridership increases along corridors; a fixed-route service would provide a more efficient transit rider service).

3. The City shall actively participate in and support regional discussions and efforts to develop and improve countywide public transportation services (e.g., City participation in Central Oregon Area Commission on Transportation – COACT and Central Oregon Intergovernmental Council – COIC, discussions on public transportation). Discussion to include the development of a countywide transit district and evaluation and implementation of creative public/private sector funding techniques to accomplish this task.

4. Work with other Central Oregon communities to improve inter-urban transportation services.

- a) Priority shall be given to high load ridership corridors within the Deschutes County area (i.e., Bend to Redmond, Bend to LaPine, etc.).
- b) Development of other inter-city services outside of the Deschutes County area (i.e., Bend connections to the Willamette Valley, other destinations outside of Deschutes County).

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5. The City shall establish land use ordinances and other regulations that support the development of pedestrian and transit-friendly design along all arterial and collector roadways.
6. Develop a 20-year transit master plan and implement a phased fixed-route transit system serving the Bend urban area:
 - a) Develop a fixed-route master plan to include a basic transit system and incremental improvements to the system, such as:
 - i) The 5-bus (6-route) transit system, illustrated on Figure 13, shall serve as an example of a basic start-up transit network.
 - ii) The 9-bus (7-route) transit system, illustrated on Figure 14, shall serve as an example of a more comprehensive transit network.
 - b) Acquire properties (or secure joint use agreements) for Park-n-Ride lots at strategically located sites (see also item “d.”) throughout the urban area.
 - c) Plan, acquire and develop a site in the downtown area for a transit center.
 - d) Plan, acquire and develop at least four major transit stops including the Central Oregon Community College, the St. Charles Medical Center, and sites on the north and south reaches of Bend.
 - e) Implement a phased, fixed-route transit system, focusing initially on high transit ridership corridors.
7. To supplement City funds, seek additional public transportation funding resources for Bend urban area that will support a public transportation system by seeking:
 - a) State and federal grants that support expanding public transportation for general public services
 - b) Voter approval of a funding measure to expand Dial-A-Ride system to support general public services
 - c) Voter approval of a funding measure to develop a fixed-route system to support general public services

Benchmarks:

1. Obtain funding for Dial-A-Ride expansion, and begin operation of this improved system by July 2001.
2. Meet 100% of the work and medical trip demands of the general public, and 70% of shopping trip demand by July 2002.
3. Determine candidate fixed-route transit corridors and implement, as appropriate, by July 2003
4. Provide 175,000 transit rides per year by July 2003.
5. Develop a “countywide” transit master plan in coordination with other public agencies and private transit providers by July 2003.

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Funding:

1. Explore the use of System Development Charges (SDCs) for a portion of local share of transit system capital improvements.
2. Seek other stable local funding opportunities for public transportation to support operating needs on a long-term basis that may include levies, special districts and other funding strategies.
3. Lobby the state of Oregon Legislature to consider bills that could result in increased public transportation funding.
4. Pursue multi-year funding with major employers and/or other public/private organizations (e.g. transit service contracts).
5. Seek voter approval of a transit funding measure to operate and support an expansion of local Dial-A-Ride service, to include the general public, and establish scheduled, fixed routes open to the general public as demand dictates and funding permits.
6. Seek additional funding to establish a countywide transit district and improve other inter-city transportation services.
7. Seek state and federal grants to support:
 - a) Urban area transit planning;
 - b) Dial-A-Ride expansion;
 - c) Acquisition of buses for a fixed-route transit system; and
 - d) Development of a downtown transit center, park and ride lots and other transit use amenities.

6.9.6 STREET SYSTEM

Objectives:

- To provide a practical and convenient means of moving people and goods within the urban area that accommodates various transportation modes
- To provide a safe and efficient means to access all parts of the community
- To provide an attractive, tree-lined, pedestrian friendly streetscape sensitive to protecting the livability of the community

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Policies:

General:

1. Streets shall be located, designed and constructed to meet their planned function and provide space for adequate planting strips, sidewalks, motor vehicle travel and bike lanes (where appropriate). Specific effort should be made to improve and enhance east-west circulation patterns for all modes of travel throughout the community.
2. Where a subdivision or partition is adjacent to land likely to be divided in the future, streets, bicycle paths, and accessways shall continue through to the boundary line of the subdivision or partition in order to achieve connectivity within the grid system.
3. Streets shall be classified and generally located according to the Bend Urban Area - Roadway System Plan (Map Exhibit A), the Street Functional Classification (Table 12), and the Street Grid System (Figure 29). Street right-of-ways and improvements standards shall be developed to meet the needs of the Transportation Plan and Functional Classification System. Transportation project development review and approval shall be subject to the provisions of the Bend Development Code and Oregon Administrative Rule 660-012, Section 0050, as applicable.⁹
4. In order to reduce vehicle speed, avoid construction of excessive pavement, and create livable neighborhoods, the City shall adopt standards that allow for narrower streets and lane standards, on-street parking, and other pedestrian friendly design elements.
5. The City shall manage the development process to obtain adequate street right-of-way and improvements commensurate with the level and impact of development. New development shall be supported by traffic impact analysis(es) to assess these impacts and to help determine transportation system needs.
6. Access control shall be part of the design standards for major collectors, arterials, principal arterials and expressways to ensure that adequate public safety and future traffic carrying capacity are maintained while at the same time preserving appropriate access to existing development and providing for appropriate access for future development. The city of Bend *Arterial Access Policy* (Street Policy No. 2) and the *Access Management Policy* (Street Policy No. 4) shall be reviewed and revised, and new street policies shall be adopted if necessary, to:
 - a) Conform street designations and other terminology to that which is used in this TSP;
 - b) Adopt written policies and procedures for access control on new and reconstructed major collectors, minor arterials and major arterials;
 - c) Provide that raised medians that eliminate left turn movements to existing streets or improved properties will only be installed after notice to affected property owners and an opportunity to be heard;
 - d) Require that in the case of new access control measures that will restrict existing turn movements into or out of existing homes, businesses or streets, the least restrictive measure (such as shared driveways, elimination of curb-cuts or “no left turn” signs) that is effective to achieve the purposes of the policy will be evaluated prior to installation of raised medians;

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- e) Require that the cost of installation and maintenance of raised medians, and in particular those with landscaping, be evaluated and alternatives be considered before raised medians are approved or required;
- f) Replace any mandatory requirements for raised medians on streets other than new principal arterials and expressways with an analysis of the factors set forth above, and any other factors that are identified in the policy;
- g) Provide that where commercial or industrial land uses abut residential areas, access shall not be directed to local residential streets.

