

***BANDON
TRANSPORTATION
SYSTEM PLAN***

VOLUME 1
Citizen Involvement

October, 2000

VOLUME 1 - CITIZEN INVOLVEMENT

Background

Citizen involvement in the planning process is not just the law, it makes good sense. Without involving the citizenry in the preparation of plans and policies, there will be little support when it comes time to implement the plans. The planning process for the Bandon Transportation System Plan resulted in a significant and sincere effort to involve the citizens of Bandon in the preparation of the Plan.

Interagency coordination is also important to any planning effort. The transportation planning program made efforts to assure good communication and coordination with a long list of federal, state, and local agencies. Those agencies were provided with information throughout the planning process, and their input was sought. The greatest amount of involvement with and coordination with any agency was with the Oregon Department of Transportation.

From the start of the TSP process, the work program was ambitious and the time frame unrealistic. It was anticipated at the start that the planning process would last about seven months. It took nearly three years. This unusually extended planning period has several root causes. Too much time and budget was expended on the inventory process. Too little technical assistance and guidance was provided by the Oregon Department of Transportation in the early phases of the project. The planning consultant was over-committed to other planning projects and was not able to perform on the Bandon project on a timely basis. And, the project was hampered by State and City staff turnover.

Although the planning project stretched over nearly three years, the mid-part of that period is characterized by inactivity. Virtually nothing was being done for a period of almost one year, from August of 1997 when the City's transportation planner left, until August of 1998 when the City's Planning Director took on the responsibility of writing Volume 6. During that period, the consultant did complete the drafts of Volumes 4 and 5. So, the project can accurately be described as a segmented process.

In the early part of the process, there was an intense effort to publicize the planning process and to involve the citizenry. During this time, there was light citizen turnout and mild interest in the process. In the late stage of the process, there was less intense effort to publicize the process, but more intense citizen involvement. This is too often the characteristic of planning processes. People fail to see the direct relevancy of generalized planning proposals. However, when the proposals become more specific, they can see how such proposals directly impact their individual interests.

And, in this project, the intense interest involved a proposal to build a new transportation link from the top of the Bandon bluff to the South Jetty area.

The citizen involvement process utilized all reasonable means available in a small community for informing and involving its citizenry in the planning process. Three newsletters were produced and directly mailed. All meetings were extensively advertised. Newspaper articles were published. A direct mailing list of citizens and public agencies was maintained and notices were sent by direct mail. Public forums were held to solicit ideas and input. Public meetings were held to present study findings and listen to reaction. Meetings were held to present planning alternatives and to gauge community preference. Open public work sessions were held to review draft planning reports. Public Hearings were held before the Planning Commission and City Council to take formal written and oral testimony on proposed plans and policies.

Public meetings and activities during the process of preparation of the Bandon Transportation System Plan

- | | |
|----------------|---|
| March 17, 1997 | City Council appoints a nine member Citizens Advisory Committee for the Transportation System Plan. Four members are citizens at large, two members are City Councilors, and three members are Planning Commissioners. |
| March 19, 1997 | Public meeting #1 is advertised in the Western World newspaper. |
| March 26, 1997 | An article appears in the Coffee Break newsletter providing information on the transportation planning process and encouraging people to attend the scheduled April 2, 1997 public meeting. |
| March 26, 1997 | An article appears in the Western World newspaper providing information on the transportation planning process and encouraging people to attend the scheduled April 2, 1997 public meeting. |
| March 27, 1997 | First newsletter on the transportation planning process is mailed. The newsletter explains what a transportation plan is, who is working on the plan, and how people can be involved in the planning process. The first public input meeting date, time, and location is given in the newsletter. |
| April 2, 1997 | An article is published in the Coffee Break newsletter describing |

the transportation public meeting to be held that night.

- April 2, 1997 First public meeting is held on the transportation plan. The Citizens Advisory Committee is briefed in an afternoon meeting by staff on the material to be presented at the public meeting in the evening. At the meeting, JRH Transportation Engineering, the City's consultant on the plan, gives an overview of the transportation planning process. City staff presents an overview of the transportation inventory materials that have been prepared and describes the next steps in the process. Staff and the consultants solicit and listen to the ideas and concerns citizens have about the City's transportation system.
- April 16, 1997 A display advertisement is run in the Western World newspaper encouraging people to come to the May 7, 1997 public meeting on the transportation planning process.
- April 30, 1997 An article appears in the Western World newspaper describing the transportation planning process and encouraging people to attend the scheduled May 7, 1997 public meeting on the plan.
- April 30, 1997 The second newsletter is mailed. The newsletter reviews the contents of the first public meeting, previews the contents of the second public meeting, and gives the date, time, and location of the second meeting.
- May 7, 1997 Second public meeting is held on the transportation plan. The Citizens Advisory Committee is briefed in an afternoon meeting by staff on the material to be presented at the public meeting in the evening. The consultant reviews the results of the analysis of future transportation needs in Bandon over the next twenty years.
- May 28, 1997 An advertisement appears in the Western World thanking those who participated in the May 7th public meeting and encouraging people to turn out for the scheduled June 25, 1997 public meeting.
- May 28, 1997 An article appears in the Western World newspaper describing the progress to date on the transportation plan and telling people about the scheduled June 25, 1997 meeting.
- May 30, 1997 The third newsletter is mailed. The newsletter identifies future transportation needs in Bandon and outlines a series of alternative transportation system improvements which could be made to meet

the City's needs into the future.

- June 18, 1997 A display advertisement is placed in the Western World with information on the upcoming June 25, 1997 public meeting on the transportation plan.
- June 24, 1997 An article appears in the Coffee Break newsletter with information on the June 25, 1997 public meeting on the transportation plan.
- June 25, 1997 A box ad is run in the Coffee Break advertising the meeting in the evening on the transportation plan.
- June 25, 1997 Third public meeting is held on the transportation plan. The Citizens Advisory Committee is briefed in an afternoon meeting by staff on the material to be presented at the public meeting in the evening. The consultant reviews the analysis of the various transportation alternatives and leads the public through a discussion process which results in a general consensus on the preferred alternative.
- August 11, 1997 Volume 2 - Review of Existing Plans, Policies, and Standards is published and made available for public distribution and review.
- Dec. 24, 1997 Volume 3 - Inventory of the Existing Transportation System is published and made available for public distribution and review.
- May 15, 1998 JRH Transportation Engineering completes these reports: Volume 4- Transportation Needs, and Volume 5- Transportation Alternatives. Copies are made available for public review.
- December 8, 1998 Mayor holds a public meeting at Heritage Place to discuss and listen to South Jetty residents' concerns about the possible construction of a street link from Seventh Street to Jetty Road in the Madison Avenue corridor.
- January 6, 1999 Meeting notice for the January 12, 21, and 26 Planning Commission work sessions on the draft transportation plan is published in the Coffee Break and Western World.
- January 10, 1999 Meeting notice for the February 18, 1999 Planning Commission work session is published in the Coffee Break.
- January 12, 1999 Planning Director completes first draft of Volume 6 - Transportation

System Plan. Copies are made available for public review.

- January 12, 1999 Planning Commission holds a public meeting and work session to review and edit Sections 1 and 2 of Volume 6 of the Transportation System Plan.
- January 20, 1999 Meeting notice for the January 21, 1999 Planning Commission work session on the TSP is published in the Coffee Break.
- January 21, 1999 Planning Commission holds a public meeting and work session to review and edit Sections 3 through 7 of Volume 6 of the Transportation System Plan.
- January 25, 1999 Meeting notice for the January 26, 1999 Planning Commission work session is published in the Coffee Break.
- January 26, 1999 Planning Commission holds a public meeting and work session to review and edit Section 8 of Volume 6 of the Transportation System Plan.
- February 18, 1999 Planning Commission review meeting on Volume 6 of TSP.
- March 18, 1999 Planning Commission review meeting on Volume 6 of TSP.
- May 12, 1999 Notice of hearing for the May 27, 1999 Public Hearing before the Planning Commission is published in the Western World newspaper.
- May 18, 1999 Planning Commission review meeting on Volume 6 of TSP.
- May 20, 1999 Planning Commission review meeting on Volume 6 of TSP.
- May 27, 1999 Planning Commission public hearing on Volumes 2 through 6 of TSP.
- June 24, 1999 Planning Commission continued hearing on Volumes 2 through 6 of TSP.
- July 16, 1999 An advertisement is placed in the Coffee Break notifying that the Planning Commission will be continuing its discussion of the draft transportation plan at the July 22, 1999 meeting, and inviting written comments.

- July 20, 1999 An advertisement is placed in the Coffee Break notifying that the Planning Commission will be continuing its discussion of the draft transportation plan at the July 22, 1999 meeting, and inviting written comments.
- July 22, 1999 Planning Commission continued hearing on Volumes 2 through 6 of TSP. Final amendments made with an adoption recommendation made to the City Council.
- October 6, 1999 A notice of hearing for the October 18, 1999 Public Hearing before the City Council on the draft transportation system plan is published in the Western World newspaper.
- October 18, 1999 City Council holds a public hearing on Volumes 2 through 6 of TSP as recommended for adoption by the Planning Commission.
- (See attached City Council Transportation Plan History)
- October 2, 2000 City Council holds properly noticed Public Hearing and directs staff to prepare TSP for adoption by Ordinance.
- November 6, 2000 City Council has first reading of BOR-052, which adopts TSP.
- December 4, 2000 City Council adopts BOR-052, which adopts TSP, and Resolutions 00-42 and 00-43, which adopt the Transportation Capital Improvement Project List and the Street Standards and Construction Typical.

Documentation

Documentation of the aforementioned meetings and activities is on file in the Planning Department at the Bandon City Hall.

**CITY COUNCIL
TRANSPORTATION PLAN HISTORY**

<u>Date</u>	<u>Agenda Item</u>	<u>Action/Motion</u>
10-18-99	Public Hearing	<p><u>Dennis Lewis Recommendations:</u> Volume 1, Public Involvement: To be completed after Council accepts Plan Volume 2, Review of Existing Plans, Policies & Standards: Complete Volume 3, Inventory of Existing System: Complete Volume 4, Needs Assessment: Technical revisions needed Volume 5, Development & Evaluation of Alternatives: Revisions needed Volume 6: Review and amend</p> <p>Motion: Staff respond to ODOT & DLCD concerns within next two weeks, changing whatever can be changed, and ask for exemption for cities under 10,000 for the rest</p>
11-08-99	BOR-052 (Ord. 1426) Adopting Transportation	<p>Passed to a second reading Motion: Tabled to 12-06; postponed because of quantity of material</p>
Dennis Lewis resigns		
12-06-99	Transportation Plan	<p>Motion: Winkel's recommendation accepted to postpone for policy revisions in Volume 6 with public input on changes . . .</p>
RETURNED TO PLANNING COMMISSION FOR HEARINGS:		
	03-30-2000	
	04-04-2000	Motion: Approved Volume 6 for Council's Hearing
04-25-2000	Workshop	Review
05-08-2000	Workshop	Volume 6, Sections 1 & 2
05-22-2000	Workshop	Volume 6, Sections 3 - 8 - POSTPONED
07-10-2000	Workshop	Volume 6, Sections 1 thru 8
09-18-2000	Set Hearing Date	Volume 6 Public Hearing set for 10-02-2000

BANDON TRANSPORTATION SYSTEM PLAN

VOLUME 2

***Review of Existing Plans, Policies, and
Standards***

August, 1997

TABLE OF CONTENTS

<u>P-1. PREFACE</u>	3
<u>1. INTRODUCTION AND SUMMARY</u>	3
<u>2. CITY OF BANDON</u>	8
<i>CITY GOALS, 1997-1999</i>	9
<i>CITY OF BANDON 2010 COMPREHENSIVE PLAN - DRAFT</i>	9
<i>CITY OF BANDON ZONING ORDINANCE (ORD. NO. 1336, AMENDED)</i>	13
<i>CITY OF BANDON SUBDIVISION ORDINANCE (ORD. NO. 934, AMENDED)</i>	15
<i>MISCELLANEOUS DESIGN STANDARDS, IMPROVEMENT PROCEDURES AND CONSTRUCTION SPECIFICATIONS</i>	20
<i>EXISTING FINANCING MECHANISMS AND REVENUE SOURCES</i>	22
<i>BANDON CAPITAL IMPROVEMENTS PLAN</i>	25
<i>BANDON STREETS DEPARTMENT BUDGET AND STAFFING</i>	25
<i>CITY OF BANDON 1981 CHARTER (AS AMENDED MARCH, 1996)</i>	27
<i>MISCELLANEOUS RESOLUTIONS</i>	27
<i>MISCELLANEOUS ORDINANCES</i>	28
<i>OTHER MISCELLANEOUS DOCUMENTS</i>	28
<u>3. SPECIAL DISTRICTS</u>	29
<i>PORT OF BANDON</i>	29
<u>4. COUNTY</u>	30
<i>COOS COUNTY</i>	30
<i>COOS COUNTY PUBLIC TRANSIT</i>	31
<u>5. STATE</u>	31
<i>LAND CONSERVATION AND DEVELOPMENT COMMISSION (LCDC)</i>	31
<i>OREGON DEPARTMENT OF TRANSPORTATION (ODOT)</i>	32
<i>ODOT, OREGON AERONAUTICS DIVISION</i>	35
<i>OREGON REVISED STATUTES (ORS)</i>	36
<i>DEPARTMENT OF CONSUMER AND BUSINESS SERVICES: BUILDING CODES DIVISION</i>	37
<u>6. FEDERAL</u>	37
<u>7. INTERGOVERNMENTAL</u>	37
<i>CITY/COUNTY JURISDICTION</i>	37
<i>ANNEXATIONS</i>	38
<i>CITY/STATE JURISDICTION</i>	38
<i>CITY/ STATE AGREEMENTS</i>	39
<u>8. TPR CONSISTENCY FINDINGS</u>	39
<i>INTRODUCTION</i>	39
<i>RELATIONSHIP TO TPR REQUIREMENTS</i>	39
<u>A-1. COOS COUNTY UGB STREET STANDARDS</u>	45
<u>A-2. STREET JURISDICTION CORRESPONDENCE</u>	46
<u>A-3. ODOT POLICY</u>	47
<u>A-4. LID SURVEY RESULTS</u>	48
<u>A-5. COUNTY ROADS</u>	49
<u>A-6. 1997-98 CAPITAL IMPROVEMENTS PLAN (CIP)</u>	50

P-1. PREFACE

The City of Bandon is developing a Transportation System Plan (TSP) with a grant from the Oregon Department of Transportation. The TSP will establish a system of transportation facilities and services adequate to meet the City of Bandon's identified transportation needs for the next twenty years. It will be consistent with the County TSP and adopted elements of the State TSP, and will meet the requirements of the Transportation Planning Rule (Oregon Administrative Rules, Chapter 660, Division 12). The planning work is being conducted by the City of Bandon Planning Department and JRH Transportation Engineering, with assistance from the Oregon Department of Transportation. The citizens of Bandon will play a significant role in development of the plan, and other agencies and service providers will be involved in the process to ensure plan consistency.

The plan and supporting information are being developed in seven reports that document the process followed to reach the final Transportation System Plan. The reports correspond to the major elements of the work program.

- Volume 1. Public Involvement and Interagency Coordination (PIIC).** This report outlines how the public will be involved throughout the planning process and how other agencies and service providers will be involved. The report describes the materials, publications, and meetings that will allow the City to disseminate information and receive input that will help shape the transportation system plan.
- Volume 2. Review of Existing Plans, Policies, and Standards.** This report identifies existing documents that establish policies, regulations, standards, and capital improvements planning that relate to Bandon's transportation system. The report includes a review of city, special district, county, state and federal documents.
- Volume 3. Inventory of the Existing Transportation System.** This report describes the existing transportation system in Bandon and various characteristics of the system.
- Volume 4. Transportation Needs Assessment.** This report identifies what aspects of the transportation system need to be addressed to meet the City's transportation needs for the next twenty years.
- Volume 5. Development and Evaluation of Alternatives.** This report provides alternative ways to address the identified needs. Of several alternatives, one will be selected and refined as the course the City will follow to meet its transportation needs.
- Volume 6. Transportation System Plan.** This report will establish how existing plans and implementing measures will be revised to carry out the preferred alternative. It will establish a program for development and conservation of the City's transportation system for the next twenty years.
- Volume 7. Implementation Element.** This report will provide information on the final plan and implementation element adoption. It will include information about compliance with procedural requirements for plan and ordinance adoption and will provide information on the final plan and implementation elements as adopted.

1. INTRODUCTION AND SUMMARY

INTRODUCTION

This report is Volume 2 of the seven volumes identified in the preface of this document, which together will comprise the Bandon Transportation System Plan (TSP). Transportation planning in Bandon occurs within a broad multi-jurisdictional framework of policy, regulation, and capital improvements programming. Volume 2 provides a summary of key documents that comprise the city, special district, county, state, and federal framework, identifying and summarizing the provisions of existing documents relevant to transportation planning in Bandon. These documents are collectively referred to as the 'planning documents' for ease of reference. The various documents relate to the TSP in a number of ways. While some documents provide information about the existing transportation system, Volume 2 focuses on the elements that guide and regulate the transportation system and its interface with land use. Inventory data which has been compiled in conjunction with public and private planning and development activities is addressed in Volume 3 of this plan.

The documents listed below generally fall into two categories: those which form the current system of local policy, regulation, and capital improvements programming; and those which provide guidance and requirements for revisions to that system. Only transportation-related provisions of the respective documents have been identified below. When provisions include detailed standards, they have generally been referenced and summarized in this report, rather than included in their entirety. However, in some instances, detailed provisions have been included to facilitate needs assessment which will occur in subsequent phases of the process. The report concludes with a matrix summarizing how local planning document provisions relate to the Transportation Planning Rule (TPR).

SUMMARY

Relationship Between Planning Documents

In 1991, the federal Intermodal Surface Transportation Efficiency Act (ISTEA) was enacted, which provided new requirements for the way states are to conduct transportation planning. The State of Oregon met these mandates through the adoption of the Oregon Transportation Plan in 1992, and through the adoption of modal plans. In 1995, the Department of Land Conservation and Development adopted the current Transportation Planning Rule that establishes requirements for local jurisdictions to adopt and implement Transportation System Plans (TSPs) that will become part of the state Transportation System Plan. As is true of any plan under the Oregon planning system, there must be consistency between the locally adopted TSP and the plans of other agencies, as well as internal consistency between the TSP and other plans and regulations of the jurisdiction adopting the TSP.

As shown in Figure 1.1, the Bandon TSP will be adopted as a component of the comprehensive plan. The comprehensive plan operates at the policy, physical plan, and implementation levels. The TSP will also operate at all three levels, as it is one component of the comprehensive plan.

Figure 1.1 also indicates that there is some need and opportunity to consolidate miscellaneous resolutions and ordinances into the comprehensive plan and land use ordinances.

This summary does not attempt to further summarize the individual provisions of each jurisdiction's planning documents. Instead, it summarizes the City's main transportation issues, the relationship between the city's policy and implementation measures, and the relationship between the City's documents and other jurisdictions' documents where relevant to issues of consistency.

City Issues

Bandon's transportation planning goal stresses safety, efficiency, and economy to meet transportation needs through an equitable and multi-modal system. In general, the City's policy documents focus on the following issues:

Citywide

1. Develop a street classification system and improvement standards which will be used as the basis for opening and vacating existing platted streets and rights-of-way, establishing improvement and access requirements for new streets, acquiring right-of-way, prioritizing maintenance and capital improvements, and determining appropriate financing methods and responsibilities for improvements.
2. Develop a bicycle and pedestrian system.
3. Minimize vehicular trips to the extent possible through alternative modes and travel demand management, including land use considerations.
4. Work toward further development of public transportation services, especially between Bandon and other cities.
5. Provide a transportation system suitable for emergency access and evacuation.
6. Provide for the needs of people with limited transportation choice and mobility.

Area Specific

1. Develop a parking plan for downtown
2. Provide attractive points of entry into the City on its major corridors.
3. Improve the safety of Highway 101 South between South City Limits and Seabird Drive.

Special Function

1. Maintain the Coquille River Estuary as a shallow draft port.
2. Protect the airport and approach surfaces from obstructions and incompatible uses, and encourage expanded commercial air service.

Comparison of City Documents

Policy

The City has addressed a number of transportation issues at the policy level, but the extent to which the policy has been implemented varies. To some extent, this can be explained by revisions to the comprehensive plan. The City's comprehensive plan is being updated, but the policy revisions have not yet been adopted. The subsequent action of implementation will depend on adoption of the policy element. Issue-specific policy has been adopted through a number of resolutions which depend on a specific approach to address the issue. It may be beneficial to establish the objectives and policies of these resolutions in the comprehensive plan so the issues may be considered in the context of a variety of alternative solutions in conjunction with other transportation issues.

For the 1997-1999 time period, the City has placed high priority on implementing and funding a program to maintain existing paved streets.

Physical Plan

Along with the comprehensive plan policy update, the future land use map is being revised to reflect the application of the policy. A draft of this map has been developed. In conjunction with the plan update, a Streets Committee conducted work on a street network and standards, which are also in the draft stage and have not been adopted. The street plan and land use plan build on one another. The draft street plan is available, and is generally reflected in the draft land use plan. Policy implementation is dependent on the application of policy through the physical plans.

Of particular note in the plans is the commercial designation of vacant land adjacent to Highway 101. This designation suggests a need for careful application of implementation measures to provide suitable access to these properties while maintaining the function of Highway 101.

Implementation

There do not appear to be conflicts between the City's policy documents and the implementing measures. However, the implementation measures do not currently appear adequate to carry out the full scope of policy. The City does not have a comprehensive set of access, improvement, and design standards for all new developments. Some standards are provided in the zoning ordinance which apply to all new developments, but in some cases, standards are only available through conditional use review or through the subdivision ordinance as it applies to newly platted land. Where lots have previously been platted, prior to City requirements for installation of improvements, local regulations do not provide for installation of the same improvements that would be required for development that occurs when land is subdivided, although the City has adopted improvement standards which are required to open a street. Some of the City's zoning provisions do require plan review for all new development; the CD (controlled development) zones provide for plan reviews, but without specific transportation criteria.

While not contradictory to stated City policy, the City Charter restricts the Council's approval of the use of medians on Highway 101 as a tool to address safety and capacity needs through access management.

Other Issues

The various agencies involved in or affected by Bandon's Transportation System Plan have established policy and implementation requirements with which the TSP must be consistent. The major issues for these agencies are summarized below.

The Port's plans call for the development of pedestrian and bicycle improvements in waterfront areas, and for maintaining the Coquille River Estuary as a shallow draft port.

The County transit plan is outdated, and is scheduled to be revised. Current funding levels threaten the continued operation of Bandon Dial-A-Ride. The program is pursuing development of intercity service, with intercity development project funding requested for 1999, 2000, and 2001.

The County's transportation policies and regulations are presently being reviewed in conjunction with the County TSP. In order to ensure consistency, the City will closely monitor development of the County's TSP as it progresses.

ORS and state building codes establish requirements for accessibility, including parking requirements and sidewalk ramp design.

The Transportation Planning Rule (TPR) requires access control measures, standards to protect future operation of roads, measures to protect public use airports, a process for coordinated review of land use decisions affecting transportation facilities, a process to apply conditions to protect transportation facilities, and regulations to provide notice for certain actions to public agencies providing transportation facilities and services. The TPR also requires adoption of regulations for safe and convenient bicycle, pedestrian, and vehicular circulation, including bicycle parking facilities, and provision of on-site and off-site bicycle and pedestrian routes. The TPR also requires standards to minimize pavement and right-of-way width to reduce excessive standards.

Most federal requirements are addressed through consistency with state requirements, but this may not be true for certain ADA requirements.

Comparison of City Documents to Other Documents

The City's policy and implementing measures do not appear to be in direct conflict with other agencies' policy or regulation, but there may be opportunities for the City to revise policy and regulations to more fully achieve the purposes of those requirements, which result in benefits to the City. In addition, there appear to be some gaps as the City's policies and regulations relate to the requirements of the Transportation Planning Rule; additional provisions may be necessary to comply with certain requirements of the rule.

The City and County should coordinate closely to address the access and movement functions of Highway 101 where adjacent vacant lands are planned for commercial use.

The funding for Bandon Dial-A-Ride faces an uncertain future. Bandon has stressed the importance of the service to the community. Funding must be stabilized before service considerations can be seriously addressed. Plans for development of intercity service are supported in the City's comprehensive plan.

The most significant shortcomings of the City's transportation policy and implementation measures relate to the implementation requirements of the Transportation Planning Rule. The City has not adopted specific access control measures, or standards to protect future operation of roads. The zoning ordinance does provide airport protection through an overlay zone, but will need to ensure that protection measures remain sufficient, especially if land use modifications are considered. The City does not have regulations to apply conditions to protect transportation facilities, unless the development is a conditional use or new subdivision, in which cases, there are no uniform standards. The City has some provision to notify transportation agencies of actions, but not a formal process for all potentially significant development.

Plan policies address some requirements for development of a pedestrian and bicycle system, but the physical plan must still be finalized and adopted. The City does not have requirements for bicycle parking. Policies address bicycle and pedestrian circulation in new developments, but appears to refer to new subdivisions. Clarification or modification of this policy may be necessary to reflect the need to apply standards when previously platted land is developed. There are no specific requirements for accessways in new developments such as shopping centers.

Finally, design standards that provide for reduction of pavement and right-of-way widths will be addressed as existing and proposed design standards are reviewed.



2. CITY OF BANDON

The City of Bandon manages its transportation system through a number of documents. The comprehensive plan establishes policy, which is implemented through regulations and capital improvements. The zoning and subdivision ordinances implement the regulatory policy, and the capital improvements plan establishes a schedule for construction of capital improvements. In addition, the city has prioritized goals and passed several separate resolutions and ordinances which also address the transportation system. A number of the ordinances reference a separate set of development standards or specifications for public improvements. Finally, a number of transportation issues have been addressed by the City to various degrees. Issues that have been discussed, but not incorporated into policy or regulation, are summarized.

CITY GOALS, 1997-1999

In March 1997, the Common Council held a goal setting session to establish priorities for 1997-1999. The Council identified eight priority goals for this period. The third goal addressed the importance of maintaining existing paved streets in the City.

Goal 3. Street Maintenance.

Implement and fund a program to maintain existing paved streets.



CITY OF BANDON 2010 COMPREHENSIVE PLAN - DRAFT

The Comprehensive Plan contains an inventory element, a policy element, and a future land use map that provides for specific application of policy. The implementation elements of the comprehensive plan are addressed under separate headings.

Volume I: Inventory and Analysis. The University of Oregon Community Planning Workshop prepared the draft inventory and analysis component of the City's plan, which was completed in June 1995. As of March 5, 1997, the City has not officially adopted Volume I of the plan. It provides a basis for the development of the policy element of the plan, which is discussed below. The inventory materials of Volume I of the Comprehensive Plan are discussed under Volume 3 of the Transportation System Plan.

Volume II: Goals, Objectives, and Policies. The City has prepared draft policy components of the plan and is presently in the process of revising policy and developing a future land use map. The transportation related goals, objectives, and policies listed below are taken from the last revision of the draft available as of March 5, 1997.

Future Land Use Map

The future land use map identifies general categories of land uses and densities, and highlights proposed arterial and collector components of the street network, based on work completed by a Streets Committee in 1995.

Transportation (revised 10/1/96)

Goal: A transportation system meeting the complete needs of individuals, businesses and institutions for the transport of people and goods, by multiple means, in a safe, efficient, and economical manner.

Objective 1: To prepare and adopt a Transportation System Plan by the May 8, 1997 State Transportation Planning Rule deadline.

Objective 2: To inventory parking and prepare a parking improvement plan for the Old Town business district.

- Objective 3: To inventory all platted streets in Bandon and determine which are opened, adopt an official open street map, and establish a clear process for opening streets and standards for improvement.
- Objective 4: To study and recommend streets for vacation.
- Objective 5: To establish a street system improvement program and update annually.
- Objective 6: To develop a system of sidewalks, walking paths, and bikepaths linking major areas of the City.
- Objective 7: To increase participation in regional and statewide transportation planning in order to ensure the City's access to all modes of transportation and to gain the maximum financial support possible.
- Objective 8: To establish and prioritize a street system improvement system in the 1996 year with a review schedule annually and to develop a complete system of sidewalks, walking paths and bike paths linking major areas of the City.
- Objective 9: To maintain the Coquille River Estuary as a shallow draft port.
- Objective 10: To minimize vehicular trips to the extent possible, given the practical opportunities for demand reduction and alternate modes of travel.
- Policy 1: The adopted street plan shall be used in right-of-way acquisition in the subdivision and development process.
- Policy 2: The City shall construct a storm drainage system to allow all streets to be drained and improved.
- Policy 3: The City shall require paved roads in all major developments, i.e. new subdivisions, Planned Unit Developments, mobile home parks, and all other housing developments.
- Policy 4: The City shall require the paving of streets adjacent to or providing access to major developments, as needed.
- Policy 5: The City shall encourage use of concrete construction for new or reconstructed streets wherever feasible to reduce long term maintenance cost.
- Policy 6: The City shall pay for improvements on collector and arterial streets only.
- Policy 7: The City shall encourage the use of local improvement districts for improvement of existing residential streets.
- Policy 8: The City will require limited or shared access points along major arterials, in order to facilitate safe access flows.
- Policy 9: The City shall establish a street improvement program for the transportation system which: (a) is subject to annual review; (b) is consistent with the land use policies of the comprehensive plan and other facility plans; (c) establishes a priority for improvements to the system; (d) provides for the needs of all modes within the rights-of-way; and (e) considers public economic benefits resulting from transportation improvements.

- Policy 10: Special attention should be given to major entryways into Bandon to ensure that they reflect and contribute to a positive and desirable image of the community. This will include tree planting requirements, the application of special buffer and setback conditions at the time properties abutting the highways develop, access limitations, signage, right-of-way acquisition, and other efforts to enhance the appearance and capacity of the US 101 and Highway 42S corridors.
- Policy 11: The City shall encourage better mass transportation service between Bandon and other cities.
- Policy 12: The City shall encourage the establishment of transportation systems and capabilities that will enable the transportation disadvantaged and adequate mobility.
- Policy 13: Special consideration in the design of the transportation system shall be given to the needs of those people who have limited choice in obtaining private transportation.
- Policy 14: The City shall encourage pedestrian safety by continued development of sidewalks and alternate routes for foot traffic.
- Policy 15: Development proposals shall be reviewed to assure the continuity of sidewalks, trails, bicycle paths, and pedestrian ways.
- Policy 16: The City shall encourage expanded commercial, certificated air service to the region.
- Policy 17: The City shall protect the Bandon State Airport from encroachment by incompatible uses. The land areas at the runway ends shall not be developed.
- Policy 18: The City shall coordinate its planning and land use activities with State Aeronautics Division and will comply with the Federal Standards for Airports.
- Policy 19: The City shall work with the Port of Bandon and other agencies to improve, maintain and develop the Coquille River Estuary in keeping with its designation as a shallow-draft development estuary.

Public Facilities and Services (revised 1/8/97)

- Goal: A system of public facilities and services which provides an optimum level of service to Bandon urban area residents, and which is well coordinated with the development plans and policies of the City.
- Objective 3: To ensure appropriate development potential in Bandon by timing the extension of streets and water, sewer, and electric services so as to encourage orderly development.

Policy 12: A five year capital improvement program shall be developed and reviewed annually. The program should address the following needs to meet future growth and maintain existing facilities and services: water facilities, sewerage facilities, storm drainage system, City buildings, street system, and recreational facilities. The program should also specify the location of the proposed improvements and the priority and general timing of those improvements.

Housing (revised 2/10/97)

Policy 6: The City shall continue to periodically review the immediate and long term effects of fees, charges, regulations, and standards on dwelling costs.

Policy 8: Residential developments which incorporate pedestrian and bikeway paths to connect with activity area such as schools, commercial facilities, parks, and other residential areas shall be encouraged.

Economy (revised 2/10/97)

Policy 4: The cluster development of commercial and industrial uses shall be encouraged.

Policy 6: The City of Bandon shall encourage industrial uses to locate adjacent to the airport, east of US 101, and in other industrial areas through the proper designation on the comprehensive plan and zoning maps.

Hazards (revised 2/10/97)

Policy 3: The City shall integrate slope sensitive development standards in the Zoning and Subdivision Ordinance.

Policy 4: Developers of property lying within a landslide area, or identified as a flood hazard, shall be required to post a 100% performance bond guaranteeing that specified conditions will be met and appropriate safeguards provided.

Policy 5: A natural disaster emergency response plan, including evacuation routes and procedures, shall be maintained by the City.

Open Space and Recreation (revised 2/10/97)

Objective 2: To enhance and beautify the entrances to the City.

Policy 4: The City shall promote the continued development of bicycle and pedestrian paths which link open spaces.

Urbanization (revised 1/8/97)

Objective 4: To encourage development first within areas already served by public facilities.

Policy 4: Land within the urban growth boundary shall be made available for development only with concurrent provision of key urban facilities and services.

Environmental Quality and Quality of Life (no revision date)

Policy 5: The City shall maintain needed public facilities for its residents. Financing for needed improvements will use federal and state grants and loans as well as local funds and private funds as available. Where development requires extension or expansion of public facilities, the City shall require the developer to pay for the portion of the costs associated with that development

Land Use Plan and Policies (revised 3/5/97)

Policy 15: An adequate level of urban services shall be provided prior to, or concurrent with, all proposed residential development. Services shall include, but not be limited to:
(C) Streets within the development and providing access to the development, improved to City standards (as required).

Special Protection Areas (revised 3/5/97)

Objective 6: To especially encourage walking and bicycling as transportation modes in the Special Protection Areas.

**CITY OF BANDON ZONING ORDINANCE (ORD. NO. 1336, AMENDED)**

The zoning ordinance addresses the transportation system in a number of areas. The density and uses permitted in various zones will have a direct impact on traffic patterns and volumes. In addition, the ordinance specifically provides for the protection of the airport, establishes the authority to impose conditions on certain land uses which may have impacts on traffic safety or operation, establishes standards for off-street parking, provides for vision clearance, and establishes general standards for access.

Article VI. Overlay Zones.

Summary: Overlay zones provide additional regulatory standards for certain special areas based on the presence of unique natural or built elements which require special consideration. Only transportation specific overlay zones have been addressed below.

Section 6.600-6.660. Airport Overlay Zone.

Summary: The airport overlay zone provides regulations to prevent the establishment of air space obstructions in airport approaches and the surrounding area through height restrictions and other land use controls.

Article VII. Conditional Uses.

Summary: This article provides regulations governing conditional uses which are specifically listed by zone in other sections of the zoning ordinance.

Section 7.000. Conditional Uses: Authorization to Grant or Deny Conditional Uses.

Summary: This section recognizes that certain conditional uses may be appropriate in the various zoning districts, but may have characteristics which would not be compatible with other uses in a zone, either due to the nature of a conditional use or its location in relation to other uses or public facilities. Transportation issues specifically listed which could result in denial of a conditional use or imposition of conditions include 'the creation of traffic hazards or parking problems or other adverse conditions which may be injurious to the public safety, welfare, comfort, and convenience.'

Section 7.010. Conditional Uses: Authorization to Impose Conditions.

Summary: This section identifies the purpose of imposing conditions, and identifies some of the conditions which may be imposed.

(Transportation-related) conditions may include but are not limited to: (3) Controlling the location and number of vehicle access points; (4) Requiring additional right-of-way areas or changing the street width; (5) Requiring public improvements including, but not limited to, streets, sidewalks, sewer and water line extensions, and bikepaths; (6) Changing the number of off-street parking and loading spaces required.

Article VIII. Off-Street Parking and Loading.

Summary: This article provides requirements for the number of required parking spaces for various uses, design requirements for parking lots, and other provisions regulating parking.

Section 8.010 establishes the minimum required number of parking spaces for various uses.

Section 8.020 establishes requirements for off-street loading of passengers and merchandise.

Section 8.030 establishes general provisions, including parking lot design standards and requirements for joint use of parking. Parking lot design standards include provisions regulating surfacing, screening, lighting, circulation, vision clearance, stall size, location, and access to public streets. The standards require compliance with State requirements for handicapped parking.

Article IX. Supplementary Provisions.

Summary: This article provides miscellaneous regulations that apply to uses in all zones. Transportation related provisions address visibility and access to highways and arterials.

Section 9.010. General Provisions Regarding Accessory Uses.

(1) Sight-obscuring fences, when located within required front and side yards abutting a street other than an alley shall not exceed two and one-half feet in height measured from the curb elevation. When no curb elevation has been established, the height shall be measured from the established center line grade of the street abutting the yard concerned.

Section 9.070. Access. All lots shall abut a street other than an alley for a width of at least 25 feet.

- (1) The number of access locations onto highways and arterial streets from any development shall be minimized whenever possible through the use of common driveways or side streets common to more than one development and interior vehicle circulation design.
- (2) Highway access shall be coordinated with the Oregon Department of Transportation.

Section 9.080. Vision Clearance Area. No vision clearance area shall contain plantings, walls, structures or temporary or permanent obstructions exceeding two and one-half feet in height measured from the top of the curb, or where no curb exists, from the established street center line grade. Vision clearance areas shall be established at intersections as follows:

- (1) In a residential zone, the distance determining the size of a vision clearance area shall be 30 feet, except that when the angle of intersection between streets is less than 30 degrees, the distance shall be 40 feet.
- (2) In all other zones, the distance determining the size of a vision clearance area shall be 15 feet, except that when the angle of intersection between streets is less than 30 degrees, the distance shall be 25 feet.

**CITY OF BANDON SUBDIVISION ORDINANCE (ORD. NO. 934, AMENDED)**

The Subdivision Ordinance addresses the location, design, and improvement standards for public and private improvements, including streets, sidewalks, and bikeways in new subdivisions, partitions, and planned unit developments. It also addresses the creation of streets outside of subdivisions. In some instances, the ordinance references other standards which are addressed under separate headings below. The ordinance also regulates the layout of lots and blocks, which directly impacts the transportation system. Finally, the ordinance identifies the effect of approving a plat.

Subdivision Plat

Section 18. Approval of the Plat. The approval of the plat does not constitute or effect an acceptance by the public of the dedication of any street or other easement shown on the plat.

Approval of Partitions

Section 20. Creation of a Public Street Outside a Subdivision.

Summary: The Planning Commission may approve a public street outside a subdivision, by deed, without full compliance with the regulations applicable to subdivisions provided certain conditions exist. In approving the creation of a street, the Planning Commission may impose conditions necessary to preserve the standards of the subdivision ordinance.

Section 21. Creation of a Private Street Outside a Subdivision.

Summary: The Planning Commission may approve a private street outside a subdivision, by deed, only if it is necessary to provide access to an unusually deep parcel that may be partitioned into not more than two parcels.

Planned Unit Development (as amended by Ordinance 1365)

Section 22A. PUD Approval Criteria.

(9) Public Utilities, Services, and Access. PUD shall be approved only where facilities such as public water, sewer lines, and roads external to the PUD have sufficient capacity to service the proposed development unless the developer is willing to bear the cost of improving the external facilities.

(12) Parking Requirements. Parking requirements shall be subject to Section 8.000 through 8.010, Bandon Zoning Ordinance

(19) Public Road and Street Standards. If streets and improvements within a PUD are to be conveyed to the City, they must conform to City standards. If streets and improvements are not conveyed to the City or other public agency, they will be conveyed to the Homeowners Association.

Improvement Guarantee

Section 27. Streets. (1)-(13).

Summary: This section provides regulations for the location, width, and grade of streets; minimum right-of-way and roadway width; reserve strips; alignment; future extension of streets; intersection angles; existing streets; half streets; cul-de-sacs; street names; grades and curves; marginal access streets; and alleys.

(1) **General.** The location, width, and grade of streets shall be considered in their relation to existing and planned streets, to topographical conditions, to public convenience and safety, and to the proposed use of land to be served by streets. The street system shall assure an adequate traffic circulation system with intersection angles, grades, tangents, and curves appropriate for the traffic to be carried considering the terrain. Where location is not shown in a development plan, the arrangement of streets shall either:

(a) Provide for the continuation or appropriate projection of existing principle streets in surrounding areas; or

(b) Conform to a plan for the neighborhood approved or adopted by the Planning Commission to meet a particular situation where topographical or other conditions make continuance or conformance to existing street impractical.

(2) **Minimum right-of-way and roadway width.** Unless otherwise indicated on the development plan, the street right-of-way and roadway widths shall not be less than the minimum width in feet shown in the following tables:

Type of Street	Minimum ROW Width (a)	Minimum Roadway Width
Arterial	100 feet	varies (b)
Collector Street	80 feet	varies (b)
Service and Industrial Streets	80 feet	varies (b)
Continuous Minor Street	80 feet	varies (b)
Minor Streets < 1,800' in length which cannot be extended	50 feet	(c)
Radius for turnaround at end of cul-de-sacs	50 feet	40 feet
Alleys	20 feet	20 feet

- (a) Exclusive side slope easements which may be required in addition for cuts and fills in rough terrain.
- (b) Width standards will be defined in improvement specifications adopted by the City.
- (c) In multi-family residential areas, the roadway shall be 36 feet.

Where conditions, particularly topography or the size or shape of the tract, make it impractical to otherwise provide buildable sites, narrower right-of-way may be accepted, ordinarily not less than 50 feet. If necessary, slope easements may be required.

- (3) **Reserve strips.** Reserve strips or street plugs controlling access to streets will not be approved unless necessary for the protection of public welfare or of substantial property rights and in these cases may be required.
- (4) **Alignment.** As far as is practical, streets other than minor streets shall be in alignment with existing streets by continuations of the center lines thereof. Staggered street alignment resulting in "T" intersections shall, wherever practical, leave a minimum distance of 200 feet between the center lines of street having approximately the same direction, and, in no case, shall be less than 125 feet.
- (5) **Future extension of streets.** Where necessary to give access to or permit a satisfactory future division of adjoining land, streets shall be extended to the boundary of the subdivision or partition and the resulting dead-end streets may be approved without a turnaround. Reserve strips and street plugs may be required to preserve the objectives of street extension.
- (6) **Intersection angles.** Street shall be laid out to intersect at angles as near to right angles as practical except where topography requires a lesser angle, but in no case shall the acute angle be less than 80 degrees unless there is a special intersection design. An arterial or collector street intersecting with another street shall have at least 100 feet of tangent adjacent to the intersection unless topography requires a lesser distance. Other streets, except alleys, shall

have at least 50 feet of tangent adjacent to the intersection unless topography requires a lesser distance. Intersection which contain an acute angle of less than 80 degrees or which have an arterial street shall have a minimum corner radius sufficient to allow for a roadway radius of 20 feet and maintain uniform width between the roadway and the right-of-way line.

Ordinarily, the intersection of two or more streets at any one point will not be approved.

- (7) **Existing streets.** Whenever existing streets adjacent to or within a tract are of inadequate width, additional right-of-way shall be provided at the time of land division.
- (8) **Half street.** Half streets, while not generally acceptable, may be approved where essential to the reasonable development of the subdivision or partition when in conformity with the other requirements of these regulations and when the Planning Commission finds it will be practical to require the dedication of the other half when the adjoining property is divided. Whenever half a street is adjacent to a tract to be divided, the other half of the street shall be provided within such tract. Reserve strips and street plugs may be required to preserve the objective of half streets.
- (9) **Cul-de-sac.** A cul-de-sac shall be as short as possible and shall have a maximum length of 400 feet and serve building sites of not more than 18 dwelling units. A cul-de-sac shall terminate with a circular turnaround.
- (10) **Street names.** Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with any existing street. Street names and numbers shall conform to the established pattern in the City and shall be subject to the approval of the Planning Commission.
- (11) **Grades and curves.** Grades shall not exceed six percent on arterials, ten percent on collector streets, or twelve percent on other streets. Center line radii or curves shall not be less than 300 feet on major arterials, 200 feet on secondary arterials, or 100 feet on other streets, and shall be to an even ten feet. Where existing conditions, particularly topography, make it otherwise impractical to provide building sites, the Planning Commission may accept steeper and sharper curves. In flat areas, allowance shall be made for finished street grades having a minimum slope, preferably, of at least 0.5 percent.
- (12) **Marginal access streets.** Where a land division abuts or contains an existing or proposed arterial street, the Planning Commission may require marginal access streets, reverse frontage lots with suitable depth, screen planting contained in a non-access reservation along the rear or side property line, or other treatment necessary for adequate protection of residential properties, and to afford separation of through and local traffic.
- (13) **Alleys.** Alleys shall be provided in commercial and industrial districts, unless other permanent provisions for access to off-street parking and loading facilities are approved by the Planning Commission. The corners of alley intersections shall have a radius of not less than 12 feet.

Section 28. Blocks.

(2) Size. Summary: Blocks must be not exceed 1,000 feet in length unless adjacent to an arterial or justified by topography. The recommended minimum block length along an arterial is 1,800 feet.

(3)(c) Easements: Pedestrian and bicycle ways. When desirable for public convenience, a pedestrian or bicycle way may be required to connect a cul-de-sac or pass through an unusually long or oddly shaped block or otherwise provide appropriate circulation.

Improvements

Section 35. Specifications for Improvements. The City Administrator shall prepare and submit to the City Council specifications to supplement the standards of this ordinance based on engineering standards appropriate for the improvements concerned. Specifications shall be prepared for the design and construction of the required public improvements, such other public facilities as a developer may elect to install, and private streets.

Section 36. Improvements in Subdivisions.

(1) Streets. Public streets, including alleys, within the subdivision and public streets adjacent, but only partially within the subdivision shall be improved. Catch basins shall be installed and connected to drainage tile leading to storm sewers or drainage ways.

(5) Sidewalks. Sidewalks shall be installed on both sides of a public street and in any special pedestrian way within the subdivision, except that in the case of primary or secondary arterials, or special type industrial districts, the Planning Commission may approve a subdivision without sidewalks if alternative pedestrian routes are available; and provided further, that in the case of streets serving residential areas having single-family dwellings located on lots equivalent to two and one-half or less dwellings per gross acre, the requirements of sidewalks shall not apply, provided there is no evidence of special pedestrian activity along the streets involved.