7. City and state transportation system improvements shall comply with the Americans with Disabilities Act requirements.

8. Traffic signals or roundabouts shall be constructed in accordance with the design, spacing and standards adopted by the City and State.

9. The City Council shall involve the public, where appropriate, in the development and redevelopment of street designs prior to their construction.

10. The City shall consider the impact of improvements to or completion of existing facilities when considering the need for constructing new facilities.

11. The City shall place a high priority on providing adequate funding for street maintenance.

12. Traffic calming devices may be considered anywhere traffic impacts are adverse to residential livability.

Residential Streets:

13. Residential block lengths shall not exceed 600 feet without a connecting cross street. When existing conditions or topography prevent a cross street, a pedestrian accessway to connect the streets shall be required.

14. A grid-like pattern of residential local streets shall be developed whenever practical in order to increase street connectivity within a neighborhood. A system of local streets shall be developed within a framework that is defined by the *Bend Urban Area - Bicycle and Pedestrian System Plan* (TSP: Map Exhibit B), as much as practical.⁶

15. The City may require adjustment to the street pattern or installation of traffic calming devices in order to discourage high speed and volume vehicular traffic on local residential streets.

16. Street widths on public residential local streets may vary depending on topography, anticipated traffic volume, natural features that warrant protection, and existing street patterns in the neighborhood. Right of way shall be a minimum of sixty (60) feet except in special circumstances. Narrower streets may have limited on-street parking to ensure emergency vehicle access.

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17. New alleys should be developed to City standards and shall be maintained by the property owners.

18. Cul-de-sac or “hammer-head” residential streets may be allowed only where existing development, steep slopes, open space, or natural features prevent through street connections, or when the objectives of connectivity are met within the neighborhood.

Arterial Streets:

19. Due to the sensitive nature of the Deschutes River corridor, the extension of Reed Market Road, between Blakely Road and Century Drive, shall be limited to a two-travel lane roadway.

20. Appropriate facilities for bike, pedestrian and transit use shall be included in any road-widening project.

21. The City shall evaluate the effect of transportation demand management (TDM) and transportation system management (TSM) measures that would successfully eliminate or delay the need for minor arterial street widening beyond the existing travel lanes within the twenty-year design life of a proposed roadway project. Transportation system computer modeling is one acceptable evaluation method that can be used to assist in the assessment of forecast travel demand and the associated vehicle travel lane needs.⁴

TDM/TSM measures as an alternative to roadway widening: The TDM and TSM measures **incorporated into this analysis**, as an alternative to roadway widening, shall be capable of funding and fulfillment within a reasonable time period such that the subject arterial level-of-service shall not diminish below an acceptable adopted City standard.^{4,5}

TDM/TSM measures AND roadway widening: If the implementation of TDM and TSM measures **from the previous analysis** are determined to be insufficient in meeting the transportation system needs along the subject roadway corridor, the City shall undertake an evaluation of the consequences that additional roadway widening may have on adjoining neighborhoods as well as the benefits gained by additional street construction.^{4,5}

This evaluation shall include an assessment of the design features and construction options for the road widening project. The design analysis of roadway widening shall consider the impacts on all modes of travel, adjacent affected travel corridors and the impact on properties immediately adjacent to the contemplated road widening. The most effective and appropriate TDM and TSM measures recommended by the evaluation **as selected by the City Council, shall** be implemented either in conjunction with, or before, the road widening project. **The City Council after providing notice and opportunity to be heard at a public hearing shall decide whether to authorize the street widening based upon this policy and the evaluation report. Written notice shall be provided to property owners within 250 feet of the proposed widening and to affected neighborhood associations. In addition, notice of the hearing shall be posted in conspicuous locations along the proposed widening and published at least ten days prior to the hearing.**^{4,5}

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The City Council shall receive this evaluation report that makes the aforementioned analysis of TDM and TSM measures, and the evaluation of roadway widening design options, prior to considering authorization of proceeding with the road widening project.⁴

Minor arterial street corridors shall be designated by City Council as falling into one of three classifications:⁴

a. “Not authorized for lane expansion”. These minor arterial corridors are described in the TSP, in Section 6.5.1.4 requiring a TSP amendment before being categorized as “b” or “c” as described below.

b. “Possible lane expansion”. These minor arterial corridors are listed in the City’s annual Capital Improvement Plan as corridors where additional travel lanes may be necessary within the 20-year planning period. Street corridors in this category may not be programmed for lane expansion in the CIP without City Council authorization.

c. “Probable lane expansion”. These minor arterial corridors are listed in the City’s annual Capital Improvement Plan as corridors where additional travel lanes are probably going to be necessary within the 20-year planning horizon. Street corridors in this category may not be programmed for lane expansion in the CIP without City Council authorization.

Intersection widening and improvements, that are necessary for vehicle turning lanes or pedestrian safety, are exempt from this policy.⁴

Notwithstanding a street’s categorization as “possible lane expansion” or “probable lane expansion”, the City Council must comply with paragraphs 3 and 4 of Transportation System Plan Arterial Street Policy 21 prior to authorizing a road widening project.⁴

22. The City shall involve the public, the Park District and other governmental agencies in developing a roadway design for the southern river crossing that complements the natural features of the river area.