(6) Bicycle Routes. If appropriate to the extension of a system of bicycle routes, existing or planned, the Planning Commission may require the installation of separate bicycle lanes within streets and separate bike paths.

(7) Street Name Signs. Street name signs shall be installed at all street intersections.

(8) Street Lights. Street lights shall be installed and shall be served from an underground source of supply.

Section 37. Improvements in Partitions. The same improvements shall be installed to serve each building site of a partition as is required of a subdivision.



MISCELLANEOUS DESIGN STANDARDS, IMPROVEMENT PROCEDURES AND CONSTRUCTION SPECIFICATIONS

Certain provisions of City ordinances reference improvement specification documents, rather than establishing standards within the ordinance. In this section, terminology is clarified, ordinance references to specifications are listed, and specification documents are discussed.

Terminology

Some planning documents use varying terminology to reference the following items. Refinement of terms may be necessary to clarify which item a document references. To eliminate confusion, the term ‘improvement standard’ is not used in this section, because it creates confusion in distinguishing between various items. The terms ‘design standard’, ‘improvement procedure’, and ‘construction specification’ are used instead.

Design standards relate to the operation, function, and quality-of-life characteristics of a system. They specify how design elements such as number of travel lanes, on-street parking, sidewalks, bike lanes, street furniture, and landscaping, should be applied in various situations. Design standards may also identify specific treatments for required items such as paving surface, catch basins, and ramps, in order to address aesthetics and to facilitate travel by bicycles, wheelchairs, and pedestrians. They are predominantly local standards based on the preferences of the City.

Improvement procedures include requirements for preparing plans, obtaining permits, receiving inspections and providing financial guarantees.

Construction specifications relate to the physical performance of the required improvements. They specify how the design elements must be constructed to provide the desired design life in relation to environmental and use characteristics. They specify materials, components, sizes, compactions, etc., for construction of the required design elements. They do not specify which elements are required for a given location, but specify how the required elements should be constructed. Construction specifications are typically based on engineering principles, and, therefore, they are usually standardized beyond the local level.

References to Documents Containing Specifications and Standards

Reference 1. Subdivision Ordinance Section 27(2).

Summary: States that for certain street types, width standards will be defined in improvement specifications adopted by the City.

Reference 2. Subdivision Ordinance Section 35. Specifications for Improvements.

Summary: Requires the City Administrator to prepare and submit to City Council specifications to supplement the standards of the ordinance based on engineering standards appropriate for the improvements concerned. Requires that specifications be prepared for the design and

construction of required public improvements, other public facilities a developer may elect to install, and private streets.

Reference 3. Ordinance 959.

Summary: States that sidewalks shall be constructed, altered, and repaired to standards adopted by City Council.

Reference 4. Ordinance 1338, as amended by Ordinance 1341.

Summary: Prohibits opening of streets unless fully improved in accordance with Ordinance No. 934 (which references improvement specifications). Requires streets under exceptions process to be constructed in accordance with City standards for gravel road construction and dimensions.

Local Design Standards and Improvement Specification Documents.

Bandon Streets Committee Recommended Standards. (Design Standards)

A Streets Committee was formed in 1994 to develop a street plan in conjunction with the Comprehensive Plan update. The plan included a functionally classified street system and design standards for the classified street types. The committee developed standards which specified requirements for right-of-way width, travel lane width, on-street parking location and width, curb and gutter, bike lane location and width, sidewalk location and width, and turnaround radius. The street plan was presented to the Planning Commission, which incorporated the recommendations into the draft Comprehensive Plan. As of March 10, 1997, the City has not formally adopted design standards for the classified street types. The standards are scheduled for adoption in conjunction with the adoption of the Comprehensive Plan.

APWA Oregon Chapter 1990 Standard Specifications for Public Works Construction, with September 19, 1996 Updates. (Construction Specifications)

The City Engineer has recommended that the City use the APWA Specifications for public works construction. The City adopted the standards by Ordinance 1355, on February 20, 1996.

Resolution 91-38. (Design Standards)

Summary of Standards: Establishes minimum construction standards required to open platted, unopened streets, which are not collectors or arterials, which serve only single-family dwellings. Minimum street construction standards for any other use other than single family-dwellings and for collectors and arterials are determined on a case-by-case basis.

Resolution 93-32. (Design Standards)

Summary of Standards: Requires all newly opened streets to be improved with curbs, gutters, sidewalk, drainage, fixtures, and utilities.

Ordinance 1338, as Amended by Ordinance 1341. (Design Standards and Construction Specifications)

Summary of Standards: In order to open a new street, the ordinance requires full improvement with paved surface, curbs, gutters, sidewalk, drainage, fixtures, and utilities. Exceptions are provided for certain unopened streets platted prior to June 7, 1993. The ordinance establishes requirements for streets eligible for exceptions. The ordinance references City standards for gravel road construction and dimensions (presumably Resolution 91-38 at present).

**EXISTING FINANCING MECHANISMS AND REVENUE SOURCES**

The City of Bandon presently uses the following revenue sources and financing mechanisms to pay for transportation improvements and services.

General Fund

General Fund revenues come from a variety of sources including property taxes, utility taxes, transient occupancy taxes, franchise fees, building permits, planning permits, other permits and fees, intergovernmental transfers, police and court fines, reimbursements, and other miscellaneous sources. 1997-98 budgeted general fund expenditures for the street department totaled \$60,789. In the three previous years, the total gradually declined from \$72,277 to \$55,550, before increasing for 1997-98. 1997-98 budgeted capital expenditures totaled \$16,519. In 1997-98, \$10,719 was budgeted for street and drainage capital projects for repairs from flood damage. Aside from flood repairs, in 1997-98 and the three previous years, none of the capital expenditures amount went toward materials or labor for streets and drainage capital projects. General fund materials and services expenditures have been used toward street and drainage maintenance materials and pothole repair.

State Tax

The City receives state revenues which are budgeted in the State Tax Street Fund and the State Revenue Sharing Fund.

The State Tax Street Fund includes revenue from various sources, with the major component typically coming from the State Street Tax. Bandon's 1997-98 revenue from the Street Fund was \$130,800 with a beginning balance of \$25,000 for a total revenue of \$155,800, with \$128,200 coming from the Street Tax and \$2,600 from interest. The Street Tax and interest have been a stable source of income, while other revenue from the State Tax Street Fund varies. The Street Tax has increased gradually from \$110,699 in 1994-95 to the current total. The fund has been used primarily toward personal services to operate the department. Capital expenditures from the State Tax Street Fund have not been used extensively for street, drainage, or sidewalk improvements. After three years of no expenditure for street construction, \$10,200 is budgeted for 1997-98. After two years of no expenditure for sidewalk construction, \$1,180 was budgeted for two consecutive years. After drainage expenditures of \$4,821 in 1994-95, there have been no drainage expenditures for three years.

The State Revenue Sharing Fund provided \$14,250 in revenue in 1997-98, and varied from \$16,184 to \$13,374 in the three previous years. The revenue plus the beginning fund balance provides \$16,000 in revenue from this fund for 1997-98. Of this, \$12,500 was budgeted for expenditures for pothole repair, and \$3,500 for Dial-A-Ride. Transfers from this fund to the general fund have been used for pothole repair in previous years.

Capital Improvement Fund

The capital improvement fund includes revenue from a variety of sources. This fund has been the city's main funding source for street and drainage capital projects. In general, it is City policy that the City does not pay to pave unpaved streets. New paving projects are only undertaken by developers and Local Improvement Districts, except in a few instances, where a project is in the public interest, and would primarily serve a public other than those that would be assessed through an LID. Therefore, the City's use of this fund would be for repair and maintenance projects on paved or gravel streets, but not for upgrading gravel streets to paved streets. The fund built up a small reserve through carryover in previous years, adding a beginning balance of \$210,000 to new revenues of \$350,435 for a total of \$560,435 in 1997-98. Only utility sales and interest have provided a relatively constant source of revenue for this fund in the range of \$80,000 to \$90,000 in previous years, while other sources have fluctuated. \$205,500 is scheduled for street and drainage capital improvements for 1997-98, including major improvements on Franklin Avenue, Beach Loop Drive, and 1st Street NE. This expenditure in combination with other expenditures from the fund are projected to exhaust the remaining revenue in the fund. It is expected to take a number of years to build up the fund before other significant capital projects could be undertaken.

System Development Charges (SDCs) and the Street SDC Fund

SDCs are governed by ORS 223.297-314. The City presently has two ordinances, Ordinance 1327 and Ordinance 1328, addressing system development charges in accordance with the statutory provisions. Ordinance 1327 establishes the system development fee, and Ordinance 1328 shows the methodology used to determine SDCs. The Capital Improvement Plan for the establishment of systems development charges was prepared by Gary L. Dyer Consulting Engineers in June, 1991. Ordinance 981, adopted in 1993, changed the System Development Fee, and this fee has been retained in Ordinance 1327. The current street system development fee (including drainage) is \$1,333.34 per equivalent dwelling unit (EDU), based on a new lane mile cost of \$854,158.21.

The System Development Charge (SDC) Fund provides revenue from fees for new development, and related revenue. This source of revenue is dependent upon development activity levels in the community. The fund can only be used toward projects identified in the SDC Capital Improvement Plan. The fund has built up some reserves in previous years, adding a beginning balance of \$140,000 to budgeted revenue of \$66,000 dollars for a total of \$206,000 budgeted to be fully expended in 1997-98. \$146,000 is targeted for specific street and drainage projects. New revenues in the past three years have ranged from an expected low of \$33,500 in 1996-97 to a high of \$99,927 in 1995-96.

Local Improvement Districts and the LID Fund

The City recently repealed its old LID ordinance and adopted a new one. Ordinance BOR-010 repealed Ordinance 842. It provides for the creation of local improvements districts to comply with Article XI, Section 11b, of the Oregon Constitution.

Local Improvement District (LID) funds are dedicated to specific projects for which benefited property owners are assessed for the benefit resulting from the improvements. LIDs have not been used extensively in Bandon for street and drainage capital projects. In large part, this has been due to lack of property owner interest in participating in LIDs.

In 1996, the City and numerous volunteers conducted a survey of Bandon property owners to identify neighborhoods that would be interested in upgrading their streets through the use of Local Improvement Districts. 2,369 surveys were sent to property owners, and a total of 1,090 survey forms were returned, for a response rate of 46%. The responses are summarized below:

Yes	262
No	816
<u>Response Unclear</u>	<u>12</u>
Total	1,090

Several neighborhoods had clusters of property owners who returned positive responses. These are provided along with a summary of responses by assessor's map number in Appendix A-4.

Neighborhood Improvement Districts (NIDs)

Ordinance 1366 establishes a process for forming Neighborhood Improvement Districts for the purpose of providing a simple, cost-effective mechanism for residents who desire to voluntarily participate in, and fund, infrastructure improvements projects in their neighborhood. NIDs have already been used for street graveling projects.

State Grants

Each year, the City applies for grants for transportation improvements through a competitive grant process. The City has applied for grants through a number of programs.

The City has applied for bike and pedestrian improvements through ODOT's Bike and Pathway Program for improvements to 11th Street, but has not been awarded a grant through this program.

The Small City Allotment program awards a maximum grant of \$25,000. The City was recently awarded a grant through this program which was used for the Baltimore and 9th Street SE street improvement project.

Revenue Bonds and General Obligation Bonds

Bonds have not been used as a funding source for street and drainage capital projects.

Developer Installed Improvements

Developers of new subdivisions and major development projects are required to install improvements in conjunction with those projects. The Subdivision Ordinance provides specific requirements for improvements that must be installed in conjunction with a subdivision. The zoning ordinance authorizes the City to require improvements with certain major developments.

State Projects

Major projects on Highway 101 and Highway 42S are undertaken by ODOT. These projects are scheduled in the STIP, which is described in more detail in this report.

ODOT has recently begun a program of subcontracting projects to local jurisdictions for certain projects. The City is installing sidewalks on a portion of Highway 101 through this program.



BANDON CAPITAL IMPROVEMENTS PLAN

The City of Bandon adopted a Capital Improvements Plan (CIP) as part of the 1997-98 budget. The Plan identifies annual street improvement projects through fiscal year 2000-2001. The projects are prioritized with a 4 point rating system. 1=urgent, 2=priority, 3=necessary, 4=contingent, C=completed. The CIP is provided in Appendix A-6.



BANDON STREETS DEPARTMENT BUDGET AND STAFFING

This section identifies the budgeting and man-hours attributed to streets. The street and drainage maintenance activities are funded primarily by the General Fund and the State Tax Street Fund. Most major capital improvement projects are funded from the Capital Improvement Fund, the Street SDC Fund, and through grants where available. The FY 1997-98 Budget Message includes the following summary the Street Department budget:

The basic operation of the Street Department is funded primarily from the State Tax Street Fund (210), with some funding from the General Fund (100) and the Street SDC Fund (710). Although the operation and maintenance budget is not much different from last year, the proposed budget includes a significant increase in capital improvements. The City has not had enough money in the past to properly maintain its existing paved streets. Therefore, the City is preparing a Transportation System Plan which will serve as the basis for long-term street improvement and maintenance planning. To be able to maintain some of our most used, but severely deteriorated streets, they must be brought up to a "maintainable" condition before they are completely destroyed. Therefore, the proposed budget includes a significant amount of funding from the Street SDC Fund (710) and the Capital Improvement Fund (510) to repair, overlay, and improve drainage on portions of

Beach Loop and Franklin Avenue (GOAL #3: Street Maintenance). In addition, funds have been budgeted for installing new aluminum signs (to replace the existing wooden street signs) at approximately half of the locations where they are needed. The remainder would be replaced next year.

The City of Bandon Public Works Department includes four personnel responsible for streets, water distribution, wastewater collection, and parks and recreation. Full time equivalent positions for streets include .4 FTE Supervisor for 95-96, 96-97, and 97-98, and 2.0 FTE Laborers for 95-96, 96-97, and 97-98. The 1997-98 public works budget is \$1,057,428. The Streets budget, including drainage, comprises 60.43% of the budget, or \$638,989.

Item	Fund	Adopted		
		1995-96	1996-97	1997-98
Materials and Services		91,087*	70,298*	73,270*
Contr. Svcs.-Engineering	100-30-661	0	5,000	
Street Drainage/Maint Matls	100-30-703	0	10,000	12,000
Traffic Safety Supplies	100-30-706	4,000	4,000	4,000
Pot Hole Repair	100-30-711	14,200	14,400	0
Pot Hole Repair	260-00-711	-	-	16,000
Consult. Svcs.- Engineering	210-00-660	25,000	5,000	5,000
Street Maintenance	210-00-703	27,387	7,998	8,000
Public Works Permits	100-90-737	0	5,000	0
Capital		84,250*	1,180*	447,299*
CIP-FEMA Damage Projects	100-00-000	-	-	10,719
Major Equipment	100-30-750	8,000	0	-
Major Equip.- Lease Purchase	510-00-790	-	-	7,713
Major Equipment	210-00-750	62,750	0	-
Major Equip.- Lease Purchase	510-00-791	-	-	47,187
Minor Equipment	100-30-757	3,500	0	5,800
CIP- Signs	210-00-000	-	0	13,000
Street Construction	210-00-775	10,000	0	10,200
Sidewalk Construction	210-00-781	0	1,180	1,180
CIP- Street & Drainage	510-00-000	-	0	205,500
CIP- Street & Drainage	710-00-000	-	0	146,000
Contingency		0*	0*	13,707*
Contingency	210-00-980	0	0	13,707
TOTAL STREETS		291,774*	181,165*	638,989*

*Totals may not be the sum of the items shown, because most vehicle & office materials are not shown as line items in this report.

CITY OF BANDON 1981 CHARTER (AS AMENDED MARCH, 1996)***Chapter IX. Public Improvements.***

Section 38. Improvements. The procedure for making, altering, vacating, or abandoning a public improvement shall be governed by general ordinance, or to the extent not so governed, by the applicable general laws of the State. Action on any proposed public improvement shall be suspended for six months upon a remonstrance thereto by the owners of two-thirds of the land to be specially assessed therefor.

Chapter X. Miscellaneous Provisions.

Section 46. Parkway. The City Council shall not approve, nor take any action which would consent to, construction of a parkway on Highway 101 in Bandon. "Parkway" is defined for purposes of this section as a divided highway with travel lanes separated by a continuous raised or painted center median strip that limits left hand turn access. (As added by election held March 23, 1993, by a vote of 618 Yes to 473 No.)

**MISCELLANEOUS RESOLUTIONS*****Resolution 91-38. A resolution establishing a policy and standards for opening City rights-of-way.***

Summary: Establishes minimum standards for opening unopened platted streets for construction of single-family dwellings only; states that construction standards for any other use, other than for single-family dwellings or for collector or arterial streets shall be determined by the Council on a case by case basis.

Resolution 93-32. A resolution establishing a policy for improving streets to be opened.

Summary: Appears to supersede Resolution 91-38; requires that no public street shall be opened unless it is improved with paved surface, curbs, gutters, sidewalk, drainage, fixtures, and utilities.

Resolution 96-30. A resolution supporting improvements on Highway 101 south of Bandon.

Summary: Describes safety concerns related to that portion of Highway 101 between south City Limits and Seabird lane, suggests means to address safety concerns, and requests that ODOT implement these solutions.



MISCELLANEOUS ORDINANCES

Ordinance 959.

An ordinance regulating the construction, alteration and repair of sidewalks.

Summary: Assigns responsibility to adjoining property owners to maintain and repair sidewalks; assigns liability to adjoining property owners; states that sidewalks shall be constructed, altered, and repaired to standards adopted by City Council (standards not provided); establishes procedure for construction and repair of sidewalks.

Ordinance 1338, as amended by Ordinance 1341.

An ordinance regulating street work in the City of Bandon by owners of adjacent property or other interested persons.

Summary: Establishes procedures for performing street work; prohibits opening of street unless fully improved with paved surface, curbs, gutters, sidewalk, drainage, fixtures, and utilities in accordance with Ordinance 934, or as modified by ordinance; allows for variance from the requirements if portion of street is not suitable for opening and improving for public use or it is not necessary that grade be formally established, allows for conditions in granting variance.

Ordinance 1350.

An ordinance establishing procedures for making excavations and undertaking work in streets, alleys and other rights-of-way; providing for public works permits; requiring performance bonds or cash guarantees; and establishing penalties.

Summary: Appears to overlap on certain provisions with Ordinance 1338; requires permits and establishes procedures for excavation work undertaken in public rights-of-way.

Ordinance 1379.

Public Rights-of-Way.

Summary: Establishes City jurisdiction and regulatory control within right-of-way; does not constitute official acceptance of right-of-way and does not obligate City to maintain or repair any part of the right-of-way.



OTHER MISCELLANEOUS DOCUMENTS

The City has had a number of ongoing discussions regarding open streets, maintenance, use of right-of-way, improvement standards, jurisdiction, establishing street grades, truck routes, etc. Some of these issues have been ongoing since at least 1979. Some issues have been resolved through the adoption of resolutions or ordinances, and some of the policy and law has been

revised after being implemented. Rather than address all records on file regarding these issues, the major points and their resolutions to date are summarized.

Open Streets, Street Maintenance

The City has addressed relationship between opening streets and maintaining streets, but has not clarified whether it will maintain all open streets. The City has not formally classified streets as open or maintained.

The City has addressed standards which must be met prior to opening streets. Standards recommended by Streets Committee were not adopted; City apparently wishes to revise requirements for standards of existing streets which provide access to properties, but which have not been officially opened; City apparently wishes to revise requirements for standards for new streets and reconstructed streets.

Truck Routes

The City has addressed issue of log and lumber trucks on local streets. The Common Council reviewed a proposed ordinance to limit trucks on local and residential streets, but elected not to adopt the ordinance. The issue has again been raised by residents since that time.

Street Committee Recommendations- Proposed Local Street Network and Street Standards

The Streets Committee has developed a proposed street network by functional class and design standards by functional class. The classification plan and standards have not been adopted, but have been incorporated into the draft Comprehensive Plan, and will be recommended to the Common Council for adoption.



3. SPECIAL DISTRICTS

PORT OF BANDON

The Port District covers an area of 320 square miles. An inventory of the port and its activities is provided in a report produced by the Oregon Coastal Zone Management Association entitled "Navigation and Other Activities On Oregon Coastal and Columbia River Waterways and Harbors in 1995". The document includes inventory data that will be discussed in the next volume, but also provides a list of relevant plans, feasibility studies, and governing documents, as well as a list of development projects.

The Business Plan addresses transportation issues related to Bandon's transportation planning. The Port seeks to maintain the Coquille River Estuary as a shallow draft development estuary. The Port plans to develop a pedestrian and bicycle oriented riverwalk system.

Plans, Feasibility Studies, Governing Documents

1. Business Plan. Richard Hill & Associates. February 1989.
2. Business Plan updates. Tom Notos, Dick Hill. 1995
3. State Marine Board Engineering for old basin expansion.
4. Planning and Marketing Feasibility Study. Al Benkendorf and Assoc. (for development of dock, retail, rentals, etc.)
5. Planning and Design of Johnson Mill Pond. Stuntzner Engineering. 1995.
6. Market Analysis for Boardwalk/Highdock. Recon, Inc. 1995.

Development Projects for 1996

1. Continue 26 miles of River maintenance using Port owned self-propelled barge
2. Develop feasibility study of new commercial building
3. Construct recreational dock and breakwater
4. Develop architectural plan for boardwalk



4. COUNTY

COOS COUNTY

Coos County is currently developing a County Transportation System Plan. Because revisions may be necessary for compliance with the Transportation Planning Rule, the existing County policies and regulations have not been reviewed in detail in this document.

Several issues will need to be reviewed in relation to county policy, regulation, and capital improvements. The County maintains several roads within City limits; County roads provide an extension and continuation of City streets; and the County regulates land use, subdivision, and access regulations adjacent and contiguous to city limits and streets of importance to the city and the state.

The county policy and regulations are currently found in the Coos County Comprehensive Plan and the Coos County Zoning and Land Development Ordinance. The Coos County TSP will identify necessary revisions to these documents. The County does not presently have a 5-year Capital Improvements Plan for transportation improvements, but will develop one through the Transportation System Plan process.

The current Coos County Street Improvement Standards and Parking Standards are provided in Appendix A-1 of this document. The appendix also provides the county permit requirements for work within a right-of-way.

Section 7.1.900 of the Coos County Zoning and Land Development Ordinance stipulates that “opened road” means a rocked or paved road which has an all-weather year-round maintained travel surface. The determination of whether a road is “opened” shall be made by the Roadmaster. The County Road Department does not maintain a formal list of opened roads, but makes the determination on a case-by-case basis, and the status may change over time, depending on the condition of the road. The County does keep a list of roads that are within the County maintenance system, and that list is provided in Appendix A-5. The county does not have an ‘automatic maintenance’ provision within the Land Development Ordinance; therefore, when a road is installed to County standards, it is not automatically accepted into the County maintenance system. ORS 368.036 establishes requirements for standards for county road and road work.

The County Street Improvement Standards apply to ‘county roads’ and ‘local access roads’ as defined by ORS 368.001, but the County only maintains those county roads that have been accepted into the maintenance system, and it does not accept maintenance responsibility for local access roads. The County has not established maintenance standards for local access roads, and does not require these roads to be maintained. ORS 369.031 states that a county is not liable for failure to improve the local access road or keep it in good repair. It also provides that a county governing body shall only spend county monies on a local access road in certain circumstances.

COOS COUNTY PUBLIC TRANSIT

ODOT allocates funds to Coos County through the Special Transportation Fund, which is funded through a State cigarette tax, and through the Surface Transportation Program. South Coast Business Employment Corporation is the subgrantee under Coos County, and manages the transit program for the County. The last transit development plan was prepared by the former Coos-Curry Council of Governments in 1985. South Coast Business is preparing for a transit system planning project for Coos and Curry Counties in 1998-99 budgeted at \$72,000. Transit policy issues are currently second in importance to questions of adequate funding for Bandon Dial-A-Ride. Additional information on operations is found in Volume 3.



5. STATE

LAND CONSERVATION AND DEVELOPMENT COMMISSION (LCDC)

OAR Chapter 660 Division 12. Transportation Planning Rule

The Transportation Planning Rule (TPR) implements Statewide Planning Goal 12 (Transportation), and explains how local governments and state agencies responsible for transportation planning demonstrate compliance with other statewide planning goals. It sets the

requirements for coordination among affected levels of government for preparation, adoption, refinement, implementation, and amendment of transportation system plans. Transportation plans adopted pursuant to the TPR fulfill the requirements for public facilities planning required under ORS 197.712 (2)(e), Goal 11, and OAR Chapter 660, Division 11, as they relate to transportation facilities. The Transportation Planning Rule is provided in its entirety in Appendix 2-5-1.

The TPR requires ODOT to adopt a state TSP that identifies a system of transportation facilities and services adequate to meet state transportation needs. The state TSP includes the state transportation policy plan, modal systems plans, and transportation facilities plans. State transportation project plans must be consistent with acknowledged comprehensive plans.

Cities and counties are required to adopt local TSPs which establish a system of transportation facilities and services adequate to meet identified local transportation needs, and must be consistent with regional TSPs and adopted elements of the state TSP.



OREGON DEPARTMENT OF TRANSPORTATION (ODOT)

Oregon Transportation Plan- 1992 (OTP)

The OTP carries out the requirements of ORS 184.618(1), which directs the Transportation Commission to develop and maintain a state transportation policy and a comprehensive, long-range plan for a multimodal transportation system for the state; carries out federal Intermodal Surface Transportation Efficiency Act (ISTEA) requirements for a state transportation plan; meets the requirements of the state agency coordination program; and the Land Conservation and Development Commission (LCDC) Goal 12: Transportation Planning Rule regarding the system plan. The plan includes a policy element and a system element. County and City transportation planning must be consistent with the Oregon Transportation Plan, the LCDC Transportation Planning Rule, and the State Implementation Plan under the Clean Air Act Amendments.

The statewide planning process also includes the development and refinement of modal plans: Highways, Aviation, Transit, Rail, Pipelines, Bicycle and Pedestrian, and Ports and Waterways.



Proposed Oregon Coast Highway Corridor Master Plan, January 1995

The Corridor Plan grew out of several policy directives at the state and federal levels to coordinate land use patterns and transportation system improvements and to address a variety of transportation modes. The Oregon Coast Highway Corridor was chosen as the first of a number of corridor plans throughout the state. The plan includes a series of inventory reports, an evaluation framework, opportunities and constraints reports, and the proposed plan. The proposed plan describes a county vision, which provides the basis for a proposed set of improvements for individual sub-county corridor segments. The plan includes a series of matrices which rate projects in order to facilitate prioritization and incorporation into future State Capital

Improvement Programs. The inventory materials and opportunities and constraints are discussed under the Volume 3 of this plan.

The improvement projects identified for the Bandon segment are summarized as follows:

- Establish additional gateway treatments into Bandon and preserve the gateway theme to Bandon's Old Town.
- Improve Highway 101 operations and signage at the intersection of Highway 42S to address turning movements between the highways and limit local access. Create a South Oregon Coast Gateway and Visitor Center. (This project is currently being developed in Brookings by the Oregon Parks Department).
- Investigate the potential to develop a parallel local circulation system to reduce trip demand on Highway 101. Consider including other modes, such as bicycle facilities.
- Develop an access management and parking strategy, consistent with the State Access Management Category, to address the numerous access points and need for convenient parking.
- Establish a planning horizon or threshold at which point alternatives for addressing long-term travel demand will need to be implemented. If necessary, investigate the technical/environmental feasibility and operational/economical merit for a bypass. A potential corridor exists along existing high voltage power lines.
- Develop a bicycle/pedestrian circulation strategy to improve safety and accessibility.
- Identify ways to improve transit/paratransit service and implement transportation demand management strategies.
- Develop a program to improve both the signage to and function of Beach Loop Road for all modes of travel. Investigate the potential to expand the roadway width for bicycles and pedestrians, or to provide adjoining paths for these modes.



US 101 Scenic Byway Plan

ODOT is continuing work on the development of the US 101 Scenic Byway Plan. The Plan will be used to determine if the state and coastal communities will seek designation as a federal Scenic Byway. The plan is predominantly an economic development plan, and does not focus on transportation needs of the Highway, as much as it focuses on unique characteristics of communities and resources at various points along the highway.

Statewide Transportation Improvement Programs (STIPs)

The STIPs are ODOT's four year construction and development programs. A STIP is a project prioritization and scheduling document developed through various planning processes. Through the STIP, ODOT allocates resources to those projects that have been given the highest priority in

these plans. This section identifies the STIP projects which are scheduled for Bandon. Several of the 1995-1998 STIP projects have been completed, are underway, or have been moved to the 1998-2001 STIP.

1995-1998 STIP, Region 3.

Two major construction projects in Bandon were scheduled in the 1995-1998 STIP. The reconstruction of the Highway 101/Highway 42S intersection will take place in the Spring of 1997. The reconstruction of the Ferry Creek Channel has been moved to the 1998-2001 STIP draft.

Draft 1998-2001 STIP, Region 3.

TRANSIT PROJECTS					
YEAR	APPLICANT	PROJECT DESCRIPTION	TOTAL COST	RECOMMENDATION	
				STP (1)	STF/FTA (2)
1998	SCBEC	van	\$45,000	\$0	\$36,000
1999	Coos County Pub Trans	2 modified vans- 1 repla. & 1 exp.	\$98,000	\$78,400	\$0
1999	Coos County Pub Trans	intercity dev. project, 1 veh. exp.	\$167,500	\$39,200	\$59,250
2000	Coos County Pub Trans	1 modified van, replacement	\$51,450	\$41,160	\$0
2000	Coos County Pub Trans	intercity dev. project, 1 veh.	\$216,500	\$123,700	\$0
2000	Coos County Pub Trans	1 modified van, replacement	\$54,000	\$43,200	\$0
2000	Coos County Pub Trans	intercity dev. project, 1 veh.	\$272,000	\$43,200	\$109,000

(1) Flexible funding for transportation projects from the Surface Transportation Program (STP)

(2) Funding from dedicated transit sources; Special Transportation Funding (STF); Federal Transit Administration

CONSTRUCTION PROJECTS						
Route	Project	Fiscal Year	Location	Classification	Cost	Work Type
US 101	reconstruct Ferry Creek channel and replace the access bridge	1999	MP 273.8-273.9	Principal Arterial	880,000	Preservation



Pacific Coast Scenic Parkway

US 101 Improvement Strategy and Parkway Design Guidelines, undated (received by City of Bandon February 25, 1991)

In 1988, a Pacific Coast Parkway concept was presented to the public during US 101 Improvement Strategy meetings. Design guidelines and standards were established for use in developing specific parkway projects. The US 101 improvement strategy proposed a Bandon Parkway from Gross Creek to Knapp Road, designated as a Maximum Improvement Zone. The Improvement Zone classification provided standards for acceptable levels of service, and identified improvement types which would be considered to correct deficiencies and meet desired objectives. In an urban Maximum Improvement Zone, design solutions included parkways, 5-lane sections, and bypasses. The guidelines provided typical sections for the design elements.

Bandon Parkway Design

Using the design standards, a parkway concept was developed for US 101 in Bandon. The parkway improvements provided for center medians and other improvements. The concept also provided for the improvement of parallel access roads to facilitate access adjacent to US 101, and to reduce local traffic and delivery traffic on Highway 101. The parkway was met with varying levels of support and opposition from the community. The community elected not to proceed with the parkway design. It does not appear that the project proceeded through development of an Environmental Impact Statement. Opposition was mainly directed at the issue of restricted turning movements to existing businesses that would result from center medians. In 1993, voters amended the City Charter so that Council could not approve construction of a parkway on Highway 101 in Bandon.

ODOT Access Management Policy

ODOT's current access management policy, found in the 1991 Oregon Highway Plan, is provided in Appendix A-3. A working draft of ODOT's proposed revisions to the access management policy is also provided in Appendix A-3.



ODOT, OREGON AERONAUTICS DIVISION

Revised Bandon State Airport Master Plan Update, August 1991 with January 1992 revisions

The plan provides long-range guidance for the development of airfield facilities, forecasts future levels of aeronautical activity, offers an assessment of future capital projects required at the airport, identifies projects eligible for federal funding assistance, and promotes compatibility planning efforts between the airport and the community.



OREGON REVISED STATUTES (ORS)

Numerous provisions of ORS have an impact on local transportation planning in Bandon. This section provides a listing of the major chapters addressing transportation. Some sections are further discussed as they relate to Bandon.

ORS Title 31. Highways, Roads, Bridges, and Ferries

- Chapter 366. State Highways
- Chapter 367. Indebtedness for State Highways, City and County Roads and Recreation Facilities
- Chapter 368. County Roads
- Chapter 369. Ways of Public Easement
- Chapter 370. County Road Bonding Act
- Chapter 371. Road Districts and Road Assessment Plans
- Chapter 372. Highway Lighting Districts
- Chapter 373. Roads and Highways Through Cities
- Chapter 374. Control of Access to Public Highways
- Chapter 376. Ways of Necessity; Special Ways; Pedestrian Malls
- Chapter 377. Highway Beautification
- Chapter 381. Interstate Bridges
- Chapter 382. Intrastate Bridges
- Chapter 383. Toll Roads and Private Toll Bridges
- Chapter 384. Ferries
- Chapter 390. State and Local Parks; Recreation Programs; Scenic Waterways; Recreation Trails
- Chapter 391. Mass Transportation

ORS 373 is of particular interest to the City as it applies to jurisdiction over streets taken over for state highways routing through cities. The text is provided under the Intergovernmental section of this document.

ORS 374 is also of interest to the City, as it applies to the agreement executed between the City and State for the development of the throughway for the Bullards Bridge-Bandon Section of the Oregon Coast Highway. The throughway agreement is further discussed under the Intergovernmental section of this document.

ORS Chapter 447. Access for Disabled Persons

This Chapter includes miscellaneous provisions establishing accessibility standards. Design standards utilized by the City must comply with the following standards, which require accessible sidewalk ramps at intersections.

ORS 447.310. Standards for curbing.

(1) The standard for construction of curbs on each side of any city street, county road, or state highway, or any connecting street, road or highway for which curbs and sidewalks have been prescribed by the governing body of the city or county or Department of Transportation having jurisdiction thereover, shall require not less than two curb cuts or ramps per lineal block to be located on or near the crosswalks at intersections. Each curb cut or ramp shall be at least 48

inches wide, where possible, and a minimum of 36 inches wide where a 48-inch width will not fit, at a slope not to exceed one-inch rise per 12-inch run. If a slope of 1:12 will not fit, a slope between 1:10 and 1:12 is allowed for a maximum rise of six inches and a slope between 1:8 and 1:10 is allowed for a maximum rise of three inches. In no case shall the slope exceed 1:8.

(2) Standards set for curbs and ramps under subsection (1) of this section shall apply whenever a curb or sidewalk is constructed or replaced at any point in a block which gives reasonable access to a crosswalk.

DEPARTMENT OF CONSUMER AND BUSINESS SERVICES: BUILDING CODES DIVISION

Uniform Building Code (UBC), 1994 Edition with 1996 Oregon Amendments.

Chapter 11. Accessibility

Chapter 11 of the UBC establishes requirements for accessible design features in new and retrofitted development. The accessibility standards include requirements for the location, number, and design of accessible parking spaces and routes.



6. FEDERAL

Federal requirements for transportation planning are found in the Intermodal Surface Transportation Efficiency Act, Clean Air Act Amendments, Federal Aid Highway Act, and Americans with Disabilities Act (ADA). Most of the local requirements are addressed through consistency with state planning requirements and the ADA provisions of the Uniform Building Code. However, there may be some ADA requirements which must be addressed directly by the City.



7. INTERGOVERNMENTAL

CITY/COUNTY JURISDICTION

The City of Bandon and Coos County are presently in the process of addressing questions of jurisdiction over certain roads within the City of Bandon. The correspondence addressing these issues is provided in Appendix A-2.

It appears that the County has jurisdiction over several roads within the City of Bandon. These roads are listed in Appendix A-2 in the letter of May 23, 1997 from Matt Winkel to David Ris.

ANNEXATIONS

ORS Chapter 222 sets forth the statutory provisions for annexations. This chapter does not specifically address how an annexation affects the jurisdictional status of public streets and rights-of-way. The League of Oregon Cities has provided information addressing this issue. There is no default mechanism to address what happens to a public street when it is annexed. Each annexation document must specifically address the issue for a particular annexation.

A reading of ORS Chapter 368 suggests that local access roads as defined by ORS 368.001, when annexed, fall under city jurisdiction. This is not true for annexation of county roads as defined by ORS 368.001, which remain under county jurisdiction until formal action is taken under ORS 373.270.

The City and County should clearly establish jurisdictional responsibility in each specific annexation agreement. In addition, the agreement should clarify the City's position on improvement, repair, and maintenance issues for streets to be included in the annexed area. City Counsel should be consulted in regard to the issues addressed in this section.

CITY/STATE JURISDICTION

Highway 101 and Highway 42 South are subject to the provisions of ORS 373.020, which provides for jurisdiction over streets taken over for state highway routing through cities.

373.020. Jurisdiction over streets taken over for state highway routing through cities; effect on public utility duties.

(1) Complete jurisdiction and control of streets taken over by the Department of Transportation as provided in ORS chapter 366 and ORS 105.760, 373.010, 373.015, 373.030 and this section, is vested in the department and extends from curb to curb, or, if there is no regular established curb, then such control extends over such portion of the right of way as may be utilized by the department for highway purposes. Responsibility for and jurisdiction over all other portions of the street or road remains in the city.

(2) All cities retain the right to grant the privilege to open the surface of any such street or road, but all damage occasioned thereby shall promptly be repaired by the city, either itself or at its direction, and the responsibility for the cost thereof shall be upon the city permitting the opening.

(3) Cities retain the exclusive right to grant franchises over, beneath and upon any such street or road, and to control and regulate such franchises and the utilization thereof, but the department may utilize any storm sewers thereon or thereunder without cost or charge therefor by the city.

(4) Nothing contained in ORS chapter 366 and ORS 105.760, 373.010, 373.015, 373.030 and this section, relieves any public utility or telecommunications utility from the maintenance and repair of any street or portion thereof or the performance of any other obligation required under any franchise granted to it by any city.

CITY/ STATE AGREEMENTS

Throughway Agreement, June 20, 1958

The agreement established a basis for the construction of the Bullards Bridge-Bandon section of the Oregon Coast Highway as a throughway pursuant to ORS 374. The agreement provided for the closing of streets abutting the throughway, generally between what is now north city limits to State Highway 42S.



8. TPR CONSISTENCY FINDINGS

INTRODUCTION

The transportation system planning process is guided by LCDC's Transportation Planning Rule, which establishes standards based on Statewide Transportation Planning Goal 12 and other state and federal policy.

This section expands on the points raised in the summary section of this report. The primary issues of consistency related to the Bandon Transportation Plan occur between the City's policy and regulation and the implementation requirements of the Transportation Planning Rule. This should not be considered a needs assessment, but identifies the areas of the City planning documents that will need to be reviewed to address one aspect of the needs assessment. The findings of Volume 2 (plan review) and Volume 3 (inventory) will be synthesized to determine needs in Volume 4.

RELATIONSHIP TO TPR REQUIREMENTS

The TSP will involve potential revisions to local policy and regulation, as well as identification of necessary improvement projects. Identification of needed improvements will result largely from the inventory of the existing system, and the analysis of existing conditions. On the other hand, this review of existing local documents provides a basis for identifying necessary revisions to local planning documents. The following matrix relates existing plans, policies, and regulations to the requirements of the TPR. The matrix identifies the TPR requirement and identifies which local documents, if any, address the issue. It is not intended to determine if the existing provisions are adequate to meet the requirements of the rule. It is intended to facilitate needs assessment at subsequent stages of the planning process. The documents identified above may be revised to meet local community needs as well as requirements of the planning rule.

Implementation of the Transportation System Plan

OAR 660-12-045(2) Local governments shall adopt land use or subdivision ordinance regulations, consistent with applicable federal and state requirements, to protect transportation facilities, corridors and sites for their identified functions. Such regulations shall include:

* =the issue is addressed in the document, but the document or portion cited has not been adopted.

Provision	Topic/Item Addressed	Related Policy	Related Regulation	Note
a. Access control measures which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities	Y	*BCP Trans. Policy 8;	BZO §7.010; BZO §8.030; BZO §9.070; BSO §27; BSO §28	No uniform standards have been established in these sections; some address only conditional uses
b. Standards to protect future operation of roads, transitways, and major transit corridors	Y	*BCP Trans. Obj 10; Trans. Policy 8; LUPP Policy 15;	BZO §7.010; BZO §8.030; BZO §9.070; BSO §27; BSO §28	No uniform standards have been established in these sections; some address only conditional uses.
c. Measures to protect public use airports	Y	*BCP Trans. Policy 17; Trans. Policy 18;	BZO §6.600-6.660	
d. A process for coordinated review of future land use decisions affecting transportation facilities, corridors, or sites	Y	-	BZO Art 7; BZO Art 14; BZO §9.070;	No formal procedure established; some address only conditional uses.
e. A process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors, or sites	Y	*BCP Trans. Policy 8	BZO Art 7	
f. Regulations to provide notice to public agencies providing transportation facilities and services, MPOs, and ODOT of:				
• Land use applications that require public hearings	N	-	-	-
• Subdivision and partition applications	N	-	-	-
• Other applications which affect private access to roads	N	-	-	-

<ul style="list-style-type: none"> Other applications within airport noise corridors and imaginary surfaces which affect airport operations 	Y	-	BZO §6.650	Requires app. to provide info relating to airport; requires notice to Aeronautics Div. for certain apps.
g. Regulations assuring that amendments to land use designations, densities, and design standards are consistent with the functions, capacities, and levels of service of facilities identified in the TSP.	N	-	-	-

OAR 660-12-045(3). Local governments shall adopt land use or subdivision regulations for urban areas and rural communities as set forth below. The purposes of this section are to provide for safe and convenient pedestrian, bicycle, and vehicular circulation consistent with access management standards and the function of affected streets, to ensure that new development provides on-site streets and accessways that provide reasonably direct routes for pedestrian and bicycle travel in areas where pedestrian and bicycle travel is likely if connections are provided, and which avoids wherever possible levels of automobile traffic which might interfere with or discourage pedestrian or bicycle travel.

Provision	Addressed	Related Policy	Related Regulation	Note
a. Bicycle parking facilities as part of new multi-family residential developments of four units or more, new retail, office, and institutional developments, and all transit transfer stations and park and ride lots.	N	-	-	-
b. On-site facilities shall be provided which accommodate safe and convenient pedestrian and bicycle access from within new subdivisions, multi-family developments, planned developments, shopping centers, and commercial districts to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the	Y	*BCP Trans Obj. 6; Trans. Obj. 8; Trans. Obj 10; Trans. Pol. 12; Trans. Pol. 13; Trans. Pol. 14; Trans. Pol. 15; Housing Pol. 8; Open Space and Rec. Pol. 4; Special Protect. Areas Obj. 6 Resolution 93-32	BSO §28(3)(c); §36(5); §36(6); §37 Ord 1338 *Streets Comm. Rec'd Stndrds. Ord 959 (refs stndrds)	Standards primarily address new subdivisions only

<p>development. Single-family residential developments shall generally include streets and accessways. Pedestrian circulation should generally be provided in the form of accessways.</p>				
<p>A. "Neighborhood activity centers" includes, but is not limited to, existing or planned schools, parks, shopping areas, transit stops or employment centers.</p>				
<p>B. Sidewalks shall be required along arterials, collectors, and most local streets in urban areas, except that sidewalks are not required along controlled access roadways, such as freeways.</p>	<p>Y</p>	<p>address generally, but not specifically- see 3b above</p>	<p>BSO §36(5); Ord 1338</p>	<p>for subdivisions an streets to be opened only; ordinance provides exception if alternate ped. routes are avail.</p>
<p>C. Cul-de-sacs and other dead-end streets may be used as part of a development plan, consistent with the purposes set forth in this section.</p>	<p>Y</p>	<p>"</p>	<p>BSO §27(9); §28(3)(c)</p>	<p>subdivisions only</p>
<p>D. Local governments shall establish their own standards or criteria for providing streets and accessways consistent with the purposes of this section. Such measures may include but are not limited to: standards for spacing of streets or accessways; and standards for excessive out of direction travel.</p>	<p>N</p>	<p>-</p>	<p>-</p>	<p>-</p>
<p>E. Streets and accessways need not be required where one or more of the following conditions exist:</p>				
<p>i. Physical or topographic conditions make a street or accessway connection impracticable. Such conditions include, but are not limited to freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided.</p>	<p>N</p>	<p>-</p>	<p>-</p>	

ii. Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment.	N	-	-	-
iii. Where streets or accessways would violate provisions of leases, easements, covenants, restrictions, or other agreements existing as of May 1, 1995 which preclude a required street or accessway reduction.	N	-	-	-
c. Where off-site road improvements are otherwise required as a condition of development approval, they shall include facilities accommodating convenient pedestrian and bicycle travel, including bicycle ways along arterials and major collectors.	Y	*BCP Trans. Pol. 3; Trans. Pol. 4 Resolution 93-32	BSO §36(5) Ord. 1338	for subdivisions and streets to be opened only; BCP policy needs clarification of definition of development; see also (b)(2) above
d. (Defines "safe and convenient" for purposes of subsection (b) of this section.)				
e. Internal pedestrian circulation within new office parks and commercial developments shall be provided through clustering of buildings, construction of accessways, walkways, and similar techniques.	N	-	-	-

OAR 660-12-045(4). Not applicable.

OAR 660-12-045(5). Not applicable.

OAR 660-12-045(6). In developing a bicycle and pedestrian circulation plan as required by OAR 660-12-020(2)(d), local governments shall identify improvements to facilitate bicycle and pedestrian trips to meet local travel needs in developed areas. Appropriate improvements should provide for more direct, convenient and safer bicycle or pedestrian travel within and between residential areas and neighborhood activity centers (i.e., schools, shopping, transit stops). Specific measures include, for example constructing walkways between buildings, and providing direct access between adjacent uses.

Provision	Addressed	Related Policy	Related Regulation	Note
a. 660-12-045(6)	Y	see 660-12-045(3)(b) above	see 045(3)(b)	see 045(3)(b)

OAR 660-12-045(7). Local governments shall establish standards for local streets and accessways that minimize pavement width and total right-of-way consistent with the operational needs of the facility. The intent of this requirement is that local governments consider and reduce excessive standards for local streets and accessways in order to reduce the cost of construction, provide for more efficient use of urban land, provide for emergency vehicle access while discouraging inappropriate traffic volumes and speeds, and which accommodate convenient pedestrian and bicycle circulation. Notwithstanding sections (1) or (3) of this rule, local street standards adopted to meet this requirement need not be adopted as land use regulations.

Provision	Addressed	Related Policy	Related Regulation	Note
a. 660-12-045(7)	Y	Resolution 91-38 Resolution 93-32	BSO §27(2); §35; Ord 959; Ord 1338; *Streets Comm. Rec'd Stndrds	Policy doesn't specifically address the issues; referenced regs provide existing stndrds only

A-1. COOS COUNTY UGB STREET STANDARDS

- Coos County Zoning and Land Development Ordinance
 - Chapter VII- Street and Road Standards
 - Chapter X- Off-street Parking

- Coos County Code
 - Article Four, Division One- Permits for Work in a Right-of-Way

A-2. STREET JURISDICTION CORRESPONDENCE

- 09-01-92 Memo from Ben McMakin to Common Council
- Minutes of 09-01-92 City/County Work Session
- 05-23-97 Letter from Matt Winkel to David Ris
- 06-26-97 Letter from Matt Winkel to David Ris
- 07-07-97 Letter from David Ris to Matt Winkel

A-3. ODOT POLICY

The Oregon Highway Plan contains Goals and Policies related to the operation and improvement of US 101 and OR 42S through Bandon. The following Highway Plan goals and policies are most directly related to State highways in Bandon, although other policies may relate as well.

Goal 1: System Definition

- 1A: State Highway Classification System
- 1D: Scenic Byways
- 1F: Highway Mobility Standards

Goal 2: Access Management

Note: Related to Goal 2 of the Oregon Highway Plan is OAR 734-051 which governs construction and closure of approaches to State Highways. The statute text is not included here due to its length.

A-4. LID SURVEY RESULTS

- Memo and Summary from Robert Holmes to Mayor and Council
- Local Improvement District Survey Results by Assessor's Map Number
- (Large format map is available in Council chambers).

A-5. COUNTY ROADS

- County Road List

A-6. 1997-98 CAPITAL IMPROVEMENTS PLAN (CIP)

- City of Bandon CIP, 1997-98 through 2000-01: Street Department

CHAPTER VII
STREET AND ROAD
STANDARDS

CHAPTER VII STREETS AND ROADS

ARTICLE 7.1 GENERAL PROVISIONS

SECTION 7.1.100. Rural and Urban Street and Road Provisions. Road and street development standards shall be divided into two categories:

- 1) Rural standards (See Article 7.2).
- 2) Urban road standards (See Article 7.3).

Policy matters regarding required road improvements are set forth and summarized in Table 7.1.

SECTION 7.1.200. Required Dedication of Streets or Roads.

When a land division is reviewed by the County, the Board of Commissioners, Hearings Body or TRC may require design and public dedication of streets or roads to ensure the development and continuance of a convenient public transportation system.

SECTION 7.1.300. Public and Private Roads. For the purpose of this ordinance, streets and roads shall be divided into two major types:

- 1) Private roads (ie., private access easements);
- 2) Public roads (created by public dedication or easement, or by fee title transfer to the public);

NOTE: New public roads created pursuant to this ordinance will not become part of the Coos County road maintenance system without specific action by the Board of Commissioners adopting such new roads into the maintenance system.

SECTION 7.1.400. New Private Roads in Conjunction with Land

Divisions. New private roads may be created to provide access to proposed land divisions in urban or rural areas only when the Planning Director finds that the private road will not be needed for proper development of the surrounding sub-area. The Planning Director's decision shall be made only after receiving and reviewing a written recommendation from the Roadmaster.

The Planning Director's decision to allow or not allow creation of a private road to access proposed new lots or parcels is a land use action that shall be supported by written findings and subject to the notice

provisions of Article 5.7. Notice of the decision shall be provided at the same time that notice is given for approval or denial of the tentative partition plat for the proposed land division related to the proposed private road.

SECTION 7.1.500. Special Provisions for New Private Roads. When new private roads may be created to provide access to proposed land divisions in urban or rural areas:

- 1) The proposed private road shall be clearly designated as a private road on any required map or plat as shall any reservations or restrictions relating to its use and, if named, the private road shall end with the designation "Lane" or "Way";
- 2) All new lots and parcels proposed to be served by any new private road shall have a non-exclusive easement covering the entire private road to be created, and this easement shall be made a part of the legal description for the new lots or parcels at the time of title transfer;
- 3) If an existing private road is to be used as access to the proposed land division, then the property to be divided must also enjoy a non-exclusive easement covering the entire existing private road being used to access the property being divided;
- 4) Road maintenance agreements are strongly recommended for new private roads, but not required;
- 5) The following notice shall appear in legible print on the face of any proposed final plat containing a lot or parcel to be served by a private road:

"Coos County hereby gives notice to all developers, purchasers, potential purchasers and all third parties whatsoever that the County disclaims any liability whatsoever for any damage which may occur as a result of the failure of the developer to construct, improve or maintain roads in this proposed land division."

In addition, for all partitions approved after January 1, 1996, the following shall also appear on the face of any proposed final plat containing a lot or parcel to be served by a private road:

"Confirmation is required from the County Roadmaster that all road and driveway requirements of the Coos County Zoning and

Land Development Ordinance have been met prior to the issuance of a Zoning Compliance Letter.”

SECTION 7.1.600. Forestry, Mining or Agricultural Access. A public or private way which is created to provide ingress or egress in conjunction with the use of land for forestry, mining or agricultural purposes shall not be required to meet minimum road, bridge or driveway standards set forth in this ordinance, nor are such resource-related roads, bridges or driveways reviewable by the County. The categorical exemption provided by this section does not apply to ingress and egress to land for forestry, mining or agricultural purposes when that ingress and egress also provides access to one or more dwellings.

SECTION 7.1.700. Bridge Standards for Roads. Bridges in conjunction with required road improvements shall conform to the following design standards and requirements:

- 1) The travel surface width of the bridge deck shall not be less than the required travel surface width of the roadway.
- 2) The bridge and its support components shall be designed to meet or exceed H-20 AASHTO loading requirements.
- 3) A registered professional engineer shall certify that the bridge is safe and that it meets or exceeds H-20 AASHTO loading requirements. The engineer's stamp shall be placed on all designs. Design specifications for prefabricated bridges shall be presented with an engineer's stamp attached.
- 4) Notwithstanding the above, other bridge designs, including railroad flatcars, may be approved by the Coos County Roadmaster when such alternative designs are found to be safe and adequate to accomplish their purpose.

SECTION 7.1.800. Standards for Driveways and Driveway Bridges. When driveway improvements, including driveway bridges, are required by this ordinance, such improvements shall conform to the following design standards:

- 1) The provisions of Table 7.2 concerning rural driveways shall apply to both rural and urban driveways; and

2) When driveway bridges are necessary, then:

- a. The provisions of Section 7.1.700 shall apply when the subject driveway exceeds 450 feet in length; or
- b. When the subject driveway does not exceed 450 feet in length, designs shall be approved when certified by the Roadmaster to safely carry a 10-ton load.

SECTION 7.1.900. Circumstances Requiring Road Improvements; Extent of Required Road Improvements.

Public and private road and street improvements are required by this ordinance when the circumstances set forth in Table 7.1 exist.

If and when public or private road improvements are required, then such improvements shall be back to the intersection with an opened public road. This may include road improvements to a series of public roads or streets and private access easements.

When road improvements are required within city urban growth boundaries, including the Coos Bay Area Urban Growth Boundary, road construction shall be required for all public or private roads and streets fronting a lot or parcel located within the plat or development area subject to the improvements.

When road improvements are required for rural areas outside city urban growth boundaries, including the Coos Bay Area Urban Growth Boundary, road construction shall be required to the extreme point of physical access (ie., driveway), and not to the furthestmost property line.

"Opened road," as used in this chapter, means a rocked or paved road which has an all-weather year-round maintained travel surface. The determination of whether a road is "opened" shall be made by the Roadmaster.

SECTION 7.1.1000. Responsibility for Determining Compliance with this Chapter. The Coos County Roadmaster shall be responsible for determining compliance with the provisions of this chapter. When road and driveway improvements are required by this ordinance, the Roadmaster shall provide the Planning Director with written notice when the provisions of this chapter have been satisfied with respect to an application or other matter under review.

TABLE 7.1 ROAD STANDARD POLICY MATRIX

	When a new road is created or an unopened road is opened...			When a legally created road already exists...		
	Rural	City-UGB's	CBA-UGB	Rural	City-UGB's	CBA-UGB
1. Must a road be improved in conjunction with a partition?	No	No	No	No	No	No
A. Before a dwelling may be authorized in a partition created after 1/1/96, to what extent shall roads be improved?	Sec. 7.1.900	Sec. 7.1.900	Sec. 7.1.900	None	Sec. 7.1.900	Sec. 7.1.900
B. Before a dwelling may be authorized in a partition created after 1/1/96, what road standards are required?	Table 7.2	Table 7.3	Table 7.4	None	Table 7.3	Table 7.4
2. Must a road be improved in conjunction with a subdivision at the time of final plat?	Yes	Yes	Yes	Yes	Yes	Yes
A. To what extent shall roads be improved?	Sec. 7.1.900	Sec. 7.1.900	Sec. 7.1.900	Sec. 7.1.900	Sec. 7.1.900	Sec. 7.1.900
B. What road improvement standards are required?	Table 7.2	Table 7.3	Table 7.4	Table 7.2	Table 7.3	Table 7.4
3. Must unopened roads in existing platted subdivisions be improved before a dwelling may be authorized?	Yes	Yes	Yes	NA	NA	NA
A. To what extent shall roads be improved?	Sec. 7.1.900	Sec. 7.1.900	Sec. 7.1.900	NA	NA	NA
B. What road improvement standards are required?	Table 7.2	Table 7.3	Table 7.4	NA	NA	NA

ARTICLE 7.2 RURAL ROAD STANDARDS

SECTION 7.2.100. Requirements for New Private Roads to be Created in Conjunction with a Partition, Subdivision or Planned Unit Development. The following standards shall apply to any proposed private road that is to be created in conjunction with a rural land division:

- 1) The provisions of Table 7.2.
- 2) Intersection angles.

New roads and streets shall be designed to intersect with existing roads and streets at angles as near to right angles (90 degrees) as practicable. Lesser angles shall be permitted where topography limitations do not allow a right angle intersection but in no case may an intersection angle less than 60 degrees be approved without a variance, and in no case may an intersection angle be approved where the intersection has less than a 50-foot tangent intersecting the centerline of the existing road unless the Roadmaster approves a special intersection design needed to provide safety.

- 3) Control strip.

A "control strip" may be required or authorized, pursuant to Section 6.2.200.

- 4) Alignment.

Whenever practicable, all new roads and streets shall be in alignment with existing roads and streets by continuation of the centerlines thereof. Staggered road or street alignments resulting in "T" intersections shall leave a minimum distance of 150 feet between the centerlines of roads or streets oriented in approximately the same direction.

SECTION 7.2.200. Requirements for New Public Roads to be Created in Conjunction with a Partition, Subdivision or Planned Unit Development. The following standards shall apply to any proposed public road that is to be created in conjunction with a rural land division:

- 1) The provisions of Table 7.2.

2) Compaction.

All base and finish rock shall be compacted to 95% as per "Method A", AASHTO regulations, or APWA specifications. If requested by the Roadmaster, the developer shall submit compaction test results.

3) Horizontal Curves.

- a. Centerline radii of curves, as constructed, shall be not less than the standards prescribed in the following table:

TYPE OF PUBLIC STREET	CENTERLINE MAXIMUM DEGREE CURVATURE (Arc Definition)	CENTERLINE MINIMUM RADIUS IN FEET
ARTERIALS	24 degrees	238.73
COLLECTOR STREETS, AND ALL BUSINESS STREETS OTHER THAN ARTERIALS	40 degrees	143.24
MINOR STREETS AND CUL-DE-SACS	56 degrees	102.31

- b. Conversion formulas for arc definition of curvature are:

$$\text{Degree of curvature} = \frac{5729.58}{\text{radius}}$$

$$\text{Radius} = \frac{5729.58}{\text{degree of curvature}}$$

- c. Each curve shall have a minimum length of 75 feet.
- d. Whenever the centerline of a road or street changes direction, the tangents of such centerline shall be connected with curves meeting the specifications of this section.

4) Vertical Curves.

- a. All tangent grades shall be connected by means of vertical curves.

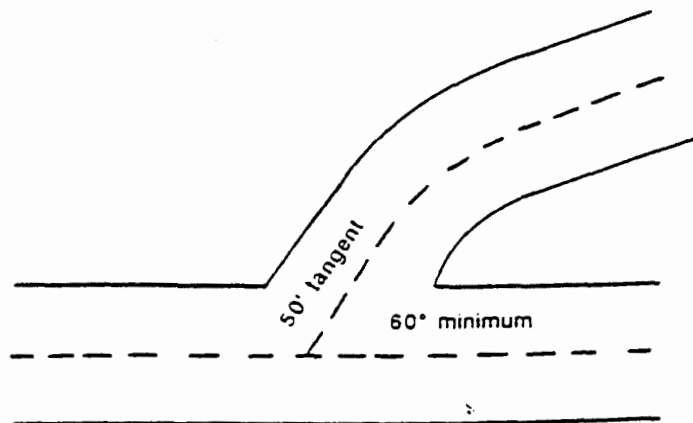
- b. Vertical curves shall be at least 100 feet long except as provided in this section.
- c. Vertical curves at intersections shall be at least 25 feet long and may have unequal tangents; the shortest tangent shall be at least 10 feet long.
- d. Except under special conditions, vertical curves shall begin at or outside the extended right-of-way lines of intersections.

5) Intersection Angles.

New roads and streets shall be designed to intersect with existing roads and streets at angles as near to right angles (90 degrees) as practicable. Lesser angles shall be permitted where topography limitations do not allow a right angle intersection but in no case may an intersection angle less than 60 degrees be approved without a variance.

The intersection of arterial or collector roads or streets with other arterial or collector roads or streets shall have at least 50 feet of tangent adjacent to the intersection of centerlines unless topography requires a lesser distance.

Intersections which are not at right angles shall have a minimum corner radius of 20 feet along the right-of-way lines at the acute angle. Right-of-way at intersections with arterial roads or streets shall have a corner radius of not less than 20 feet.



6) Dead End Roads or Streets.

Dead end roads or streets, other than cul-de-sacs, shall not be approved except when such dead end roads or streets are necessary for the effective development of the area. Any approved dead end road or street shall be provided with a turnaround conforming to the provisions of this ordinance.

7) Alignment.

Whenever practicable, all new roads and streets shall be in alignment with existing roads and streets by continuation of the centerlines thereof. Staggered road or street alignments resulting in "T" intersections shall leave a minimum distance of 150 feet between the centerlines of roads or street oriented in approximately the same direction.

8) Future Extension of Street or Road.

Roads and streets shall be extended across property being divided when necessary to facilitate development or provide future access to adjoining property. When extensions are deemed necessary, roads and streets shall be extended to the boundary of the property being divided. The resulting dead end road or street may be approved without a turnaround, notwithstanding subsection "6", above.

9) Road and Street Names.

Except for extensions of existing roads or streets, no new road or street name shall be used which will duplicate or be confused with the name of existing roads or streets in the County. Road or street names, or numbers, shall conform to established patterns in the surrounding area (whether the area is incorporated or not) and must comply with road naming requirements set forth in the Coos County Code.

10) Slope Easements.

In addition to the minimum right-of-way standards set forth in this ordinance, slope easements may be required for cuts or fills that must necessarily extend beyond right-of-way lines.

11) Grading.

- a. Cut slopes shall be not steeper than one (1) foot vertical rise to one (1) foot horizontal run, except that if the material is blow sand, the cut slope shall be not steeper than one (1) foot vertical rise to two (2) feet horizontal run.
- b. Fill slopes shall be not steeper than one (1) foot vertical rise to one and one-half (1.5) feet horizontal run, except that if the material is blow sand, the fill slope shall be not steeper than (1) foot vertical rise to two (2) feet horizontal run.

<rdstds.doc>
10/06/95

**TABLE 7.2
MINIMUM STANDARDS FOR NEW ROADS, STREETS AND DRIVEWAYS**

	TYPICAL CROSS-SECTION FIGURE	AVERAGE DAILY TRAFFIC ¹	SUBGRADE WIDTH ¹	ALL-WEATHER TRAVEL SURFACE ²	RIGHT-OF-WAY WIDTH ⁴	COMPACTED ROCK DEPTH		MAXIMUM GRADE ⁷	CENTERLINE MAXIMUM DEGREE OF CURVATURE	VERTICAL UNOBSTRUCTED CLEARANCE
						Base Rock ⁴	Finish Rock ⁴			
Private roadways in conjunction with a residential partition ³	---	0-12 ADT	16'	12'	50'	5"	3"	18%	56 degrees	13.5'
Other minor roads and streets	Figure 1	0-80 ADT	24'	20'	50'	5"	3"	12%	56 degrees	13.5'
Collector roads and streets	Figure 2	81+ ADT	30'	24"	60'	6"	4"	12%	56 degrees	13.5'
Arterials	---	---	36'	See footnote ⁹	80'	6"	4"	12%	56 degrees	13.5'
Driveways ¹⁰	---	---	---	12'	---	---	---	12%	---	13.5'
Turnarounds										
Circular	---	---	53' radius ¹¹	45' radius ¹²	60' radius	Same as type of road served		12%		13.5'
Hammerhead	---	---	66' x 44'	60' x 40'	70' x 50'			12%		13.5'
Temporary hammerheads at plat lines	---	---	46' x 36'	42' x 32'	50' x 40'			12%		13.5'

FOOTNOTES FOR TABLE 7.2

- ¹ Average Daily Traffic (ADT) is computed by multiplying the number of dwelling units abutting or using the road by 4, except (a) each new lot or parcel creation shall count as a dwelling unit and (b) lots or parcels shall be used for the determination when an owner is dividing off of an existing driveway, easement or driveway extension. In the case of commercial/industrial use, ADT is computed by multiplying the number of commercial/industrial uses existing and proposed by 21.
- ² Subgrade width is that grade upon which surfacing materials will be placed. Sloped roadside ditches will be required in cuts outside of stated subgrade widths.
- ³ All accesses shall have an unobstructed horizontal clearance not less than the width of the all-weather travel surface. In addition, to the maximum extent practicable, vegetation shall be trimmed along the edge of the all-weather travel surface. Gates on roads, streets and driveways leading to a structure shall have a minimum clearance of 12 feet for the safe passage of emergency vehicles.
- ⁴ Additional slope easements are required where slopes are constructed outside the normal right-of-way.
- ⁵ Base rock shall consist of 1-1/2" minus crushed rock, except that other base rock specifications may be accepted where the Roadmaster finds that 1-1/2" minus base rock is not practicable. Additional rock depth may be required if rock other than 1-1/2" minus crushed rock is proposed.
- ⁶ Finish rock shall consist of 3/4" minus crushed rock, except that other base rock specifications may be accepted where the Roadmaster finds that 3/4" minus finish rock is not practicable. Additional rock depth may be required if finish rock other than 3/4" minus crushed rock is proposed.
- ⁷ Road grades shall not exceed an average of 12%, with a maximum of 18% on short pitches. Variances may be granted when topographical conditions make these standards impractical. For "minor" roads or streets serving more than ten dwellings, any grade exceeding 16% shall have the following conditions imposed: (a) no intersections, driveways or other access shall be permitted, (b) no horizontal curves greater than 16 degrees shall be permitted and (c) no super-elevations of curves greater than 0.02-foot rise per 10-foot run shall be permitted.
- ⁸ Notwithstanding requirements for "other minor roads and streets," as set forth in this table, the standards of this category of new roadways shall apply (a) to private roadway easements not offered for public dedication, and (b) where the new private access roadway is to serve not more than three parcels intended for residential use, except that the new private roadway may serve more than three parcels if it is brought into full compliance with the applicable standards set forth in this table and elsewhere in this ordinance. Where new private roadways approved under this provision exceed 1000 feet in length, turnouts 100 feet in length shall be provided every 600 feet.
- ⁹ Travel surface to consist of 32' rock and 24' paved surface.
- ¹⁰ "Driveway", pursuant to Section 21-200, means "a private vehicular travel surface accessing a single residence."
- ¹¹ Roads or streets within a partition shall have a subgrade width not less than 44' and an all-weather travel surface of 36'.
- ¹² Roads or streets within a partition shall have a subgrade width not less than 44' and an all-weather surface of 36'.

ARTICLE 7.3 URBAN ROAD STANDARDS (CITY-UGB's) and URBAN ROAD STANDARDS FOR THE AREA WITHIN THE COOS BAY AREA URBAN GROWTH BOUNDARY (CBA-UGB)

SECTION 7.3.1. Requirements for New Roads to be Created in Conjunction with a Partition, Subdivision or Planned Unit Development. The following standards shall apply to any proposed road that is to be created in conjunction with a land division within a City-UGB or the CBA-UGB:

1. The provisions of Table 7.3 are applicable within the City-UGB and the provisions of Table 7.4 are applicable within the CBA-UGB.

2. Compaction.

All base and finish rock shall be compacted to 95% as per "Method A", AASHTO regulations, or APWA specifications. If requested by the Roadmaster, the developer shall submit compaction test results.

3. Horizontal Curves.

- a. Centerline radii of curves, as constructed, shall not be less than the standards prescribed in the following table:

TYPE OF PUBLIC STREET	CENTERLINE MAXIMUM DEGREE CURVATURE (Arc Definition)	CENTERLINE MINIMUM RADIUS IN FEET
ARTERIALS	24 degrees	238.73
COLLECTOR STREETS, AND ALL BUSINESS STREETS OTHER THAN ARTERIALS	40 degrees	143.24
MINOR STREETS AND CUL-DE-SACS	56 degrees	102.31

- b. Conversion formulas for arc definition of curvature are:

$$\text{Degree of curvature} = \frac{5729.58}{\text{radius}}$$

$$\text{Radius} = \frac{5729.58}{\text{degree of curvature}}$$

- c. Each curve shall have a minimum length of 75 feet.
- d. Whenever the centerline of a road or street changes direction, the tangents of such centerline shall be connected with curves meeting the specifications of this section.

4. Vertical Curves.

- a. All tangent grades shall be connected by means of vertical curves.
- b. Vertical curves shall be at least 100 feet long except as provided in this section.
- c. Vertical curves at intersections shall be at least 25 feet long and may have unequal tangents; the shortest tangent shall be at least 10 feet long.
- d. Except under special conditions, vertical curves shall begin at or outside the extended right-of-way lines of intersections.

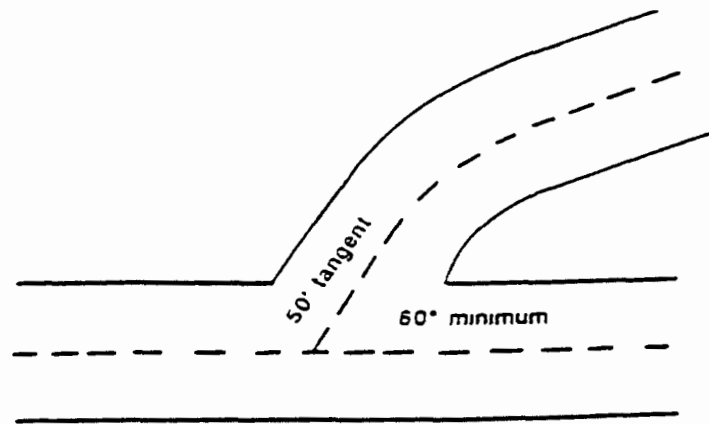
5. Intersection Angles.

New roads and streets shall be designed to intersect with existing roads and streets at angles as near to right angles (90 degrees) as practicable. Lesser angles shall be permitted where topography limitations do not allow a right angle intersection but in no case may an intersection angle less than 60 degrees be approved without a variance.

The intersection of arterial or collector roads or streets shall have at least 50 feet of

tangent adjacent to the intersection of centerlines unless topography requires a lesser distance.

Intersections which are not at right angles shall have a minimum corner radius of 20 feet along the right-of-way lines at the acute angle. Right-of-way at intersections with arterial roads or streets shall have a corner radius of not less than 20 feet.



6. Dead End Roads or Street.

Dead end roads or streets, other than cul-de-sacs, shall not be approved except when such dead end roads or streets are necessary for the effective development of the area. Any approved dead end road or street shall be provided with a turnaround conforming to the provisions of this ordinance.

7. Alignment.

Whenever practicable, all new roads and streets shall be in alignment with existing roads and streets by continuation of the centerlines thereof. Staggered road or street alignments resulting in "T" intersections shall leave a minimum distance of 150 feet between the centerlines of roads or streets oriented in approximately the same direction.

8. Future Extension of Street or Road.

Roads and streets shall be extended across property being divided when necessary to facilitate development or provide future access to adjoining property. When extensions are deemed necessary, roads and streets shall be extended to the boundary of the property being divided. The resulting dead end road or street may be approved without a turnaround, notwithstanding subsection "6", above.

9. Road and Street Names.

Except for extensions of existing roads or streets, no new road or street name shall be used which will duplicate or be confused with the name of existing roads or streets in the County. Road or street names, or numbers, shall conform to established patterns in the surrounding area (whether the area is incorporated or not) and must comply with road naming requirements set forth in the Coos County Code.

10. Slope Easements.

In addition to the minimum right-of-way standards set forth in this ordinance, slope easements may be required for cuts or fills that must necessarily extend beyond right-of-way lines.

11. Grading.

- a. Cut slopes shall be not steeper than one (1) foot vertical rise to one (1) foot horizontal run, except that if the material is blow sand, the cut slope shall be not steeper than one (1) foot vertical rise to two (2) feet horizontal run.
- b. Fill slopes shall be not steeper than one (1) foot vertical rise to one and one-half (1.5) feet horizontal run, except that if the material is blow sand, the fill slope shall be not steeper than one (1) foot vertical rise to two (2) feet horizontal run.

SECTION 7.3.2. Street Hierarchy

Arterial: These roads are intended to provide for high speed travel between or within communities or to and from collectors. Arterials may be four (4) or more lanes in width or two (2) one-way lanes.

Collector: Collector roads connect residential streets to the highway systems major and high speed arterial roads or provide access to non-residential uses and arterial streets. Collector roads are designed for higher speeds and traffic volumes than are residential streets. Because uncongested traffic flow is necessary for their effective functioning, residential uses are discouraged access to collector roads. Collector roads accommodate traffic from two(2) or more residential streets.

Residential Streets: Residential streets primarily function to provide access to residential uses. All residential streets are intended to accommodate relatively low traffic volumes at slow speeds in order to minimize the basic incompatibility of vehicles and the pedestrians and children who characterize residential neighborhoods.

Cul-de-sac: Cul-de-sacs are limited to residential use, and as local streets have only one outlet, without possibility of extension, and a maximum length of 400 feet measured from the center of the turnaround to the right-of-way line of the street or road being intersected.

Commercial/Industrial: Commercial/industrial streets primarily function to provide access to commercial or industrial zones.

///
10/6/95

TABLE 7.3
MINIMUM ROAD AND STREET DEVELOPMENT STANDARDS
WITHIN CITY - UGB'S

PUBLIC OR PRIVATE ROAD TYPE / DRIVEWAYS	MINIMUM RIGHT-OF- WAY WIDTH ¹	MINIMUM TRAVEL SURFACE WIDTH	MINIMUM SUB-GRADE WIDTH	INTERSECTIONS			MAXIMUM GRADE
				Minimum Acute Angle	Minimum Tangent Adjacent	Minimum Centerline Offset	
Arterial (Four-lane)	80'	62'	66'	60 degrees	50'	150'	7%
Arterial (2 one-way lanes)	60'	36'	40'	60 degrees	50'	150'	7%
Collector	60'	36'	40'	60 degrees	50'	150'	10%
Residential	50'	28'	32'	60 degrees	50'	150'	16%
Cul-de-Sac (Not to exceed 400-ft. in length)	40' with 50' radius turn- around	28'	32'	60 degrees	50'	150'	16%
Commercial / Industrial	60'	36'	40'	60 degrees	50'	150'	12%

Table 7.3 continued on next page.

¹ In addition to right-of-way, slope easements may be required.

Table 7.3 (Continued)

PUBLIC OR PRIVATE ROAD TYPE / DRIVEWAYS	SIDEWALKS MINIMUM WIDTH ¹	CURB WIDTH ¹	CONSTRUCTION		
			BASE ROCK	FINISH ROCK	PAVING ROCK
Arterial (Four-lane)	5' BOTH SIDES	6"	6"	4"	YES ²
Arterial (2 one-way lanes)	5' BOTH SIDES	6"	6"	4"	YES ²
Collector	4' BOTH SIDES	6"	6"	4"	YES ²
Residential Cul-de-Sac (Not to exceed 400-ft. in length)	NOT REQUIRED	6"	6"	4"	YES ²
Commercial / Industrial	NOT REQUIRED	6"	6"	4"	

¹ Required only if paving is required.

² Paving is required only if the land division is served by public water and public sewer. (Public includes municipal, district, or community system). Paving shall consist of 2" compacted depth the total width of the required travel surface.

**TABLE 7.4
MINIMUM ROAD AND STREET DEVELOPMENT STANDARDS
WITHIN COOS BAY AREA UGB**

PUBLIC OR PRIVATE ROAD TYPE / DRIVEWAYS	MINIMUM RIGHT-OF- WAY WIDTH ¹	MINIMUM TRAVEL SURFACE WIDTH	MINIMUM SUB-GRADE WIDTH	INTERSECTIONS			MAXIMUM GRADE
				Minimum Acute Angle	Minimum Tangent Adjacent	Minimum Centerline Offset	
Arterial (Four-lane)	80'	62'	66'	60 degrees	50'	150'	7%
Arterial (2 one-way lanes)	60'	36'	40'	60 degrees	50'	150'	7%
Collector	60'	36'	40'	60 degrees	50'	150'	10%
Residential	50'	24'	32'	60 degrees	50'	150'	16%
Cul-de-Sac (Not to exceed 400-ft. in length)	40' with 50' radius turn- around	24'	32'	60 degrees	50'	150'	16%
Commercial / Industrial	60'	36'	40'	60 degrees	50'	150'	12%

Table 7.4 continued on next page.

¹ In addition to right-of-way, slope easements may be required.

Table 7.4 (Continued)

PUBLIC OR PRIVATE ROAD TYPE / DRIVEWAYS	SIDEWALKS MINIMUM WIDTH ¹	CURB WIDTH ¹	CONSTRUCTION		
			BASE ROCK	FINISH ROCK	PAVING
Arterial (Four-lane)	5'	6"	6"	4"	YES ²
Arterial (2 one-way lanes)	ONE SIDE	6"	6"	4"	YES ²
Collector	NOT REQUIRED	NOT REQUIRED	6"	4"	NOT REQUIRED
Residential	NOT REQUIRED	NOT REQUIRED	6"	4"	NOT REQUIRED
Cul-de-Sac (Not to exceed 400-ft. in length)	NOT REQUIRED	NOT REQUIRED	6'	4'	NOT REQUIRED
Commercial / Industrial	NOT REQUIRED	NOT REQUIRED	6"	4"	NOT REQUIRED

1 Required only if paving is required.

2 Paving is required only if the land division is served by public water and public sewer. (Public includes municipal, district, or community system). Paving shall consist of 2" compacted depth the total width of the required travel surface.

CHAPTER X. OFFSTREET PARKING.

ARTICLE 10.1. PARKING STANDARDS

SECTION 10.1.100. General Provisions. Offstreet parking and loading facilities as defined shall be subject to the general regulations and requirements of this Ordinance as well as the following provisions:

- (1) Increase. An increase in parking spaces shall be required to correspond to any enlargement or addition to any building or use.
- (2) Change in Use. When a building or open land use changes in use, the parking requirements shall be changed to reflect the requirements of the new building or use if a greater number of spaces are required.
- (3) Use. Parking facilities shall be used for automotive parking only. No sales, dead storage, repair work, dismantling, or servicing of any kind shall be permitted.
- (4) Fractional Requirements. Fractional requirements up to one-half or over shall require one space.
- (5) Staff Determination. Parking space requirements for a use not specifically mentioned shall be the same as for a use which has similar traffic-generating characteristics as determined by the Planning Director.

SECTION 10.1.200. Common Facilities for Mixed Uses.

- (A) Mixed Uses. In the case of mixed uses, the total requirements for offstreet parking shall be the total of the individual uses except as provided in "B" below.
- (B) Joint Use. The Planning Director may, upon application, authorized the joint use of parking facilities required by said uses and any other parking facility, provided that:
 - i. the applicant shows that there is no substantial conflict in the principal operating hours of the building or use for which the joint use of parking facilities is proposed;
 - ii. the parking facility for which joint use is proposed is not further than 400 feet from the building or use required to have provided parking; and

- iii. the parties concerned in the joint use of offstreet parking facilities show evidence of an agreement for such joint use by a legal instrument.

SECTION 10.1.300. Parking Area Design.

- (1) Ingress and Egress. In any zoning district, driveways or accessways providing ingress and egress for private parking areas or garages, public parking areas or garages and parking spaces shall be permitted, together with any appropriate traffic control devices in any required yard or setback area.
- (2) Minimum Standards for Parking. All public or private parking areas and parking spaces shall be designed and laid out to conform to the minimum standards as specified in the Parking Table and Diagram. All parking lot designs shall be reviewed and approved by the County Roadmaster.
- (3) Service Drive. Groups of three or more parking spaces, except those in conjunction with single-family or two-family dwelling structures on a single lot, shall be served by a service drive so that no backward movement, or other maneuvering of a vehicle within a public right-of-way, other than an alley, will be required. Service drives shall be designed and constructed to facilitate the flow of traffic, provide maximum safety for ingress and egress and maximum safety of pedestrians.
- (4) Lighting. Any lights provided to illuminate any public or private parking area shall be so arranged as to reflect the light away from any abutting or adjacent residential district or use.

SECTION 10.1.400 Required Number of Parking Spaces for Type of Use

<u>USE</u>	<u>STANDARD</u>
(1) Commercial	
(a) Retail store and general commercial except as provided in subsection (b) of this section.	1 space per 200 square feet of floor area, plus 1 space per employee.
(b) Retail store handling bulky merchandise (furniture, appliances, automobiles, machinery, etc.)	1 space per 600 square feet of floor area, plus 1 space per employee.
(c) Bank, general office, (except medical and dental);	1 space per 600 square feet of floor area, plus 1 space per employee.
(d) Medical or dental clinic or office	1 1/2 space per examination room plus 1 space per employee
(e) Eating or drinking establishment	1 space per 200 square feet of floor area, plus 1 space for every 4 seats
(2) Commercial Amusement	
(a) Bowling alley	5 spaces per alley plus 1 space per 2 employees
(b) Dance hall, skating rink, lodge hall	1 space per 100 square feet of floor area plus 1 space per 2 employees
(c) Stadium, arena, theater, race track	1 space per 4 seats or every 8 feet of bench length or equivalent capacity if no seating is provided.
(3) Industrial	
(a) Storage warehouse, manufacturing establishment, rail or trucking freight terminal	1 space per employee

<u>USE</u>	<u>STANDARD</u>
(b) Wholesale establishment	1 space per employee plus 1 space per 700 square feet of patron serving area
(4) Institutional	
(a) Welfare or correctional institution	1 space per 5 beds for patients or inmates, plus 1 space per employee
(b) Convalescent hospital, nursing home, sanitarium, rest home, home for the aged	1 space per 5 beds for patients or residents, plus 1 space per employee
(5) Place of Public Assembly	
(a) Church, mortuary, sports arena, theater	1 space for 4 seats or every 8 feet of bench length in the main auditorium
(b) Library, reading room	1 space per 400 square feet of floor area plus 1 space per employee
(c) Preschool nursery, kindergarten	2 spaces per teacher; plus offstreet loading and unloading facility
(d) Elementary or junior high school	1 space per classroom plus 1 space per administrative employee or 1 space per 4 seats or every 8 feet of bench length in the auditorium or assembly room, whichever is greater.
(e) High school	1 space per classroom plus 1 space per administrative employee plus 1 space for each 6 students or 1 space per 4 seats or 8 feet of bench length in the main auditorium, whichever is greater.

TABLE 10.1
PARKING AREA DESIGN STANDARDS

Parking areas shall be designed in accordance with the following chart so that good utilization of the available space can be achieved.

MINIMUM PARKING LOT DESIGN STANDARDS

Parking Angle	Stall Width	Curb Length Per Car	Stall Depth	Driveway Width
A	B	C	D	E
0°	9' - 0"	23' - 0"	9' - 0"	12' - 0"
20°	9' - 0"	21' - 8" 26' - 4"	15' - 3"	11' - 0"
30°	9' - 0"	18' - 0"	17' - 8"	11' - 0"
40°	9' - 0"	14' - 0"	19' - 6"	12' - 0"
45°	9' - 0"	12' - 9"	20' - 5"	13' - 0"
50°	9' - 0"	11' - 9"	21' - 0"	14' - 0"
60°	9' - 0"	10' - 5"	21' - 10"	16' - 0"
70°	9' - 0"	9' - 8"	21' - 10"	18' - 0"
80°	9' - 0"	9' - 2"	21' - 4"	20' - 0"
90°	9' - 0"	9' - 0"	20' - 0"	22' - 0"

ARTICLE FOUR -- ROADS

DIVISION ONE - PERMITS FOR WORK IN A RIGHT OF WAY

SECTION 04.01.010 FINDINGS

- (1) Upon evidence presented by the Roadmaster, the Board finds that a request for a permit to allow construction of any structure, pipeline, ditch, cable or wire or any other facility, thing or appurtenance over, under or within a County right-of-way requires study and field time by the Roadmaster, the County Engineer and other County employees.
- (2) The Board further finds that recovery of such costs is appropriate and is a matter of County concern.
- (3) Therefore, the Board finds that the following schedule of fees is a fair and reasonable approximation of the actual cost of processing a permit request or permit renewal. [91-06-007L]

SECTION 04.01.020 SCHEDULE OF FEES ESTABLISHED

- (1) There is established within Coos County a fee of Forty (\$40.00) Dollars for each request for a permit made by any private individual, firm, corporation or utility for construction of any driveway, access, structure, pipeline, ditch, cable or wire or any other facility, thing or appurtenance over, under or within a County Road or Local Access Road right-of-way.
- (2) There is established within Coos County a fee of Twenty Five (\$25.00) Dollars for any renewal of such permits.
- (3) The fees listed above must be tendered at the time of application, and the fees are not refundable once signed, stamped or initialed as having been received by the Coos County Road Department. [91-06-007L]

SECTION 04.01.030 PERMIT REQUIREMENTS

- (1) As used in this Division, "construction project" means the construction of any structure, pipeline, ditch, cable or wire or any other thing or appurtenance going over, under or along a County right-of-way or connecting thereto. This includes, but is not limited to, a driveway, a buried telephone cable, a buried power line, a buried water line or a cable service.
- (2) Whether the application is by a person, persons or any other entity or entities, separate permits will

Post-It™ brand fax transmittal	no 7871	# of pages 2
To: Tom Schauer	From: Sharon	
Co. City of Brainerd	Co. Coos Co. Highway	
Dept. Planning	Phone # 396-3101	X3367
Fax # 347-1415	Fax #	

be required for each construction project occurring along a named roadway or roadway bearing a County Clerk or Road Department "road case" number.

- (3) Construction projects benefitting a single lot or parcel of land that involve construction of one or more structures or construction projects that are bordered by more than one roadway and that benefit a single lot or parcel need pay only one permit fee.
- (4) Persons, public utilities or other entities anticipating application for more than one permit in any calendar year may place on deposit money to cover anticipated permit applications. The money so deposited will not bear interest by the County, and the unused portion thereof may be withdrawn by the permittee at anytime.
- (5) Permits issued under this Division will be in effect for a maximum ninety (90) days. If the construction project(s) is (are) not completed within that time, a renewal of the permit must be requested.

DATE: _____

P E R M I T

NO. _____

BEFORE THE ROADMASTER OF COOS COUNTY

This Permit is issued to _____ upon the
 for the placement and/or construction of the following facility: _____
 _____ County Rd. No. _____ at the following location: _____
 _____ All work shall be in strict conformity with all terms
 of this permit, with any exhibits attached hereto, and with Article Four, Division One of the Coos County Code and ORS 374.305 to
 374.340.

GENERAL PROVISIONS:

Permit Holder shall be solely responsible for any and all damages of or destruction to any road, road structure, utility, cable, pipe, waterline, ditch or culvert arising out of or incident to this permit. Permit Holder shall repair or reimburse the County or utility for any and all costs of repair, restoring or replacing damaged or destroyed property.

Permit Holder shall indemnify, hold harmless, and defend Coos County, its elected officials, officers and employees from any liability, claim, damage, loss and/or expense, including, but not limited to, reasonable attorney's fees, arising out of or resulting from the performance of or failure to perform the obligations of this Permit by Permit Holder, its employees, agents and subcontractors.

Permit Holder shall supply all materials and labor at own expense.

Permit Holder shall provide adequate warning and traffic control in a manner to insure public safety and cause minimum inconvenience.

A minimum of two-lane traffic will be maintained at all times and control of traffic will be in accordance with the current provisions in the Manual on Uniform Traffic Control Devices for Streets and Highways.

No work other than that specifically mentioned is authorized by this permit.

SPECIAL PROVISIONS: the interpretation of the intent of the special provisions is at the discretion of the County.

- // Permit Holder shall compact backfill material to 95% of original density and maintain finish conformation same as original for 90 days after completion of construction replacing any rock and/or asphalt to its original depth.
- // Permit Holder shall supply the county with a performance bond or cash in the amount of _____ to be refunded 90 days after completion of the project if at that time an inspection is made and all measures in this permit are found to have been complied with.
- // Permit Holder shall install a minimum of _____ culvert located as directed by county.
- // Permit Holder shall not fell trees within the traveled portion of the roadway and shall clear the right-of-way of any slash or debris caused from the felling of said trees.
- // This permit is issued pursuant to ORS 368.942 and is for the explicit purpose of allowing the construction and maintenance of a tourism sign within the county right-of-way. This sign shall in no way impede vision or cause an unsafe traffic condition. Permit is revokable for nonmaintenance of sign or signs for which permit holder is responsible.
- // Permit Holder shall construct driveway to meet at right angles with county road and shall construct driveway to be at same level as county road for a distance of 20 feet more or less.
- // This permit is revokable at any time when area is determined to be needed for road purposes.
- // Permit Holder or his contractor shall notify the Coos County Hwy Dept., at 396-3121 X366, forty-eight (48) hours prior to commencing work and after completing work covered by this permit.
- // All construction operations will be performed off limits of the highway travel way and shoulders.
- // Prior to installing any U.S. Postal Neighborhood Delivery and Collection Box Units pursuant to this permit, Permit Holder shall contact the Coos County Road Department and obtain approval for the specific location at which each unit is to be installed. Permit Holder shall comply with all instructions of the County pertaining to the location of such units. This permit may be terminated upon ninety (90) days prior written notice by County. Upon termination of the permit all units and cement slabs shall be removed by Permit Holder if such removal is requested by County.
- // Permit Holder shall provide insurance as described in the attached insurance provisions.

I accept and agree to the conditions herein: _____
 Permittee _____ Date _____

This permit shall be void unless the work herein contemplated shall have been completed before: _____
 _____, 19____.

Meets Permit Conditions

ISSUED BY AGENT OF BOARD OF COMMISSIONERS

By _____ Date: _____ date _____
 Roadmaster

A-2. STREET JURISDICTION CORRESPONDENCE

- 09-01-92 Memo from Ben McMakin to Common Council
- Minutes of 09-01-92 City/County Work Session
- 05-23-97 Letter from Matt Winkel to David Ris
- 06-26-97 Letter from Matt Winkel to David Ris
- 07-07-97 Letter from David Ris to Matt Winkel

Seabird Drive - County Road Number 85226

Road Case 1055. Established as a County Road in 1978. A portion of the west end of the road is within the city.

1. Should the County continue to maintain the road within the city.

Excerpt of Report
prepared by
County Counsel David Ris
for joint City/County workshop
on September 1, 1992

MINUTES OF THE WORK SESSION OF THE
COMMON COUNCIL OF THE CITY OF BANDON,
COOS COUNTY, OREGON,
HELD SEPTEMBER 1, 1992, ~~AT 7:00 P.M.~~
IN THE COUNCIL CHAMBERS AT CITY HALL

PRESENT: James L. Cawdrey Mayor

Councilors: Reed Gallier Council President
Judith Densmore
Frank Maciejewski
Leland Sutton
Blythe Tiffany
Patrick Watson

Staff: Ben M. McMakin City Manager
Fred Carleton City Attorney
Denise M. Skillman City Recorder

Visitors: 1

1. CALL TO ORDER

The work session was called to order at 6:20 p.m. by Mayor James L. Cawdrey. Roll was taken as indicated above.

2. COUNTY ROADS IN BANDON

Mr. McMakin submitted a report compiled by David Ris regarding County roads in Bandon, and his own written analysis of their status. He indicated on a wall map where each road is located, noting that "no effort has been made to survey these old roads and their actual location is, in some areas, questionable."

In the following summary, page numbers refer to Mr. Ris' report, and the recommendations are taken from Mr. McMakin's memorandum.