23. The City and State shall develop and implement a plan to improve the appearance, safety and function of East 3rd Street, portions of Highway 20 and old Highway 97 when the Parkway is completed.

24. The City shall work with the State to line the entrance to the city of Bend along Highways 97, Highway 20, Century Drive and the Parkway, with large stature trees.

25. Landscaped medians should be included on all arterial streets, except where right-of-way acquisition is not possible, that incorporate left-turn refuge lanes at controlled intervals to improve community appearance, maintain system mobility and to reduce the adverse affects of wide street widths to all types of travel (Figure 28). On streets with multiple vehicle lanes and wide curb radii, pedestrian refuge islands shall be constructed to minimize street crossing distances.

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26. Frontage roads shall be provided parallel to arterial streets, as illustrated on the Bend Urban Area Roadway System Plan Map, or as determined necessary by the City or State, to maintain an acceptable level of safety and carrying capacity on the arterial street system.

27. The state highway system (i.e., Highways 97 and 20, Century Drive and the Parkway) shall be designated as the through truck route system. Trucks shall be permitted on the City and County arterial street system for local trip activity, unless otherwise restricted.

28. The city of Bend shall work with ODOT to plan for specific improvements needed to grade separate Cooley Road from US 97 and the railroad.^{3, 12}

29. When a final land use or limited land use decision determines that a right-turn lane will improve, maintain or prevent further degradation of an applicable performance standard for the intersection of an arterial with another arterial of the intersection of an arterial with an expressway, the right-turn lane shall be considered allowed by the TSP at the appropriate location, provided that if the need for the right-turn lane is caused by a specific application, the applicant shall be responsible for full payment of the costs associated with construction of the right-turn lane.²

Parkway:

30. The Bend Parkway will be planned, constructed, and managed to limit direct access to the facility to meet the policies and requirements of the Oregon Highway Plan, to protect the integrity of the routes through capacity, and to promote public safety.¹²

31. To maintain the viability of the existing East 3rd Street and downtown business districts, the Bend Parkway will provide convenient access to these areas in so far as this does not compromise the function of the Parkway.

32. The Bend Parkway shall, to the greatest extent possible, include landscaping, medians, separated sidewalks, and bike lanes.

33. The City accepts the findings of US 97 Bend North Corridor Project Preferred EIS Alternative. Prior to design and construction, the City and ODOT will coordinate to conduct two independent project development plans/designs within the study area of the preferred alternative to verify the construction meets the then current needs of both the City and ODOT. One plan development and design will be for the study and analysis, **including the impact on any business**, of a possible Robal Road connection to the ODOT Preferred Alternative to be completed prior to entering into an intergovernmental agreement (IGA) for implementation of the US 97 phase of the Preferred Alternative. The other development and design will be for the Empire interchange area to be completed prior to entering into the intergovernmental agreement (IGA) for implementing the phase of work that would impact any business, public street, or private driveway access onto Empire Avenue. The final redevelopment of the transportation system at Robal and Empire and the ODOT Preferred Alternative may include some or all of the changes determined in the final design to improve the transportation system and meet the City's transportation needs. The IGAs will conform with the studies and analyses.¹²

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34. The City of Bend will coordinate with ODOT to determine when to implement closures to approaches on Empire Avenue and improvements to Mervin Sampels and connecting roads shown in the US97 Bend North Corridor preferred alternative.¹²

Safety:

35. The City and State shall improve transportation safety for all modes through approved design practice, sound engineering principles and regulation of vehicle speeds.

36. The City shall explore with the State and implement appropriate “Intelligent Transportation System Devices”.

37. The City shall take measures to ensure that traffic speeds are appropriately designated throughout the City.

38. As a part of the development process, right-of-way shall be acquired as necessary for the correction of street intersections, excessively sharp curves, or as otherwise necessary to improve the safety of a road alignment.

39. The City and State shall support efforts to educate the public regarding safe travel on the transportation system.

40. The City and State shall monitor transportation crash and safety issue locations, and develop and implement corrective improvement projects.

Implementation:

1. Update, expand background justification, priorities, categories and weightings in the Transportation CIP, and monitor it on a regular basis.

2. Study alternatives to improve the street grid system and east/west street connectivity in order to address future transportation needs:

- a) Evaluate the need for more through routes and grid connections in the northeast section of Bend in order to preserve capacity on the 27th Street corridor - this will require the City to coordinate street extensions with the County.
- b) Study the completion of the Purcell corridor and determine placement in the CIP.
- c) Study the American Lane/9th Street offset intersection reconstruction.
- d) Study options for the future extension of Cooley Road in the northwest quadrant of the City.
- e) Study the Blakely/Brookwood connection and determine the priority in light of the Southern Bridge Crossing project.

3. Install interim signals where warranted for traffic safety and enhancement of traffic flow. Complete a list of interim signalization projects and monitor on an annual basis.

4. Monitor completion of Bend Parkway impacts on local intersections and determine if additional improvements are needed.

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5. Complete the current study to evaluate and produce appropriate roundabout construction and performance standards. Give special consideration to the needs of the disabled community.
6. Produce preliminary topographical and engineering alignments for future road extensions prior to acquiring right-of-way.
7. As a part of the Project Development for the construction, or reconstruction, of roadways that will impact Resource Areas that have been identified by the city of Bend - Goal 5 Inventories, an Environmental, Social, Energy and Economic (ESEE) analysis shall be conducted. Land-use findings will be required on all transportation projects that will have impacts to a Goal 5 identified resource. Mitigation measures to address Goal 5 impacts shall be developed and implemented as a part of the construction of transportation projects where Bend's Goal 5 protection ordinances apply.⁸
8. The City shall work cooperatively with the state of Oregon to resolve any level-of-service issues on the state highway system that are forecast to exceed the mobility standards of the Oregon Highway Plan (OHP). Methods to be considered to accomplish this goal shall include limiting the number and type of access points to the highway system. Refinement Plans shall be initiated cooperatively by the City and the State, involving affected property owners, to help identify these issues and to develop agreed upon strategies that will help fulfill the OHP standards.⁸
9. The City shall seek alternative highway classifications, where appropriate, as identified in the Oregon Highway Plan (i.e., STAs and/or UBAs) for qualifying state highways within the urban area.⁸

6.9.7 RAIL SYSTEM

Policies:

1. When railroad rights-of-way are considered for abandonment or vacation, the City, County and State shall seek the preservation of these corridors for other transportation services.
2. The City shall work with Burlington Northern Santa Fe Railway to develop and implement a plan for train scheduling to ensure that the current needs of the transportation system in the City are minimally affected.