- A) Page 1: County Road #84096
This road starts at about 1st Street and Cleveland Avenue and may wander through some platted areas. This road has not been found on any recent title surveys and should probably be left alone. It is possible the currently used Oregon Avenue may traverse some of this right of way.

Mr. Ris identified two of three major road cases related to the creation of this road: Road Case 115 (1878), Coquille Ferry at the mouth of the Coquille River to the Curry County Line; Road Case 169 (1883), Bandon Ferry via Rosa Road to the Curry County Line. The only remaining portion of this road appears to be

Oregon Avenue and Rosa Road; other portions were vacated, are no longer used, or were replaced by Highway 101.

Recommendation -- Request the surrender of the right of way within the City of any current right of way on Road Case 115 & 169.

- B) Page 2: County Road #84095 (Bills Creek)
Created by Road Case 275 in 1983, this street starts at the south end of Harlem Avenue and heads southwest. The County surveyor has been instructed to confirm that the road is not within the city limits. Prior to about 1939-40 this road took off from Rosa. The County apparently unilaterally changed to current place beginning at 13th.

Mr. McMakin raised two questions with the County about this road which still need some investigation:

1. Can the County unilaterally dump a County road at a City limit? and
2. Isn't there a responsibility for a County Road to connect to a County road or State highway?

Recommendation -- None at this time.

Discussion: Bills Creek was created in 1893 and used to take off from Rosa Road. Prior to 1940, 13th Street (which cuts through the Portland Addition) was not used as the connector. It is only a partial right of way.

- C) Page 3: Ohio Street
Ohio appears not to be a [County] street (but then, how was east half of street dedicated?)

Recommendation -- If the full street exists, see if there can be some joint responsibility for the street in exchange for City annexing the full street.

Discussion: The section line runs down the center of the road and there is no subdivision on the east side of Ohio. The question is, did the ownership of the land to the west have control over the 30 feet on the other side of the section line so they could have a road, or is there really only half a road there? Mr. McMakin said this can be clarified by a study of the subdivision map. The County would like to eliminate the problem by letting the City have the 30 feet, even though it is not in the Urban Growth Boundary. It might be possible to persuade the County or owners on

the east side to pay for some of the work to upgrade Ohio. The County has performed some work in the past under contract with the property owners, which Mr. Ris declared was a problem because half the road is in the City. Since this is not a County road, they have no obligation to maintain it, and in fact, it is illegal for them to maintain a non-County road.

D) Page 4: Fahy Road
There is no indication of the history of Fahy Road between Riverside Drive and the Platted Fahy Avenue which starts near the 101 bridge. Not a County road and is not a County/City problem.

E) Page 5: Road Case 271 (Ferry Creek)
Location unknown but does not present a problem with any private property. The road created in 1892 appears to be in the vicinity of 3rd Street and Grand Avenue, passing through the cheese factory.

Recommendation -- Request surrender of the right of way within the City on Road Case 271 to clear up the County record.

F) Page 6: Empire to Bandon
Location is not exactly known and has not shown up on any title policy. A small portion of this road (created in 1887) exists near the former Coast Guard building. Apparently, it terminated at a ferry crossing. This right of way could be of some value to the City for drainage purposes in the area. It seems to be on the same alignment as the pipes which carry Gross Creek to the river.

Recommendation -- Locate right of way and request surrender of Road Case 211 within City of Bandon.

Discussion: From Cleveland west on First, the City has no public right of way to the river, other than Gross Creek. Mr. McMakin had heard that the Gross Creek drainage system had been put in privately, so it is not certain that the pipes are on our right of way.

G) Page 7: Beach Loop -- County Road #95029 (formerly known as Bradley Lake Road). The County does not maintain any portion of this road within the city limits. Road Case 168 originally created this road in 1883. It started at First and Cleveland, thence southwest to the bluff area, thence southward. In 1909, Road Case 481 vacated the road in the Averill Addition. Road case 769 relocates the road from Tupper Creek (the city limits at that time) to what is now

101. Volume 14 page 306 (1929) designates Bradley Lake Road as a market road. Final field notes were filed in 1930, but no other records of a final BOC order have been found. Related actions are recorded in Road Case 788 (1925) and Volume 27 page 686 (1963).

Old problems:

- 1) Apparently Ocean Drive from 4th Street to 7th Street is still a County road under Road Case 168.
- 2) Apparently Road Case 168 meanders through Blocks 24, 28 and 40 in West Bandon.

Recommendation -- City should request surrender of all existing right of way in Road Case 168 for 1st and Cleveland south to Tupper Creek. City should then vacate the portion of County Road 168 that exists on Blocks 24, 28 and 40 West Bandon Addition.

Discussion: There has never been any negotiation regarding the road from Johnson Creek south to the city limits. Mr. McMakin is concerned about the culvert beneath Johnson Creek from an engineering standpoint, and he would hate to take that over. There appear to be structural problems on Beach Loop; there is evidence of sliding.

Opportunities -- Beach Loop from Tupper Creek south is a County road. The City intended to take over Beach Loop from Tupper Creek to Johnson Creek in 1963. The County can overlay about one mile of 24 foot wide road for \$50,000. \$50,000 is also the maximum road project the County will do due to the current State law.

Recommendation -- We need to find a way we can obtain a State bicycle route grant (\$50,000 State and \$12,500 local match), do some of the work with our crews in preparing for the bike path, and have the County overlay and stripe the road and bike path. I would expect this to be about a \$100,000 project.

This would be \$50,000 State Bicycle Grant, \$12,500 local match for the Bicycle Grant, and \$37,500 in City funds. The project should include engineering (\$8,000), work done by City crews (\$42,000) and County overlay (\$50,000). About \$20,000 of the City work should be a soft match (City personnel and equipment), which means local cash cost would be about \$30,000. This should be able to do a bicycle path from 11th Street to about Face Rock Viewpoint.

The County has some bike path funds they may be able to put into the project.

With two years of this type of commitment, I believe we could get a bike path on both sides of Beach Loop from 11th to Seabird Drive. A bike path could easily be continued from Seabird to the Inn at Face Rock, but it would be very difficult to have a bike path through the Johnson Creek fill area.

H) Page 8: County Road #85121 (Jetty Road)
This is a County Road from Edison to the County Park. It was created by a deed from the Port to the County for street purposes in 1959. There is no record of acceptance or formal inclusion in the County Road system, but the County has maintained this road. Mr. McMakin told the County we would take over the road and County Park when we had an FAS project to reconstruct our FAS route from Edison and Jetty Road to Beach Loop and 8th.

I) Page 9: County Road #85226 (Seabird Drive)
This is a County Road from Beach Loop to Highway 101, established by Road Case 1055 in 1978. A portion of the west end is within the City. Mr. McMakin indicated as part of a major package the City may be willing to take this road over.

Discussion: We can take it over if we want, but it may not be wide enough for a bike path. Mr. McMakin can visualize a bike path all the way down Beach Loop to Seabird and then out to the highway, but there would be a problem extending the path through the Johnson Creek area. Mr. Maciejewski suggested a bicycle bridge across Johnson Creek.

J) Page 10: Riverside Drive
Created by Road Case 254 in 1891. The terminus of this road is unclear, but the City Manager believes it is clear the bridge is the County's. The bridge deck is in good shape but the bridge sits on timber piles rather than concrete abutments. The piling is the weak point of the bridge.

Recommendation -- It would appear to Mr. McMakin that should the County put in a bike path from 101 to Fillmore and perhaps overlay Riverside, we could accept the road.

Discussion: Riverside Drive is part of the State's official coast bike path, but is far more dangerous than Beach Loop, even though there are fewer

pedestrians and less traffic. The existing bike line is only six inches wide in some places.

At the conclusion of this presentation and discussion, it was the Council's consensus to direct the City Manager to continue to march along the lines he outlined in his recommendations. He will return to the Council when he has reached some agreements with the County that can be formalized by Council action. He was also directed to contact the County regarding Ohio Street to see what their view is before spending money to pave for so few people.

3. ADJOURNMENT

The work session ended at 6:58 p.m.

James L. Cawdrey, Mayor

ATTEST:

Denise M. Skillman, City Recorder



CITY of BANDON

P. O. BOX 67
BANDON, OR 97411
347-2437

WORK
SESSION

3-29

David Ris

TO: HONORABLE MAYOR AND COMMON COUNCIL 09-01-92

FROM: BEN M. MCMAKIN *BM*
CITY MANAGER

SUBJECT: COUNTY ROADS IN BANDON

Attached is the report compiled by David Ris regarding County roads in Bandon. I will refer to these by the page numbers of his report. It should be remembered no effort has been made to survey these old roads and their actual location is, in some areas, questionable.

- A) Page 1: County Road #84096
This road starts at about 1st Street and Cleveland Avenue and may wander through some platted areas. This road has not been found on any recent title surveys and should probably be left alone. It is possible the currently used Oregon Avenue may traverse some of this right of way.

Recommendation -- Request the surrender of the right of way within the City of any current right of way on Road Case 115 & 169.

- B) Page 2: County Road #84095 (Bills Creek)
Prior to about 1939-40 this road took off from Rosa. The County apparently unilaterally changed to current place beginning at 13th.

I raised two questions about this road which still need some investigation:

1. Can the County unilaterally dump a County road at a City limit? and
2. Isn't there a responsibility for a County Road to connect to a County road or State highway?

Recommendation -- None at this time.

- C) Page 3: Ohio Street
Ohio appears not to be a City street (but then, how was east half of street dedicated?)

Recommendation -- If the full street exists, see if there can be some joint responsibility for the street in exchange for City annexing the full street.

- D) Page 4: Fahy Road
Not a County road and is not a County/City problem.

- E) Page 5: Road Case 271
Location unknown but does not present a problem with any private property. Appears to be in vicinity of 3rd Street and Grand Avenue.

Recommendation -- Request surrender of the right of way within the City on Road Case 271.

- F) Page 6: Empire to Bandon
Location is not exactly known and has not shown up on any title policy. This right of way could be of some value to the City for drainage purposes in the area.

Recommendation -- locate right of way and request surrender of Road Case 211 within City of Bandon.

- G) Page 7: Beach Loop -- County Road #95029

Old problems:

- 1) Apparently Ocean Drive from 4th Street to 7th Street is still a County road under Road Case 168.
- 2) Apparently Road Case 168 meanders through Blocks 24, 28 and 40 in West Bandon.

Recommendation -- City should request surrender of all existing right of way in Road Case 168 for 1st and Cleveland south to Tupper Creek. City should then vacate the portion of County Road 168 that exists on Blocks 24, 28 and 40 West Bandon Addition.

Opportunities -- Beach Loop from Tupper Creek south is a County road. The City intended to take over Beach Loop from Tupper Creek to Johnson Creek in 1963. The County can overlay about one mile of 24 foot wide road for \$50,000. \$50,000 is also the maximum road project the County will do due to the current State law.

Recommendation -- We need to find a way we can obtain a State bicycle route grant (\$50,000 State and \$12,500 local match), do some of the work with our crews in

preparing for the bike path, and have the County overlay and stripe the road and bikepath. I would expect this to be about a \$100,000 project.

This would be \$50,000 State Bicycle Grant, \$12,500 local match for the Bicycle Grant, and \$37,500 in City funds. The project should include engineering (\$8,000), work done by City crews (\$42,000) and County overlay (\$50,000). About \$20,000 of the City work should be a soft match (City personnel and equipment), which means local cash cost would be about \$30,000. This should be able to do a bicycle path from 11th Street to about Face Rock Viewpoint.

The County has some bikepath funds they may be able to put into the project.

With two years of this type of commitment, I believe we could get a bikepath on both sides of Beach Loop from 11th to Seabird Drive. A bikepath could easily be continued from Seabird to the In at Face Rock, but it would be very difficult to have a bikepath through the Johnson Creek fill area.

- H) Page 8: County Road #85121 (Jetty Road)
This is a County Road from Edison to the County Park. I said we would take over the road and County Park when we had an FAS project to reconstruct our FAS route from Edison and Jetty Road to Beach Loop and 8th.
- I) Page 9: County Road #85226 (Seabird Drive)
This is a County Road from Beach Loop to Highway 101. I indicated as part of a major package the City may be willing to take this road over.
- J) Page 10: Riverside Drive
The terminus of this road is unclear, but I believe it is clear the bridge is the County's. The bridge deck is in good shape but the bridge sits on timber piles rather than concrete abutments. The piling is the weak point of the bridge.

Recommendation -- It would appear to me that should the County put in a bikepath from 101 to Fillmore and perhaps overlay Riverside, we could accept the road.

Bandon to County Line - County Road Number 84096.

Three major Road Cases related to creating this road. The only remaining portion of this road appears to be Oregon Avenue and Rosay Road. Other portions vacated, no longer used or replaced by 101.

Road Case 115 (1878) - Coquille Ferry at the Mouth of the Coquille River to Curry County Line
Road Case 169 (1883) - Bandon Ferry via Rosa's to Curry County Line. Final Order Vol 2 Pg 274 or 275

Road Case 525 (1911) - Surveyor investigating

Road Case 532 (1912) - Surveyor investigating

Road Case 749 (6/14/22) - Vacated Road in Portland Addition.

Road Case 763 (7/6/23) - Offer to surrender jurisdiction from 13th Ave north. ACTUAL TERMINUS OF OFFER? NO RECORD OF ACCEPTANCE

Road Case 795 (9/1/26) - Offer to surrender, river up Oregon Ave. Accepted by Ordinance 580.

Remaining Issues

1. Is there a need to vacate portions of RC 115 and 169 within City?
2. RC 763 is probably not relevant any more since it has been replaced by 101.

Bills Creek - County Road Number 84095

Created by Road Case 275 (1893). Also relevant Vol 24 pg 729.
Starts at the South end of Harlem and heads southeast.

Although no portion of the County Road is within the City of Bandon, Coos County has occasionally cuts brush on city streets when in the area.

Surveyor is confirming that the road is not within city limits

look 1939 f 1940

Ohio Street - Not a County Road

The County does not maintain this road. However, County has in the past performed some work under contract with the property owners. This creates a problem since half of the road is within the city.

*is 30ft in City
where is subdivision boundary*

Fahy Avenue - Not a County Road

No indication of the history of Fahy Road between Riverside and the platted Fahy Avenue which starts near the 101 bridge. County does not maintain this road.

Ferry Creek - Not shown as a constructed County Road

Road Case 271 (1892). Appears to go through cheese factory. Not clear if this is the basis of any city streets.

Remaining Issues

1. Vacate this road unless it provides right of way to city

Case 211

Empire to Bandon (1887) - A small portion of this road exists near the former Coast Guard building.

Remaining Issues

1. Vacate or surrender that portion of the Road that is on dry land within the City of Bandon.

Beach Loop - County Road Number 95029, former name was Bradley Lake Road.

County does not maintain any portion of this road within the City of Bandon.

Road Case 168 originally created this road in 1883. Started at First and Cleveland thence southwest to bluff area thence south.

Road Case 481 (1909) - Vacated road in Averill Addition.

Road Case 769 - Relocation of the Road from Tupper Creek (city limits at that time) to what is now 101. Vol 14 pg 306 (1929) designates Bradley Lake Road as a market road. Final field notes filed in 1930. NO OTHER RECORDS OF FINAL BOC ORDER.

Road Case 788 (1925) - Vacated road in West Bandon Addition, Blocks 8,9,14,15 and 23.

Vol 27 Pg 686 (5/23/63) - Upon City request (27/686), County offered to surrender jurisdiction from West Bandon Addition to Johnson Creek (city limits at that time). NO RECORD OF FINAL CITY ACCEPTANCE

Remaining Issues

1. Ocean Drive - Apparently located on RC 168. City sewer and street development. No record of surrender of jurisdiction.
2. West Bandon Addition, Blocks 24,28 and 40 - No apparent streets but no record of vacation.
3. West Bandon Addition to Johnson Creek - No record of acceptance of offer to surrender jurisdiction.
4. West Bandon Addition to 101. Final BOC order on RC 769 needs to be clarified. Surveyor investigating.
5. Johnson Creek to South City limits - Jurisdiction.

Bandon Jetty - County Road Number 85121

Road created by deed from Port to County for street purposes. Vol 271 Page 411 (1959). No record of acceptance or formal inclusion in the County Road system. County has maintained this road.

Remaining Issues

1. Should this road be surrendered to the City
2. Clarification of status of the road if not taken over by the city.

Seabird Drive - County Road Number 85226

Road Case 1055. Established as a County Road in 1978. A portion of the west end of the road is within the city.

1. Should the County continue to maintain the road within the city.

Riverside Drive -

Road Case 254 (1891), see also Vol 4 Pg 610

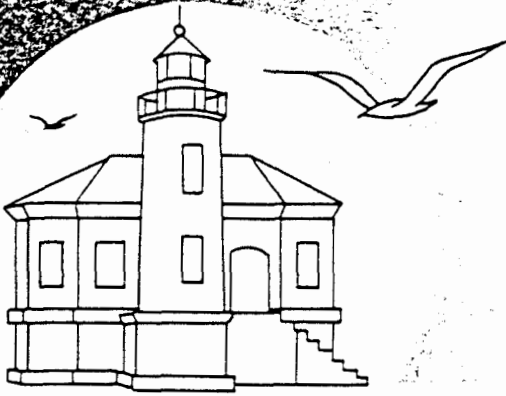
Curves away from bridge area and end in Woodland Addition. Unclear how the bridge portion of the right of way was established. The County maintains this road up to the bridge. In 1963 the City agreed to take over the bridge if the County built a new one. NO RECORD OF THIS HAPPENING.

Remaining Issues

1. Jurisdiction within the City of Bandon
2. Vacation of portion of road.
3. Dedication of road where no road right of way records exist.
4. Maintenance of the bridge.

CITY OF BANDON

P.O. BOX 67
BANDON, OREGON 97411
PHONE (541) 347-2437
FAX (541) 347-1415



May 23, 1997

David R. Ris
County Counsel
Coos County Office of Legal Counsel
Coos County Courthouse
Coquille, Oregon 97423

RE: Coos County Roads in the City of Bandon

Dear Mr. Ris:

This is in response to your letter dated May 16, 1997 regarding County roads in Bandon.

I have reviewed your letter, and have researched the records regarding the subject of Beach Loop Road jurisdiction. In light of the information we have been able to put together, and the information you have provided, it does appear that the City of Bandon has jurisdiction over the portion of Beach Loop Road from its northern terminus at the intersection with 7th Street SW south to the north bank of Johnson Creek, as described in Resolution No. 63-6.

It appears from our research that the roads inside the Bandon City limits over which the County currently has jurisdiction and maintenance responsibilities include, but are not necessarily limited to, the following:

- Beach Loop Road from the north bank of Johnson Creek south to the City limits.
- Riverside Drive from the south bank of Ferry Creek north to the City limits.
- Seabird Drive for its entire length, from Beach Loop Road east to the City limits at US Highway 101.
- Jetty Road for its entire length, from Edison Avenue west to, and including, the parking lot at the South Jetty Park.

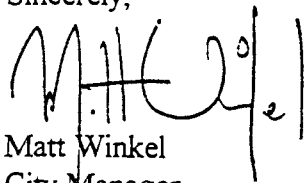
- The east portion of Ohio Avenue adjacent to the City limits through an area where it provides access to City residents on one side and County residents on the other side.
- The south portion of 13th Street adjacent to the City limits through those areas where it provides access to City residents on one side and County residents on the other side.
- Ocean Drive from 4th Street to 7th Street.
- Miscellaneous portions of other streets as described in Road Cases 115, 168, 169, 211, 275, 254, and 271.

Please review the above list, and advise me regarding whether you have located any further documentation related to the jurisdiction of these roads.

I believe it would be appropriate for City and County representatives to meet regarding the various issues associated with maintenance, improvement, and jurisdiction of these roads. Apparently, an effort to resolve all of these questions was initiated in 1992, but was never completed. Please contact me so that we arrange a date and time to meet and discuss this matter.

Thank you very much for your assistance. If you have any questions or need additional information, please feel free to contact me any time at (541) 347-2437, voice mail ext. 229.

Sincerely,

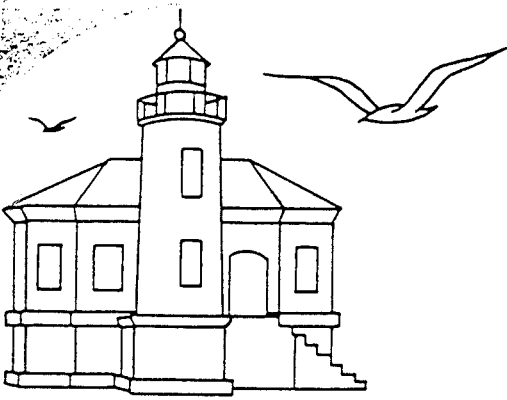


Matt Winkel
City Manager

cc: Mayor and City Council
Denise Skillman, City Recorder
Fred Carleton, City Attorney
Dennis Lewis, Planning Director
Richard Anderson, Public Works Supervisor

CITY OF BANDON

P.O. BOX 67
BANDON, OREGON 97411
PHONE (541) 347-2437
FAX (541) 347-1415



June 26, 1997

David R. Ris
County Counsel
Coos County Office of Legal Counsel
Coos County Courthouse
Coquille, Oregon 97423

RE: Coos County Roads in the City of Bandon

Dear Mr. Ris:

In my letter of May 23, 1997, I outlined several roads which were all or partly located inside the City of Bandon, which were still under jurisdiction of Coos County. It has come to my attention that the following road should be added to that list of County roads:

- Allegheny Avenue between 13th Street SW and roughly the 16th Street SW alignment, through and area where it provides access to County residents on one side and in-City commercial property on the other side.

Please contact me if you would like to arrange a meeting between City and County representatives to discuss this and the other County roads within Bandon.

Thank you very much for your assistance. If you have any questions or need additional information, please feel free to contact me any time at (541) 347-2437, voice mail ext. 229.

Sincerely,

A handwritten signature in black ink, appearing to read "Matt Winkel". The signature is stylized and includes a vertical line to the right of the name.

Matt Winkel
City Manager

COOS COUNTY OFFICE OF LEGAL COUNSEL

Coos County Courthouse, Coquille, Oregon 97423

(541) 396-3121 Ext 215 Fax (541) 396-4861

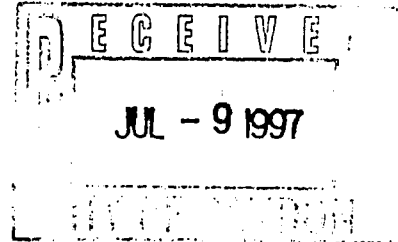
TDD Relay 1-800-735-2900 E-Mail: cooscc@mail.coos.or.us



DAVID R. RIS
County Counsel

DAVID A. CAMERON
Assistant County Counsel

July 7, 1997



Matt Winkel
City Manager
City of Bandon
P.O. Box 67
Bandon, Oregon 97411

Re: County Roads in Bandon

Dear Mr. Winkel:

Thank you for your various letters regarding county roads in Bandon. The County has researched the additional roads you have identified to determine if they have county road status. Before discussing the status of these roads, I thought it would be helpful to review the various types of public roads.

ROAD STATUTES

ORS Chapter 368 contains provisions relating to county roads. The Oregon legislature substantially revised this chapter in 1981. ORS 368.001 defines public roads, local access roads, and county roads. A public road is any road over which the public has a right of use as a matter of public record. A county road is a public road that has been designated a county road pursuant to ORS 368.016. A local access road is a public road that is not a county road, state highway or federal road.

ORS 368.016 states that the county may make a public road a county road by order or resolution. Roads classified as county roads on November 1, 1981 retain that classification unless changed following the procedures provided by law. ORS 373.270 provides procedures for transferring a county road to a city. ORS 368.026 establishes a process to withdraw county road status for a county road outside of a city. ORS 368.062 deals with transferring a city street to a county.

ORS 368.031 provides that a local access road outside of a city is subject to the exercise of jurisdiction by the county in the same manner as a county road except the county is not liable for failure to improve or repair a local access road. County expenditures for local access roads are subject to specific procedural requirements. In other words, the county has jurisdiction over these local access roads, but is not responsible for maintenance.

Matt Winkel
July 7, 1997
Page 2

Another issue is what happens to a county road or a local access road when a city is incorporated or annexes additional territory. It is the County's understanding that the general rule of law is that the city has exclusive control over any type of road within its limits. An important exception is if the state statute incorporating the city or the charter of the city directs otherwise. It will be necessary to review these documents to determine how the incorporation of Bandon and subsequent annexations effected the status of roads within the City. Please provide me with a copy of these documents.

COUNTY ROADS

Subject to review of the incorporation and charter documents of the City, the County views the four roads listed in the draft agreement as county roads. This includes a portion of Beach Loop, Riverside Drive, Seabird Drive, and Jetty Road. The work the County will do before transferring jurisdiction is described in the draft agreement, copy enclosed.

ADDITIONAL ROADS

You brought to the County's attention Ohio Avenue, 13th Street, Allegheny Avenue, and Ocean Drive. The County has no records to indicate that these are county roads. To the extent that these roads are within city limits, they are within the jurisdiction of the city. Those portions outside of the city limits are local access roads. The County would have jurisdiction, but no maintenance responsibility.

Research by County Surveyor Karlas Seidel has provided new information regarding these roads. It appears that Ohio Street north of Highway 42 was created by the Bandon Heights Extension plat. There is some indication that additional right of way may have been dedicated by property owners to the east of the plat to increase the size of the road. However, nothing indicates that any portion of Ohio north of Highway 42 is a county road.

South of Highway 42, Ohio was created solely by the Sweeny Addition to the Bandon plat. The County has not researched the city limits in this area. Assuming the city limits are the plat boundary, the city would have exclusive jurisdiction over the road. If the city limits do not extend to the plat boundary, nothing indicates that the remainder of Ohio south of Highway 42 is a county road.

13th street was created by the Portland Addition to Bandon. Portions of 13th are entirely within the city limits of Bandon. The city limits run down the center of 13th in another portion. The road cases for Bills Creek and Rosa Road start at the plat boundary. Nothing indicates that any portion of 13th is a county road.

The creation of Allegheny Avenue is confusing. A portion was created by the Oakes Addition to Bandon, another portion was

Matt Winkel
July 7, 1997
Page 3

dedicated to the City (deed reference 79-2-6985 and 79-2-6986). The remaining portion of the street appears to have been the result of gaps in deed descriptions. Nothing indicates that any portion of Allegheny is or ever was a county road.

Ocean drive appears to be a portion of Road Case 168. This was a county road in 1889. In 1925, Road Case 168 within the plat of West Bandon, just south of Ocean Drive, was vacated. The County has not considered Ocean Drive as a county road since long before November of 1981. The city has exercised jurisdiction over this road, including utility installations. The County does not consider Ocean Drive a county road.

HISTORICAL ROAD CASES

I have enclosed tracings for the miscellaneous road cases you mentioned in your letter, except for 275. Road Case 275 is Bills Creek Road and starts outside of the city limits. It appears that these tracings confirm that improvements have been constructed on several of these historical rights of way.

Coos County has no interest in these historical rights of way within city limits. Subject to review of the incorporation statutes and city charter, I believe jurisdiction of these rights of way transferred to the city upon incorporation or annexation. I have not researched the issue of whether the County has any role if the city desires to vacate these historical rights of way. If the County does have a role, the County will be happy to cooperate with the city during this process.

Based on available information, Coos County has no maintenance obligation for the additional roads and road cases you described in your letters.

DANGEROUS CONDITIONS

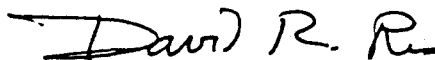
You report several dangerous conditions over that part of Beach Loop in the city which remains a county road. Although the County has jurisdiction over this portion of the road, apparently there have been multiple utility and at least one culvert installations through the city's permit system. The road is in bad repair due to substandard installations. The County is very concerned that the city appears to be willing to exercise jurisdiction over a road, but does not take responsibility to maintain the same road. The County is willing to discuss how the City, County, and property owners can cooperate to address the culverts in this area.

MEETING

Karlas Seidel, Bits Klemm, and I will be happy to come to Bandon to further discuss these issues. Due to vacations, it will be the last week of July that we all will be available. I tentatively suggest the afternoon of Thursday, July 31st for our meeting. Please let me know if this date is satisfactory.

Matt Winkel
July 7, 1997
Page 4

Sincerely,

A handwritten signature in black ink that reads "David R. Ris". The signature is written in a cursive style with a long horizontal stroke at the beginning of the first name.

David R. Ris

Enclosures

cc: Board of Commissioners
Karlus Seidel
Bits Klemm
Fred Carleton

AGREEMENT

This Agreement is entered into by and between Coos County, a political subdivision of the State of Oregon and the City of Bandon, a municipal corporation of the State of Oregon.

Whereas, the transfer of jurisdiction over County Roads within cities is subject to ORS 373.270; and

Whereas, the governing bodies of the City and County deem it in the best interest of the County to surrender jurisdiction and for the City to acquire jurisdiction over the County Roads described below; and

Whereas, to further the transfer of jurisdiction, the City and County have agreed to certain improvements to the County Roads and to a process by which the transfer can be accomplished.

Now, therefore, it is hereby agreed:

1. Jurisdiction over the following County Roads located within the City of Bandon shall be transferred to the City pursuant to the terms of this agreement:

- Beach Loop Road from the north bank of Johnson Creek south to the City limits,
- Riverside Drive from the south bank of Ferry Creek north to the City limits, and
- South Jetty from Edison Street to its terminus at the north boundary of the Amended Breakwater Addition between Blocks 25 and 31.
- Seabird Drive from Beach Loop east to the City limits.

2. The transfer of jurisdiction may be accomplished in phases, including portions of the County Roads described above.

3. The County recognizes that certain portions of the County Roads must be improved before the City is willing to accept jurisdiction. The City and County agree that when the work described in paragraph 4 is performed by the County, the City shall accept jurisdiction of the County Road or portion thereof for which the improvement has been made.

4. The work to be performed by Coos County shall be as follows:

- Beach Loop Road - Patch roadway with asphalt from the north bank of Johnson Creek south to the City limits.
- Riverside Drive - Overlay roadway and patch Ferry Creek Bridge. This project has been completed. Notwithstanding paragraphs 6 and 7, the City shall immediately adopt appropriate municipal legislation regarding Riverside Drive pursuant to paragraphs 8 and 10.

- South Jetty - Overlay from Edison Street for a distance of 3/10 mile (approximately Harrison Ave.) and overlay 1/10 mile from the platted alleys in Blocks 22 and 27 to the north line of Block 26, Amended Breakwater Addition.

- Seabird Drive - No work is needed. Notwithstanding paragraphs 6 and 7, the City shall immediately adopt appropriate municipal legislation regarding Seabird Drive pursuant to paragraphs 8 and 10.

5. The City may wish to make additional improvements such as curbs, sidewalks, shoulders, drainage, and other improvements. The City shall be solely responsible for such additional work.

6. Prior to implementing the transfer process described below for any County Road or portion thereof, the City and County shall agree to a schedule of work. The schedule of work shall be in writing and signed by the County Roadmaster and City Manager. The schedule of work shall take into consideration the needs of both the City and County, including but not limited to budget matters and the \$50,000 limitations on work performed by County forces provided by ORS 279.023.

7. The schedule of work shall include the following:

- A description of the County Road or portion thereof which will be the subject of the transfer process.

- The dates for the initiation of the transfer process by the City and the work to be performed by the County.

- The work to be performed by the County.

- A description of the additional work, if any, to be performed by the City.

- Any provisions necessary for the coordination of work to be performed by the County with any additional work to be performed by the City.

- Such additional matters as may be agreed to by the parties to expedite the transfer of jurisdiction.

8. Upon agreement to a schedule of work, the City shall initiate action for the surrender of jurisdiction pursuant to ORS 373.270(6) by passage of appropriate municipal legislation that requests surrender of jurisdiction. The legislation shall incorporate the schedule of work as agreed to by the parties.

9. Any limitations upon acceptance of jurisdiction by the City shall be restricted to the work to be performed by Coos County as described in this agreement and the schedule of work. Any time limitation to be included in the legislation shall be in accordance with the agreed schedule of work.

10. The City shall forward to the County Roadmaster a certified copy of the legislation. Upon receipt of the

legislation, Coos County shall implement the agreed schedule of work.

11. Upon completion of the work, Coos County shall adopt an order surrendering the County Road or portion thereof and provide the City a certified copy of the order. Upon adoption of the order and without any further action by the City, the jurisdiction of the County shall cease and vest in the City pursuant to ORS 373.270(7).

12. The City and County recognize that historic Road Cases or other documents exist that created rights-of-way within the City of Bandon. The City and County specifically agree that, except for the County Roads described in this agreement, the City has full and exclusive jurisdiction over such rights-of-way. Upon completion of the work and transfer of jurisdiction of County Roads as described in the agreement, no roads within the City of Bandon shall have County Road status or be within the jurisdiction of the County.

CITY OF BANDON

BOARD OF COMMISSIONERS OF
COOS COUNTY

Signature

Chairperson

Name (Printed)

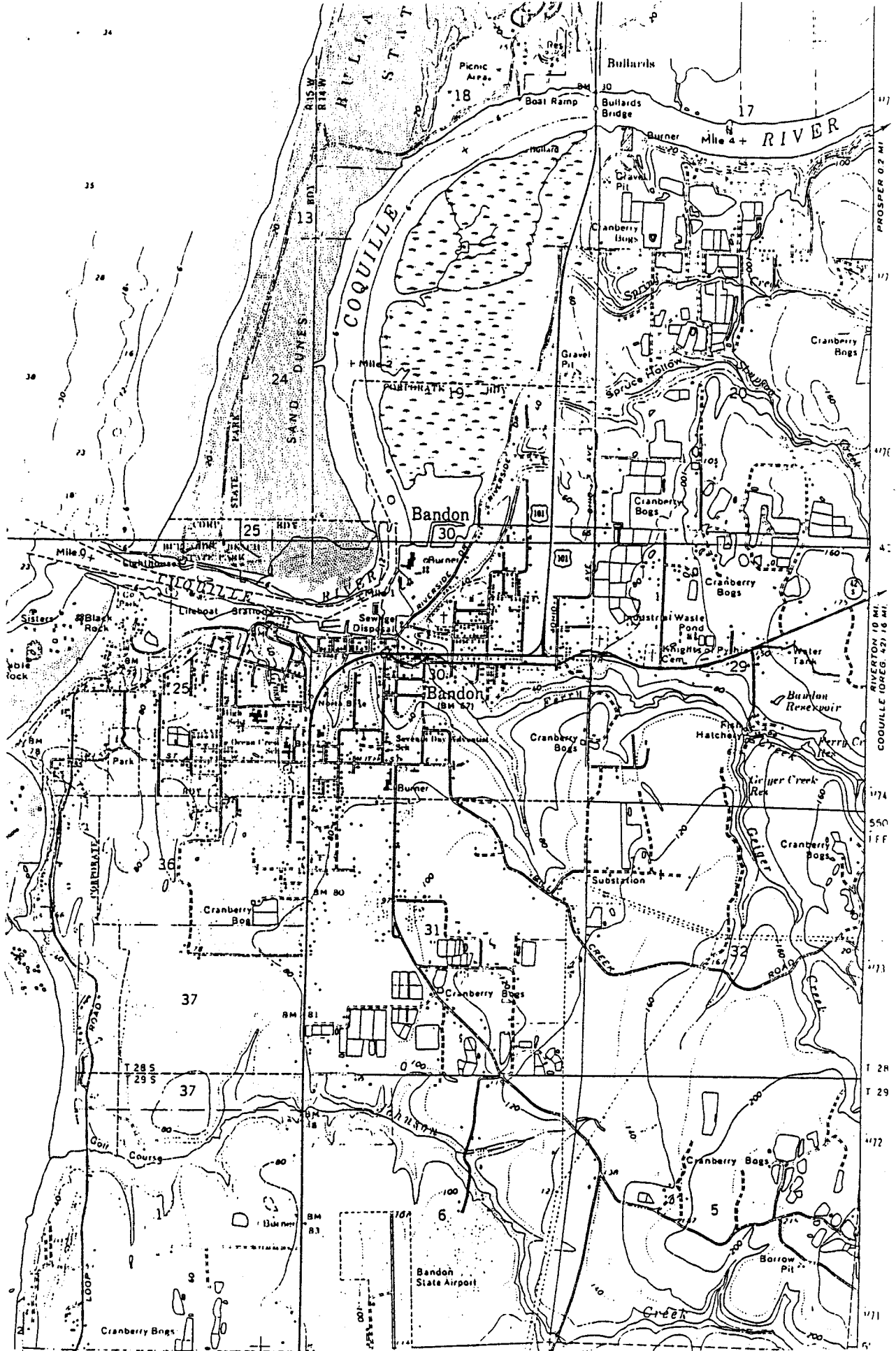
Commissioner

Title

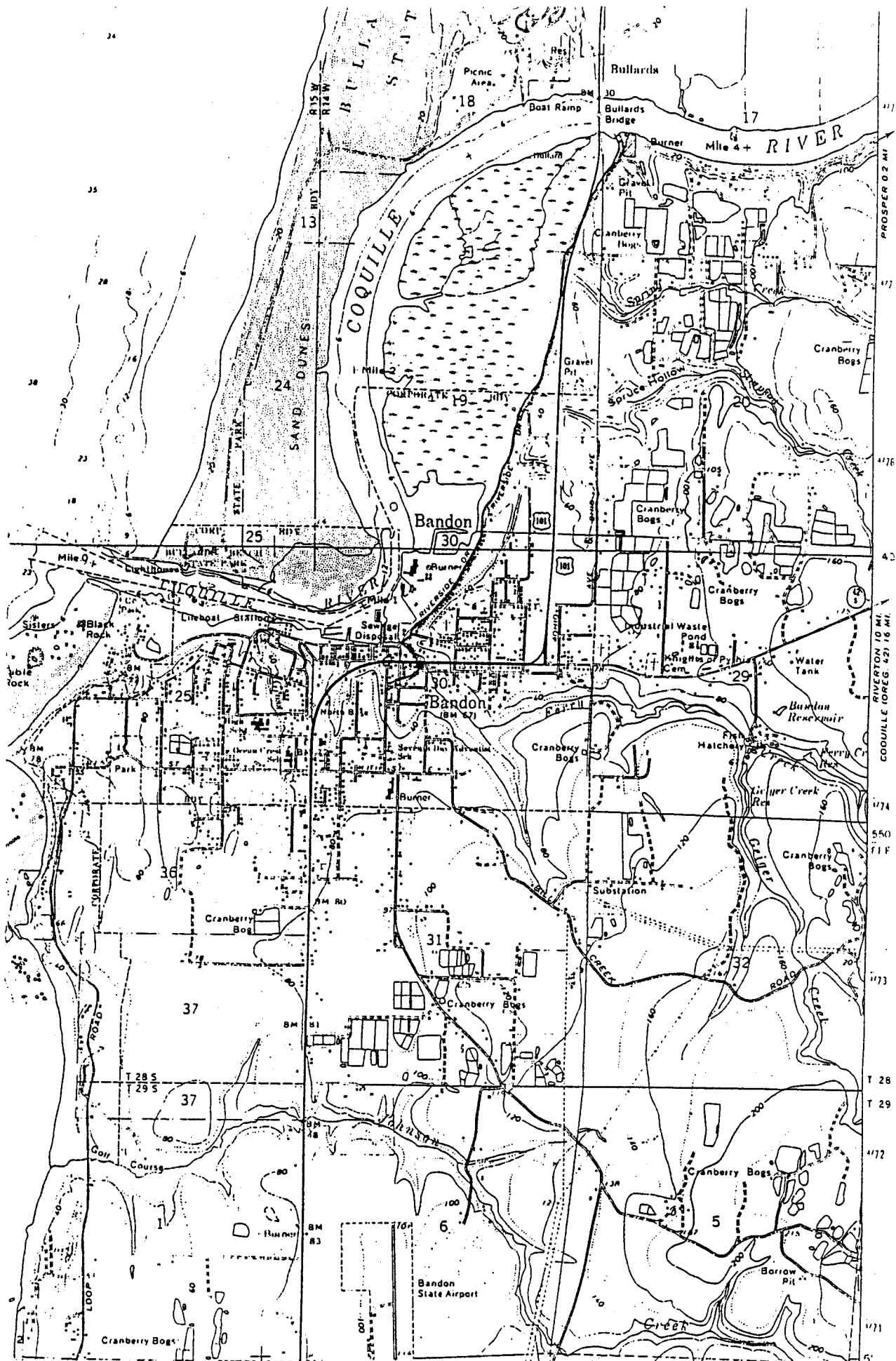
Commissioner

Date

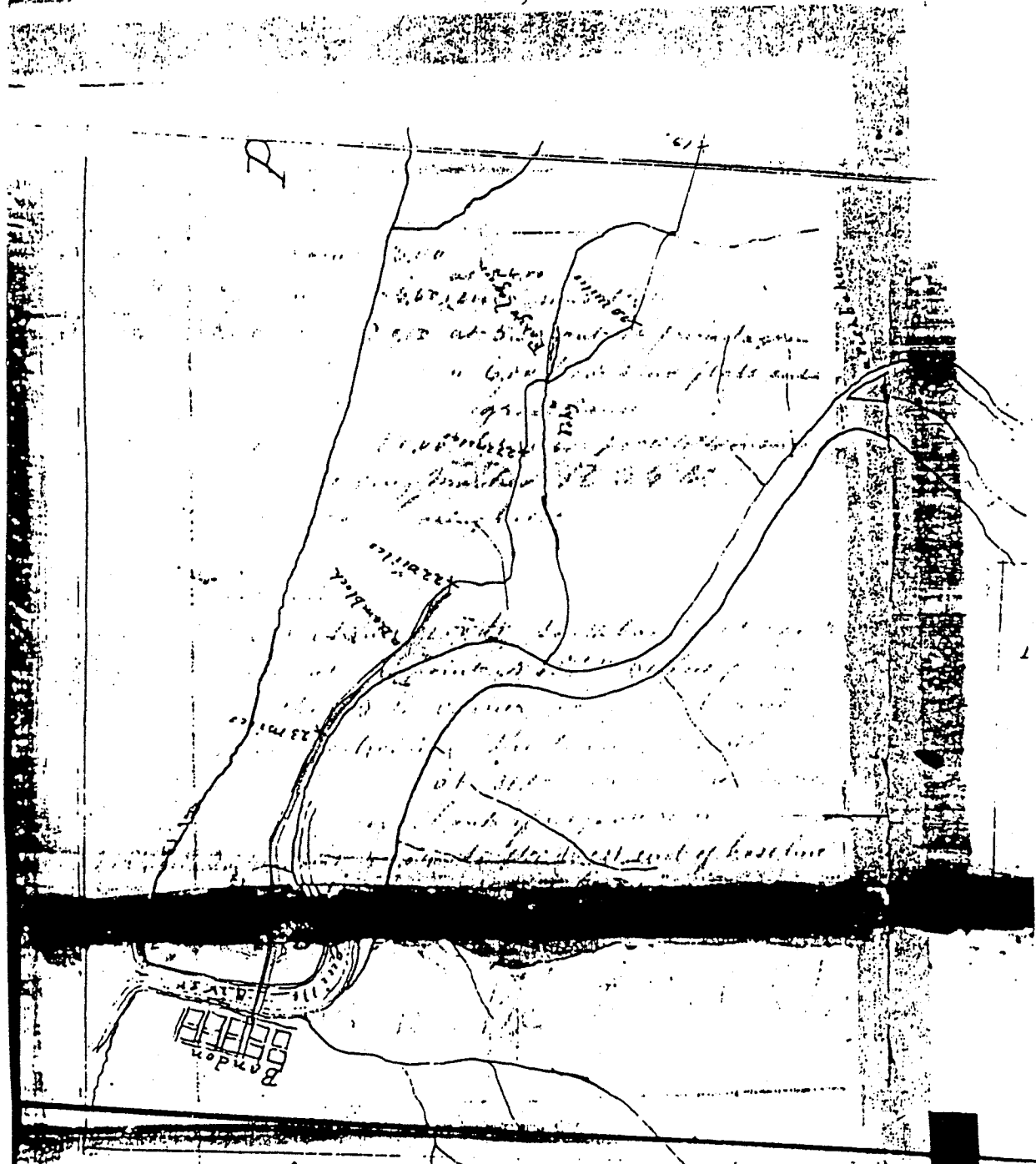
Date



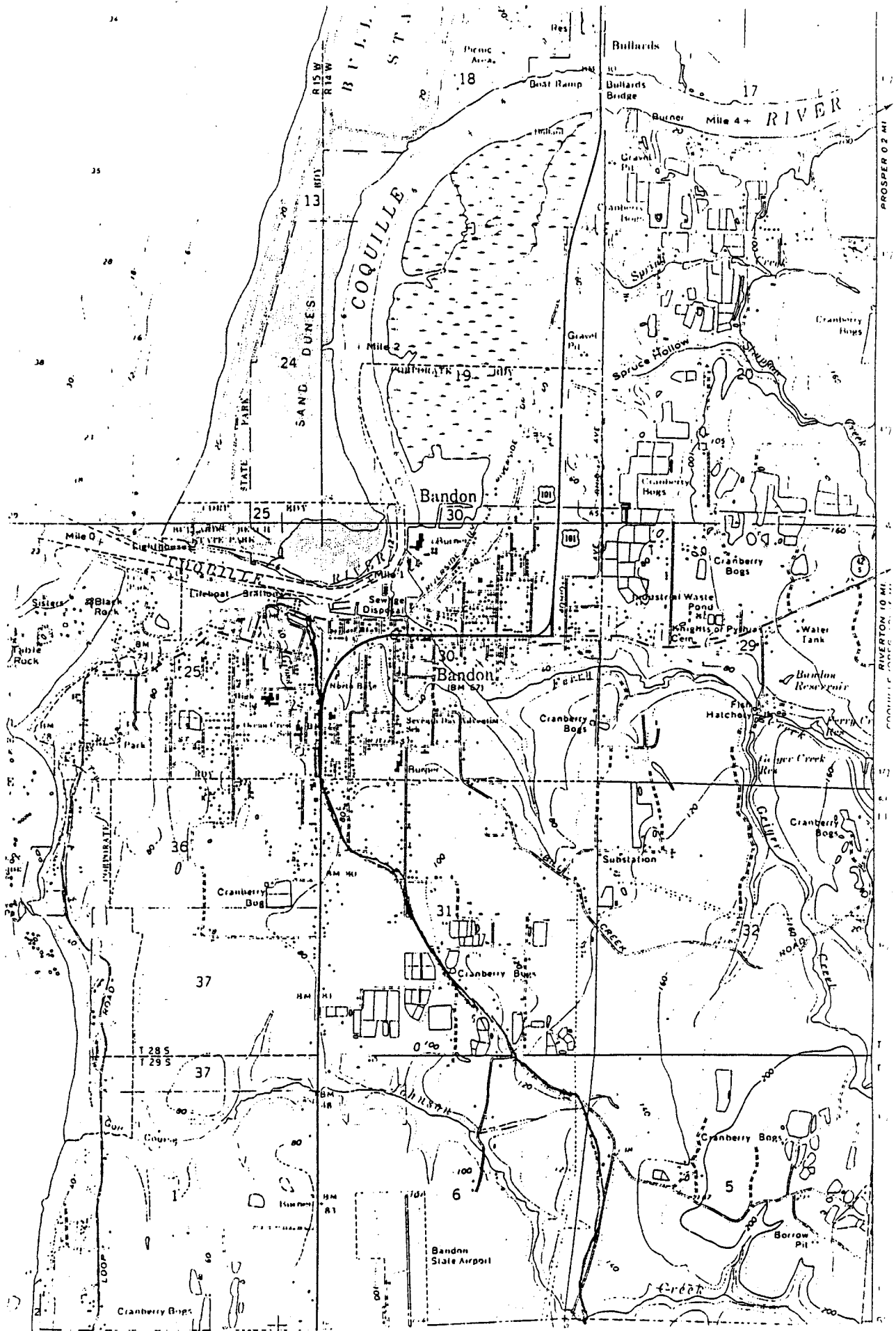
ROAD CASE 271
 APPROXIMATE LOCATION FROM 1892 SUZUEY



Road CASE 254
 APPROXIMATE LOCATION FROM 1891 SURVEY

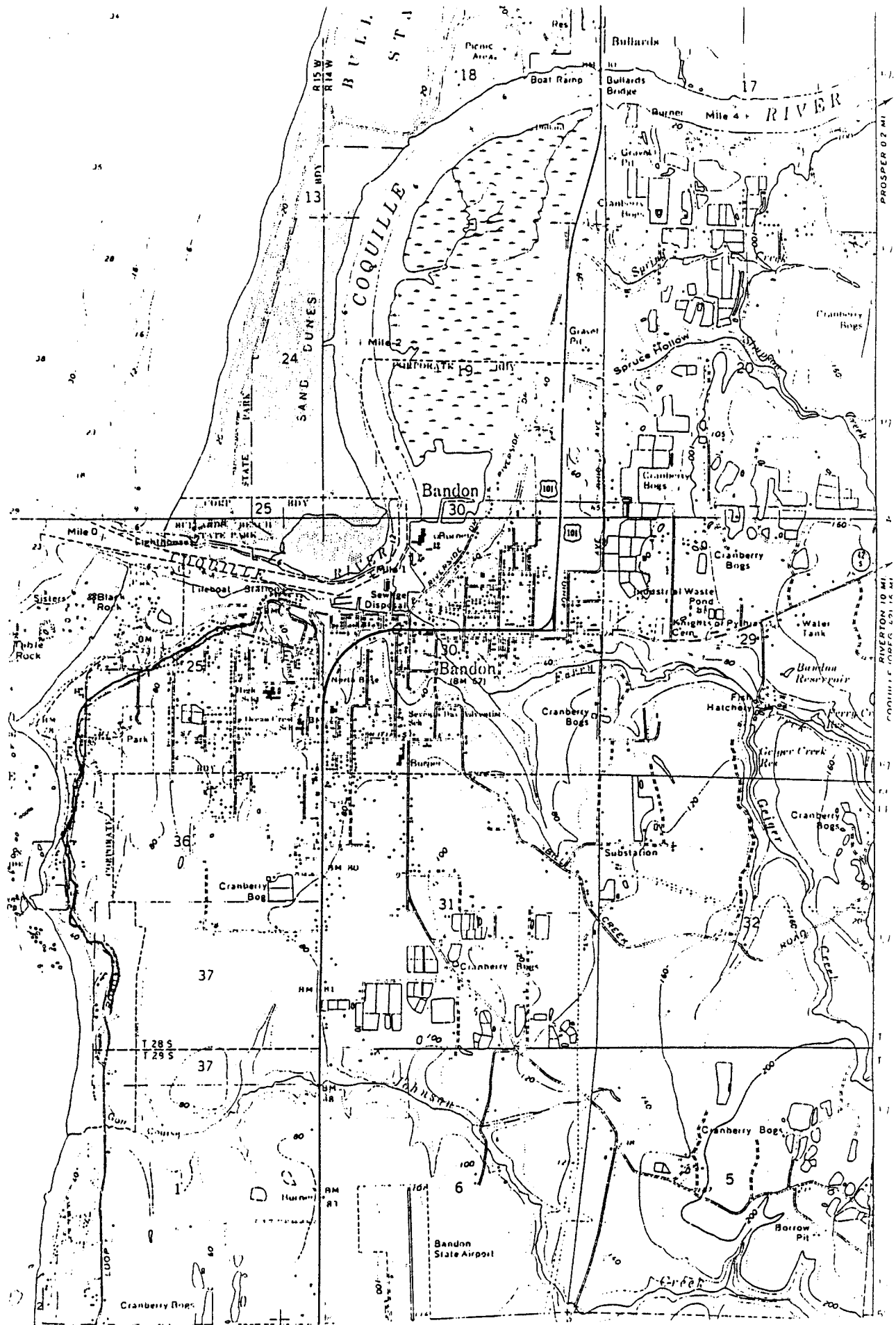


ROAD CASE 211
 (APPROXIMATE) 1887

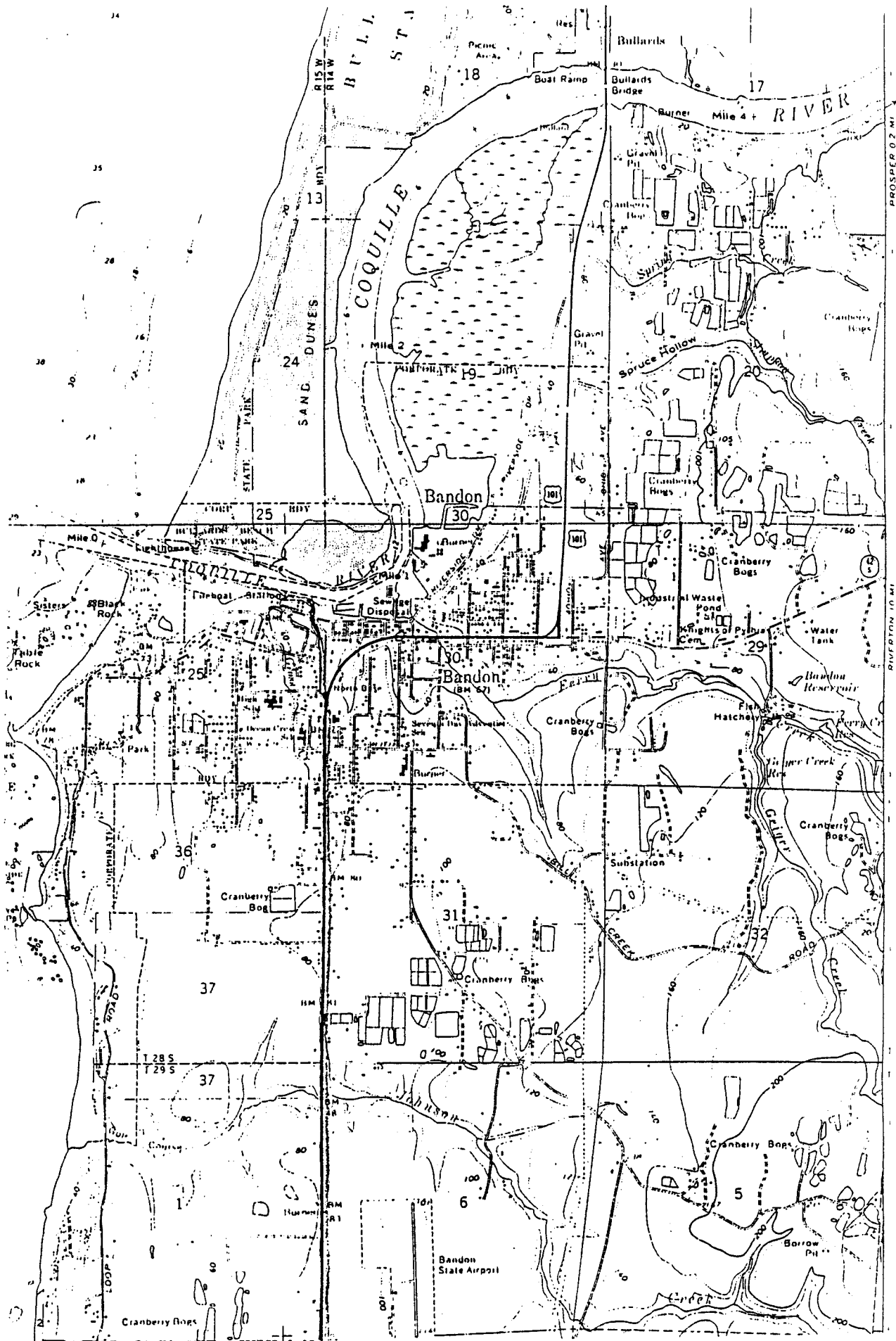


RC 169

Approximate Location from 1983 SURVEY



ROAD CASE 168
 APPROXIMATE LOCATION FROM 1883 SURVEY



• Road Case 115
 Approximate location from 1878 survey

A-3. ODOT POLICY

The Oregon Highway Plan contains Goals and Policies related to the operation and improvement of US 101 and OR 42S through Bandon. The following Highway Plan goals and policies are most directly related to State highways in Bandon, although other policies may relate as well.

Goal 1: System Definition

- 1A: State Highway Classification System
- 1D: Scenic Byways
- 1F: Highway Mobility Standards

Goal 2: Access Management

Note: Related to Goal 2 of the Oregon Highway Plan is OAR 734-051 which governs construction and closure of approaches to State Highways. The statute text is not included here due to its length.



Policy Element

Goal 1: System Definition

To maintain and improve the safe and efficient movement of people and goods and contribute to the health of Oregon's local, regional, and statewide economies and livability of its communities.

Overview

The state highway classification system divides state highways into five categories based on function: Interstate, Statewide, Regional, District, and Local Interest Roads. Supplementing this base are four special purpose classifications: land use, statewide freight routes, scenic byways, and lifeline routes. These address the special expectations and demands placed on portions of the highway system by land uses, the movement of trucks, the Scenic Byway designation, and significance as a lifeline or emergency response route. Information contained in these special designations supplement the highway classification system and will be used to guide management, needs analysis, and investment decisions on the highway system.

The System Definition section also includes policies on highway mobility standards and major improvements, which further define state highway management goals and objectives.

STATE HIGHWAY CLASSIFICATION SYSTEM

Background

The 1991 Highway Plan's Level of Importance Policy classified the state highway system into four levels of importance (Interstate, Statewide, Regional and District) to provide direction for managing the system and a basis for developing funding strategies for improvements. Realizing that limited funding would not allow all the statewide highways to be upgraded, the 1991 Highway Plan also designated some of the statewide

highways as the Access Oregon Highway system to focus needed improvements. The goal of the Access Oregon Highway system was to provide an efficient and effective system of highways to link major economic and geographic centers.

Congress adopted the highway routes in the National Highway System (NHS) as part of the National Highway System Designation Act of 1995. In Oregon, the National Highway System highways include all the Interstate and Statewide Highways and Access Oregon Highways except for Oregon Highway 82. To reduce the redundancy between Level of Importance, Access Oregon Highways and the National Highway System and to define a highway classification system that is consistent with the National Highway System, this Highway Plan has adopted the National Highway System as the primary classification and retained the Regional and District categories from the Level of Importance system. Oregon Highway 82 in Wallowa and Union Counties will remain a Statewide Highway. This ensures that every county in Oregon has a link to the rest of the state through the Statewide Highway network.

Congress also designated major intermodal connectors as part of the National Highway System. These roads, some owned by the state and some by local jurisdictions, are located in Astoria, Boardman, Coos Bay-North Bend, Eugene, Medford and Portland. (These roads are listed in Appendix E.) They link airports, ports, rail terminals, and other passenger and freight facilities to Interstate and Statewide Highways, and are of particular importance to Oregon's economy. State-owned intermodal connectors are either Regional or District Highways and are managed according to their state highway classification.

The classification system also recognizes that certain roads which are currently state highways function primarily as local roads. In cooperation with local governments, ODOT will develop a process to identify these roads which may be transferred to local jurisdictions in accordance with Policy 2C of this plan. The process will also consider the transfer of local highways and roads that serve primarily state interests to state jurisdiction.

ODOT will use the state highway classification system to guide management and investment decisions regarding state highway facilities. The system will be used in the development of corridor plans, transportation system plans, major investment studies, review of local plan and zoning amendments, periodic review of local comprehensive plans, highway project selection, design and development, and facility management decisions including road approach permits.

The broad classifications defined in Action 1A.1 will be complemented by specific subcategories and designations defined in other policies within this plan (see Policies 1B, 1C, 1D, 1E, 1F, and 3A). These subcategories and designations are policy-specific; the overall state highway classification defined in Policy 1A forms the basis for the classification system. The classification map in this plan and Appendix D detail the application of the state highway classification system to specific highways.

The categories recognize that different highway types have importance for certain areas and users. The categories are not the same as the federal government's functional classification system. It is the responsibility of the Oregon Transportation Commission to establish and modify the classification systems and the routes in them.

Policy 1A: State Highway Classification System

It is the policy of the State of Oregon to develop and apply the state highway classification system to guide ODOT priorities for system investment and management.

Action 1A.1

Use the following categories of state highways, and the list in Appendix D, to guide planning, management, and investment decisions regarding state highway facilities:

- **Interstate Highways (NHS)** provide connections to major cities, regions of the state, and other states. A secondary function in urban areas is to provide connections for regional trips within the metropolitan area. The Interstate Highways are major freight routes and their objective is to provide mobility. The management objective is to provide for safe and efficient high-speed continuous-flow operation in urban and rural areas.
- **Statewide Highways (NHS)** typically provide inter-urban and inter-regional mobility and provide connections to larger urban areas, ports, and major recreation areas that are not directly served by Interstate Highways. A secondary function is to provide connections for intra-urban and intra-regional trips. The management objective is to provide safe and efficient, high-speed, continuous-flow operation. In constrained and urban areas, interruptions to flow should be minimal. Inside Special Transportation Areas (STAs), local access may also be a priority.
- **Regional Highways** typically provide connections and links to regional centers, Statewide or Interstate Highways, or economic or activity centers of regional significance. The management objective is to provide safe and efficient, high-speed, continuous-flow operation in rural areas and moderate to high-speed operations in urban and urbanizing areas. A secondary function is to serve land uses in the vicinity of these highways. Inside STAs, local access is also a priority. Inside Urban Business Areas, mobility is balanced with local access.
- **District Highways** are facilities of county-wide significance and function largely as county and city arterials or collectors. They provide connections and links between small urbanized areas, rural centers and urban hubs, and also serve local access and traffic. The management objective is to provide for safe and efficient, moderate to high-speed continuous-flow operation in rural areas reflecting the surrounding

Policy Element

environment and moderate to low-speed operation in urban and urbanizing areas for traffic flow and for pedestrian and bicycle movements. Inside STAs, local access is a priority. Inside Urban Business Areas, mobility is balanced with local access.

- **Local Interest Roads** function as local streets or arterials and serve little or no purpose for through traffic mobility. Some are frontage roads; some are not eligible for federal funding. Currently, these roads are District Highways or unclassified and will be identified through a process delineated according to Policy 2C. The management objective is to provide for safe and efficient, low to moderate speed traffic flow and for pedestrian and bicycle movements. Inside STAs, local access is a priority. ODOT will seek opportunities to transfer these roads to local jurisdictions.

SCENIC BYWAYS

Background

While every state highway has certain scenic attributes (see Policy 5B), the Oregon Transportation Commission has designated 12 Scenic Byways throughout the state on federal, state, and local roads which have exceptional scenic value (see map, Figure 11, page 71). In 1998, the federal government designated two of these routes as All-American Roads and four as National Scenic Byways. The Oregon Transportation Commission may designate additional state byways. To protect the scenic assets of its Scenic Byways, ODOT will develop guidelines for aesthetic and design elements within the public right-of-way that are appropriate to Scenic Byways. The Scenic Byways Policy recognizes that safety and performance issues may cause the need for physical improvements to Scenic Byways, and seeks to balance these needs with the preservation of scenic values.

Policy 1D: Scenic Byways

It is the policy of the State of Oregon to preserve and enhance designated Scenic Byways, and to consider aesthetic and design elements along with safety and performance considerations on designated Byways.

Action 1D.1

Develop and apply guidelines for appropriate aesthetic and design elements within the public right-of-way on Scenic Byways. The purpose of these guidelines is to preserve and enhance the scenic value while accommodating critical safety and performance needs. The elements should include guidelines for turnouts, overlooks, signage, and visual treatment of the highway infrastructure.



The Historic Columbia River Highway is both a State Scenic Byway and an All American Road.

Action 1D.2

With guidelines in place, develop management priorities for Scenic Byways in management plans and corridor plans.

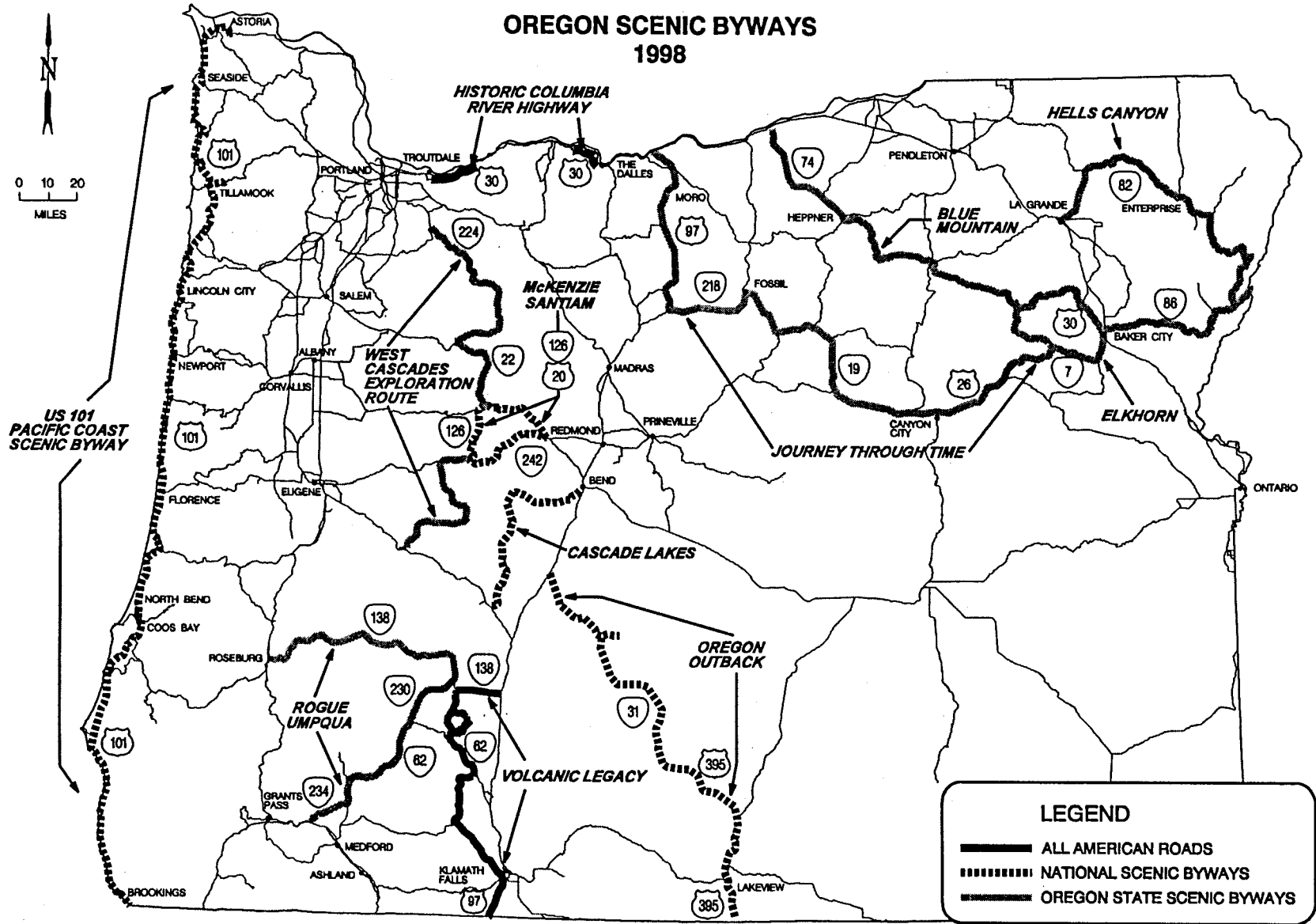


Figure 11: Designated Scenic Byways

Action 1D.3

Consider impacts to the scenic qualities of Scenic Byways when designing plans and projects.

Action 1D.4

Develop resource management plans and maps that describe ODOT's maintenance actions for roads which are designated Oregon Scenic Byways, including restricted activity zones, property to be used for disposal of slide debris and other material, and unsold state properties to be considered for ODOT retention. Identify scenic resources and existing vista opportunity locations on the maps. Include guidelines for maintenance activities where scenic resources are a factor. Ensure that ODOT highway maintenance activities are compatible with Scenic Byway management plans.

HIGHWAY MOBILITY STANDARDS

Background

Several policies in the Highway Plan establish general mobility objectives and approaches for maintaining mobility.

- Policy 1A (State Highway Classification System) describes in general the functions and objectives for several categories of state highways. Greater mobility is expected on Interstate and Statewide Highways than on Regional and District Highways.
- Policy 1B (Land Use and Transportation) has an objective of coordinating land use and transportation decisions to maintain the mobility of the highway system. The policy identifies several land use types and describes in general the levels of mobility appropriate for each.
- Policy 1C (State Highway Freight System) has an objective of maintaining efficient through movement on major truck freight routes. The policy identifies the highways that are freight routes.

- Policy 1G (Major Improvements) has the purpose of maintaining highway performance and improving highway safety by improving system efficiency and management before adding capacity.

Although each of these policies addresses mobility, none specifically identifies what levels of mobility are acceptable.

The Highway Mobility Standards Policy establishes standards for mobility that are reasonable and consistent with the directions of other Highway Plan policies. This policy carries out the directions of Policies 1A and 1C by establishing higher mobility standards for Interstate Highways, freight routes and other Statewide Highways than for Regional or District Highways. It carries out Policy 1B by establishing lower mobility standards for Special Transportation Areas (STAs) and more highly developed urban areas than in less developed areas and rural areas. The lowest standards for mobility are for Regional and District Highways in STAs where traffic congestion will be allowed to reach levels where peak hour traffic flow is highly unstable and traffic queues will form on a regular basis. The levels of mobility established for Statewide Highways in STAs will avoid high levels of traffic instability (except where accidents or other incidents disrupt traffic). A larger cushion of reserve capacity is established for freight routes than for other Statewide Highways to provide steady flow conditions, although traffic will be slowed in STAs to accommodate pedestrians. (Interstate Highways and Expressways will not be incorporated into an STA.)

The mobility standards are contained in Tables 6 and 7 and in Actions 1F.1 and 1F.5. While state highways are often important routes for pedestrians and bicyclists, Tables 6 and 7 refer only to vehicle mobility.

The policy identifies three uses for the highway mobility standards:

- Planning: identifying state highway mobility performance expectations for planning and plan implementation;
- Review of amendments to comprehensive plans and land use regulations: maintaining consistency between desired highway performance and the type of land use development; and
- Making traffic operations decisions such as managing access and traffic control systems to maintain acceptable highway performance.

The Highway Mobility Standards Policy applies primarily to transportation and land use planning decisions. By defining acceptable levels of highway system mobility, the policy provides direction for identifying highway system deficiencies. The policy does not, however, determine what actions should be taken to address the deficiencies. The highway mobility standards in the policy (volume to capacity ratio or v/c) are neutral regarding whether solutions to mobility deficiencies should be addressed by

actions that reduce highway volumes or increase highway capacities. The Major Improvements Policy establishes priorities for actions to address deficiencies.

The Highway Mobility Standards Policy will primarily affect land use decisions through the requirements of the Transportation Planning Rule (TPR). The TPR requires that regional and local transportation system plans be consistent with plans adopted by the Transportation Commission. The TPR also requires that comprehensive plan amendments and zone changes which significantly affect a transportation facility be consistent with the adopted function, capacity and performance measures for the affected facility. The Highway Mobility Standards Policy establishes ODOT's mobility performance measures for state highways.

Policy 1F does not apply to highway design. Separate design standards are contained in ODOT's Highway Design Manual. Mobility performance standards for highway design are generally equal to or higher than the standards contained in this policy to provide an adequate operating life for highway improvements. In some circumstances, highway improvements may be designed to meet the highway mobility standards in this policy where necessary to avoid adverse environmental, land use or other effects.

ODOT's intention is that the highway mobility standards not be exceeded over the course of a reasonable planning horizon. The planning horizon shall be:

- 20 years for the development of state, regional and local transportation plans, including ODOT's corridor plans; and
- The greater of 15 years or the planning horizon of the applicable local and regional transportation system plans for amendments to transportation plans, comprehensive plans or land use regulations.

In the 1991 Highway Plan, levels of service were defined by a letter grade from A-F, with each grade representing a range of volume to capacity ratios. A level of service of A represented virtually free-flow traffic with few or no interruptions while level of service F indicated bumper-to-bumper, stop-and-go traffic. However, each letter grade actually represented a range of traffic conditions, which made the policy difficult to implement. This Highway Plan maintains a similar concept for measuring highway performance, but represents levels of service by specific volume to capacity ratios to improve clarity and ease of implementation.

A volume to capacity ratio (v/c) is the peak hour traffic volume (vehicles/hour) on a highway section divided by the maximum volume that the highway section can handle. For example, when v/c equals 0.85, peak hour traffic uses 85 percent of a highway's capacity; 15 percent of the capacity is not used. If the traffic volume entering a highway section exceeds the section's capacity, traffic queues will form and lengthen for as long as there is excessive demand. When v/c is less than but close to 1.0 (e.g., 0.95), traffic flow becomes very unstable. Small disruptions can cause traffic flow to

break down and long traffic queues to form. This is a particular concern for freeways because the capacity of a freeway under stop-and-go traffic conditions is lower than the capacity when traffic is flowing smoothly.

The Department and Transportation Commission are concerned that mobility standards may have the unintended effect of discouraging development in downtowns and encouraging development in urban fringe areas. This may occur where highways in downtowns and central business districts are near capacity. Plan amendments to allow more development in such areas are generally discouraged because there is inadequate highway capacity to support more intense use. By contrast, highway facilities in urbanizable areas may have excess capacity that allow land use plan amendments that increase development. The plan attempts to offset this unintended effect by varying the mobility standards by type of area, as shown by Table 6. Furthermore, the policy in Action 1F.3 allows alternate standards to be adopted in metropolitan areas, Special Transportation Areas (STAs) and constrained areas.

Alternate standards for the Portland metropolitan area have been included in the policy (Table 7). These standards have been adopted with an understanding of the unique context and policy choices that have been made by local governments in that area including:

- A legally enforceable regional plan prescribing minimum densities, mixed use development and multi-modal transportation options;
- Primary reliance on high capacity transit to provide additional capacity in the radial freeway corridors serving the central city;
- Implementation of an Advanced Traffic Management System including freeway ramp meters, real time traffic monitoring and incident response to maintain adequate traffic flow; and
- An air quality attainment/maintenance plan that relies heavily on reducing auto trips through land use changes and increases in transit service.

The alternative standards are granted to the Portland metropolitan area with a mutual understanding that reduced mobility standards will result in congestion that will not be reduced by state highway improvements. Alternative standards may also be approved for other metropolitan areas or portions thereof to support integrated land use and transportation plans for promoting compact development.

Although non-metropolitan areas do not face the same magnitude of traffic and land use pressures as do metropolitan areas, they may include Special Transportation Areas or may face environmental or land use constraints that make it infeasible to provide an adequate road network to serve planned development. For example, in a number of coastal cities, highway and other road improvements are severely limited by the presence of unstable terrain and the coast, sensitive wetlands and endangered plants and animals.

In these places it may not be feasible to improve the transportation system to the degree necessary to accommodate the reasonable use of properties in accordance with acknowledged comprehensive plans. In such circumstances, the standards in Table 6 might also preclude comprehensive plan changes that carry out the Land Use and Transportation Policy (1B) such as compact development in a Special Transportation Area. Therefore, the Transportation Commission may adopt alternate standards to accommodate development where practical difficulties make conformance with the highway mobility standards infeasible.

Local governments may adopt higher operating standards if desired, but the standards in Tables 6 and 7 must be used for deficiency analyses of state highways.

The policy also anticipates that there will be instances where the standards are exceeded and the deficiencies are correctable but the necessary transportation improvements are not planned. This may be due to environmental or land use constraints or to a lack of adequate funding. In these circumstances, the Department of Transportation's objective is to improve highway performance as much as possible and to avoid further degradation of performance where improvements are not possible. Action 1F.5 gives examples of actions that may be undertaken to improve performance.

Policy 1F: Highway Mobility Standards

It is the policy of the State of Oregon to use highway mobility standards to maintain acceptable and reliable levels of mobility on the state highway system. These standards shall be used for:

- *Identifying state highway mobility performance expectations for planning and plan implementation;*
- *Evaluating the impacts on state highways of amendments to transportation plans, acknowledged comprehensive plans and land use regulations pursuant to the Transportation Planning Rule (OAR 660-12-060); and*
- *Guiding operations decisions such as managing access and traffic control systems to maintain acceptable highway performance.*

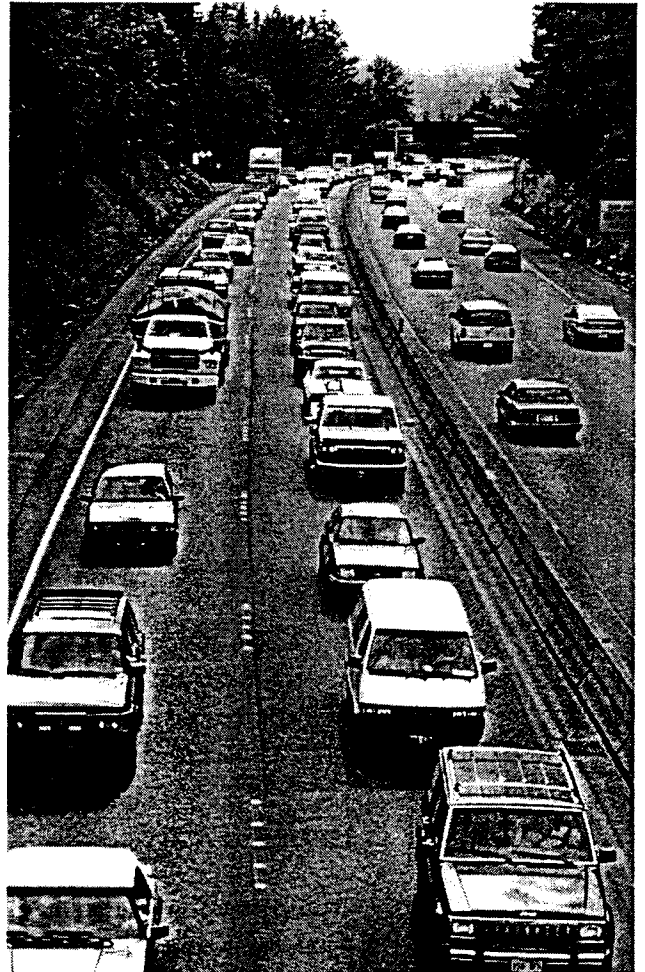
Action 1F.1

Apply the highway mobility standards below and in Table 6 to all state highway sections located outside of the Portland metropolitan area urban growth boundary and the standards below and in Table 7 to all state highway sections located within the Portland metropolitan area urban growth boundary.

- On portions of highways where there are no intersections, the volume to capacity ratios in Tables 6 and 7 shall not be exceeded for either direction of travel on the highway.
- At unsignalized intersections and road approaches, the volume to capacity ratios in Tables 6 and 7 shall not be exceeded for either of the state highway approaches that are not stopped. Approaches at which traffic must stop, or otherwise yield the right of way, shall be operated to maintain safe operation of the intersection and all of its approaches and shall not exceed the volume to capacity ratios for District/Local Interest Roads in Table 7 within urban growth boundaries or 0.80 outside of urban growth boundaries.

At signalized intersections other than crossroads of freeway ramps (see below), the total volume to capacity ratio for the intersection considering all critical movements shall not exceed the volume to capacity ratios in Tables 6 and 7. Where two state highways of different classifications intersect, the lower of the volume to capacity ratios in the tables shall apply. Where a state highway intersects with a local road or street, the volume to capacity ratio for the state highway shall apply.

- Although a freeway interchange serves both the freeway and the crossroad to which it connects, it is important that the interchange be managed to maintain safe and efficient operation of the freeway through the interchange area. The main problem to avoid is the formation of traffic queues on freeway off-ramps which back up into the portions of the ramps needed for safe deceleration from freeway speeds. This is a significant traffic safety concern. The primary cause of traffic queuing



Traffic is bunching up and slowing down in all lanes of this freeway because traffic demand exceeds capacity.

at freeway off-ramps is inadequate capacity at the intersections of the freeway ramps with the crossroad. These intersections are referred to as ramp terminals. In many instances where ramp terminals connect with another state highway, the volume to capacity standard for the connecting highway will generally be adequate to avoid traffic backups onto the freeway. However, in some instances where the crossroad is another state highway or a local road, the standards will not be sufficient to avoid this problem. Therefore, the maximum volume to capacity ratio for the ramp terminals of interchange ramps shall be the smaller of the values of the volume to capacity ratio for the crossroad, or 0.85.

At an interchange within a metropolitan area where a majority of the interchange access management area (Policy 3C) of the interchange is developed, the maximum volume to capacity ratio may be increased to as much as 0.90, but no higher than the standard for the crossroad, if:

1. It can be determined, with a probability equal to or greater than 95 percent, that vehicle queues would not extend into the portion of the ramp needed to accommodate deceleration from freeway speed; and
2. The interchange access management area is retrofitted to comply, as much as possible, with the standards contained in Policy 3C of this plan.

For the purposes of this policy, the portion of the freeway ramp needed to accommodate deceleration shall be the distance, along the centerline of the ramp, needed to bring a vehicle to a full stop from the posted freeway speed at a deceleration rate of 6.5 feet/second² (two meters/second²).

- Because the freeway ramps serve as an area where vehicles accelerate or decelerate to or from freeway speeds, the maximum volume to capacity ratio for the interchange ramps exclusive of the crossroad terminals shall be the standard for the freeway with the following exception. For freeway on-ramps where entering traffic is metered to maintain efficient operation of the freeway through the interchange area, the maximum volume to capacity ratio may be higher.
- The Director of the Department of Transportation or his/her delegate shall have the authority to adopt methods for calculating and applying the volume to capacity ratio standards in this policy or any alternative standards adopted pursuant to this policy.

Action 1F.2

Apply the highway mobility standards over a 20-year planning horizon when developing state, regional or local transportation system plans, including ODOT's corridor plans. When evaluating highway mobility for amendments to transportation system plans, acknowledged comprehensive plans and land use regulations, use the planning

horizons in adopted local and regional transportation system plans or a planning horizon of 15 years from the proposed date of amendment adoption, whichever is greater. To determine the effect an amendment to a transportation system plan, acknowledged comprehensive plan or land use regulation has on a state facility, the capacity analysis shall include the forecasted growth of traffic on the state highway due to regional and intercity travel and to full development⁶ according to the applicable acknowledged comprehensive plan over the planning period.

Action 1F.3

Where it would be infeasible to meet the standards in this policy, consider adopting alternate highway mobility standards for:

- Metropolitan areas or portions⁷ thereof to support an integrated land use and transportation plan for promoting compact development, reducing the use of automobiles and increasing the use of other modes of transportation, promoting efficient use of transportation infrastructure, and improving air quality;
- Special Transportation Areas (STAs); and
- Areas where severe environmental or land use constraints⁸ make infeasible the transportation improvements necessary to accommodate reasonable use of properties in accordance with acknowledged comprehensive plans or to accommodate comprehensive plan changes that carry out the Land Use and Transportation Policy (1B).

The alternative standards shall be clear and objective and shall be related to v/c (e.g., corridor-average v/c, network-average v/c, and the ratio of average daily traffic and hourly capacity (adt/c)). The standards shall be adopted as part of a regional and/or local transportation system plan. The plan shall demonstrate that it would be infeasible to meet the highway mobility standards in this policy. In addition, the plan shall include all feasible actions for:

- Providing a network of local streets, collectors and arterials to relieve traffic demand on state highways and to provide convenient pedestrian and bicycle ways;

⁶ Full development, for the purposes of this policy, means the amount of population and employment growth and associated travel anticipated by the community's acknowledged comprehensive plan over the planning period. The Transportation Commission encourages communities to consider and adopt land use plan amendments that would reallocate expected population and employment growth to designated community centers to reduce reliance on state highways.

⁷ This policy does not prescribe minimum or maximum sizes for portions of metropolitan areas that would qualify for alternative standards. Nevertheless, the area must be of the size necessary to support compact development, reduce the use of automobiles and increase the use of other modes of transportation, promote efficient use of transportation infrastructure, and improve air quality.

⁸ Examples of severe environmental and land use constraints include endangered species, sensitive wetlands, and historic districts.

- Managing access and traffic operations to minimize traffic accidents, avoid traffic backups on freeway ramps, and make the most efficient use of highway capacity;
- Managing traffic demand, where feasible, to manage peak hour traffic loads on state highways;
- Providing alternative modes of transportation; and
- Managing land use to limit vehicular demand on state highways consistent with the Land Use and Transportation Policy (1B).

The plan shall include a financially feasible implementation program and shall demonstrate strong public and private commitment to carry out the identified improvements and other actions.

In metropolitan areas, the alternate highway mobility standards will become effective only after the standards have been approved by the metropolitan planning organization and adopted by the Transportation Commission.

Outside of metropolitan areas, the alternate highway mobility standards will become effective only after the Transportation Commission has adopted them in a corridor plan or in a portion of a corridor plan.

Action 1F.4

Develop corridor plans for Interstate Highways, other freeways and designated highway freight routes in the Portland metropolitan area that are important for through travel. Develop standards for those routes to provide adequate levels of highway mobility.

Action 1F.5

For purposes of preparing planning documents such as corridor plans and transportation system plans, in situations where the volume to capacity ratio for a highway segment is above the standards in Table 6 or Table 7, or those otherwise approved by the Commission, and transportation improvements are not planned within the planning horizon to bring performance to standard because of severe environmental, land use or financial constraints, the performance standard for the highway segment shall be to improve performance as much as feasible and to avoid further degradation of performance where no performance improvements are feasible. Examples of actions that might improve performance include the following:

- Reconfigure highway and side-street accesses to minimize traffic conflicts at intersections;

- Limit parking near signalized intersections to increase intersection capacity;
- Coordinate and operate traffic signals to improve traffic progression;
- Relocate driveways and improve local road connections to direct traffic away from overburdened intersections and intersections where side-street capacity is limited in order to optimize traffic progression on the state highway;
- Improve turning-radii at intersections that are heavily used by trucks to avoid lane blockages;
- Install raised medians to reduce traffic conflicts;
- Improve accesses so that traffic can enter or exit the highway with minimal disruptions of flow; and
- Manage land uses to favor types of uses that generate less traffic or traffic peaks which do not coincide with traffic peaks on the highway. This could be done by making appropriate plan amendments or changes to zoning ordinances.

Local governments may also request that the Transportation Commission adopt alternate standards in accordance with Action 1F.3.

Action 1F.6

For purposes of evaluating amendments to transportation system plans, acknowledged comprehensive plans and land use regulations subject to OAR 660-12-060, in situations where the volume to capacity ratio for a highway segment, intersection or interchange is above the standards in Table 6 or Table 7, or those otherwise approved by the Commission, and transportation improvements are not planned within the planning horizon to bring performance to standard, the performance standard is to avoid further degradation. If an amendment to a transportation system plan, acknowledged comprehensive plan or land use regulation increases the volume to capacity ratio further, it will significantly affect the facility.

Policy Element

MAXIMUM VOLUME TO CAPACITY RATIOS OUTSIDE METRO						
Highway Category	Land Use Type/Speed Limits					
	Inside Urban Growth Boundary				Outside Urban Growth Boundary	
	STAs	MPO	Non-MPO outside of STAs where non-freeway speed limit <45 mph	Non-MPO where non-freeway speed limit >= 45 mph	Unincorporated Communities	Rural Lands
Interstate Highways and Statewide (NHS) Expressways	N/A	0.80	0.70	0.70	0.70	0.70
Statewide (NHS) Freight Routes	0.85	0.80	0.75	0.70	0.70	0.70
Statewide (NHS) Non-Freight Routes and Regional or District Expressways	0.90	0.85	0.80	0.75	0.75	0.70
Regional Highways	0.95	0.85	0.80	0.75	0.75	0.70
District/Local Interest Roads	0.95	0.90	0.85	0.80	0.80	0.75

Table 6: Maximum volume to capacity ratios for peak hour operating conditions through a planning horizon for state highway sections located outside the Portland metropolitan area urban growth boundary

Notes for Table 6:

- Interstates and Expressways shall not be identified as Special Transportation Areas (STAs).
- For the purposes of this policy, the peak hour shall be the 30th highest annual hour. This approximates weekday peak hour traffic in larger urban areas.
- For the purposes of Policy 1F and Table 6, the MPO category includes areas within the planning boundaries of the Eugene/Springfield, Medford and Salem/Keizer Metropolitan Planning Organizations, and any other MPO areas that are designated after the adoption of this plan.

Goal 3: Access Management

To employ access management strategies to ensure safe and efficient highways consistent with their determined function, ensure the statewide movement of goods and services, enhance community livability and support planned development patterns, while recognizing the needs of motor vehicles, transit, pedestrians and bicyclists.

Overview

Access management is balancing access to developed land while ensuring movement of traffic in a safe and efficient manner. To achieve effective transportation it is necessary to have a blend and balance of road facilities. Each performs its unique function since no single class of highway can provide both high levels of movement and high levels of access to property. The spectrum ranges from freeways that provide for ease of movement through higher speeds, higher capacity and freedom from interruption to local residential streets that serve a diverse group of users from pedestrians to garbage collectors and emergency response vehicles by providing ease of access through slow speeds and numerous driveways.

Because expanding population growth and transportation needs are placing increasing demands on the state highway system, there is intense pressure to allow businesses and individuals extensive access to the roadways. Access can be managed a number of different ways, including freeway interchange placement and design, driveway and road spacing and design, traffic signal location, median design and spacing of openings, connectivity and the use of turn lanes. The challenge is to determine how to best apply these access management techniques on Oregon's state highway system to safely protect the highway efficiency and investment, contribute to the health of Oregon's local, regional and statewide economies, and support and maintain livable communities.

Implementation of access management is essential if the safety, efficiency and investment of the existing and planned state highways are to be protected. Roads link together as a chain, and the roadway system is only as effective as its weakest link. The amount of access and how it is allowed to a state highway is a critical factor in determining how long the facility can remain functional, and is the largest contributor to safety. An uncontrolled number of driveways to a highway can cause it to be very unsafe, and some highways will not serve their intended function to carry people, freight, and goods throughout the state. Implementation of access management techniques produces a more constant traffic flow, which helps to reduce congestion, fuel consumption and air pollution.

ACCESS MANAGEMENT

Background on Road Approaches (Driveways and Public Road Connections)

In Oregon, prior to 1949, a property owner could build a road approach (driveway or public road connection) to a highway at any location without obtaining permission. The State Legislature realized that highways would not operate safely or efficiently if this practice continued, and in 1949 a statute was passed that required all parties to receive written permission from ODOT or county governments, as appropriate, before constructing an approach road.

Since that time, property owners adjacent to state highways have been required to obtain an approach road permit from ODOT even though they have a “common law” right of access to the state highway. The common law right allows them to access the highway, and the permit process determines how and where the approach road can be safely constructed. While the statute requires that owners be allowed to access their property, it does not ensure that they can have an approach road wherever they desire. For example, ODOT is not obligated to issue an approach road permit when reasonable access is available, such as to a city street or a county road.

ODOT has the authority to purchase the right of access from property owners where appropriate. In some cases, such as along Interstate Highways, ODOT purchases the right of access in its entirety and the property owner no longer has any common law right to access the highway. In this case, a statement in the property owner’s chain of title will show that the right of access has been conveyed to ODOT.

In other cases, ODOT purchases access rights just along portions of properties. Gaps, called “reservations of access,” may remain along the property’s frontage. The reservation of access gives a property owner the common law right of access to the state highway only at specific locations. The property owner must still apply for a road approach permit at these locations.

Having a reservation of access in the deed does not guarantee that ODOT will permit a driveway at that location. For example, in the time since the reservation of access was established, traffic volumes may have increased significantly, travel speeds on the highway may have risen, the highway design may have changed (for example, by adding a passing lane), other approach roads may be too close, or alternate street connections may have been built. Any of these cases could make a new approach road unsafe or otherwise inappropriate.

In these cases, however, ODOT must still ensure that property owners have reasonable access to their property. If there is no reasonable access to the property leaving the property landlocked, ODOT may be required to purchase the property.