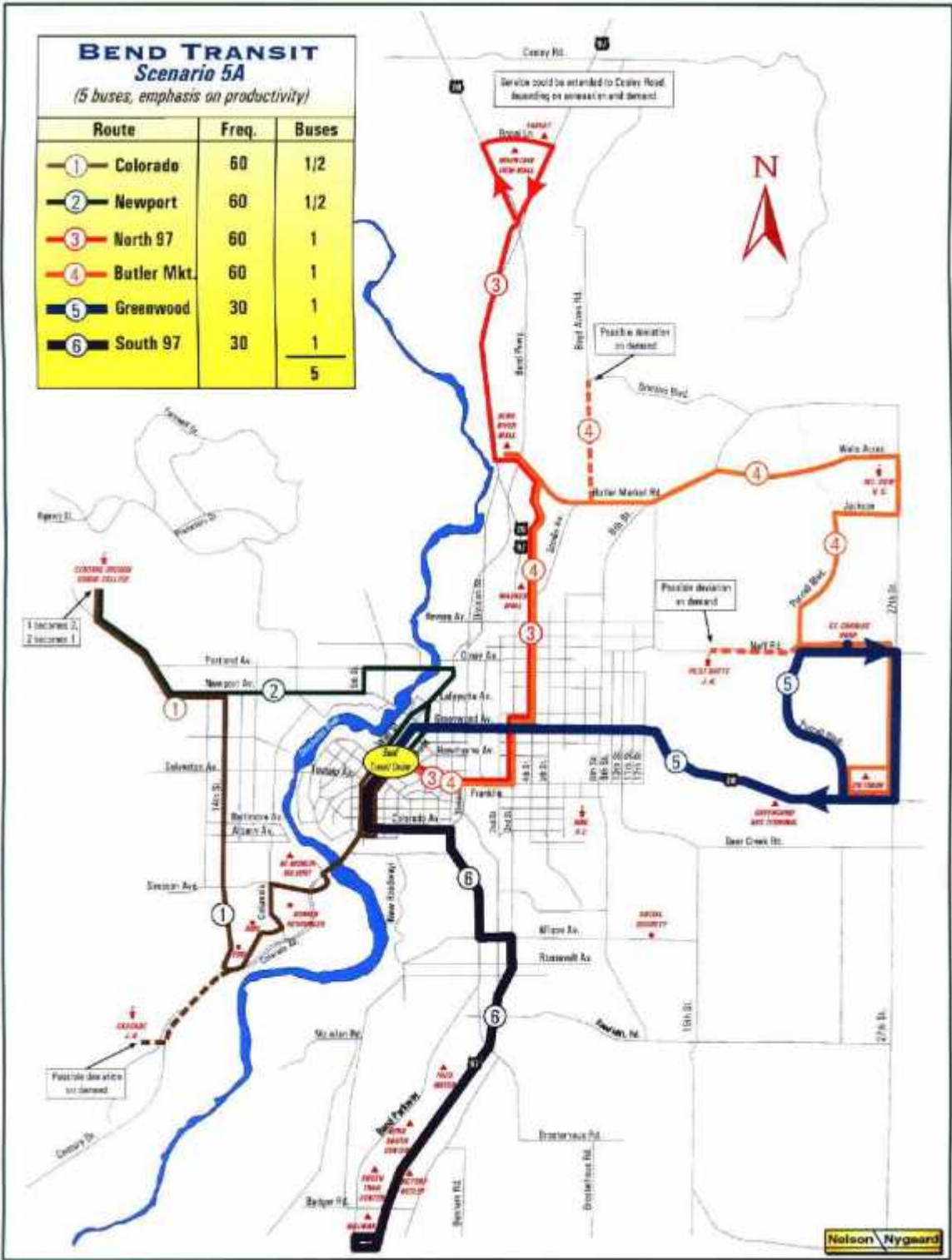
6.9.8 TSP MAP UPDATES¹³

Policy:

Any Bend TSP map that illustrates a dashed line for a proposed transportation facility may be updated administratively by staff upon the construction/completion of that facility. Updating of any affected maps shall convert any "dotted" lines into "solid" lines that follow *as-built* alignments, as much as practical, and shall not constitute a land use decision.

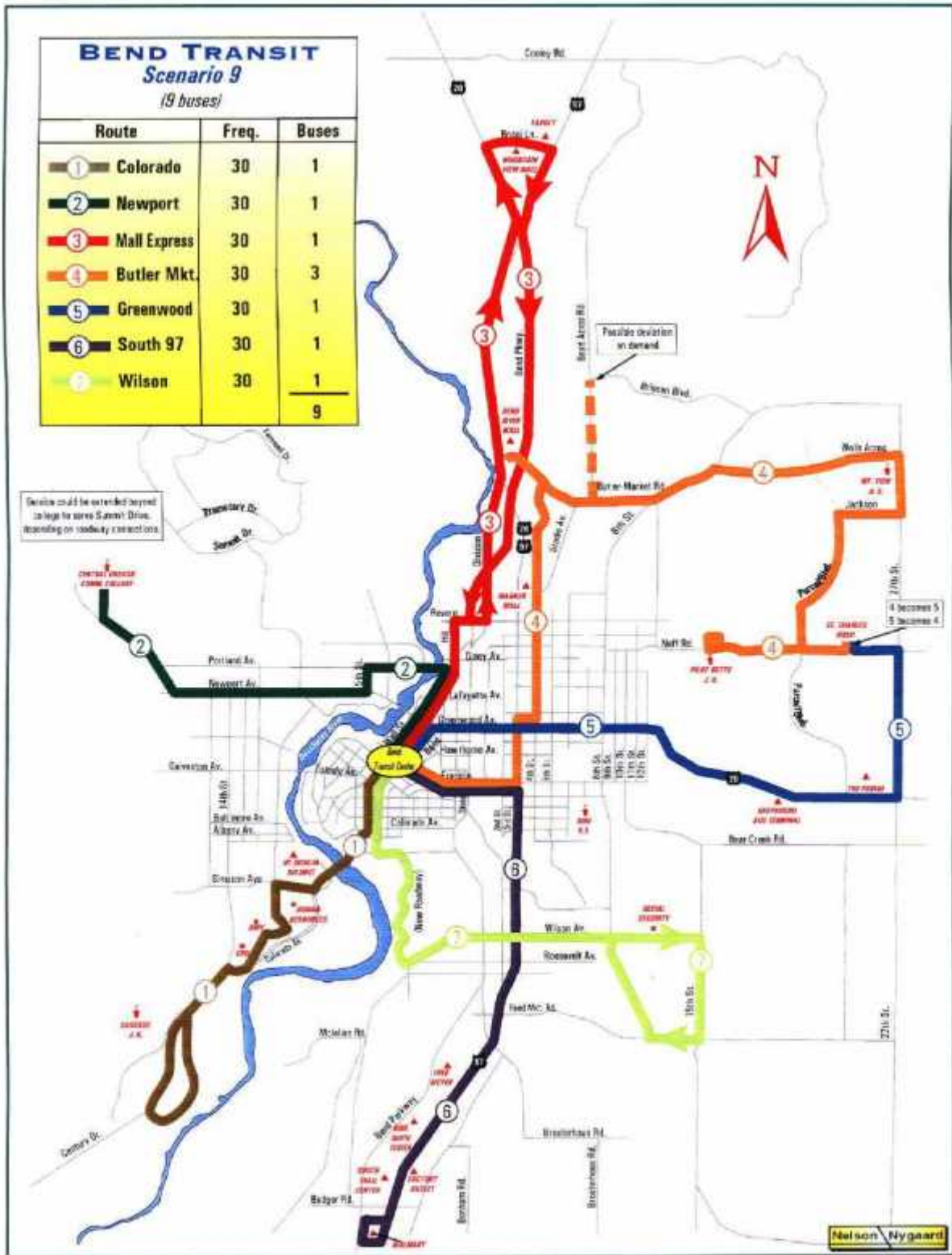
BEND AREA GENERAL PLAN

Figure 7-1
(TSP Figure 13)
5-Bus Route Alternative



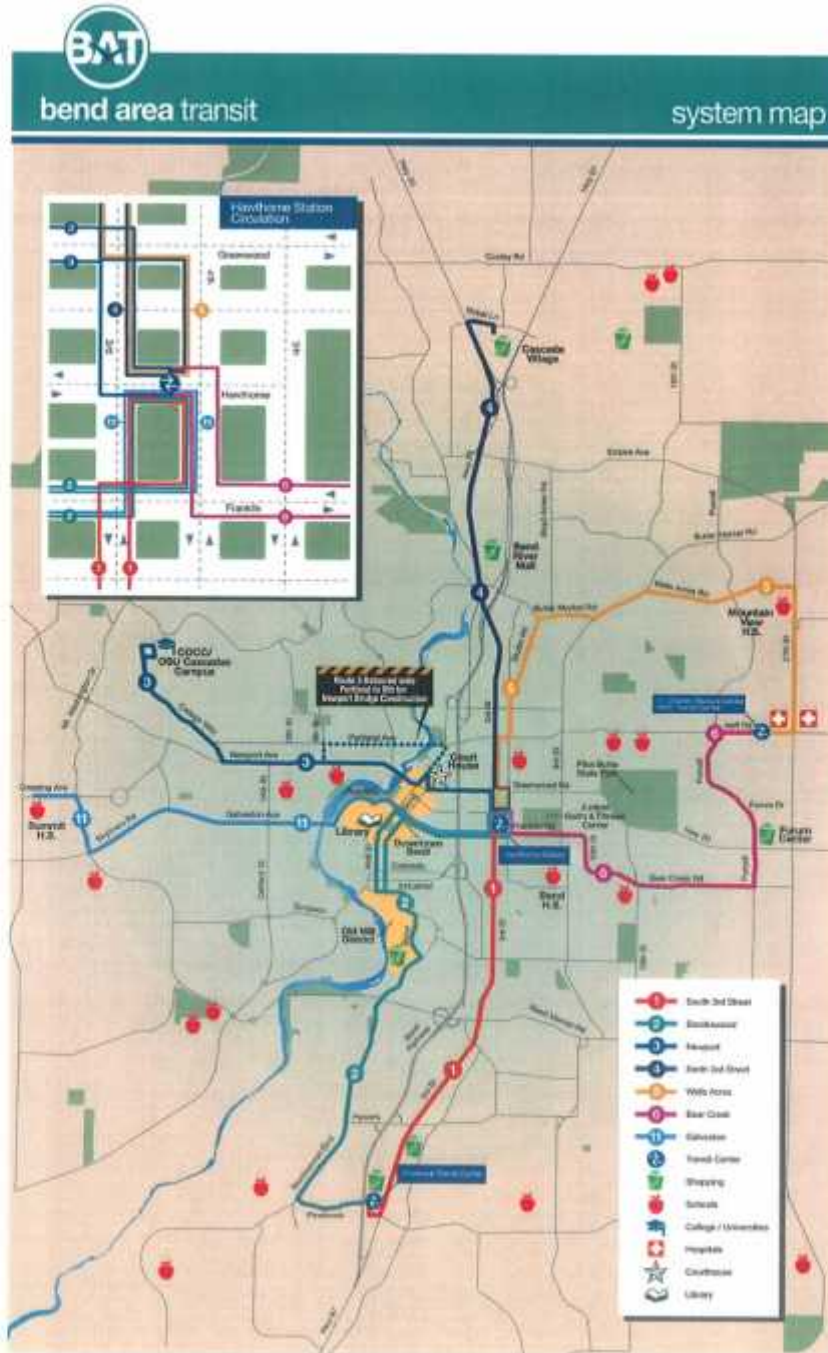
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Figure 7-2
(TSP Figure 14)
9-Bus Route Alternative