Scope of the Policies

The criteria in the Access Management Policies and the standards in Appendix C shall be applied to the development of all ODOT highway construction, reconstruction or modernization projects and approach road permits, as well as all planning processes involving state highways, including corridor plans, refinement plans, state and local transportation system plans and local comprehensive plans.

- All highway plans, including corridor plans and refinement plans, which have not been adopted on or before the effective date of the Access Management Policies, shall be subject to these policies. Local and regional transportation system plans adopted after January 1, 2000 shall be subject to these policies.
- All projects which have not published the draft environmental document at the effective date of the Access Management Policies shall be subject to these policies.
- Projects which have published the draft environmental document prior to the effective date of the Access Management Policies shall be evaluated individually by the Region Manager to determine to what extent these policies should be implemented.

The policy and procedures for Deviations and the standards in Appendix C, and the policy and procedures for Appeals portions of the Access Management Policies apply to local governments, private applicants, and state agencies, including ODOT, where there is a desire to apply standards and criteria different than those outlined in the Access Management Policies, in the following instances:

- All approach road and private road crossing requests for approaches to state highways.
- New state highway construction projects and new highway plans.
- Any reconstruction or modernization work on state highways.

All proposed traffic control devices on the state highway system must have prior approval of the State Traffic Engineer and may include criteria not set forth in these policies.

Policy 3A: Classification and Spacing Standards

It is the policy of the State of Oregon to manage the location, spacing and type of road and street intersections and approach roads on state highways to assure the safe and efficient operation of state highways consistent with the classification of the highways.

Action 3A.1

Manage access to state highways based on the access management classifications as defined below:

1. Freeways (NHS) – Interstate and Non-Interstate

(Examples: Interstate 5, Interstate 84, and Oregon Route 217, US Route 26 from Interstate 405 west to Oregon Route 6 (Non-Interstate))

- Freeways are multi-lane highways that provide for the most efficient and safe high speed and high volume traffic movement.
- Interstate Freeways are subject to federal interstate standards as established by the Federal Highway Administration.
- Freeways are subject to ODOT's Interchange Policy.
- ODOT owns the access rights and direct access is not allowed. Users may enter or exit the roadway only at interchanges.
 - Preference is given to through traffic.
 - Driveways are not allowed.
- Traffic signals are not allowed.
- Parking is prohibited.
- Opposing travel lanes are separated by a wide median or a physical barrier.
- Grade separated crossings that do not connect to the freeway are encouraged to meet local transportation needs and to enhance bicycle and pedestrian travel.
- The primary function is to provide connections and links to major cities, regions of the state, and other states.

2. Statewide Highways (NHS)

(Examples: Oregon Route 58, Oregon Route 42, US Route 30, US Route 97, and US Route 20)

a. Rural Expressways

- Expressways are to be designated by action of the Oregon Transportation Commission. (See Action 1A.2.)

- Expressways are existing two lane and multi-lane highways or planned highways that provide for safe and efficient high speed and high volume traffic movements.
- Private access is discouraged.
 - There is a long-range plan to eliminate, as possible, existing approach roads as opportunities occur or alternate access becomes available.
 - Access rights will be purchased and a local road network may be developed consistent with the function of the roadway.
- Public road connections are highly controlled and must be spaced appropriately. Future grade separations (interchanges) may be an option. Compatible land use actions may be necessary and shall be included in local comprehensive plans.
- Traffic signals are discouraged.
- Nontraversable medians must be constructed in the modernization of all multi-lane Expressways that have traversible medians.
- Parking is prohibited.
- The primary function of Expressways is to provide connections to larger urban areas, ports and major recreation areas with minimal interruptions.

b. Rural Other

- Statewide Rural Highways provide for high speed, continuous flow and through traffic movement.
- Direct access to the abutting property is a minor objective.
- The function of the highway is consistent with purchasing access rights. As the opportunity arises, access rights should be purchased. Preference is to purchase access rights in full.
- The primary function of these highways is to provide connections to larger urban areas, ports and major recreation areas of the state not served by Freeways or Expressways.

- c. **Urban Expressways** (Not inconsistent with, but supplemental to, the criteria listed for Statewide Rural Expressways.)
 - Traffic signals are discouraged. Where signals are allowed, their impact on through traffic must be minimized by ensuring that efficient progression of traffic is achieved.
 - Median treatments are considered in accordance with criteria in Action 3B.3.
- d. **Urban Other** (Not inconsistent with, but supplemental to, the criteria listed for Statewide Rural Other.)
 - Statewide Urban Highways provide high to moderate speed operations with limited interruptions in traffic flow.
- e. **Urban Business Areas (UBAs)** (See Policy 1B.)
 - UBAs must be designated in a corridor plan and/or local transportation system plan and agreed upon by ODOT and the local government.
 - Direct property access is less limited than on Statewide Urban Highways.
 - Purchase of access control may be of lesser importance and access to adjacent land use is a higher priority.
 - Redevelopment and in-fill development are encouraged.
 - The needs of local auto, pedestrian, bicycle and transit movements to the area are balanced with the through movement of traffic.
- f. **Special Transportation Areas (STAs)** (See Policy 1B.)
 - STAs must be designated in a corridor plan and/or local transportation system plan and agreed upon in writing by ODOT and the local government.
 - STAs apply to a highway segment.
 - Direct street connections and shared on-street parking are encouraged.
 - Direct property access is limited.
 - Purchase of access control may be of lesser importance and access to adjacent land use for all modes is a higher priority.

- Redevelopment and in-fill development are encouraged.
- Local auto, pedestrian, bicycle and transit movements to the area are generally given more importance than the through movement of traffic.

3. Regional Highways

(Examples: Oregon Route 99E, Oregon Route 138, Oregon Route 31, and Oregon Route 207)

a. Rural Expressways (Not inconsistent with, but supplemental to, the criteria listed for Statewide Rural Expressways.)

- The primary function of these highways is to provide connections and links to regions within the state, and between small urbanized areas and larger population centers.

b. Rural Other

- Regional Rural Highways provide for efficient and safe medium to high speed and medium to high volume traffic movements.
- These highways serve as routes passing through areas which have moderate dependence on the highway to serve land access.
- The function of the highway supports selected acquisition of access rights. Purchase of access rights should be considered where beneficial such as, but not limited to, ensuring safe and efficient operation between connecting highways in interchange areas, protecting resource lands, preserving highway capacity on land adjacent to an urban growth boundary, or ensuring safety on segments with sharp curves, steep grades or restricted sight distance, or those with a history of accidents.
- The primary function of these highways is to provide connections and links to regions within the state, and between small urbanized areas and larger population centers through connections and links to Freeways, Expressways, or Statewide Highways.

c. Urban Expressways (Not inconsistent with, but supplemental to, the criteria listed for Regional Rural Expressways.)

- Where traffic signals are allowed, their impact on through traffic must be minimized by ensuring that efficient progression of traffic is achieved.
- Median treatments are considered in accordance with criteria in Action 3B.3.

- d. **Urban Other** (Not inconsistent with, but supplemental to, the criteria listed for Regional Rural Other.)
 - The function of the highway is consistent with selected acquisition of access rights. Purchase of access rights should be considered where beneficial such as, but not limited to, ensuring safe and efficient operation between connecting highways in interchange areas, protecting resource lands, or ensuring safety on segments with sharp curves, steep grades or restricted sight distance, or those with a history of accidents.
- e. **Urban Business Areas (UBAs)** (See Policy 1B. Same criteria as Statewide Urban Business Areas.)
- f. **Special Transportation Areas (STAs)** (Same criteria as Statewide Special Transportation Areas.)

4. District Highways and Local Interest Roads

(Examples: Oregon Route 10, Oregon Route 34, Oregon Route 238, Oregon Route 27 and Oregon Route 86)

- a. **Rural Expressways** (Not inconsistent with, but supplemental to, the criteria listed for Statewide Rural Expressways.)
 - The primary function of these highways is to provide connections and links to intercity, inter-community and intracity movements.
- b. **Rural Other**
 - These highways provide for safe and efficient medium speed and medium-to high-volume traffic movements.
 - Traffic movement demands and access needs are more evenly balanced, with reasonable access to abutting property.
 - The function of the highway supports acquisition of access rights in limited circumstances, recognizing the balanced demands of traffic movement and access needs. Purchase of access rights should be considered where beneficial such as, but not limited to, ensuring safe and efficient operation between connecting highways in interchange areas, protecting resource lands, preserving highway capacity on land adjacent to an urban growth boundary, or ensuring safety on segments with sharp curves, steep grades or restricted sight distance, or those with a history of accidents.

- The primary function of these highways is to provide connections and links to intercity, inter-community and intracity movements.
- c. **Urban Expressways** (Not inconsistent with, but supplemental to, the criteria listed for District Rural Expressways.)
 - Where traffic signals are allowed, their impact on through traffic must be minimized by ensuring that efficient progression of traffic is achieved.
 - Median treatments are considered in accordance with criteria in Action 3B.3.
- d. **Urban Other** (Not inconsistent with, but supplemental to, the criteria listed for District Rural Other.)
 - The function of the highway is consistent with acquisition of access rights in limited circumstances, recognizing the balanced demands of traffic movement and access needs. Purchase of access rights should be considered where beneficial such as, but not limited to, ensuring safe and efficient operation between connecting highways in interchange areas, protecting resource lands, or ensuring safety on segments with sharp curves, steep grades or restricted sight distance, or those with a history of accidents.
- e. **Urban Business Areas (UBAs)** (See Policy 1B. Same criteria as Statewide Urban Business Areas.)
- f. **Special Transportation Areas (STAs)** (Same criteria as Statewide Special Transportation Areas.)

Action 3A.2

Establish spacing standards on state highways based on highway classification, type of area and speed. Tables 16, 17, 18, and 19 in Appendix C show the access spacing standards for the access management classifications listed in Action 3A.1.

- These standards shall be applied to the development of all ODOT highway construction, reconstruction or modernization projects, approach road and private road crossing permits, as well as all planning processes involving state highways, including corridor studies, refinement plans, state and local transportation system plans and local comprehensive plans.
- These standards do not retroactively apply to legal approach roads or private road crossings in effect prior to adoption of this Oregon Highway Plan, except or until any redevelopment, change of use, or highway construction, reconstruction or modernization project affecting these legal approach roads

or private road crossings occurs. At that time the goal is to meet the appropriate spacing standards, if possible, but at the very least to improve current conditions by moving in the direction of the spacing standards.

- When in-fill development occurs, the goal is to meet the appropriate spacing standards. In some cases this may not be possible, and at the very least the goal is to improve the current conditions by moving in the direction of the spacing standards. Thus, in-fill development should not worsen current approach road spacing. This may involve such options as joint access.
- In some cases access will be allowed to a property at less than the designated spacing standards, but only where a right of access exists, that property does not have reasonable access, and the designated spacing cannot be accomplished. If possible, other options should be considered such as joint access.
- If a property becomes landlocked (no reasonable access exists) because an approach road cannot be safely constructed and operated, and all other alternatives have been explored and rejected, ODOT might be required to purchase the property. (Note: If a hardship is self-inflicted, such as by partitioning or subdividing a property, ODOT does not have responsibility for purchasing the property.)

Action 3A.3

Manage the location and spacing of traffic signals on state highways to ensure the safe and efficient movement of people and goods. Safe and efficient traffic signal timing depends on optimal intersection spacing. It is difficult to predetermine where such locations should exist, although half-mile intersection spacing for Statewide and Regional Highways is desirable. The following are critical elements in planning an interconnected traffic signal system:

- Signalized intersection capacity and operation analysis must take into account lane balance of existing and future (20-year projection) traffic volumes.
- The progression bandwidth must equal or exceed that required to accommodate the through volume on the state highway at the most critical intersection during all peak periods. The most critical intersection is defined as the intersection carrying the highest through volume per lane on the state highway. The State Traffic Engineer or designated representative shall approve signal progression parameters and analysis methodology.
- All signals must provide for adequate vehicle storage that does not encroach on the operation of adjacent lanes and signalized intersections.

- The common cycle length for the interconnected traffic signal system must provide for adequate pedestrian crossing times.
- The speed of the progressed traffic band should be no more than five miles per hour below the existing posted speed for both directions of travel during the off-peak periods, nor more than 10 miles per hour below the existing posted speed during peak periods. Approval of the State Traffic Engineer or designated representative is required where speeds deviate more than the above.

Action 3A.4

In general, traffic signals should not be installed on rural high-speed highways because they are inconsistent with the function of these highways to provide for safe and efficient high-speed travel. Although a rural traffic signal may be warranted in a particular instance to control traffic due to existing conditions, ODOT and local governments must avoid creating conditions that would make future traffic signal installations necessary in rural areas. Amendments to local comprehensive plans or land use ordinances that would require a traffic signal on rural highways are inconsistent with the function of the highway.⁹

Action 3A.5

Some private approach roads may have characteristics similar to public road approaches. Such similarities may allow a private approach road to operate as a public road approach. For a private approach road to be considered for a signal, it must have the following attributes:

- High traffic volumes, typically 200 vehicles or more during the peak period;
- Design geometry consistent with that of public road intersections including curbs, appropriate lane widths, pavement markings and vertical alignment; and
- An adequate approach throat length to assure that the movement of entering vehicles is not impeded by on-site queuing.

Signalization of a private approach road shall be dependent upon meeting signal spacing criteria considering the likelihood that nearby locations may be signalized in the future as development occurs in the area. Signal spacing concerns may require that a route be established to a nearby public street that can be signalized at its intersection with the state highway, or a shared private driveway may be required to serve the needs of multiple properties. If a private approach road is

⁹ Typically, based on guidance provided in the *Manual on Uniform Traffic Control Devices*, rural traffic signals are not warranted. Rural traffic signals are unexpected by the motorist who is unfamiliar with the location, requiring longer than normal time for drivers to react. Rural highway speeds are typically very high, requiring longer stopping sight distance.

considered, it should also be required to connect to the existing or planned local street system and allow use by surrounding properties.

Policy 3B: Medians

It is the policy of the State of Oregon to plan for and manage the placement of medians and the location of median openings on state highways to enhance the efficiency and safety of the highways, and influence and support land use development patterns that are consistent with approved transportation system plans.

Action 3B.1

Plan for a level of median control for the safe and efficient operation of state highways, consistent with the classification of the highway. Corridor plans and transportation system plans shall identify planned median treatments.

Action 3B.2

Design and construct nontraversable medians for:

- All new multi-lane highways constructed on completely new alignment; and
- Modernization of all rural, multi-lane Expressways, including Statewide (NHS), Regional and District.

Action 3B.3

Consider construction of nontraversable medians for:

- Modernization of all urban, multi-lane Statewide (NHS) Highways;
- Modernization of all urban, multi-lane Regional Highways where posted speeds are 45 mph (70 km/h) or greater;
- Multi-lane highways undergoing 3-R or 4-R improvements; and
- Highways not undergoing modernization where a median could improve safety.

In the four instances listed above, consideration shall occur when any of the following criteria are present:

- Forecasted average daily traffic is anticipated to be 28,000 vehicles per day during the 20-year planning period;

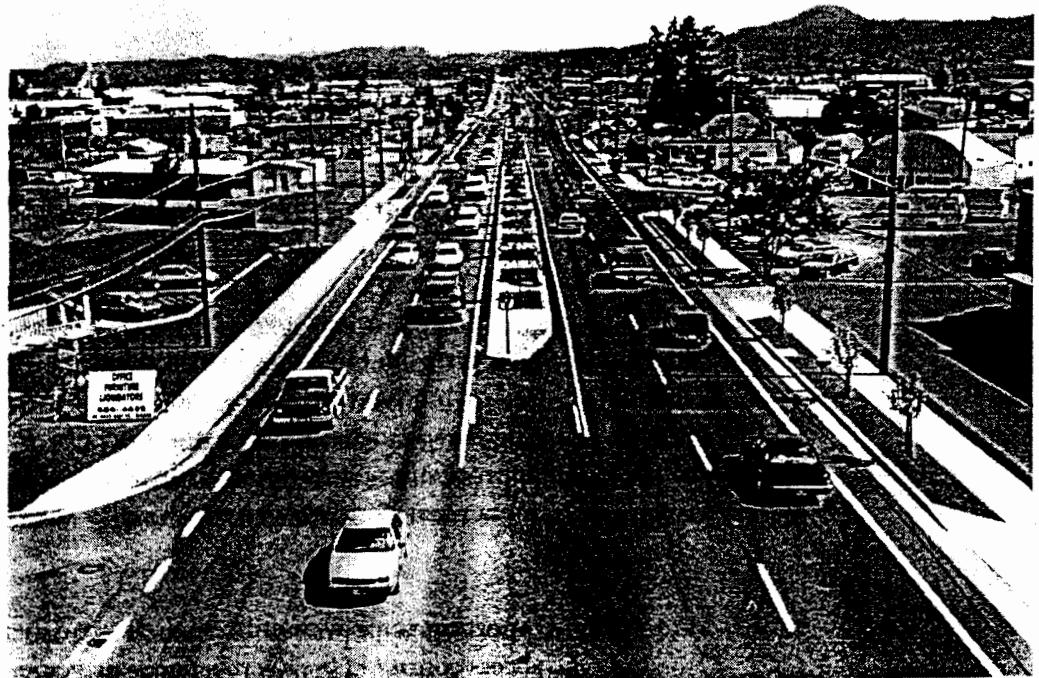
- The annual accident rate is greater than the statewide annual average accident rate for similar roadways;
- Pedestrians are unable to safely cross the highway, as demonstrated by an accident rate that is greater than the statewide annual average accident rate for similar roadways; and/or
- Topography and horizontal or vertical roadway alignment result in inadequate left-turn intersection sight distance and it is impractical to relocate or reconstruct the connecting approach road or impractical to reconstruct the highway in order to provide adequate sight distance.

Reasons for not using nontraversable medians when any of these criteria are present must be documented and reviewed and approved by the Region Manager.

Action 3B.4

Full and directional median openings shall be:

- Restricted to locations that conform to ODOT's spacing standards as shown in Appendix C; and
- Designed with a left-turn bay and deceleration lane.



A nontraversable median with plantings on Pacific Highway West in Eugene.

Full median openings will be given preference to a public road connection which is part of a continuous and comprehensive public road network.

Action 3B.5

Continuous two-way left-turn lanes are primarily used on urban highways. On urban Expressways, continuous two-way left-turn lanes are minimal; they will be approved in the future only as part of staged construction of nontraversable medians, and a strategy/plan to replace existing continuous two-way left-turn lanes with nontraversable medians will be developed.

Action 3B.6

Except on freeways, consider using raised median pedestrian refuge islands and mid-block crosswalks in urban areas that are pedestrian and/or transit oriented.

Policy 3D: Deviations

It is the policy of the State of Oregon to manage requests for deviations from adopted access management standards and policies through an application process to ensure statewide consistency.

Action 3D.1

Implement a procedure by which an applicant may request consideration of a deviation from access management standards and policies. The Access Management Spacing Standard Minor Deviation Limits are shown in Tables 20, 21 and 22 in Appendix C.

Action 3D.2

Establish Region Access Management Engineers to review and act on requests for deviations from access management standards and policies.

Action 3D.3

Establish the use of a technical group to assist the Region Access Management Engineer in an advisory capacity in the review of requests for major deviations from access management standards and policies. Members of the technical group shall have expertise in access management policies, roadway design standards and traffic engineering, and may include technical persons who are not ODOT employees.

Action 3D.4

Establish the criteria which the Region Access Management Engineers shall consider when reviewing requests for deviations from access management standards and policies.

Action 3D.5

Establish criteria for when minor deviations may be allowed. The kinds of considerations likely to be included are:

- Potential queuing, increased delays and safety impacts;
- Pedestrian and bicycle circulation;
- Use of traffic controls;
- Requirements for local road systems;
- Improvement of connectivity to adjacent properties or local road system;
- Plans that address an entire roadway segment (e.g., a transportation system plan);
- Potential need for channelization, such as for turn lanes; and
- Possible use of nontraversable medians for right-in/right-out movements.

Any requests for spacing at less than the minimum deviation limits shall be considered a major deviation from the spacing standards except as stated in Note ① in the notes on Tables 20, 21 and 22 in Appendix C.

Policy 3E: Appeals

It is the policy of the State of Oregon to manage appeals of both denied requests for approach roads and denied requests for deviations from adopted access management standards and policies through an appeals process to ensure statewide consistency.

Action 3E.1

Implement an appeals process by which an applicant may request further consideration of a deviation request denied by a Region Access Management Engineer through ODOT's Administrative Hearings Procedure.

Action 3E.2

Implement an appeals process by which an applicant may request consideration of a denied approach road request (not requiring a deviation).

- Establish Region Review committees to include members with expertise in access management policies, roadway design standards, right-of-way and traffic engineering to make a recommendation to the Region Manager.
- Establish criteria which the Region Review committees shall consider when reviewing denied approach road requests.
- Implement a process where the Region Manager will review and act on the Region Review committee's recommendation.

Action 3E.3

Implement an appeals process by which an applicant may request further consideration of an approach road request denied by the Region Manager through ODOT's Administrative Hearings Procedure.

SPACING STANDARDS FOR STATEWIDE HIGHWAYS①②						
Posted Speed③	Rural		Urban			
	Expressway **	Other	Expressway **	Other	UBA	STA
≥55	5280	1320	2640	1320		
50	5280	1100	2640	1100		
40 & 45	5280	990	2640	990		
30 & 35		770		770	720	④
≤25		550		550	520	④

Table 13: Access management spacing standards for statewide highways
(measurement is in feet)*

Notes for Table 13:

Note: The numbers in circles (②) refer to explanatory notes that follow tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

SPACING STANDARDS FOR REGIONAL HIGHWAYS①②						
Posted Speed③	Rural		Urban			
	Expressway **	Other	Expressway **	Other	UBA	STA
≥55	5280	990	2640	990		
50	5280	830	2640	830		
40 & 45	5280	750	2640	750		
30 & 35		600		600	425	④
≤25		450		450	350	④

Table 14: Access management spacing standards for regional highways
(measurement is in feet)*

Notes for Table 14:

Note: The numbers in circles (②) refer to explanatory notes that follow tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

SPACING STANDARDS FOR DISTRICT HIGHWAYS^{①②}

Posted Speed ^③	Rural		Urban			
	Expressway **	Other	Expressway **	Other	UBA	STA
≥55	5280	700	2640	700		
50	5280	550	2640	550		
40 & 45	5280	500	2640	500		
30 & 35		400		400	350	④
≤25		400		400	350	④

Table 15: Access management spacing standards for district highways
*(measurement is in feet)**

Notes for Table 15:

Note: The numbers in circles (②) refer to explanatory notes that follow tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

Notes on Tables 13, 14 and 15:

- ① Where a right of access exists, access will be allowed to a property at less than the designated spacing standard only if that property does not have reasonable access and the designated spacing cannot be accomplished. If possible, other options should be considered such as joint access.

Where the right of access exists, the number of approach roads (driveways) to a single property shall be limited to one, even when the property frontage exceeds the spacing standards. More than one approach road may be considered if, in the judgment of the Region Access Management Engineer, additional approach roads are necessary to accommodate and service the traffic to a property, and additional approach roads will not interfere with driver expectancy and the safety of the through traffic on the highway.

Approach roads shall be located where they do not create undue interference or hazard to the free movement of normal highway or pedestrian traffic. Locations on sharp curves, steep grades, areas of restricted sight distance or at points which interfere with the placement and proper functioning of traffic control signs, signals, lighting or other devices that affect traffic operation will not be permitted.

If a property becomes landlocked (no reasonable access exists) because an approach road cannot be safely constructed and operated, and all other alternatives have been explored and rejected, ODOT might be required to purchase the property. (Note: If a hardship is self-inflicted, such as by partitioning or subdividing a property, ODOT does not have responsibility for purchasing the property.)

(Note ① has precedence over notes ②, ③ and ④.)

- ② These standards are for unsignalized access points only. Signal spacing standards supersede spacing standards for approaches.
- ③ Posted (or Desirable) Speed: Posted speed can only be adjusted (up or down) after a speed study is conducted and that study determines the correct posted speed to be different than the current posted speed. In cases where actual speeds are suspected to be much higher than posted speeds, ODOT reserves the right to adjust the access spacing accordingly. A determination can be made to go to longer spacing standards as appropriate for a higher speed. A speed study will need to be conducted to determine the correct speed.
- ④ Minimum spacing for public road approaches is either the existing city block spacing or the city block spacing as identified in the local comprehensive plan. Public road connections are preferred over private driveways, and in STAs driveways are discouraged. However, where driveways are allowed and where land use patterns permit, the minimum spacing for driveways is 175 feet (55 meters) or mid-block if the current city block spacing is less than 350 feet (110 meters).

Access Management Spacing Standard Minor Deviation Limits

The following tables show the access management spacing standard minor deviation limits for the access management classifications listed in Goal 3, Policy 3A: Classification Spacing Criteria, Action 3A.1. The Access Management Spacing Standards are shown in Tables 13, 14 and 15 of this Appendix. Minor deviations may be considered down to the deviation limits shown in Tables 20, 21 and 22. Any request to deviate beyond these limits is considered a major deviation.

SPACING MINOR DEVIATION LIMITS FOR STATEWIDE HIGHWAYS ①②						
Posted Speed③	Rural		Urban			
	Expressways **	Other	Expressways **	Other	UBA	STA
≥55	(none)	(950)	(none)	(870)		
	[none]	[1150]	[none]	[1000]		
50	(none)	(700)	(none)	(640)		
	[none]	[900]	[none]	[810]		
40 & 45	(none)	(560)	(none)	(530)		
	[none]	[810]	[none]	[740]		
30 & 35		(400)		(350)	(350)	④
		[675]		[600]	[600]	
≤25		(280)		(250)	(250)	④
		[525]		[400]	[400]	

Table 20: Access management spacing standard minor deviation limits for statewide highways
(measurement is in feet)*

Notes for Table 20:

Note: The numbers in circles (②) refer to explanatory notes that follow the tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

() = Driveway spacing minor deviation limit.

[] = Public street spacing minor deviation limit.

SPACING MINOR DEVIATION LIMITS FOR DISTRICT HIGHWAYS ①②						
Posted Speed ^③	Rural		Urban			
	Expressways **	Other	Expressways **	Other	UBA	STA
≥55	(none)	(650)	(none)	(650)		
	[none]	[660]	[none]	[660]		
50	(none)	(475)	(none)	(475)		
	[none]	[525]	[none]	[525]		
40 & 45	(none)	(400)	(none)	(400)		
	[none]	[475]	[none]	[475]		
30 & 35		(275)		(275)	(250)	④
		[325]		[325]	[300]	
≤25		(200)		(200)	(175)	④
		[245]		[245]	[200]	

Table 22: Access management spacing standard minor deviation limits for district highways
(measurement is in feet)*

Notes for Table 22:

Note: The numbers in circles (②) refer to explanatory notes that follow the tables.

* Measurement of the approach road spacing is from center to center on the same side of the roadway.

** Spacing for Expressway at-grade intersections only. See Table 12 for interchange spacing.

() = Driveway spacing minor deviation limit.

[] = Public street spacing minor deviation limit.

Notes on Tables 20, 21 and 22:

- ① Where a right of access exists, access will be allowed to a property at less than minor deviation limits only if that property does not have reasonable access and the minor deviation limits cannot be accomplished. If possible, other options should be considered, such as joint access.

Where the right of access exists, the number of approach roads (driveways) to a single property shall be limited to one, even when the property frontage exceeds the spacing standards. More than one approach road may be considered if, in the judgment of the Region Access Management Engineer, additional approach roads are necessary to accommodate and service the traffic to a property, and additional approach roads will not interfere with driver expectancy and the safety of the through traffic on the highway.

Approach roads shall be located where they do not create undue interference or hazard to the free movement of normal highway or pedestrian traffic. Locations on sharp curves, steep grades, areas of restricted sight distance or at points which interfere with the placement and proper functioning of traffic control signs, signals, lighting or other devices that affect traffic operation will not be permitted.

If a property becomes landlocked (no reasonable access exists) because an approach road cannot be safely constructed and operated, and all other alternatives have been explored and rejected, ODOT might be required to purchase the property. (Note: If a hardship is self-inflicted, such as by partitioning or subdividing a property, ODOT does not have responsibility for purchasing the property.)

(Note ① has precedence over notes ②, ③ and ④.)

- ② These standards are for unsignalized access points only. Signal spacing standards supersede spacing standards for approaches.
- ③ Posted (or Desirable) Speed: Posted speed can only be adjusted (up or down) after a speed study is conducted and that study determines the correct posted speed to be different than the current posted speed. In cases where actual speeds are suspected to be much higher than posted speeds, ODOT reserves the right to adjust the access spacing accordingly. A determination can be made to go to longer spacing standards as appropriate for a higher speed. A speed study will need to be conducted to determine the correct speed.
- ④ Minimum spacing for public road approaches is either the existing city block spacing or the city block spacing as identified in the local comprehensive plan. Public road connections are preferred over private driveways, and in STAs driveways are discouraged. However, where driveways are allowed and where land use patterns permit, the minimum spacing for driveways is 55 meters (175 feet), or mid-block if the current city block spacing is less than 110 meters (350 feet).

A-4. LID SURVEY RESULTS

- Memo and Summary from Robert Holmes to Mayor and Council
- Local Improvement District Survey Results by Assessor's Map Number
- (Large format map is available in Council chambers).

To: The Honorable Mayor Judy Densmore
and Common Council Members

November 18, 1996

From: Robert S. Holmes 

Re: LID Survey

With the help of many volunteers the LID Survey is complete. I would like to express appreciation to the following volunteers who spent many hours addressing and stuffing envelopes with survey forms and posting responses to maps:

Judy Densmore
Barbara Dodrill
Katharina Farrand

Bob Gerkin and his daughter, Alexa
Robin Holmes
Nadja Rogers

2,369 surveys were sent to Bandon property owners. A total of 1,090 returned survey forms for a response rate of 46%. A summary of the responses is as follows:

Yes	262
No	816
Response Unclear	<u>12</u>
Total	<u>1,090</u>

The intent of the survey was to find neighborhoods that might be interested in upgrading their streets and the survey has accomplished that objective. There are many in Bandon who do not wish to upgrade their streets, but this need not inhibit those neighborhoods who wish to upgrade from doing so. The following neighborhoods had clusters of property owners who returned positive responses. While the results of the survey are not conclusive, further investigation of possible LID projects in the following areas would appear to be worth pursuing:

3rd Street - North Avenue to Harlem Avenue
11th Street - East of June
Bandon Avenue - South of 4th Street
Douglas - South of 4th Street
Cleveland/2nd/Bandon Avenue on Coast Guard Hill
8th Street-Oregon to Gross Creek
Edison Avenue - South of 4th Street
14th & 15th-West of Baltimore
Newport Avenue - South of 11th Street
Beach Loop - 11th Street to Face Rock Drive

Scattered responses were received in many neighborhoods which indicate a potential for LID projects in the future.

cc: Matt Winkel, City Manager

Enclosure - Summary of the survey results by city map code

City of Bandon
Local Improvement District (LID) Survey
Summary
November 18, 1996

<u>Map Index</u>	<u>Total</u>	<u>Responses</u>		<u>Unclear</u>
		<u>Yes</u>	<u>No</u>	
28 14 19DA	4	2	2	
28 14 19DB	1		1	
28 14 19DC	5	1	4	
28 14 19DD	20	10	10	
28 14 30AA	40	9	30	1
28 14 30AB	33	1	32	
28 14 30AC	64	14	50	
28 14 30AD	32	2	30	
28 14 30BC	11	5	5	1
28 14 30BD	17	6	11	
28 14 30CA	19	4	15	
28 14 30CB	51	16	32	3
28 14 30CC	39	8	31	
28 14 30CD	27	7	20	
28 14 30DA	41	13	28	
28 14 30DB	23	9	13	1
28 14 30DC	37	5	32	
28 14 30DD	32		32	
28 14 31BA	1	1		
28 14 31BB	13	5	8	
28 15 25AC	17	8	9	
28 15 25AD	26	10	16	
28 15 25BD	50	7	43	
28 15 25CA	46	10	36	
28 15 25CB	22	6	16	
28 15 25CC	33	12	19	2
28 15 25CD	21	8	13	
28 15 25DA	37	20	17	
28 15 25DB	56	9	47	
28 15 25DC	62	7	52	3
28 15 25DD	25	2	23	
28 15 36	8	4	4	
28 15 36AA	2	1	1	
28 15 36BA	0			
28 15 36BB	24	10	14	
28 15 36BC	21	6	15	
28 15 36CB	34	6	28	
28 15 36CC	30	4	26	
28 15 36CD	1		1	
28 15 36DA	0			
28 15 36DC	8	2	6	
28 15 36DD	2	1	1	
29 15 1	1	1		
29 15 1AB	11	4	7	
29 15 1B	8		8	
29 15 1BA	4		4	
29 15 1BB	16	4	11	1
29 15 1BC	15	2	13	-
Total	1090	262	816	12

A-5. COUNTY ROADS

- County Road List

COUNTY ROADS - ALPHABETICAL

July 15, 1997

* 6	Airport Way (Lakeside-101 #35)
	Alderwood Drive
	Anchor Lane (West Catching #205)
*	Anderson-Northup (Blossom Gulch #130)
*	Andrews (W. Bunker Hill #128)
78	Arago Crossroads
*	Arago (Lower Norway #76)
146	Arago-Arago Jct.
77	Arago-Fishtrap Landing
247	Auction Barn
1 A	Bald Hill (see 1B, 1C MP-Sitkum)
*	Bandon 2-Mile (Rosa #96)
165	Bandon Airport (Kehl Rd)
121	Bandon Jetty
29	Bandon Loop
166	Bandon Refuse Site
94	Bandon-Bullards
235	Barklow/Sandstone
243	Barview Blvd.
127	Bastendorff (Coos Head Loop)
160	Bates Road
*	Bay Park (W. Bunker Hill #128)
241	Beacon St.
8	Bear Creek
91	Bear Creek-Parkersburg Prosper Jct.
105	Beaver Creek
208	Beaver Hill - Seven Devils
126	Beaver Hill (Townsite)
187	Benson Extension
	Benson (Ten Mile Benson #69)
101	Bethel Mountain
*	Big Creek (Old Big Ck #203)
44	Big Creek (Zone 1)
84	Big Creek (Zone 4)
95	Bill's Creek
248	Blackmoor
30	Blossom Gulch (Anderson-Northup)
*	Boat Basin (Coos Head Loop 127)
116	Boone Creek
124	Bowron
34	Brady
238	Braley
*	Brauer (John Brauer #131)
15	Broadbent Bar
13	Brummit Creek
*	Buchanan (Bay Park #128)
92	Bullards Jct.
71	Bunker Hill (Harriett)
65	Camman
142	Carlisle (Hollow Stump)
19	Catching Creek
23	Catching Slough
205	Catching Slough (Westside)
108	Cedar Point
93	Chandler
12	Charles Fellows
	Charleston Dock
6	Cherry Creek
33	Chester Ruth
*	Chrome (W. Humphries #206)
*	Cleveland (Bay Park #128)

171 C	Coalbank Slough
*	Coaledo (Overland-Coaledo #3)
*	Cooper Bridge (MP-Cooper Br. #12)
122	Cooper Br. Weekly Ck.
*	Cooper (Old M.P. Cooper #194)
70	Coos Bay (CB/Bandon, Old)
57	Coos City - Sumner
127	Coos Head Loop (Bastendorff)
6	Coos River
188	Copple
9	Coquille - Fairview
10	Coquille - Fat Elk
*	County Line (Sitkum County Line #64)
216	Crest Acres
161	Croft Lake
132	Crosby Road
43	Crown Point (Joe Ney)
55	Daniel's Creek
67	Davis Slough
119	Dean Minard
137	Delmar
83	Dement
141	Dew Valley
3 A	Dillard Drive
225	Dolezal Blvd. (Dueling)
*	Donald (Walter Donald #157)
*	Dora (Lone Pine-Dora #63)
*	Driftwood Inn (Snake #75)
220 A	Dunes Drive
45	East Bay Drive
49	East Fork Millicoma
207	East Humphries
114	East Millington
*	Eastside-McKenna (Isthmus Hts. #211)
53	Eastside-Sumner
151	Eckley Mountain
129	Edwards
*	Eel Lake (Lakeside Eel #199)
*	Empire (Old Empire #135)
52	Englewood-Shinglehouse Slough
245	Evergreen St.
33 D	Fahy (portion Seven Devils)
*	Fairview (Coquille-Fairview #9)
*	Fairview (Norway-Lee-Fairview #2)
*	Fairview (Sumner Fairview #59)
60	Fairview-Middle Creek (Lone Pine Jct.)
*	Fat Elk (Coquille-Fat Elk #10)
*	Fellows (Charles Fellows #212)
31 A	Filter Plant
31	Finley State (Old Highway 42)
*	First Street (Bay Park #128)
167	Fish Hatchery
214	Fish Pit
22	Fishtrap Landing
179	Fishtrap-Collier
172	Flagstaff School (Shoshone)
213	Flanagan Street
*	Four Mile (Lower 4-Mile #97)
*	Four Mile (North 4-Mile #98)
*	Four Mile (South 4-Mile #99)
24	Fox Bridge Gravelford

185	Fruitdale
104	Garden Valley
	Gaylord
	George Clausen
37	Gerlach
*	Glasgow Graveyard (East Bay Drive #45)
178	Glenn Aiken Ck.
48	Glenn Creek
123	Goldbrick
1 C	Gravelford Sitkum
*	Gravelford (Brady #34)
*	Gravelford (Fox Bridge #24)
118	Greenacres
*	Greenbay St. (6th Street Bay Park #223))
233	Grinnel Ave.
79	Hall Creek
4 B	Halls Creek-Fishtrap-Lampa
*	Harriett (Bunker Hill/Coalbank #171)
120	Hatchet Slough
41	Hauser Depot (Sandy Way)
16	Haynes Slough
*	Haynes Slough Templeton (Ridge Road #36)
2 B	Hervey Bridge - Fairview
72 B	Hilltop Drive (Old Lakeside Hauser Stage Rd.)
68	Hinch
182	Hollow Stump
246	Hollywood Street
*	Humphreys (East Humphreys #207)
*	Humphreys (West Humphreys #206)
*	Island Drive (Saunders Lake #220)
	Isthmus Heights (Windy Hill Eastside McKenna)
	Isthmus St. (E. Millington #114)
154	Jenkins Prairie
103	Joe Ney Landfill
*	Joe Ney (Libby Joe Ney #184)
131	John Brauer
39	Johnson Creek
74	Johnson Mill
*	Johnson (Piper Johnson #150)
*	Jordan Cove (TransPacific Parkway #218)
56	K-9
228	Kadora Drive
229	Kellogg
27	Kentuck
155	King Creek
*	Kohl (Bandon Airport #165)
209	Lakeside 8th Street
35	Lakeside Hiway 101 (Airport Way)
199	Lakeside-Eel Lake
4 C	Lampa Creek Mt.
*	Lampa (Myrtle Point Lampa #4)
139	Landrith
17	Larson Slough
48	Laverne Park North
13	Lee McKinley
*	Lee (Norway-Lee-Fairview #2)
68	Leneve
204	Lighthouse Way
	Lil' Norway
	Lone Pine Jct. - Dora
*	Lone Pine (Fairview-Middle Creek #60)
43	Lorraine (Niles)
97	Lower 4-Mile

76	Lower Norway (Arago)
*	Mallory Lane (Bill's Creek #95)
*	Maple Ext. (Sugar Loaf #106)
221	Marine Drive (Shorewood)
*	Matson (Vic Matson #134)
173	McKenna Drive
*	McKinley (Lee McKinley #13)
184	McLain-Libby Drive
85	McMullen
197	McTimmons
191	Meadow Lane (Elfson)
136	Metcalf Ave.
42	Metman Creek
*	Middle Creek (Fairview-Lone Pine #60)
21 A	Mill Creek (Bridge)
*	Mill (W. Millington #174)
159	Miller
*	Millicoma (East Fork #49)
*	Millicoma (West Fork #47)
*	Millington (E. Millington #114 - Isthmus St.)
*	Minard (Dean Minard #119)
189	Morgan Creek
*	Morris (Dew Valley #141)
162	Morrison Road
32	Myrtle Creek
20	Myrtle Point Broadbent (Westside Rd)
12	Myrtle Point Cooper Brd.
*	Myrtle Point Cooper (Old MP Cooper #194)
4 A	Myrtle Point Lampa
156	Myrtle Point River Road
1 B	Myrtle Point Sitkum (Bald Hill)
100	New Lake
102	Nichols
*	Niles (Lorraine #143)
198	No Name
46	Noble Creek
98	North 4-Mile
5	North Bank
7 A	North Bay Drive
186 A	North Lake Extension
186	North Lake (Lakeside 6th Street)
109	North Shutters Landing
15	North Slough
201	North Slough School House (St. Dennis)
*	Northwood (Saunders #220)
*	Norton (Stew Norton #200)
2 A	Norway-Hervey Bridge
203	Old Big Creek
135	Old Empire
21 B	Old Highway at Bridge
72	Old Lakeside Hauser (Stage/Hilltop Drive)
194	Old Myrtle Point Cooper
33 W	Old Seven Devils
*	Old Shipyard (Edwards #129)
144	Olive Barber
140	Overland
3	Overland Coaledo
38	Palouse Creek - Johnson
*	Peninsula Drive (Saunders #220)
232	Penney Blvd.
102 C	Pigeon Point
*	Pine Street (Sunnyvale #117)
150	Piper Johnson

152	Pleasant Valley
*	Powers North (Woodward #219)
90	Powers South
1	Price Robinson
5	Prosper Jct. Highway 42
222	Quail Drive
163	Randolph Whiskey Run
183	Red Dike (Libby Dike)
81	Reedsford
36	Ridge (Haynes Slough-Templeton)
30	Rink Creek
*	River Road (Myrtle Point River #156)
49	Riverton Old Road
40	Roberts (Private)
242	Robertson
236	Robeson
*	Robinson (Price Robinson #115)
88	Rock Creek
*	Roosevelt (Penney Blvd. #232)
96	Rosa (Bandon 2-Mile)
18	Ross Slough
73	Ross-Wicks
230	Roy
*	Russell (Willanch Russell #202)
*	Ruth (Chester Ruth #133)
234	Saddler
70	Salal (Old Coos Bay - Bandon)
86	Salmon Gulch
*	Sandstone (Barklow #235)
89	Sandy Creek
2	Saunders Lake
	School (Flagstaff #172)
226	Seabird Drive
175	Selander - Sumner
71	Sengstacken
33 A	Seven Devils (Bullards - Whiskey Run)
33 B	Seven Devils (Beaver Hill - Charleston)
164	Seven Miles
47	Shelley Road
*	Shinglehouse Slough (Englewood #52)
*	Shipyard (Edwards #129)
*	Shoneshona (Flagstaff #172)
*	Shorewood (Marine Drive #221)
25	Shutters Landing (Lundgren)
*	Shutters Landing (N. Shutters Landing #109)
64	Sitkum County Line
*	Sixth Street Lakeside (North Lake #186)
223	Sixth Street (Bay Park Bunker Hill)
110	Slaughter House - Yokum
*	Sleepy Hollow (Carlisle #142)
*	Smith (Tom Smith #180)
75	Snake (Driftwood Inn)
99	South 4-Mile
16	South Coos River (Dellwood)
38	South Sumner
*	Southport (K-9 Road #56)
227	Spaw Blvd
*	Stage (Old Lakeside-Hauser #72)
200	Stew Norton (Levi Bunch)
14	Stian Smith
4	Stock Slough
0	Stringtown
*	St. Dennis (N. Slough-School House #201)

106	Sugarloaf (Maple Ext.)
195	Summerlin
*	Sumner (Coos City Sumner #57)
59	Sumner-Fairview
117	Sunnyvale (Pine St.)
14	Templeton
69	Templeton-Benson
50	Ten-Mile Creek
180	Thomas Smith
87	Transit Hill
218	TransPacific Parkway
244	Travis Street
11	Two-Mile
*	Two-Mile (Rosa Bandon #96)
21 C	Upper Rock Creek
134	Vic Matson (Matson)
33 C	Walker Avenue
240	Wallace Avenue
157	Walter Donald
82	Ward Creek
190	Waymire Lane
112	Weaver
*	Weekly (Cooper-Weekly #122)
231	Welch
128	West Bunker Hill (Bay Park)
249	West Central (Coquille Old Hiway 42)
47	West Fork Millicoma
206	West Humphreys (Chrome)
174	West Millington
*	Westside Road (Myrtle Point-Broadbent #20)
217	Whiskey Run
177	Whitney
102 A	Wildahl
7 B	Wildwood Drive (Hauser-Saunders Lake)
7 C	Wildwood Drive (Saunders Lake Lakeside)
28	Willanch Slough
202	Willanch-Russell
224	Wilshire Blvd.
*	Windy Hill (Isthmus Hts.-Eastside-McKinna #211)
219	Woodward Creek (Powers North)
158	Yellow Creek

A-6. 1997-98 CAPITAL IMPROVEMENTS PLAN (CIP)