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Figure 7-3
(TSP Figure 15) Bend Area Transit (BAT) Route System



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Table 7-1
(TSP Table 12)
Street Functional Classification System
Typical Characteristics

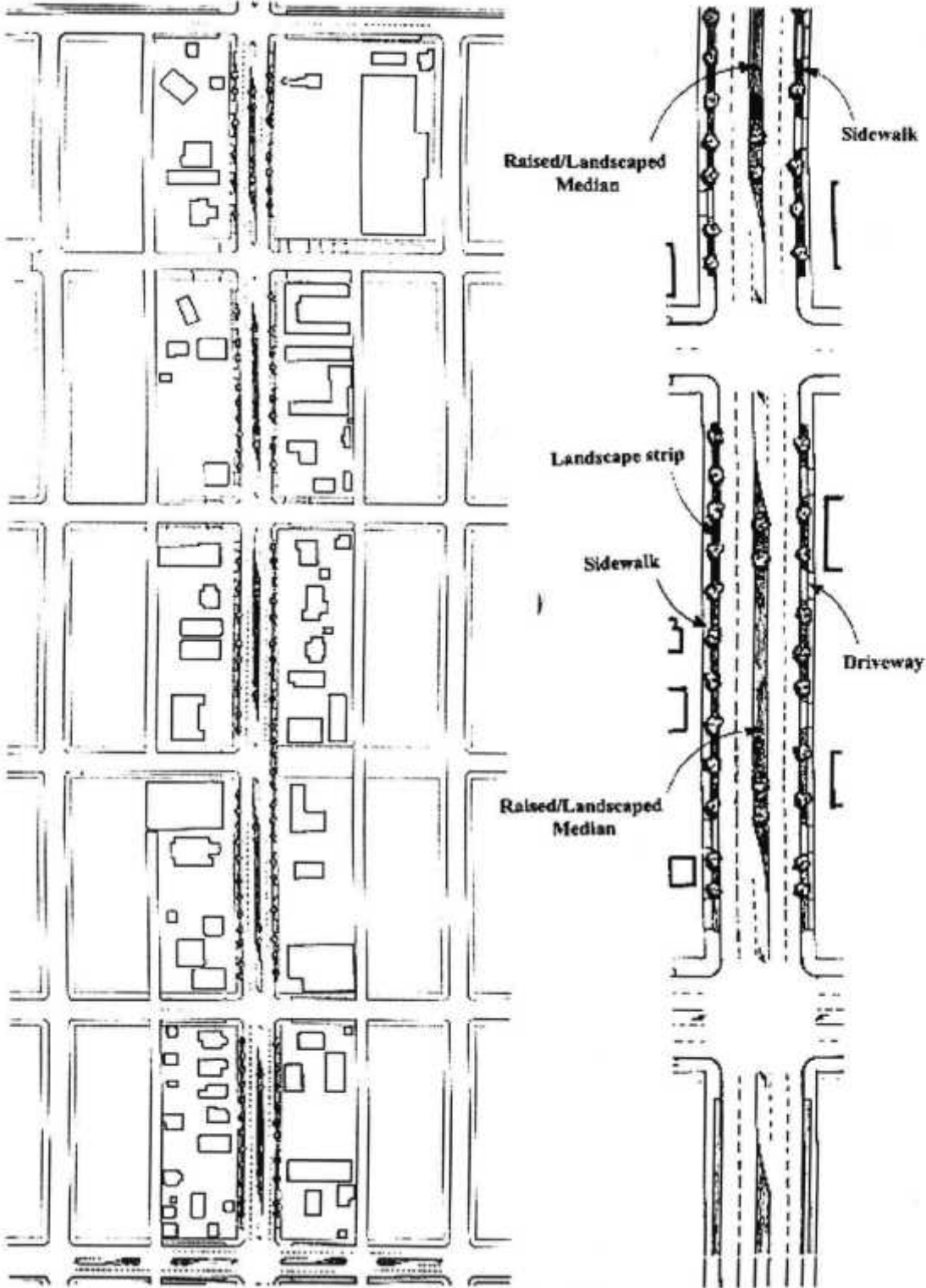
Functional Classification	Projected Daily Traffic (Typical)	F.C. Spacing (Typical)	Trip Length (Typical)	Vehicle Lanes (Typical)	Bike Lanes	Sidewalks	Parking Permitted (Typical)
Arterial: Expressway	20,000 - 45,000+	5+ Miles	Over 5 miles	5	Yes	Yes Both sides	No
Principal Arterial	15,000 - 40,000	2+ Miles	Over 2 miles	5	Yes	Yes Both sides	No
Major Arterial	10,000 - 30,000	1-2 Miles	Over 1 mile	3-5	Yes	Yes Both sides	No
Minor Arterial	5,000 - 18,000	1/2-1 Miles	Over 1 mile	2-5	Yes	Yes Both sides	No*
Major Collector	1,500 - 9,000	1/2 Mile	Under 1 mile	2-3	Yes	Yes Both sides	No*
Industrial Streets	500 - 3,000	Not applicable	Varies	2	Not required	Yes Both sides	Yes
Local Street	< 1,500	300-600 feet	Under ½ mile	2	Not required	Yes Both sides	Yes
Frontage Road	Varies	Not applicable	Varies	2	Not required	Yes Both sides	Yes** if adequate width provided
Alley	< 400	Not applicable	Not applicable	1 1/2	Not applicable	Not applicable	Yes** if adequate width provided