- City of Bandon CIP, 1997-98 through 2000-01: Street Department

CITY OF LONDON
CAPITAL IMPROVEMENT PROJECTS

YEAR	RTG	PROJECT	DEPT	COST	\$ EXT FUNDING	SOURCE	\$ INT FUNDING	SOURCE
96-97	COMPLETE	Pave/Drain - 9th & Baltimore from Chicago to 10th	STR	\$80,000	\$25,000	St Grant	\$55,000	710
96-97	COMPLETE	Drainage - Newport 8th to 10th	STR	\$10,000				
96-97	COMPLETE	CAT (Lease/Purchase from Fire Dist) \$16,000	STR	\$4,000			\$4,000	210
96-97	COMPLETE	Drainage - 1st St NE and June Ave NE	STR	\$4,500				
96-97	COMPLETE	New Grader (Lease/Purch) \$85,000	STR	\$21,250			\$21,250	210
96-97	COMPLETE	New Shoulder Mower (Lease/Purch) \$50,000	STR	\$12,500			\$12,500	210
96-97	COMPLETE	Street Sweeper (Lease/Purch) \$100,000	STR	\$25,000			\$25,000	210
96-97	COMPLETE	Tipper Creek Culvert @ Beach Loop	STR	\$32,000	\$32,000	LID		
97-98	1	(Lease/Purch) New Grader \$85,000	STR	\$19,725			\$19,725	510
97-98	1	(Lease/Purch) New Shoulder Mower \$50,000	STR	\$11,205			\$11,205	510
97-98	1	(Lease/Purch) Street Sweeper \$100,000	STR	\$19,970			\$19,970	510
97-98	1	(Lease/Purch) from Fire dist) CAT \$16,000	STR	\$4,000			\$4,000	510
97-98	1	Drainage - Franklin, 12th Ct to 8th SW	STR	\$86,880			\$86,880	710
97-98	1	Drainage - City Park	STR	\$4,500			\$4,500	510
97-98	1	Drainage - 12th St SW and Hwy 101	STR	\$12,400	\$12,400	LID/ODOT		
97-98	1	Equipment - New Engine (603)	STR	\$1,800			\$1,800	100
97-98	1	Equipment - New Engine (621)	STR	\$1,800			\$1,800	100
97-98	1	FEMA - Rebuild No. Shoulder of 8th St SW	STR	\$3,455			\$3,455	100
97-98	1	FEMA - Ferry Creek Channel Relined	STR	\$5,753			\$5,753	100
97-98	1	FEMA - Reinforce West Side of Ohio Ave SE	STR	\$1,511			\$1,511	100
97-98	1	Reconstruct -- Beach Loop from 8th to No. of Face Rock Dr.	STR	\$206,230	\$50,000	County	\$59,120. \$97,110.	710 510
97-98	1	Reconstruct -- Franklin Ave from 4th to 12th Crt	STR	\$103,890			\$103,890	510
97-98	1	Signage -- New Street Signs	STR	\$13,000			\$13,000	210

CITY OF LANDON
CAPITAL IMPROVEMENT PROJECTS

YEAR	RTG	PROJECT	DEPT	COST	\$ EXT FUNDING	SOURCE	\$ INT FUNDING	SOURCE
97-98	2	Reconstruct -- 1st St NE from Harlem to June	STR	\$44,140			\$44,140	210
97-98	2	Reconstruct -- 101/42S Intersection	STR	\$1,093,000	\$1,093,000	ODOT		
97-98	2	Sidewalk -- N side of 101/June to Grand	STR	\$73,890	\$73,890	St Grant		
97-98	2	Sidewalk -- 11th St, Hwy 101 to Park	STR	\$60,000	\$60,000	St Grant		
98-99	1	(Lease/Purchase from Fire Dist) CAT \$16,000	STR	\$4,000			\$4,000	210
98-99	1	(Lease/Purch) Street Sweeper \$100,000	STR	\$25,000			\$25,000	210
98-99	1	(Lease/Purchase) New Shoulder Mower \$50,000	STR	\$12,500			\$12,500	210
98-99	1	(Lease/Purchase) New Grader \$85,000	STR	\$21,250			\$21,250	210
98-99	1	Equipment - Radio for Shoulder Mower	STR	\$700			\$700	210
98-99	1	Ferry Creek Channel	STR	\$475,000	\$475,000	ODOT		
98-99	1	Signage -- Lane Dividers and Parking Markers	STR	\$6,570			\$6,570	210
98-99	2	Equipment - New Engine (Trash Pump)	STR	\$300				
98-99	2	Overlay - Jackson Ave from 8th to Ocean Dr	STR	\$10,500				
98-99	2	Reconstruct -- Harlem Ave from 1st St NE to 101	STR	\$25,500			\$25,500	210
98-99	2	Reconstruct -- 1st St SE from Harlem to June	STR	\$27,950			\$27,950	210
98-99	2	Reconstruct -- 3rd St SE from Michigan to Grand	STR	\$99,625			\$99,625	210
98-99	2	Reconstruct -- 4th St SW from Franklin to Lincoln	STR	\$91,900			\$91,900	210
98-99	2	Reconstruct -- 9th SW, Hwy to Franklin	STR	\$150,000			\$150,000	210
98-99	3	Drainage - 8th SW, Harrison to Jackson	STR	\$20,900			\$20,900	210
98-99	3	Drainage - 3rd SE, Mich to Grand	STR	\$100,000			\$100,000	210
98-99	3	Drainage - Jennie	STR	\$9,300	\$9,300	LID		
98-99	3	Drainage - Caroline, Harlem to Fillmore	STR	\$25,190			\$25,190	210
98-99	3	Drainage - 11th & Rosa to 5th & Fillmore	STR					
98-99	3	Drainage Ave, 9th St SE to 4th St SE	STR	\$116,820			\$116,820	210

CITY OF LANCASTER
CAPITAL IMPROVEMENT PROJECTS

YEAR	RTG	PROJECT	DEPT	COST	\$ EXT FUNDING	SOURCE	\$ INT FUNDING	SOURCE
98-99	3	Drainage - 9th, 10th, 11th from Grand to Harlem	STR	\$152,350				
98-99	3	Drainage - 12th St SW @ Harrison	STR	\$47,600				
98-99	3	Drainage - Bandon Ave, Sq of 4th St	STR	\$26,620			\$26,620	210
98-99	3	Drainage - Ohio SE, 42 So to 7th SE	STR	\$138,810				
98-99	3	Equipment - Winch (603)	STR	\$1,200				
98-99	3	New Construct - Jetty Road Realignment	STR	\$499,125	\$499,125	County		
98-99	3	New Construct - Madison Ave	STR	\$282,155	\$282,155	Grant		
98-99	4	New Construct - Newport - 8th to 10th	STR	\$50,000	\$50,000	LID		
98-99	4	Pick-up - New	STR	\$12,000				
98-99	4	Reconstruct - 1st St NE - June to Mich.	STR	\$50,000				
99-00	1	(Lease/Purch from Fire Dist) CAT \$16,000	STR	\$4,000			\$4,000	210
99-00	1	(Lease/Purch) New Grader \$85,000	STR	\$21,250			\$21,250	210
99-00	1	(Lease/Purch) New Shoulder Mower \$50,000	STR	\$12,500			\$12,500	210
99-00	1	Shop - New	STR					
99-00	1	(Lease/Purch) Street Sweeper \$100,000	STR	\$25,000			\$25,000	210
00-01	1	(Lease/Purch) New Grader \$85,000	STR	\$21,250			\$21,250	210
00-01	1	(Lease/Purch) New Shoulder Mower \$50,000	STR	\$12,500			\$12,500	210
00-01	1	(Lease/Purch) Street Sweeper \$100,000	STR	\$25,000			\$25,000	210

BANDON TRANSPORTATION SYSTEM PLAN

VOLUME 3

***Inventory of the Existing Transportation
System***

December, 1997

TABLE OF CONTENTS

TABLE OF CONTENTS	2
TABLE OF TABLES	3
TABLE OF FIGURES	4
P-1. PREFACE	5
1. INTRODUCTION AND SUMMARY	6
2. POPULATION AND DEVELOPMENT DATA.....	12
3. ENVIRONMENTAL CONSTRAINTS	15
4. TRAFFIC VOLUMES AND LEVELS OF SERVICE.....	18
5. EXISTING AND COMMITTED ROADWAY SYSTEM.....	18
<i>FUNCTIONAL CLASSIFICATION</i>	18
<i>DESIGN CHARACTERISTICS</i>	21
<i>STATUS OF PLATTED STREETS</i>	24
<i>STREET SURFACE TYPE</i>	25
<i>PAVEMENT EVALUATION</i>	27
<i>ACCESS</i>	30
<i>ACCIDENTS</i>	31
<i>SPECIAL ROUTES</i>	37
<i>JURISDICTION</i>	37
<i>CONDITION OF ROADWAY STRUCTURES, BRIDGES, AND OVERPASSES</i>	37
<i>TRAFFIC CONTROL DEVICES</i>	37
6. PARKING	37
7. BICYCLE WAY FACILITIES.....	40
8. PEDESTRIAN FACILITIES.....	40
9. PUBLIC TRANSPORTATION SERVICES	41
10. AIRPORT, RAIL, WATER, AND PIPELINE	41
A-1. TABLE 3-3.....	43
A-2. AIRPORT FACILITIES.....	44
A-3. PORT FACILITIES	45
A-4. TRANSIT DATA.....	46
A-5. FIGURE 3-4. EXISTING PAVEMENT CONDITION	47
A-6. FIGURE 3-5. EXISTING PEDESTRIAN FACILITIES.....	48
A-7. TRANSPORTATION STRUCTURE EVALUATION.....	49

TABLE OF TABLES

TABLE 3- 1. POPULATION FORECAST	13
TABLE 3- 2. EXISTING FUNCTIONAL CLASS	21
TABLE 3- 3. DETAILED STREET CHARACTERISTICS.....	21
TABLE 3- 4. PAVEMENT EVALUATION CRITERIA	28
TABLE 3- 5. PAVEMENT CONDITION	29
TABLE 3- 6. APPROXIMATE NUMBER OF ACCESS POINTS ON HIGHWAY 101	30
TABLE 3- 7. APPROXIMATE NUMBER OF ACCESS POINTS ON HIGHWAY 42 SOUTH	31
TABLE 3- 8. LOCATIONS OF HIGH INCIDENCE OF ACCIDENTS 1993-1996	35
TABLE 3- 9. HIGHWAY 101 FATAL ACCIDENTS REPORTED BY ODOT 1987-1996	36
TABLE 3- 10. HIGHWAY 101 PEDESTRIAN & BICYCLE ACCIDENTS, ODOT 1987-1996	36
TABLE 3- 11. EXISTING PARKING IN THE OLD TOWN AREA.....	38
TABLE 3- 12. EXISTING BICYCLE FACILITIES.....	40

TABLE OF FIGURES

FIGURE 3- 1. BUILDING PERMIT ACTIVITY	15
FIGURE 3- 2. EXTENT OF MILEAGE AND TRAVEL ON URBAN SYSTEMS	19
FIGURE 3- 3. AVAILABILITY OF PARKING IN THE OLD TOWN AREA	39
FIGURE 3- 4. EXISTING PAVEMENT CONDITION.....	47
FIGURE 3- 5. EXISTING PEDESTRIAN FACILITIES	48

P-1. PREFACE

The City of Bandon is developing a Transportation System Plan (TSP) with a grant from the Oregon Department of Transportation. The TSP will establish a system of transportation facilities and services adequate to meet the City of Bandon's identified transportation needs for the next twenty years. It will be consistent with the County TSP and adopted elements of the State TSP, and will meet the requirements of the Transportation Planning Rule (Oregon Administrative Rules, Chapter 660, Division 12). The planning work is being conducted by the City of Bandon Planning Department and JRH Transportation Engineering, with assistance from the Oregon Department of Transportation. The citizens of Bandon will play a significant role in development of the plan, and other agencies and service providers will be involved in the process to ensure plan consistency.

The plan and supporting information are being developed in seven reports that document the process followed to reach the final Transportation System Plan. The reports correspond to the major elements of the work program.

- Volume 1. Public Involvement and Interagency Coordination (PIIC).** This report outlines how the public will be involved throughout the planning process and how other agencies and service providers will be involved. The report describes the materials, publications, and meetings that will allow the City to disseminate information and receive input that will help shape the transportation system plan.
- Volume 2. Review of Existing Plans, Policies, and Standards.** This report identifies existing documents that establish policies, regulations, standards, and capital improvements planning that relate to Bandon's transportation system. The report includes a review of city, special district, county, state and federal documents.
- Volume 3. Inventory of the Existing Transportation System.** This report describes the existing transportation system in Bandon and various characteristics of the system.
- Volume 4. Transportation Needs Assessment.** This report identifies what aspects of the transportation system need to be addressed to meet the City's transportation needs for the next twenty years.
- Volume 5. Development and Evaluation of Alternatives.** This report provides alternative ways to address the identified needs. Of several alternatives, one will be selected and refined as the course the City will follow to meet its transportation needs.
- Volume 6. Transportation System Plan.** This report will establish how existing plans and implementing measures will be revised to carry out the preferred alternative. It will establish a program for development and conservation of the City's transportation system for the next twenty years.
- Volume 7. Implementation Element.** This report will provide information on the final plan and implementation element adoption. It will include information about compliance with procedural requirements for plan and ordinance adoption and will provide information on the final plan and implementation elements as adopted.

1. INTRODUCTION AND SUMMARY

INTRODUCTION

This report is Volume 3 of the seven volumes identified in the preface of this document, which together will comprise the Bandon Transportation System Plan (TSP). The transportation system in Bandon is comprised of an existing and committed roadway system, bicycle way facilities, pedestrian facilities, public transportation services, and airport and port facilities. In planning for the conservation and development of this system, it is recognized that the transportation system itself is a land use and also has a significant impact on adjoining uses and the quality of life in Bandon. The system must meet Bandon's transportation needs as the community grows, and must respond to the natural and built environment in a manner that contributes to a positive quality of life.

Volume 3 provides an inventory of the physical and operational characteristics of the existing transportation system in Bandon. In addition, it provides a summary of population and land use trends and projections and an inventory of environmental features to which the system must respond in addressing future needs.

The inventory includes field-collected data which, in some cases, has not been compiled before, and in other cases, replaces outdated material. The inventory also consolidates data which has been collected in conjunction with other public and private planning activities. A detailed inventory of certain characteristics of the street system is provided in tabular format by street segment. Additional information about the transportation system described in the summary below can be found in the respective sections of the report or in the table.

SUMMARY

Population and Land Use Data

Population and land use data is used to forecast the future number of dwelling units and extent of commercial and industrial development expected as a result of population growth. This in turn is used to determine future traffic. This process is described in Volume 4, Transportation Needs Assessment. Bandon's official population estimate for July 1, 1996 was 2760 persons, representing population growth of 24% in the six years from 1990-1996. During the planning process, the Department of Land Conservation and Development (DLCD) was involved in reconciling state, county, and city population forecasts. Concurrent with this process, the City prepared two forecasts, low and moderate, for Bandon through the year 2020. The low projection was based on County projections in progress. The moderate projection was based on historical trends. The moderate projection had been used by the City as the basis for other planning activities. On September 5, 1997, DLCD reconciled the state, county, and city projections, and the result for Bandon was almost identical to the moderate projection. The City relied on this DLCD forecast as the basis for the analysis of this plan. The DLCD projection is

based on a percent share of the County's population. DLCD indicates that the share is projected to increase for Bandon by 1/20th of a percent per year through 2020. The DLCD projection results in an increase of 963 persons between 1996 and 2020, representing population growth of 35 percent over the 24 year period. This figure was used to determine future land use and residential unit needs. Based on this figure, 521 additional dwelling units would be needed to serve the population in 2020, accounting for vacancy rate and average household size. Projected dwelling unit subtypes (single-family, multi-family, etc.) were identified based on historical percentages, and are provided in the population and land use section of this report. Commercial and industrial land needs were determined by using a ratio of population to commercial and industrial acreage, based on existing ratios. An additional 48 commercial acres and an additional 18 industrial acres would be needed by 2020. Zoning designations and vacant lands were reviewed to identify where the potential development would be likely to occur. The City has sufficient lands in its urban growth boundary to meet these needs, and a substantial portion of these lands are already within city limits. Residential growth is expected to occur primarily within city limits west of Highway 101 north of 13th Street, on and near Beach Loop Drive, and along Seabird Drive. Most commercial development is expected to occur along Highway 101 south of 13th Street SW. Most industrial development is expected to occur at the airport and in the existing industrial area south of 11th Street SE between Fillmore Avenue and Harlem Avenue.

Traffic Data

Traffic data was collected for Bandon, including average daily traffic volumes and p.m. peak hour volumes at major intersections on arterials and collector streets. This data was used to identify how well the arterial and collector system is currently operating by determining the level of service (LOS) of the intersections. Local streets do not typically experience capacity constraints. The arterial and collector intersections, which are the critical element in traffic operations, are currently operating at acceptable levels. There are currently no problem intersections on collectors, and the most congested intersections occur on Highway 101 at unsignalized intersections between Fillmore Avenue and 11th Street SW. This data was used in conjunction with the population and land use forecasts to determine future traffic volumes and levels of service. Volume 4 provides data on the traffic forecast, applies it to the street network, and identifies how well the street system will operate in the future under these conditions.

Environmental Constraints

The major environmental issue for the transportation system is expected to be the constraints posed by wetlands in locating certain collector facilities. Previous plans have identified planned collector facilities, both east-west and north-south, across part of the 'donut hole' area, which is roughly bounded by Highway 101 on the east, Beach Loop Drive on the west, 13th Street on the north, and Seabird Drive on the south. More detailed wetlands identification conducted as part of the 1997 South Bandon Refinement Plan indicates that a significant portion of the area previously assumed to be uplands has a high likelihood of being wetlands. The previous plans established collector locations based on the less detailed National Wetlands Inventory, and alignments were proposed through areas now believed to be wetlands. It is still expected that collector facilities will be required in this area, and while alignments may be possible through wetland areas with

proper design and mitigation, alternative alignments should be considered to minimize the impacts on the wetlands.

Existing and Committed Roadway System

Detailed data on the current street improvements is provided in Table 3-3. This table includes data on functional classification, number of travel lanes, posted speed, travel lane and right-of-way widths, street surface type, pavement condition, on-street parking, pedestrian facilities, and bicycle facilities.

Bandon is served by one main arterial, Highway 101, which serves as the primary route for both local trips and pass-through trips. The current street network channels most trips onto Highway 101, providing few opportunities for trips on parallel streets for local trips.

The majority of the local streets have not been installed or upgraded to current City standards.

Access

Arterials

Highways 101 and 42S are the main arterials through Bandon. It is evident that presently, both facilities also serve a major access function to abutting properties, with the exception of Highway 101 from north city limits to Highway 42S. This segment is a designated throughway with restricted access, as discussed in Volume 2 of this plan. The only at grade intersection along this segment is located at 2nd Street NE on the west side of the highway. The remainder of Highway 101 is intersected by relatively short blocks through town, with numerous midblock access points to abutting land uses. Access on Highway 101 from Michigan Avenue through South City Limits at 13th Street South is characterized by 500 to 650 block length to Fillmore, blocks about 250' w of Fillmore, access south of curve at 325 foot block lengths. Highway 42S also provides numerous direct access points to abutting land uses.

Collectors

Where development has occurred along collectors, it has generally been with direct access from the collector to the abutting properties. Along Riverside Drive, the location of the facility precludes development along the majority of the west side of the facility, and therefore, access is mostly limited to the east side. In developing areas along collector facilities, such as along Seabird Drive, new development is occurring with new lots directly abutting the collector facility with direct access.

Accidents

As expected, most accidents occurred on arterial or collector facilities, within commercial areas, or within a short distance of these areas. The majority of accidents in Bandon occurred on Highway 101 at public street intersections. Based on ODOT and Bandon Police Department data from 1993-1996, the Highway 101 intersection at Fillmore Avenue encountered the most accidents, averaging three per year. Highway 101 at Elmira Avenue, June Avenue, 10th Street

South, 11th Street South, 9th Street South, and Grand Avenue followed, averaging between 2.75 to 2 accidents per year. On collectors, Alabama at 10th Street South and 11th Street South had the highest frequency of accidents, averaging 1.75 and 1.5 accidents per year.

From 1993-1996, ODOT reported 2 fatal accidents, both on Highway 101. During the same period, ODOT reported 50 injury accidents, totaling 72 injured persons. Of the 72 injured, 55 were involved in accidents on Highway 101, while 17 persons were injured in accidents on other streets. Accidents were reviewed in less detail for the period from 1987-1996. Fatal accidents generally occurred toward the south end of Highway 101 through the study area, with the majority of fatal accidents involving drivers under the influence of alcohol or drugs.

Pedestrian and bicycle accidents were reviewed only for Highway 101 using available ODOT data. These accidents were reviewed for the period from 1987-1996. During this period, ODOT reported 5 accidents involving pedestrians, including one pedestrian fatality. ODOT reported 6 accidents involving bicycles, including 6 bicyclist injuries.

Comparisons of ODOT and Bandon Police Department data indicated that the information sharing programs might benefit from a review of methods to ensure accurate data conversion.

Special Routes

No truck or hazardous material routes within the planning area have been designated locally or by the state. Generally, Highway 101 serves as the primary arterial, and truck traffic and hazardous material transport are assumed to follow this route. Certain local streets are signed to restrict truck traffic.

Jurisdiction

Jurisdictional issues are summarized in Volume 2 of this plan.

Condition of Structures

Structure ratings were conducted by JRH Transportation Engineering, and the results are provided in Appendix 3-4.

Traffic Control Devices

During the planning period, ODOT was in the process of constructing a major new intersection improvement at Highways 101 and 42S, including new signalization and turn lanes. The only other signalized intersection in Bandon is located at Highway 101 and 11th Street South, and also includes left turn lanes. 10th Street at Highway 101 provides a crosswalk, a flashing amber light, and a pedestrian crossing sign. The intersection provides access from the schools across Highway 101.

Most collector facilities at local streets are controlled with 2-way stops, with the priority movement on the collector. Some collector/local intersections include 4-way stops, as do most 4-way collector/collector intersections. Most 3-way intersections provide for a through movement for the straight leg. In the case of some tourist routes, priority is given to the tourist route, even when the route involves a turning movement at the intersection. In these cases, the other legs of the intersection are controlled with stop signs. Most local/local intersections are controlled with 2-way or 4-way stops, but in some locations, there are no traffic control devices at intersections.

Pedestrian Facilities

Pedestrian facilities are not extensive or generally well-connected in residential areas, and those which exist are very fragmented and of varying condition. Many sidewalks in residential areas end mid-block and do not provide ramped or continuous transitions across intersections. In residential areas with sidewalks, there was significant variation as to whether a sidewalk was adjacent to the curb or separated by a planting strip. The Old Town and uptown commercial areas are generally well served with sidewalks. Virtually all areas in Old Town are served with sidewalks on both sides of the street, and about half of the area in uptown has sidewalks on both sides of the streets. In a few locations in Old Town, and several locations in uptown, pedestrian facilities do not provide sidewalk ramps at intersections. Continuous extruded curbs without breaks also pose constraints to an accessible sidewalk system. Sidewalks are lacking on most collectors and portions of arterials, including areas heavily used by tourists. Improved pedestrian facilities are notably lacking near school facilities and between school facilities and the park on 11th Street SW, which is paved, and 8th Street SW, which is gravel.

Sidewalk widths were not individually inventoried, but some spot checks were conducted. Sidewalks are typically 3 to 5 feet in width in residential areas, and often 8 to 10 feet in pedestrian-oriented commercial areas.

Bicycle Facilities

Special bicycle facilities are generally absent. Some portions of 11th Street SE and 11th Street SW are served by bike lanes, but these are not continuously connected. While it is expected that bicycles will use shared lanes with automobiles on most local streets, many local streets are gravel and do not provide a surface conducive to bicycle travel.

The Oregon Coast Bike Route provides a route to serve recreational bicyclists. The route is identified in the Oregon Coast Bike Route Map available from the Oregon Department of Transportation free of charge. The portion of the route through Bandon leaves Highway 101 headed southbound, and follows the collector system along Riverside Drive, through Old Town, up Edison, along Ocean Drive, and along Beach Loop Drive, rejoining Highway 101 south of town. The route is predominantly shared roadway or a narrow shoulder.

Bicycle parking was rarely observed throughout the community.

Public Transportation Services

Bandon Dial-A-Ride provides a demand-responsive service for Bandon and an area outside of city limits. Currently, there is no intercity paratransit service. Greyhound provides daily service to Bandon, with the bus stop located in front of the hostel on 1st Street SE in Old Town.

Greyhound service does not offer a schedule that would allow for intercity coordination with Dial-A-Ride services. Bandon is not served by other public transportation services.

Air, Rail, Water, and Pipeline

Bandon is not currently served by rail or pipeline, and is not expected to be served during the planning timeframe.

Bandon is served by the Bandon State Airport which is owned by the state. The Oregon Coastal Zone Management Association's (OCZMA's) 1995 ports report summarizes the facilities at Bandon State Airport. The airport has a 3,600 ft by 60 ft asphalt runway. It includes 62 acres, has medium intensity runway lighting (MIRL), NAVAIDs, runway end identifier lights (REIL), and precision approach path indicator and visual approach slope indicator (PAPI VASI). ODOT's 1995 Traffic Volume Tables estimates operations at Bandon State Airport at 11,177. This is higher than the forecast operations in the airport master plan. The plan had an initial operations forecast from 3,200 in 1989 to 6,400 in 2009. This was revised in the master plan update, with projected operations of 9,700 in 2009, with 44 based aircraft.

A profile of the Port of Bandon is provided in the OCZMA 1995 ports report. Facilities and services provided by the port include a picnic area, launch ramp, launch hoist, wet/dry moorage, land leases, building leases, clearing/marketing channels, and free parking.

Parking

A general inventory of on-street and off-street parking was conducted, with emphasis on the amount of parking available in the Old Town area. The emphasis on the Old Town area is based on the Comprehensive Plan policy which indicates the need to develop a parking plan for the Old Town area. The number and type of parking spaces were field inventoried and mapped for the Old Town area, but no assessment of adequacy was undertaken in relation to commercial square footage or use of the Old Town area in conjunction with this report. On-street parking was also reviewed throughout the city. On-street parking is prohibited on Highway 101 on virtually all locations within the planning area, with the exception of the block in front of the cheese factory. A few block segments in the vicinity of the current city shop location include restricted on-street parking. On-street parking is restricted on one side of the street in some areas in Old Town, and this is noted on the Old Town parking inventory map. Some areas near the schools include time-restricted parking. Most areas throughout the city do not restrict parking through signage or painted curbs, but may be naturally restricted through existing site or shoulder conditions. Parking data is provided in detail in the 'Parking' section of this volume, in Figure 3-3, and in Table 3-3 in Appendix 3-1.

2. POPULATION AND DEVELOPMENT DATA

Population and land use forecasts provide the basis for determining future traffic volumes. In addition, understanding the demographic characteristics of the community provides an indication of the type and level of transportation facilities and services that the community will need in the future. Specific demographic characteristics will be further discussed under the transportation elements to which the characteristics are related.

Trends and Forecasts

Population trends for the City of Bandon and Coos County are provided in the respective comprehensive plan inventory elements on population. The Bandon Comprehensive Plan also includes housing data from the 1990 census, including statistics on vacancy rates and number of housing units by type.

Several sources were reviewed for population forecasts. The University of Oregon Community Planning Workshop (CPW) has produced several documents providing population projections for Bandon, including a June 1995 draft update of Bandon's comprehensive plan. More recently, the Oregon Office of Economic Analysis (OEA) has prepared statewide county-level forecasts. The Department of Land Conservation and Development (DLCD), in carrying out the requirements of ORS 195.036, is required to ensure that the county considers these forecasts in preparing its projections, and is required to ensure that the county coordinates forecasts with the cities in the county. Ultimately, for the purposes of this plan, Bandon used the September 5, 1997 forecast recommended by DLCD, which reconciles state, county, and city forecasts. The forecast for Bandon closely resembles previous population forecasts used by the City.

Prior to the DLCD forecast, the City prepared two forecasts, low and moderate, to assess Bandon's future transportation needs. The DLCD figure for Bandon closely resembles the City's moderate forecast. However, the DLCD forecast shows Bandon growing more slowly through the year 2000, and then growing slightly faster through the year 2020. The moderate and DLCD forecasts more closely resemble recent trends reflected in Portland State University's official population estimates as well as trends in recent residential construction activity. Population trends show that Bandon's population declined at a slower rate than the county between 1980 and 1990 and experienced a stronger growth rate between 1990 and 1996, fueled strongly by the retirement population. Recent construction activity in Bandon also indicates that Bandon's population growth has been stronger than the county's.

This report recognizes the inherent limitations in forecasting for a small area. Generally, the reliability of a population forecast is lower for a smaller area and for a longer forecast period. In addition, employment trends have not been considered as a primary determinant of future population for Bandon. Structural shifts in the economy, and Bandon's increasing role as a retirement center provide limitations to relying on employment data for population projections. In addition, in a town of Bandon's size, a single new employer or the growth of an existing employer could have substantial effects on Bandon's population growth which would not be anticipated through the review of current employment trends.

Recognizing the limitations of population forecasts, it is intended that the forecasts will be reviewed and adjusted as necessary as the planning period progresses. It should also be recognized that not all elements of the plan rely on quantitative considerations, and those which do can be adjusted to meet the needs of the realized population growth. Periodic monitoring of trends will be necessary to determine if any modifications will be required, and how significant the modifications will be if they are necessary.

DLCD Forecast

As recommended by DLCD, the County has distributed future growth to cities as a function of a share of the County's population.

The Office of Economic Analysis (OEA) has shown that the county's growth rate will be variable, and has provided these variable growth rates in five-year intervals. These rates show that the county growth rate will slow in 2000, and will slowly increase after 2010. DLCD has indicated that Bandon's share is projected to increase by 1/20th of a percent per year through 2020. Based on this forecast, Bandon would increase in population by 963 persons between 1996 and 2020, or 35% over the 24 year period. The increase would be much slower between 1996 and 2000, with a total increase of 35 people, averaging 8.75 persons per year. A much stronger increase between 2000 and 2005, with a total increase of 215 persons, averaging 43 persons per year. The growth rate would continue to increase, steadily climbing to the point where, during the five-year interval between 2015 and 2020, the City's population would increase by 251 persons, averaging 50.2 persons per year.

TABLE 3- 1. POPULATION FORECAST

Year	Coos County				City of Bandon		
	County Growth Rate (%)	County Population	5-Year Change	Average 1-Year Change	City Population	5-Year Change	Average 1-Year Change
1996		62,399			2,791		
2000	.48	63,612	1,213	303.25	2,826	35	8.75
2005	.42	64,950	1,338	267.6	3,041	215	43
2010	.42	66,338	1,338	267.6	3,265	224	44.8
2015	.46	67,870	1,532	306.4	3,503	238	47.6
2020	.48	69,513	1,643	328.6	3,754	251	50.2

Source: Office of Economic Analysis, as modified by DLCD, Coos County, City of Bandon

Construction Trends and Forecasts

Construction activity provides another indicator of population growth, and is helpful in assessing different population forecasts. Building permit data for Bandon was reviewed for the 10 year period from 1987-1996. During this period, permits were issued for 351 new dwelling units, 249 of which were for single-family dwelling units, including manufactured housing. This averages permits for 35 total units per year, and permits for 25 single-family units per year. During this period, there was a building permit moratorium in 1991, which resulted in a higher than expected number of permits issued in 1990. Permits for 79 dwelling units were issued in 1990, all of which were for single-family dwellings. This was considerably higher than the number issued in the preceding and following years, 31 units in 1989 and 16 units in 1991. Also during the 10-year period, permits were issued for several multi-family projects in 1994, adding 97 multi-family units, for a total of 122 units. Figure 3-1 shows actual building activity from 1987-1996 and activity through 2020 that would be expected based on the population forecast and housing trends.

Additional calculations were also made to identify a 'what if' scenario that removed the peaks from the highest activity periods of 1990 and 1994. While of limited use, it provides an indication of a low growth trend Bandon could have experienced if no moratorium occurred, if major multi-family projects were not developed, and if the market didn't result in generally higher activity levels on average spread over several years as a result of demand which may have been created by the absence of the activity in the peak years. Assuming that the 1990 figure was an average of the 1989 and 1991 permits, there would have been 24 permits issued in 1990, all single-family and manufactured housing. Assuming that there had not been major multi-family permits issued in 1994, there would have been 25 permits issued, all single-family and manufactured housing. With these two considerations, there would have been an average of 20 permits per year issued for all dwelling units and 19 permits per year for single-family units during the 10-year period. These averages may provide an indication of what might be expected in future years in terms of a low average, in a situation where there is no moratorium, and where no additional large-scale multi-family complexes are developed. Again, this provides a low average that assumes the activity in other years would have remained the same in the absence of these projects. This figure is only useful for comparing recent activity to expected levels of construction activity relative to population forecasts.

Residential Needs

Residential needs for the planning period are address in Volume 4 as part of the Level 2 Cumulative Analysis

Commercial and Industrial Needs

Commercial and Industrial needs for the planning period are addressed in Volume 4 as part of the Level 2 Cumulative Analysis.

Future Traffic Volumes

Future traffic volumes were determined by conducting a Level 2 Cumulative Analysis. The process and results are discussed in Volume 4.

FIGURE 3- 1. BUILDING PERMIT ACTIVITY

Permits issued for 10 year period from 1987-1996

Permits for new dwelling units (all types) 1987-1996:	351
Average dwelling units (all types) per year:	35
Permits for new single family and manufactured units 1987-1996:	249
Average single-family and manufactured dwelling units per year:	25

Permits to be issued for 24 year period from 1996-2020 to achieve projection

DLCD Projection	
Total dwelling units:	521
Average dwelling units per year:	22
Total single-family and manufactured units:	443
Average single-family units per year:	18

3. ENVIRONMENTAL CONSTRAINTS

Identification of significant environmental resources is necessary to ensure that future transportation improvements can respond to the constraints and opportunities created by these resources. A broad review of natural, visual, and cultural resources and their general locations is provided with the expectation that a more detailed review of certain areas will be required as alternatives are considered and a preferred alternative is selected. The review is based on data compiled in inventory components of existing plans and planning activities identified below.

Oregon Coast Highway Corridor Plan

The Oregon Coast Highway Corridor Plan includes several inventory reports that were summarized in the plan's opportunities and constraints report. Inventories were conducted for natural resources, including wetlands, threatened and endangered species, and other significant resources; visual resources; and in some cases, cultural resources. The inventories were conducted at the corridor planning level, and are therefore limited in detail. In addition, the inventories were conducted relative to the Highway 101 corridor. While the corridor boundaries were broadly construed, the inventories may not account for resources which are of importance to the City, but which may be of limited importance in relation to the Highway 101 corridor. The plan's Analysis Zone 55 covers Bandon from Milepost 260.6 to 274.8, which generally includes the area between North City Limits and Seabird Drive. The plan's Analysis Zone 56 covers Bandon South City Limits through Langlois, Milepost 274.8 to 288.9. The following resources were identified for those zones.

Zone 55Natural Resources:

Wetlands: Coquille River Shore, Ferry Creek.

Threatened and Endangered Species: Two bird species, two mammals, five plants and four natural communities, Coos Bay through Bandon.

Significant Resources: No other significant resources.

Visual Resources:

Bandon Marsh and Coquille Point National Wildlife Refuges, Bandon Historic District, State Wayside, views.

Zone 56Natural Resources:

Wetlands: Johnson, Crooked, China, Twomile and Fourmile Creeks, forested wetlands near Fourmile Creek.

Threatened and Endangered Species: Three birds, one amphibian, ten plants and two natural communities, Bandon through Port Orford.

Significant Resources: No other significant resources.

Visual Resources:

Scenic views of ocean, China Creek pasture, Twomile Creek Valley, Bandon State Park

Additional identification of environmental resources is available in the National Wetlands Inventory, Bandon's June 1995 Draft Comprehensive Plan, and work in progress on the South Bandon Refinement Plan.

Natural Resources:Wetlands:

Wetlands review was based on the National Wetlands Inventory (NWI) and the wetlands study conducted for the geographic area in the South Bandon Refinement Plan. Estuarine wetlands are located along the Coquille River shore, and marine wetlands are located along the Pacific Ocean shore. There are also several natural drainages in the study area, with associated riverine and palustrine wetlands. These include Ferry and Geiger Creeks to the southeast, which also provide Bandon's water supply. Ferry Creek crosses Highway 101 at Grand Avenue and drains into the Coquille River on the northwest side of the intersection of Riverside Drive and 1st Street SE. Johnson Creek and associated wetlands cross the study area south of Seabird Drive, flowing generally westerly, crossing Beach Loop Drive and draining into the Pacific Ocean. Tupper Creek is located in the western portion of the city, flowing from an area south of 13th Street SE

in the Urban Growth Area (UGA), crossing Beach Loop Drive, and entering the Pacific Ocean south of Coquille Point. Gross Creek, running generally northerly, crosses from the east side of Highway 101 to the west side south of 13th Street, and crosses the east portion of the school property, entering the Coquille River near 1st Street SW and Edison Avenue.

In addition to these drainages, the portion of the unincorporated UGA west of Highway 101 is relatively flat and contains a significant amount of palustrine wetlands, and probable wetland mosaics. There are also extensive portions of this area covered with gorse that makes the identification of wetlands difficult without vegetation removal. The area east of Highway 101 and south of the unincorporated UGA also contains areas of palustrine wetlands.

Visual Resources:

As identified in the Coast Highway Corridor Plan, the predominant visual resources are the scenic vistas of the Coquille River, the lighthouse, and the ocean.

Cultural Resources:

Cultural Resources were not inventoried in the Coast Highway Corridor Plan for the Bandon area. The cultural resources identified in this section include parks, cemeteries, and historic areas. The City Park is located on 11th Street SW, between Jackson Avenue and Newport Avenue. Cemeteries include the I.O.O.F., Grand Army of the Republic, and Catholic Cemeteries east of Riverside Drive and north of Caroline Street. Cemeteries are also located east of the study area on the north side of Highway 42S. The major historic area is Bandon's Old Town, located north and west of Highway 101 between Edison Avenue and Fillmore Avenue.

The following resources are subject to special provisions of the City's Historic-Cultural Overlay Zone as regulated by the zoning ordinance:

1. Breuer Building, 460 1st Street SW
2. Kronenberg Home, 95 Harlem Avenue SE
3. Moore Mill Truck Shop, 67 Elmira Avenue SE (Formerly Nestle's Milk Condensing Plant)
4. Bandon Masonic Building, 108 2nd Street SE (Formerly 1st National Bank)
5. Bandon Lighthouse, North Jetty
6. Old Coast Guard Building, 390 1st Street SW
7. Coquille Indian Tribe Resource Lands as identified in the Comprehensive Plan

4. TRAFFIC VOLUMES AND LEVELS OF SERVICE

Existing Data

Traffic volume data for US Highway 101 and State Highway 42S was obtained from the Oregon Department of Transportation 1995 Traffic Volume Tables, published May 1996, by the Transportation Data Section. This data provides traffic volumes for 10 locations on Highway 101 within the study area and 2 locations on Highway 42S within the study area. The tables provide 1995 Annual Daily Traffic (ADT). Highways 101 and 42S were last counted in 1994, and were adjusted to 1995 levels. The tables also provide more extensive data from a permanent counter location south of Bandon.

Traffic counts were also available for 2nd Street NE from a count conducted by ODOT, and at Highway 101 and Seabird Drive from a count conducted in conjunction with a conditional use application.

New Data

JRH Transportation Engineering conducted traffic surveys at critical intersection locations on collectors and arterials for weekday PM peak hour conditions. This data is provided in Volume 4 in conjunction with the Level 2 Cumulative Analysis.

Level of Service

This data is provided in Volume 4 in conjunction with the Level 2 Cumulative Analysis.

5. EXISTING AND COMMITTED ROADWAY SYSTEM

FUNCTIONAL CLASSIFICATION

Background

This section identifies the existing federal functional classification of streets in the study area and describes the criteria that were used for those designations. Functional classification is a system used for street system design that recognizes that a vehicle trip involves a series of distinct stages: primary movement, collection/distribution, access, and termination. Streets are designed and arranged to serve a certain function appropriate to the trip stage. The system organizes streets on a hierarchy of function relating the proportion of movement to access (see Fig 3-1). A street of one functional class should intersect with a street of the same or adjacent functional class to provide a safe and efficient system. There are three major functional classes: arterials, collectors, and locals. Arterials serve a primary function of movement, while locals serve a primary function of access; collectors provide a link between arterials and locals, serving a dual purpose of

movement and access. These classes are typically broken into subcategories, usually 'minor' and 'major', based on a more detailed consideration of the relationship between movement and access.

In the functionally classified street system, arterials account for the majority of the vehicle miles traveled (vmt), while comprising a relatively small component of the physical street network. At the other extreme, local streets account for only a small percentage of the total vehicle miles traveled, but comprise the majority of the physical street system. While actual vmts and miles of street vary, Figure 3-2 identifies a range that indicates relative relationships within a developed area.

FIGURE 3- 2. EXTENT OF MILEAGE AND TRAVEL ON URBAN SYSTEMS

SYSTEM	RANGE (PERCENT)	
	VMT	Miles
Principal Arterial System	40-65	5-10
Principal <u>plus</u> Minor Arterial System	65-80	15-25
Collector Street System	5-10	5-10
Local Street System	10-30	65-80

The functional classification system provides the basis for planning improvements using appropriate standards for design and location for each functional class and subclass. Design standards relate to the primary function of a street and take into consideration such characteristics as trip length and traffic volume.

Federal Functional Classification Criteria

The existing functional classifications were obtained from the ODOT Transportation Map of the Bandon Area showing federal functional classification. The classifications are derived from the criteria established in the Federal Highway Administration's Highway Functional Classification, Concepts, Criteria, and Procedures, Revised 1989.

Area Definitions

The federal manual provides for separate classification of urban and rural functional systems due to differences in characteristics associated with these areas. Urban areas are defined in Federal-aid highway law. The federal manual uses area definitions of small urban areas, urbanized areas, and rural areas consistent with that definition.

The manual states that

Urban and rural areas have fundamentally different characteristics as to density and types of land use, density of street and highway networks, nature of travel patterns, and the way in which all these elements are related in the definitions of highway function.

Experience has shown that extensions of rural arterial and collector routes provide an adequate arterial street network in places of less than 5,000 population. Hence urban classifications as discussed herein are considered in the context of places of 5,000 population or more.

Urban Areas: are defined in Federal-aid highway law (Section 101 of Title 23, U.S. Code) as follows:

“The term ‘urban area’ means an urbanized area, or, in the case of an urbanized area encompassing more than one state, that part of the urbanized area in each state, or an urban place as designated by the Bureau of the Census having a population of five thousand or more and not within any urbanized area, within boundaries to be fixed by responsible state and local officials in cooperation with each other, subject to approval by the Secretary. Such boundaries shall, as a minimum, encompass the entire urban place designated by the Bureau of the Census.”

Small Urban Areas: Those urban places, as designated by the Bureau of Census having a population of five thousand (5,000) or more and not within any urbanized area.

Urbanized Areas: are designated as such by the Bureau of the Census.

Rural Areas: comprise the areas outside the boundaries of small urban and urbanized areas, as defined above.

According to these definitions, Bandon’s federally classified roads are based on the rural area classifications. The rural classifications tend to reflect the system from a statewide perspective, and therefore, tend to address Bandon as a point within a broader network, rather than addressing the internal components of a city-level network. This is the basis for the federal functional classification in Bandon, and criteria applicable to Bandon are summarized below. For local planning purposes, the classifications applicable to small urban areas more closely resemble Bandon’s situation.

Rural principal arterials serve substantial statewide or interstate travel, and connect most urban areas of population 25,000 or more. Rural minor arterials supplement the principal arterial system, together linking cities and towns and other traffic generators of similar magnitude. They form a network providing interstate and intercounty service.

Rural collector routes generally serve travel of primarily intracounty rather than statewide importance and constitute those routes on which predominant travel distances are shorter than on arterials routes. They are subclassified as major and minor collectors. Major collectors provide service to traffic generators of intracounty importance and link them with nearby larger towns, or with routes of higher classification. Minor collectors collect traffic from local roads and bring developed areas within reasonable distance of a major collector.

Local roads serve primarily to provide access to adjacent land, and provide service to travel over relatively short distances as compared to collectors or other higher systems.

Existing Federal Functional Classification of the Street System

The existing federal functional classification of streets in the study area is shown in Table 3-2, and is summarized below.

TABLE 3-2. EXISTING FUNCTIONAL CLASS

Federal Functional Class	Street
Primary Arterials	US Highway 101
Minor Arterials	Highway 42S
Urban Collectors/ Rural Major Collectors	The contiguous segments of Riverside Drive, 1st Street SE and 1st Street SW, Edison Avenue, 4th Street SW, Ocean Drive, and Beach Loop Drive; Fillmore Avenue between Riverside Drive and US 101.
Minor Collectors	4th Street SW and Oregon Avenue between Edison Avenue and US 101; 11th Street SW between Beach Loop Drive and US 101; Franklin Avenue between 13th Street SW and 11th Street SW
Locals	All other streets

As was noted above, these classifications are based on the federal classification system for rural areas. Therefore, Bandon may desire to develop a subclassification system appropriate to local needs to develop standards for the design characteristics described in the following section. One subclassification system has been proposed by the Streets Committee in the work they performed in 1994. This will be discussed further in the volumes addressing needs and alternatives.

DESIGN CHARACTERISTICS

TABLE 3-3. DETAILED STREET CHARACTERISTICS

(See Appendix 3-1).

Number of Travel Lanes

Currently, with the exception of Highway 101 and Highway 42S, all two-way streets in Bandon have two travel lanes, with one lane in each direction, with the exception of 2nd Street SE and Alabama Avenue in Old Town, which are one way facilities. In addition, 11th Street through City Park is a one-way pair. Some of the streets are marked with center line striping, while most are unmarked. Several two-lane facilities without painted lanes operate at intersection locations as if there are two upstream lanes at the intersection, with one operating as a right-turn only lane and the other operating as a through and left-turn lane. In Old Town, Alabama Avenue and parts of 2nd Street SW are one-way facilities.

Highway 101 varies in number of lanes as it passes through Bandon. It is a two-lane facility as it enters the city from the north, with turn refuges at 2nd Street NE. After the 101/42S intersection, Highway 101 is a four-lane facility from Michigan Avenue to Chicago Avenue, where it widens to a five lane facility with two travel lanes in each direction and a center dual left turn lane. At the signalized intersection at 11th Street South, the center lane is marked for exclusive left turns. At 13th Street South, Highway 101 narrows back to a two-lane facility for the remainder of its length through the study area. The highway is marked with various centerline striping providing for various passing configurations through the study area.

Highway 42S is a two-lane facility within the study area, with the exception of a left-turn refuge at North Avenue for east-bound traffic turning left onto North Avenue.