* Parking permitted if approved by local jurisdiction

** Parking permitted adjacent to the facility but NOT obstructing the travelway

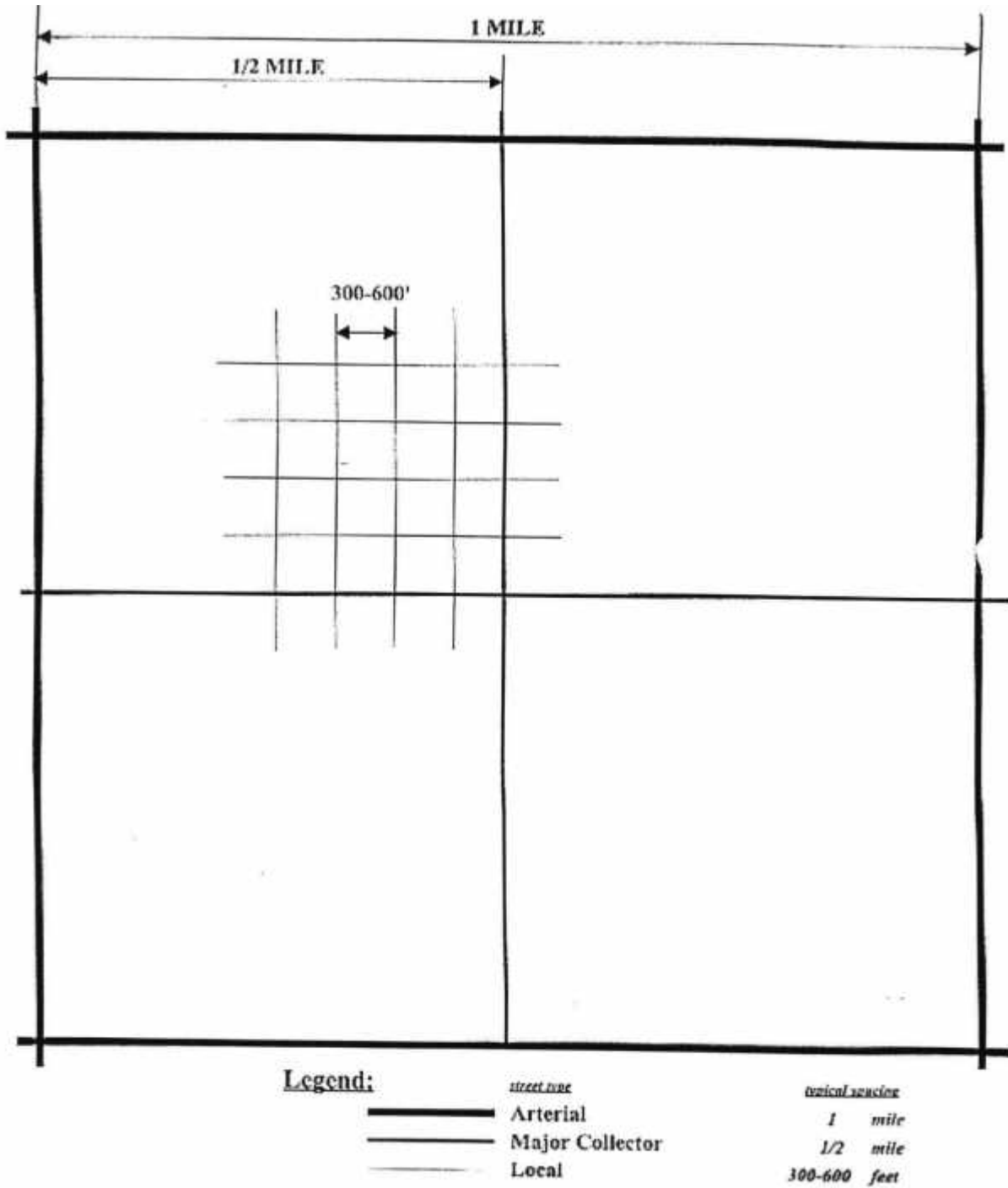
BEND AREA GENERAL PLAN

Figure 7-4
(TSP Figure 28)
Arterial StreetscapeTypicals



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Figure 7-5
(TSP Figure 29)
Street Grid System
Typical Street Spacing



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7.5 TRANSPORTATION FUNDING AND PRIORITIZATION POLICIES

Funding Policies:¹¹

1. The Bend City Council should regularly evaluate existing funding sources and explore the use of new funding opportunities to increase resources for maintenance operations and capital improvements.
2. The City shall work with the County and State to develop new sources of transportation funding for all transportation modes.
3. The City shall annually prepare a five-year capital improvement program for a balanced transportation system. The selection of transportation improvements, within the City's yearly Capital Improvement Program plan, shall continue to be subject to public review and comment through a City Council public hearing process.
4. The City shall explore ways in which to better inform and involve citizens in the development of transportation system budgets.
5. The City shall work with ODOT to develop funding sources for projects on the state highway system that include City and State as major funding partners.
6. The City shall use the City Council adopted Transportation Implementation Program (TIP) as a guide to the development of all transportation projects in the Capital Improvement Program (CIP).
7. The Financing Program projections show that sufficient funding will be available to build the twenty-year needs of the transportation system that are included in the TSP and further defined as the near- and mid-term priorities. However, if existing and future funding levels do not fully cover increased demand on the system, the City Council may accept additional congestion on the roadway system to allow transportation projects to be postponed beyond the planning period.

Benchmarks and Guidelines¹¹

1. City shall establish transportation revenue and needs benchmarks to monitor progress toward fulfilling a balanced transportation system. This will occur during the CIP budget process.
2. City will create a set of economic performance measures such as but not limited to building permits, population growth, and property tax revenues that establish benchmarks and guidelines to determine the need and timing for additional transportation revenues.
3. The City will use the following existing financial policies as guidelines for establishing and modifying the CIP and evaluating CIP projects:

BEND AREA GENERAL PLAN

- A. *A five-year Capital Improvement Program (CIP) encompassing all City facilities shall be prepared and updated annually. A public hearing will be held to provide for public input on the CIP. The five year CIP will be incorporated into the City's budget and long range financial planning processes.*
- B. *Projects included in the CIP shall have complete information on the need for the project, description and scope of work, total cost estimates, future operating and maintenance costs and how the project will be funded.*
- C. *An objective process for evaluating CIP projects with respect to the overall needs of the City will be established through a ranking of CIP projects. The ranking of projects will be used to allocate resources to ensure priority projects are completed effectively and efficiently.*
- D. *Changes to the CIP such as addition of new projects, changes in scope and costs of a project or reprioritization of projects will require City Council or City Manager approval.*

BEND AREA GENERAL PLAN

Figure 7-6
Bend Urban Area – Roadway System Plan
 (TSP: Map Exhibit – A)



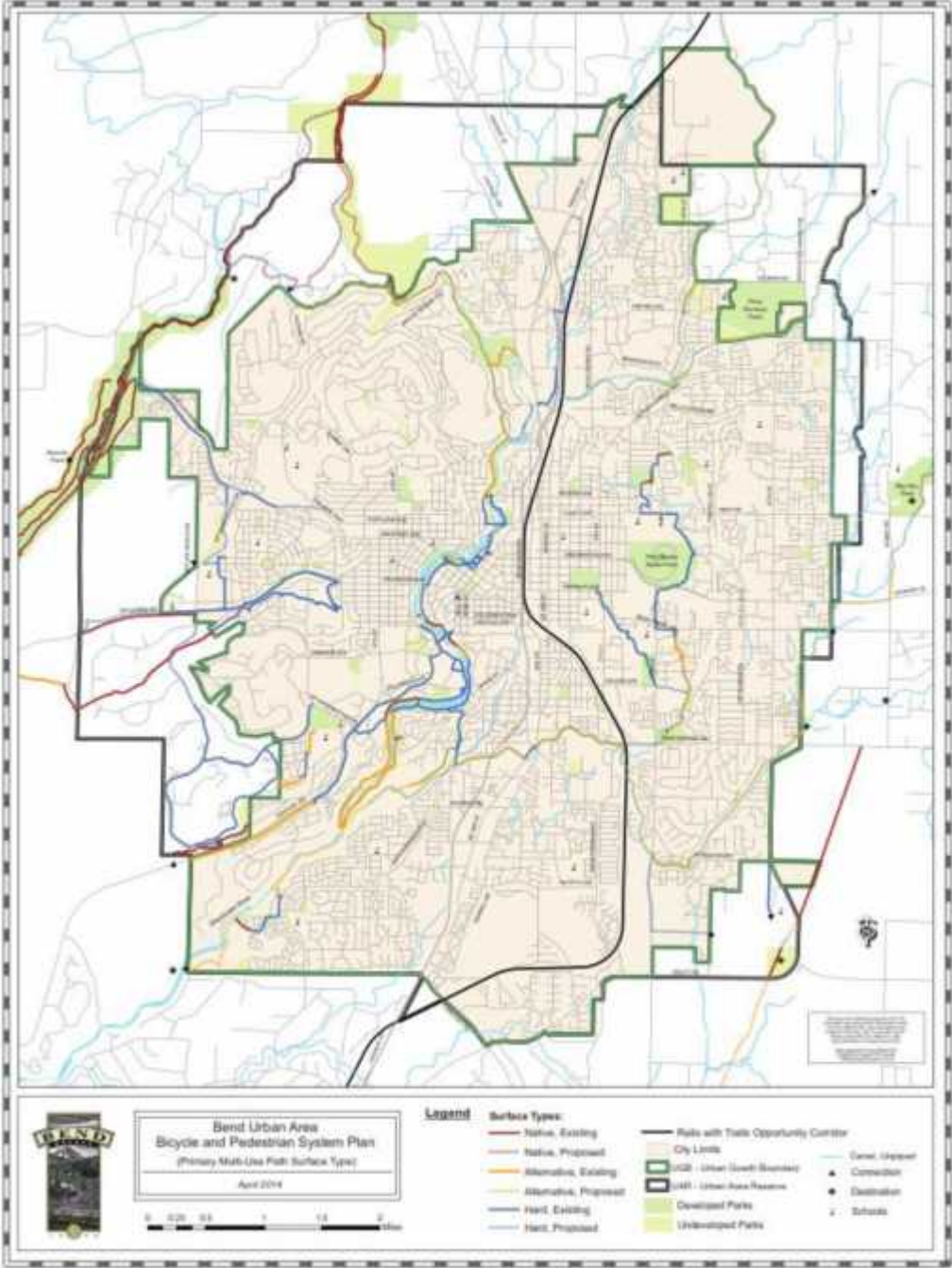
BEND AREA GENERAL PLAN

Figure 7-7
Bend Urban Area Bicycle and Pedestrian System Plan
 (TSP: Map Exhibit - B)



BEND AREA GENERAL PLAN

Figure 7-8
Bicycle & Pedestrian System Plan – Primary Trail Surface Plan
 (TSP: Map Exhibit - C)



BEND AREA GENERAL PLAN

Figure 7-9
(TSP: Map Exhibit - D)

BEND URBAN AREA SIDEWALK INVENTORY MAP