Posted Speed

Data on posted speeds were obtained through field collection in June 1997. The speed limit in the majority of the study area is 25 mph. The majority of streets in the study area are not specifically posted, but are generally continuations of street segments posted at 25 mph. Slower speeds are posted near the schools (20 mph) and the city park (15 mph). Seabird Drive was posted at a higher speed of 45 mph, and Elmira Avenue has a posted speed of 30 mph. A few facilities are posted slightly differently in each direction of travel for the same segment. Highway 101 has posted speeds varying from _____ to _____. Highway 42S has a posted speed of _____.

Travel Lane and Right-of-Way Widths

Availability of as-built plans for street improvements is limited for facilities within the study area. Therefore, travel lane data was obtained through field measurements in April 1997. The majority of gravel streets have not been constructed with a road base, and have gravel surfaces of varying depths. Due to the questionable extent of the improved travel surface width for gravel roads, gravel roads were not measured. Concrete and asphalt street widths were measured from edge of pavement or face of curb, depending presence of curb and gutter. For streets without curb and gutter that had painted outer lane markings, the width from paint to paint was measured, and pavement width was also noted. Where on-street parking was allowed, the overall width was noted, and no special consideration of parking width was noted, unless the street was specifically

painted for on-street parking. Areas where on-street parking is restricted with painted curbs or signs has been noted.

Right of-way widths were obtained from the County Assessor's parcel maps and from the digital versions of these maps produced by the City Engineer. Where widths were specifically listed on the maps, these figures were used, rather than scaling from the maps. When distances were not listed, measurements from the scaled drawings were necessary, but the two sets of maps contained some discrepancies in measured distances. For this reason, the listed widths were preferred where available. In addition, there were occasional discrepancies between the maps regarding street vacations. In these cases, data was taken from the assessor's maps. In some instances, local knowledge was relied upon to address vacations that did not appear on either set of maps. The City should notify the assessor's office of known vacations not reflected on the assessor's maps.

While street width and right-of-way width data is available, this inventory did not provide for the integration of the physical and legal data. Therefore, while width data is presented, no data is available to specify the location of the improvements within the right-of-way. In addition, there are instances where right-of-way alignment is not continuous across an intersection, and this is noted where possible in the tabular data. A set of topographic maps from the early 1970s provides an indication of the location of the streets relative to the right-of-way at that time; however, the precision of these maps should be reviewed.

New building permits within the City are issued without a requirement for a surveyed site plan. Property lines are often assumed based on the location of utility meters and measurements from property lines assumed from property owner knowledge. Many areas do not have readily available survey monuments. Especially with the abundance of gravel streets that do not have clearly defined edges, it is possible to encounter a situation where the travel surface has gradually shifted over the years from its original alignment. Therefore, the City should further pursue the development of reliable mapped data relating street improvements to the right-of-way. Again, the limited availability of as-built drawings limits the capability of measuring from street or utility features to locate right-of-way boundaries.

The majority of rights-of-way are 60 feet in width. In some areas, streets are located in rights-of-way of 20 and 30 feet. These widths are noted in detail in Table 3-3. Highway 101 has right-of-way of varying widths. The right-of-way maps do now show the vacated portion of Fillmore which was rededicated.

Many of the paved street widths are substandard when compared to existing city standards. Some segments of local and collector streets are as narrow as 16 feet in width. Street widths are detailed in Table 3-3. There are a number of location where dead-end streets terminate without a cul-de-sac.

STATUS OF PLATTED STREETS

The City of Bandon and the land in its Urban Growth Boundary have been developed under numerous historical programs of subdivision regulation. Previous regulatory programs did not require installation of public improvements as a condition of plat approval. As a result, many areas have been platted and the plats have been recorded with approved right-of-way dedications, but infrastructure improvements have been neither designed nor installed. In many of these cases, the rights-of-way have not been officially opened for public use. In addition, lots have been conveyed, creating a fragmented pattern of ownership, where the lots abut public rights-of-way but are not served by public improvements. In some cases, adjacent property owners have improved the public right-of-way to varying degrees of quality.

The City has since adopted regulations that prohibit any street work in the public right-of-way without City approval. This protects the City from further substandard improvements in existing public rights-of-way. The City has also established subdivision regulations requiring new lots in new subdivisions to be served with public improvements developed to specific standards. Before a lot in a new subdivision can be sold, the right-of-way must be dedicated, and the required improvements must be installed.

While these measures prevent further substandard improvements, there are numerous streets which have already been developed prior to the establishment of required minimum standards. These street improvements may or may not have been constructed with the approval of the City. In any case, they are in existence and have been used by the public for many years.

A review of the physical condition of platted right-of-way and access to properties adjacent to these rights-of-way provides an indication of historic use of these rights-of-way. However, a review of the local legal framework indicates that a determination of the status of platted rights-of-way will demand the expertise of the City's legal counsel in reviewing the status of existing uses and rights-of-way in the context of broader right-of-way law. For streets in the County which are within the Urban Growth Boundary, the determination of whether a street is open is made by the County Roadmaster in accordance with Section 7.1.900 of the Coos County Zoning and Land Development Ordinance. The County also considers certain roads to be included in the County maintenance system.

Open Streets and Dedicated Right-of-Way

Typically, a jurisdiction accepts a dedication of right-of-way in approving a plat. However, section 18 of the Bandon Subdivision Ordinance, Approval of Plat, states that, "the approval of the plat does not constitute or effect an acceptance by the public of the dedication of any street or other easement shown on the plat." This provision appears in the subdivision ordinance, Ordinance 855, adopted in 1963, and the subsequent ordinances amending or repealing Ordinance 855.

The action of dedication requires the offering of dedication by the party preparing the plat, and the acceptance of dedication by the agency approving the plat. Based on Section 18 of the ordinance, it would appear that the City has not accepted any street or easement since 1963. A

'street' as defined in the ordinance refers to the 'public or private way that is created to provide ingress or egress for persons and the placement of public utilities', and does not refer strictly to street improvements. It does not appear that any separate action has been taken by the city to accept the street or easement dedications offered for dedication on plats approved by the city since 1963.

In addition, the City did not have an ordinance requiring City approval for work performed in a public right-of-way until Ordinances 1338 and 1350 were adopted in 1994 and 1996, respectively.

The ability of a party to perform work in a public right-of-way without city approval, the limited records of approved as-built plans, the provision of the subdivision ordinance stating that plat approval does not constitute dedication, and the apparent lack of other formal actions accepting dedications, does not leave a clear record of right-of-way that have been officially opened for public use nor an indication of whether improvements located in the right-of-way have been developed to any particular standards or accepted by the city.

Private Streets

Section 29(2) of the Subdivision Ordinance states that, "except as set forth in Section 21, each lot and parcel shall abut upon a street other than an alley for a width of at least 25 feet. Section 21 of the subdivision ordinance allows creation of a private street outside a subdivision, to allow for the partitioning of an unusually deep parcel provided it is the only reasonable method by which such parcel may be provided with access. In addition, Section 9.070 of the zoning ordinance states that, "all lots shall abut a street other than an alley for a width of at least 25 feet."

In reviewing right-of-way data on the assessor's parcel maps, it was noted that access is provided to a few subdivisions via a private access, and lots do not abut a public right-of-way. Examples are noted in Whale Watch Way, Pelican Point, and the south half of Fairway Court. The assessor does not identify these areas as public rights-of-way, but rather with a parcel denoted with a tax lot number, presumably due to the way they were platted.

It should also be noted that where 11th Street SE passes through City Park, the improvements are located on City property, and not within a public right-of-way. This issue should be reviewed to identify if there is any need or benefit to dedicate right-of-way.

Future Actions

In the comprehensive plan draft, the City has identified the need to identify which streets are open. The City Attorney should be closely involved in the process of making these determinations, and identifying what legal responsibilities and liabilities are associated with opening a public street.

STREET SURFACE TYPE

Street surface data was field collected in March of 1997. Some data in the UGB was collected through review of aerial photos. Four major surface types were delineated, and one additional classification was used which provided an indication of the road base treatment.

The surface type inventory does not provide an indication of the condition of the street. Surface type inventory also does not indicate that any right-of-way dedication has been accepted, that a street has been opened, or that appropriate permits were obtained to develop a street with the identified surface. Surfaces located in a right-of-way shown on the assessors maps were reviewed to identify the surface type.

The classifications are: concrete, asphalt, gravel, engineered gravel, and natural. It should also be noted that a portion of Highway 101 has been surfaced with a chip seal treatment. Many of the streets were constructed without any base. The City has limited records of construction drawings or as-built plans, and therefore, this data is not readily available. Therefore, these designations do not make any assertions as to subsurface characteristics, with the exception of the engineered gravel streets, which have been grouped with other gravel streets in the summary. The streets with the engineered gravel designation have been constructed to the standards adopted by the city. As there were previously no standards for the gravel roads, except as noted for the engineered gravel roads, there are cases where it was questionable as to whether a street should be classified as gravel or natural. In questionable cases, if it appeared that the road had previously been graveled, it was classified as gravel.

The table includes information on the streets within city limits and the urban growth boundary. County roads within city limits and the UGB are not identified separately. The database does not include information on Highway 101 or Highway 42S or their municipal extensions.

Street segment lengths were measured from assessor's maps, and most were measured to the center of the right-of-way intersection. In some cases, segments were measured to the edge of the right-of-way intersection. Therefore, mileages may be slightly off, as they were measured in relation to right-of-way rather than pavement. Measurements to the center of right-of-way intersections may have resulted in some overlap where intersection areas were counted in the east-west direction and the north-south direction. Overall, the overlap is minimal.

Surface Type	City		UGB		Total	
	Lineal Feet	Miles	LF	Miles	LF	Miles
Unimproved right-of-way	94,135	17.8	63,510	12.0	157,645	29.9
Natural surface only	2,705	0.5	1,680	0.3	4,385	0.8
Gravel (including engineered gravel)	58,310	11.0	20,300	3.8	78,610	14.9
Concrete or concrete with asphalt overlay	11,330	2.2	0	0.0	11,330	2.2
<u>Asphalt</u>	<u>72,170</u>	<u>13.7</u>	<u>6,230</u>	<u>1.2</u>	<u>78,400</u>	<u>14.9</u>
Total	238,990	45.3	91,270	17.3	330,370	62.6

PAVEMENT EVALUATION

Pavement evaluation was conducted through field surveys in May and June of 1997. The evaluation was conducted using ODOT's 5-point rating system outlined in the manual assembled by the ODOT Pavements Unit for a 1994 Pavement Rating Workshop for Non-National Highway System Pavements. A similar rating system is used for both asphalt concrete and Portland cement concrete. The classification provides for ratings from very good to very poor. The 'GFP', or 'good, fair, poor' rating system has numerical ratings that correspond to these conditions, where 1 is equivalent to very good and 5 is equivalent to very poor. The numerical rating system includes a decimal system which allows for more refined evaluation within these categories. Due to the variable conditions of gravel roads, seasonally and annually, only paved roads were evaluated for condition. The criteria for rating asphalt concrete and Portland cement concrete pavements are provided in Table 3-4. It should be noted that conditions may vary within each category. The presence of a certain characteristic, such as cracking or alligating, may lower the rating for a street segment, even if the surface is fairly new and the ride quality generally good.

TABLE 3-4. PAVEMENT EVALUATION CRITERIA

Condition	Pavement Type	
	Asphalt Concrete	Portland Cement Concrete
Very Good (1.0-1.9)	Stable, no cracking, no patching, no deformation. Excellent riding qualities. Nothing would improve the roadway at this time.	Ride qualities are good. Original surface texture evident. Jointed reinforced--have no mid-slab cracks. Continuously reinforced--may have tight transverse cracks with no evidence of spalling. No faulting is evident.
Good (2.0-2.9)	Stable, minor cracking, generally hairline and hard to detect. Minor patching and possibly some minor deformation evident. Dry or light colored appearance. Very good riding qualities. Rutting less than 1/2".	Ride qualities are good. Original surface texture is worn in wheel tracks exposing coarse aggregate. Jointed reinforced--may have tight mid-slab transverse crack. Continuously reinforced--transverse cracks may show evidence of minor spalling. Pavement may have an occasional short longitudinal crack. No faulting is evident.
Fair (3.0-3.9)	Generally stable, minor areas of structural weakness evident. Cracking is easier to detect, patched but not excessively. Deformation more pronounced and easily noticed. Riding qualities are good to acceptable.	Ride qualities are good. Jointed reinforced--may have some spalling at cracks and joint edges with longitudinal cracks appearing at less than 20% of the joints. A few areas may require minor levels of repair by maintenance forces. Continuously reinforced--may show evidence of spalling with longitudinal cracks occurring in the wheel paths on less than 20% of the section. Shoulder joints may show evidence of deterioration and loss of slab support; faulting may be evident.
Poor (4.0-4.9)	Areas of instability, marked evidence of structural deficiency, large crack patterns (alligatoring), heavy and numerous patches, deformation very noticeable. Riding qualities range from acceptable to poor.	Ride may continue to be acceptable. On both jointed and continuously reinforced, cracking patterns are evident with longitudinal cracks connecting joints and transverse cracks occurring more frequently. Occasional punchout repair evident. Some joints and cracks show loss of base support.
Very poor (5.0)	Pavement in extremely deteriorated condition. Majority of section showing structural deficiency. Ride quality is unacceptable (probably should slow down).	Rate of deterioration rapidly accelerating.

Existing Pavement Condition

The condition of paved roads is provided in Table 3-3. Pavement condition was evaluated only for streets within city limits, including county roads, excluding Highway 101 and Highway 42S. A summary of the quantity of roads by condition rating is summarized in Table 3-5. Lengths were measured as described above under Street Surface Type. Pavement condition is also mapped in Figure 3-5.

TABLE 3- 5. PAVEMENT CONDITION

Condition	Concrete (and C/A)		Asphalt		Total Lineal Feet	
	Lineal Feet	Miles	LF	Miles	LF	Miles
Very good	4125	0.78	6480	1.22	10605	2.01
1.0	0	0.00	585	0.11	585	0.11
1.5	2390	0.45	230	0.04	2620	0.50
1.9	1735	0.33	5665	1.07	7400	1.40
Good	3380	0.64	39405	7.47	42785	8.11
2.0	1550	0.29	10965	2.08	12515	2.37
2.5	1630	0.31	24060	4.56	25690	4.87
2.9	200	0.04	4380	0.83	4580	0.87
Fair	2455	0.47	8570	1.62	11025	2.09
3.0	1100	0.21	850	0.16	1950	0.37
3.5	0	0.00	6065	1.15	6065	1.15
3.9	1355	0.26	1655	0.31	3010	0.57
Poor	1250	0.24	15895	3.02	17145	3.25
4.0	0	0.00	5995	1.14	5995	1.14
4.5	1250	0.24	6165	1.17	7415	1.40
4.9	0	0.00	3735	0.71	3735	0.71
Very Poor	120	0.02	1820	0.34	1940	0.37
5.0	120	0.02	1820	0.34	1940	0.37
TOTAL	11,330	2.15	72,170	13.67	83,500	15.83

ACCESS

Location and type of access was reviewed along Highway 101 within the study area from Milepost 260.64 at North City Limits to Milepost 277.00. Data was field inventoried and related data is also available in an earlier study conducted by the University of Oregon Community Planning Workshop entitled 'Highway 101 Access Study: A Pilot Project'.

Highway 101 from North City Limits to the intersection with Highway 42S is a throughway as discussed in Volume 2 of this plan. The only at grade intersection along this segment is located at 2nd Street NE on the west side of the highway. Access on Highway 101 from Michigan Avenue through South City Limits at 13th Street South is characterized by 550' to 650' block length to Fillmore Avenue, and block lengths of about 325' south of the Highway 101 curve. Midblock access points are numerous, primarily to businesses, but also including residential access. South of 13th Street South, access is characterized by numerous access points serving individual or few residences, and small businesses. In some cases, the access points correspond with public right-of-way, but these have not been improved to any given standard. South of 13th Street South, there are also several gravel roads which serve predominantly rural residential enclaves outside of City Limits. Near Seabird Drive, there are additional businesses north of and near the intersection. Industrial uses access Highway 101 at or near the airport. Access on Highway 101 and Highway 42 South is shown in Tables 3-6 and 3-7.

TABLE 3- 6. APPROXIMATE NUMBER OF ACCESS POINTS ON HIGHWAY 101

<u>Segment</u>	<u>Southbound Access</u>	<u>Northbound Access</u>
North City Limits to Highway 42S	1 public- (2nd Street NE)	none
Highway 42 S to Michigan Ave.	none	none
Michigan Ave to June Ave	7 (4 + 3 serving RV park)	3
June Ave to Harlem Ave	4	2
Harlem Ave to Grand Ave	3 to Fillmore	1
Grand Ave to Fillmore Ave	"	2
Fillmore Ave to Elmira Ave	4 + 1 continuous	2
Elmira Ave to Delaware Ave	3	2
Delaware Ave to Chicago Ave	1	-
Chicago Ave to Baltimore Ave	-	1
Baltimore Ave to 8th Street S	4	2
8th Street S to 9th Street S	2	2
9th Street S to 10th Street S	3	2
10th Street S to 11th Street S	1 + 1 continuous	2
11th Street S to 12th Street S	2	1
12th Street S to 13th Street S	1	1
13th Street S to 18th Street S	9	6
18th Street S to Seabird Dr	14	19
Seabird Dr to Kehl Rd	17	10

TABLE 3- 7. APPROXIMATE NUMBER OF ACCESS POINTS ON HIGHWAY 42 SOUTH

Segment	Southbound Access	Northbound Access
Michigan Ave to Hwy 101	0	0
Hwy 101 to North Ave	0	0
North Ave to Ohio Ave	2 + 1 continuous	5

ACCIDENTS

This section contains information on accident locations, characteristics, and contributing circumstances. Accident data will be used to identify existing locations in need of traffic control modifications or facility improvements to reduce the frequency and severity of accidents at the identified locations. In addition, data will be used to identify if local transportation facility design standards should be modified to reduce the potential for the occurrence of accidents on new facilities.

It is desirable to measure accidents using rates that incorporate the greatest number of variables possible to allow uniform comparisons of different locations. Variables include the length of the street segment, the time period during which accidents occurred, the amount of travel the area experiences, and the number of accidents; however, segment length is not an issue when measuring intersections. The majority of the accidents occurred at intersections, and only a few street segments experienced multiple accidents during the period reviewed. Therefore, a measure of 'accidents per year' provides data sufficient for analysis, without conducting a more detailed analysis accounting for all variables. Should the City have the resources at a future date to monitor traffic volumes on a regular basis, a measure of 'accidents per million vehicle miles traveled' provides additional data useful in analyzing accident occurrences, and it can also be used to compare accident rates at given locations in Bandon to average rates in other areas.

Accidents per Year (acc/yr):

Counting the number of accidents per year provides an accident rate that ensures accidents are compared over a uniform time period. However, this rate does not uniformly account for traffic volume or length of segment for the area being analyzed.

Accidents per Million Vehicle Miles Traveled (acc/mvmt):

Counting the number of accidents per million vehicle miles traveled provides the best measure of accident occurrence because it uniformly relates the number of accidents to the length of a segment and the amount of traffic using that segment. Therefore, measuring accident rates in accidents/ mvmt allows for comparisons of non-identical locations on uniform terms. Differences that cannot be accounted for in accidents/year are accounted for in accidents/mvmt. The formula for determining acc/mvmt is:

$$\text{Accident Rate} = \frac{(\text{Number of Accidents}) * 1,000,000}{(\text{Length of Section}) * \text{ADT} * (\text{Number of Days})}$$

ACCIDENT RATE is accidents per million vehicle-miles.

ADT is average daily traffic.

LENGTH OF SECTION is miles.

NUMBER OF DAYS is the number of days in which the number of accidents and ADT is valid.

Average Statewide Accident Rates:

Should the City in the future collect accident data in terms of accidents per million vehicle miles traveled, data is available for comparisons to average accident rates for certain facilities. The State Highway System Accident Rate Tables provide summaries of the accidents occurring on the entire statewide system. The rates are provided in acc/mvmt, and are presented for a number of facility types. The tables provide averages for all state highway facilities, and for subcategories of state facilities, including primary and secondary system, freeways and non-freeways, and urban, suburban, and rural facilities. It should be recognized that relating accident rates within the City to statewide averages may provide comparisons of very different conditions.

Methodology

Data was obtained from the Bandon Police Department (BPD) and Oregon Department of Transportation (ODOT) for traffic accidents that have occurred within the planning area for the four year period from 1993-1996. For reporting accidents, the study area was considered to include the street and highway system within city limits and the urban growth boundary, and Highway 101 from Milepost 260.64 (north city limits) to Milepost 277. BPD reports included accidents outside of the study area, which were excluded from this report, or were clearly noted as occurring outside the study area.

Both ODOT and BPD data was reviewed and compiled in order to obtain the most complete set of accident data. At the time the data was collected and reports were printed, ODOT data for 1996 had been compiled only through mid-September of 1996. The BPD reported complete data through the end of 1996. For accident rate calculations, the ODOT and BPD data was related to the four year period.

Data from the Bandon Police Department was compiled from accident summary reports, which include accident location, and whether the accident was injury, non-injury, or information exchange. Information exchange indicates a non-injury accident with minor property damage in which an officer was requested to be present.

Data from ODOT was compiled from reports provided to the DMV. State law requires parties to submit accident reports to DMV for accidents involving more than \$500 in property damage (\$400 prior to 1994), and for injury accidents. ODOT provides accident data in several report formats. The ODOT reports include accident location and a variety of accident characteristics and contributing circumstances.

Because ODOT compiles information for only the accidents described above, the BPD summary reports are more complete in terms of total accidents, but they provide less detail on accident characteristics. The BPD data was valuable for accounting for total accidents and identifying areas of high frequency accidents with no injuries and low property damage, which would not be reported by ODOT. Although the BPD reports were more complete in this respect, the ODOT summary reports provide more detail on accident location, characteristics, and contributing circumstances. Some accident location descriptions reported by BPD could not be tied to a specific location. Therefore, in some instances, it is not evident on exactly which street segment an accident occurred, and whether some accidents occurred within a parking lot, or on the adjacent street to a particular business location.

The data from ODOT and BPD was compared to identify accidents which appeared in both reports. The items were correlated by date, location, and time. The ODOT and BPD data is expected to overlap for accidents with injuries or more than \$500 property damage. As expected, BPD reported a higher number of accidents overall, accounting for accidents without injuries or with less than \$500 property damage. In addition, BPD reports included the accidents occurring after September 1996 which had not yet been compiled by ODOT. Unexpectedly, ODOT reported a number of accidents not identified in the BPD reports. This has not been accounted for, but may be due to response from another law enforcement agency other than the BPD. It is possible that accidents to be reported by ODOT after September 1996 were not reflected in BPD reports through the end of 1996. Therefore, it is possible that the total number of reported accidents will be slightly higher.

Due to record keeping differences, there are some conversion errors between the overlapping BPD and ODOT data. The BPD maintains information on accident locations by street segment name or by intersection reference. Some BPD segment descriptions list only a street name, and a particular segment is not specified. Some BPD intersection descriptions do not specify north/south designations for numbered streets. For Highway 101 accidents, ODOT converts the intersection location to a corresponding milepost number. The differences appear to occur primarily for accident reports at the intersection of Highway 101 and numbered streets with north or south designations.

The reports provided by ODOT indicated that intersection accidents had occurred at locations along the throughway where rights-of-way were platted, but where no intersections occur with Highway 101. These occurred at Highway 101 and the rights-of-way for NE 9th, NE 10th and NE 11th. Accidents were reported by the BPD for the same dates and times at 9th, 10th, and 11th Streets, referring to 9th SE, 10th SE, and 11th SE. This correlation provided an indication that some of the BPD data was assigned by ODOT to a milepost corresponding to the incorrect numbered street intersection. It is not clear to what extent this type of error occurred at other intersections. Therefore, where this could be documented for accidents occurring on the same date and time, they were assumed to be the same accident, and were assumed to have occurred at the location specified in the BPD report. Changes were only made to those individual accidents in the ODOT reports that could be accounted for at other locations based on the BPD data.

Accidents reported by ODOT and BPD with differing dates and times, or differing or indeterminate locations were considered to be separate accidents

Accident Overview

A total of 283 separate accidents were reported by ODOT and BPD, accounting for overlapping accidents, and conversion of errors as described above. This total includes accidents reported by BPD outside the study area and those where a specific location could not be accounted for. ODOT reported a total of 118, and BPD reported a total of 228. Of these, 63 of the same accidents were reported by both ODOT and BPD, 55 were reported by ODOT only, and 165 were reported by BPD only.

The Bandon Police Department reported 228 accidents within the City of Bandon and the area generally within its UGB from January 1993 through December 1996. Of these accidents, 35 were injury, 30 were non-injury, and 163 were information exchange. 104 of these accidents occurred on Highway 101, with 23 injury, 21 non-injury, and 60 information exchange. It is expected that additional accidents reported by BPD occurred on Highway 101, but this could not be confirmed based on the accident location description. ODOT reports 82 accidents on Highway 101 during the same period. Only 40 of the ODOT accidents reported on Highway 101 could be matched to BPD data. With one exception, all intersection accident locations with more than 2 accidents occurring during this four year period occurred on Highway 101 or within two blocks of Highway 101 in commercial areas (see Table 3-8). As expected, most of the accidents occurring outside of this area occurred on the collector system.

The locations experiencing the highest accident numbers and rates 1993-1996 were as shown below. The numbers are based on data from BPD for the four year period and from ODOT for the three-year, nine-month period through September 1996. These figures include accidents reported within a distance of approximately 1/4-block of the intersection.

TABLE 3- 8. LOCATIONS OF HIGH INCIDENCE OF ACCIDENTS 1993-1996

<u>Intersection</u>	<u>Number</u>	<u>acc/yr</u>
<u>HIGHWAY 101</u>		
Highway 101/Fillmore Ave	12	3.00
Highway 101/Elmira Ave	11	2.75
Highway 101/June Ave	10	2.50
Highway 101/10th Street SE	10	2.50
Highway 101/11th Street SE	10	2.50
Highway 101/9th Street SE	9	2.25
Highway 101/Grand Ave	8	2.00
Highway 101/Michigan Ave	7	1.75
Highway 101/Seabird Drive	7	1.75
Highway 101/8th St SE, Chevron, Coast to Coast	5	1.25
Highway 101/Highway 42S	4	1.00
Highway 101/Harlem Ave	4	1.00
Highway 101/12th Street SE	4	1.00
Highway 101/13th Street SE	4	1.00
Highway 101/25th Street SE	4	1.00
Highway 101/Chicago Ave	3	0.75
Highway 101/21st Street SE	3	0.75
<u>COLLECTORS AND LOCALS</u>		
10th St SE/Alabama Ave	7	1.75
11th St SE/Alabama Ave	6	1.50
11th St SE/Baltimore Ave	3	0.75
1st St SE/Chicago Ave	3	0.75
11th St SE/Beach Loop Dr	3	0.75
<u>OFF-STREET</u>		
Bandon Ford/Sentry Market	8	2.00
Bandon Shopping Center	7	1.75
City Hall/ BPD Parking Lot	6	1.50
Price and Pride Parking Lot	6	1.50

Injury and Fatal Accidents

Accident details and characteristics are not available from BPD reports. Therefore, injury and fatal accident data is only provided for accidents reported by ODOT.

For the period from 1993-1996, ODOT reported 2 fatal accidents, each having one fatality. Both fatal accidents occurred on Highway 101, at Mileposts 274.42 and 275.20. During the same

period, ODOT reported 50 injury accidents, totaling 72 injuries. 55 of these occurred on Highway 101, and 17 occurred on other streets.

Fatal accidents were also reviewed for a longer time period for Highway 101 only. During the 10-year period from 1987-1996, 6 fatal accidents involving 7 fatalities occurred on Highway 101. Four of these accidents and five fatalities were caused by a driver under the influence of drugs or alcohol. Of the two other accidents, one was related to another separate accident and a pedestrian was killed, and the other resulted from driving too fast for conditions, and a tree was struck. These accidents are summarized below.

TABLE 3- 9. HIGHWAY 101 FATAL ACCIDENTS REPORTED BY ODOT 1987-1996

<u>Milepost</u>	<u>Collision Type</u>	<u>Cause</u>	<u>Fatalities</u>
274.33	Sideswipe/overtaking	drinking/drugs	1
274.42	Turning	drinking/drugs	1
274.47	Rear end	drinking/drugs	1
275.20	Pedestrian	other (not improper driving)	1
275.30	Head on	drinking/drugs	2
276.57	Fixed object	speed too fast for conditions	1

Pedestrian and Bicycle Accidents

Accident details and characteristics are not available from BPD reports. Therefore, pedestrian and bicycle accident data is only provided for accidents reported by ODOT. Bicycle and pedestrian accidents were reviewed from 1987-1996 for Highway 101 only. During this period, ODOT reported 5 accidents involving pedestrians, including one pedestrian fatality and five pedestrian injuries. ODOT reported 6 accidents involving bicycles, including 6 bicyclist injuries. These accidents are summarized below.

TABLE 3- 10. HIGHWAY 101 PEDESTRIAN & BICYCLE ACCIDENTS, ODOT 1987-1996

<u>Milepost</u>	<u>Ped. Injuries</u>	<u>Ped Fatalities</u>	<u>Bike Injuries</u>	<u>Bike Fatalities</u>
260.13 (frontage rd.)			1	
260.93	1			
261.03	1			
272.10			1	
273.85			1	
274.09			1	
274.33			1	
274.35	1		1	
274.40	1			
275.20	1	1		
Total	5	1	6	0

SPECIAL ROUTES

No truck routes or hazardous materials routes have been designated locally or by the state. Most of this traffic uses Highway 101. Several streets between Riverside Drive on the west and Highway 101 on the south and east are posted with signs prohibiting truck traffic. Volume 2 of this plan includes a brief discussion of past considerations of designating truck routes.

JURISDICTION

Jurisdictional issues are summarized in Volume 2 of this plan.

CONDITION OF ROADWAY STRUCTURES, BRIDGES, AND OVERPASSES

See Appendix 3-4, Transportation Structure Evaluation

TRAFFIC CONTROL DEVICES

Traffic control at intersections in Bandon is summarized below.

Signalized intersections

The only fully signalized intersection occurs at Highway 101 and 11th Street South.

The Highway 101 and Highway 42 South intersection is presently under construction to include a signalized intersection. It was previously controlled with stop signs, and also with a flashing yellow for eastbound traffic, and a flashing red for southbound traffic in the straight/left turn lane. It is currently operating under cycled signalized control.

Other signals

The Highway 101 and 10th Street South intersection is marked with a pedestrian crosswalk and a flashing yellow light. This intersection provides access from the school across Highway 101.

Other traffic control devices

Most intersections of local streets and collector streets are controlled with stop signs. However, there are some locations which do not have traffic control devices.

Traffic calming devices

11th Street SW at the City Park utilizes speed humps and a narrow one way pair to slow traffic.

6. PARKING

Old Town

Existing parking was reviewed in detail for the Old Town area north of Highway 101 between First Street South and Second Street South from Grand Avenue on the east to Edison Avenue on

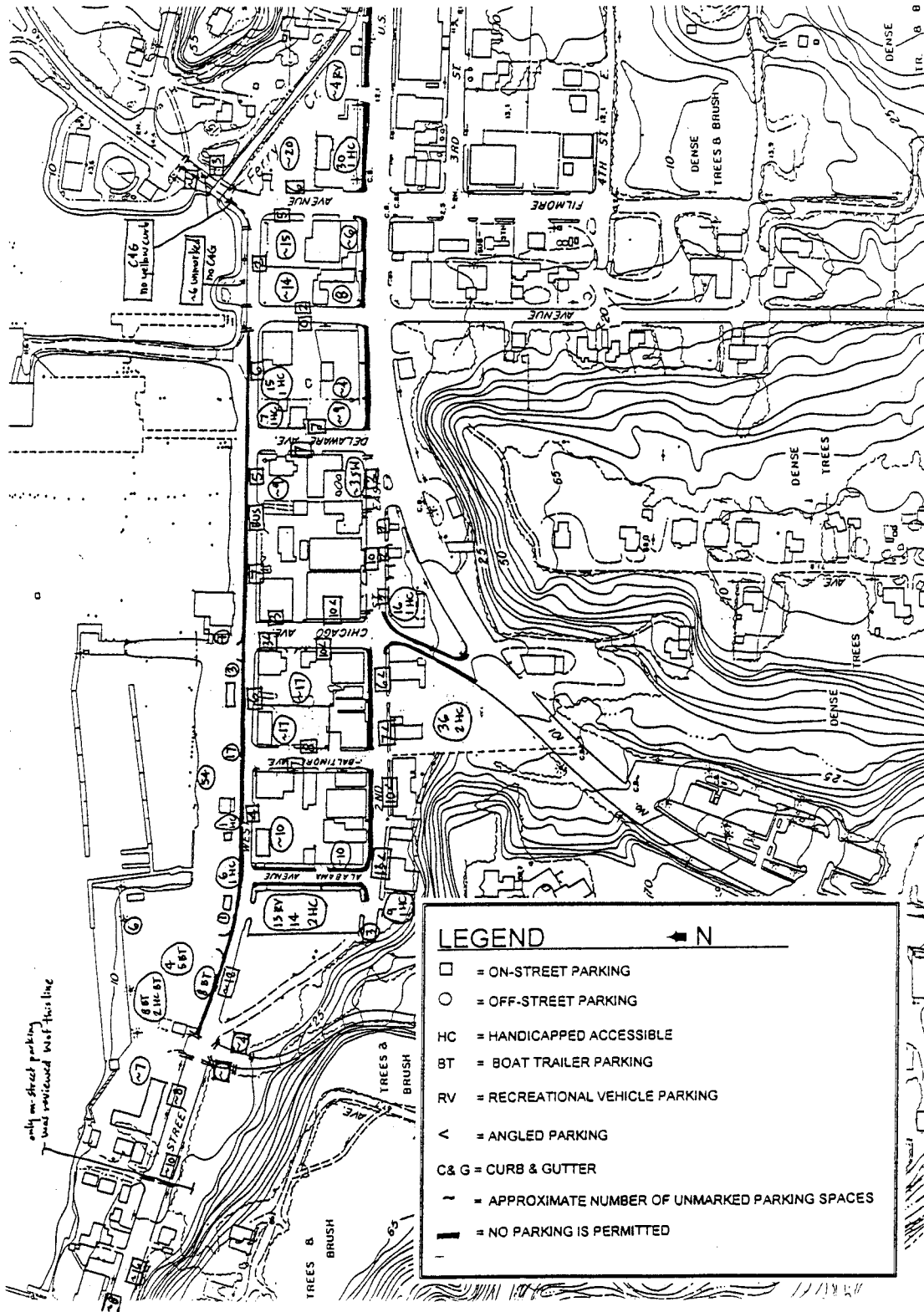
the west. Both on-street and off-street parking were reviewed as far west as Cleveland Avenue, and the area west of Cleveland was reviewed only for on-street parking. Actual spaces were counted where marked, and estimates were made for areas with unmarked spaces. In several instances, parking occurred in areas that appeared to pose a potential safety concern. Most notably, this occurs in intersection areas which are not marked with yellow-painted curbs. One example is the intersection at Oregon Avenue and 1st Street SW. These areas were counted as available parking and recorded on the map, provided that they were not marked as 'no parking' zones. The availability of parking spaces is summarized in Table 3-11 below. The availability is also illustrated in Figure 3-3.

Parking is restricted along the north side of 1st Street South between Oregon Avenue and Elmira Avenue. It is also restricted along both sides of Alabama Avenue between 1st Street South and 2nd Street South. Parking is also restricted on the north side of 2nd Street South from Alabama to Grand, except on the north side of the block between Chicago and Delaware. It is also restricted along both sides of Chicago Avenue between 2nd Street Southeast and Highway 101.

TABLE 3- 11. EXISTING PARKING IN THE OLD TOWN AREA

<u>TYPE</u>	<u>NUMBER</u>
<u>On-Street</u>	<u>239</u>
Parallel marked	93
Parallel unmarked	84
Angle marked	62
<u>Off-Street</u>	<u>419</u>
Standard marked	227
Standard unmarked	138
Standard handicapped	11
Boat Trailer	21
Handicapped Boat Trailer	2
RV marked	13
RV unmarked	4
Using sidewalk area	3
<u>Total</u>	<u>658</u>

FIGURE 3-3. AVAILABILITY OF PARKING IN THE OLD TOWN AREA



City-wide

On-street parking was also reviewed at a more general level throughout the city. On the majority of the streets in the City, on-street parking is permitted. However, in some instances, topography and the width or condition of the shoulder pose constraints to on-street parking. Some areas were found to have restricted on-street parking through signage and painted curbs. Time restricted parking was noted in the vicinity of the schools. Certain locations had time restricted parking, and others limited parking to certain types of vehicles. This information is provided by street segment in Table 3-3.

7. BICYCLE WAY FACILITIES

Bicycle way facilities are described in Table 3-11 and mapped in Figure 3-4.

The Oregon Bicycle and Pedestrian Plan identifies four major types of bicycle facilities: shared roadway, shoulder bikeway, bike lane, and multi-use path. The presence of these facilities in Bandon is summarized below.

TABLE 3- 12. EXISTING BICYCLE FACILITIES

FACILITY TYPE	LOCATION
Shared roadway	Most areas
Shoulder Bikeway	Highway 101
Bike Lane	2 locations, 11th Street SE (Beach Loop Drive to west end) and 11th Street SW (Baltimore Ave. to Elmira Ave.)
Multi-use path (high use)	The area through the park is utilized as a multi-use path.

8. PEDESTRIAN FACILITIES

Pedestrian facilities are mapped on Figure 3-4. In addition, Figure 3-6 summarizes the location of sidewalks and ramps, identifying locations where sidewalks are present on both sides of a street, where they are present on one side of a street, and where curb ramps are present in locations where sidewalks exist. The presence of sidewalks is provided in detail in Table 3-3.

The sidewalk system is summarized as well connected in commercial center, but fragmented throughout the majority of residential areas. Even in areas with a well-connected sidewalk system, there are significant limitations on routes which have good connectivity as accessible routes.

9. PUBLIC TRANSPORTATION SERVICES

Dial-A-Ride

Dial-A-Ride is operated by South Coast Business, (operating in several Coos County cities). Dial-A-Ride is funded through cigarette tax revenues, state public transportation revenues, Coos County, grants, and rider fees.

Bandon Dial-A-Ride primarily serves the Bandon area and a 4 to 5 mile radius. Dial-A-Ride is pursuing intercity service to Bandon, but does not currently provide that service between Bandon and other cities. Dial-A-Ride currently provides service between Coquille and Coos Bay once a day. In the Bandon area, service is provided by telephone. Service can generally be provided shortly after a call is placed, but 24-hour notice is recommended when possible. Bandon Dial-A-Ride maintains one vehicle, a 1997 Ford Chassis with a Collins Co. box. The vehicle is a 10-passenger vehicle with a wheelchair lift. Fees are \$2.00 per ride for the general public and \$1.50 per ride for senior citizens over sixty years old and for handicapped passengers. Service is provided 9am-4pm Monday through Friday.

Taxicabs

Taxi service is available in Gold Beach, Brookings, Reedsport, and Coos Bay, but there is no local service in Bandon.

Delivery Service

The telephone directory lists a Coastline Delivery operating out of Bandon, but it appears that this business is no longer operating.

Bus Service

Greyhound Bus Lines provides the only bus service to Bandon. Greyhound provides service to Bandon three times a day, seven days a week. There is one daily northbound stop in Bandon at 11:00 am, and there are two southbound stops in Bandon, at 3:55 am and 3:55 pm. The bus stop in Bandon is located on 1st Street SE, in front of the hostel.

10. AIRPORT, RAIL, WATER, AND PIPELINE

Bandon is not presently served by rail or pipeline, and it is not expected that the City will be served by either of these services during the planning period.

Airport Facilities

Bandon State Airport, owned by the State of Oregon is located on Highway 101 in Bandon's urban growth boundary. The airport is described in the Revised Bandon State Master Plan Update with January 1992 revisions. In addition, the Oregon Coastal Zone Management Association (OCZMA) summarizes the facilities of Oregon's Airports in the report 'Navigation and Other Activities On Oregon Coastal and Columbia River Waterways and Harbors In 1995'. Airport operation traffic volumes are provided in ODOT's traffic volume tables. Airport facilities are summarized in Appendix 3-2.

Port Facilities

The Port of Bandon, its facilities, operations, and activity levels are summarized in the OCZMA report 'Navigation and Other Activities On Oregon Coastal and Columbia River Waterways and Harbors In 1995'. Port Facilities are summarized in Appendix 3-3.

A-1. TABLE 3-3

Key to Table 3-3. Street Characteristics.

Column	Name	Description	Abbreviations
1	Area	identifies whether a street segment is within City Limits or in the Unincorporated Urban Growth Boundary.	C=City Limits UGB=Urban Growth Boundary
2	Street Name	street name alphabetically by segment	
3	Segment	when a street has been broken into multiple segments, this identifies the segment as one of the total number of segments, generally counting from west to east or north to south	
4	Total	when a street has been broken down into multiple segments, this identifies the total number of segments	
5	Street Segment or Intersection	identifies the street segment by name, referenced from intersection to intersection, or if the segment is broken midblock, this is indicated	N, S, E, W = direction from a reference point, usually an intersection; MB=midblock
6	ROW Width	indicates right-of-way width in feet; some vacated rights-of-way are identified, variable right-of-way for some segments is also noted, indicating the widest and narrowest portion, and the typical width of the majority of the segment; some street segments are located on public property as noted (rather than within a right-of-way; some street segments are not within a public right-of-way, but on a private easement or private property	vac=vacated; ?=discrepancy between mapped sources; typ=typical width if segment has variable width; align=portions of right-of-way segment or adjacent segments may be offset and are not continuously aligned along the same centerline; R=right-of-way radius at cul-de-sac

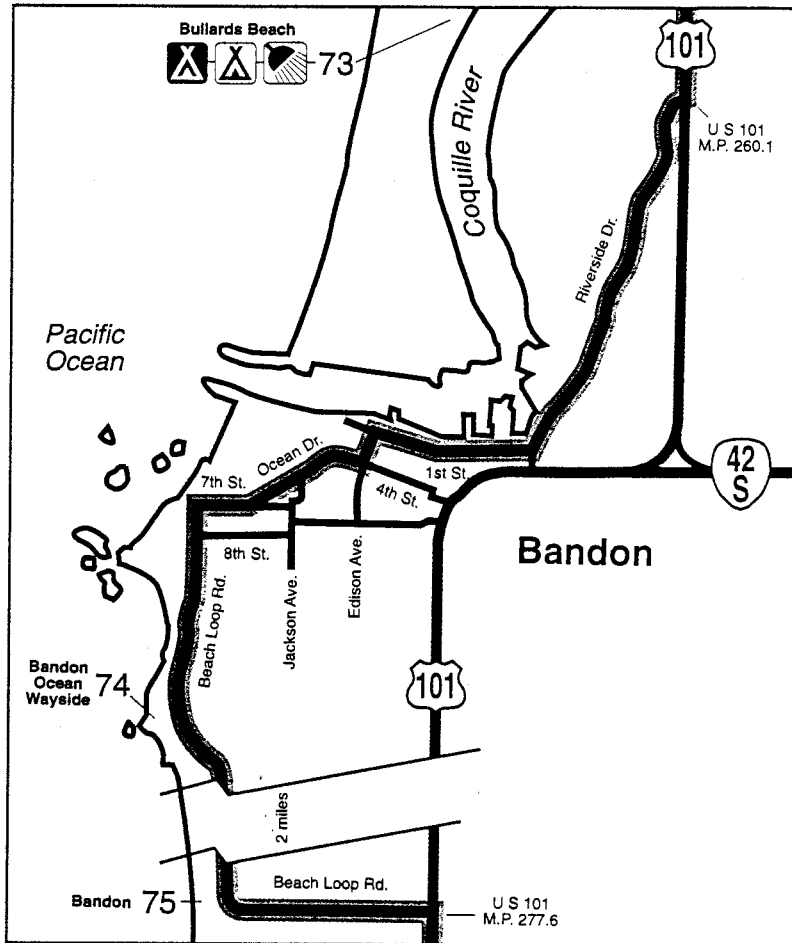
Key to Table 3-3. Street Characteristics.

Column	Name	Description	Abbreviations
7	Surface Type	street surface type	A=asphalt; G=gravel; C=concrete; N=natural (dirt); Eng G=engineered gravel; - =unimproved right-of-way
8	Condition	surface condition rating based on ODOT scale	numbers correspond to ratings in Table 3-4.
9	Pavement Width	width of pavement on asphalt or concrete segments, measured from face of curb to face of curb, if present, otherwise, from edge of pavement	
10	Lanes	number of existing travel lanes (total lanes both travel directions)	
11	Posted Speed	posted speed for a segment, or applicable speed for a segment if posted on a different segment; one or two segments had different posted speeds for different travel directions on the same segment	NP=not posted for a given segment, but continued from a different segment #/#=school zone w/first number off-school hours and second number during school hours
12	Function	indicates the existing functional classification identified on maps from the Oregon Department of Transportation, the only arterial, Highway 101, is not included	L=Local C-Maj=Major Collector C-Min=Minor Collector
13	Curb_Gutter	identifies if curb and gutter is present along a segment, and identifies on which side of the road if it is present; if not present along the entire segment, a percent is listed noting how much of the segment has curb and gutter	N, S, E, W indicate direction

Key to Table 3-3. Street Characteristics.

Column	Name	Description	Abbreviations
14	Sidewalk Location	identifies if sidewalks are present along a segment, and identifies on which side of the road if it is present; if not present along the entire segment, a percent is listed noting how much of the segment has sidewalks	N, S, E, W indicate direction
15	Sidewalk Separation	where sidewalks are present, this identifies whether sidewalks are adjacent to the curb or separated by a grass or planter strip; if only a portion of the sidewalk is separated, this is noted with a percentage	N, S, E, W indicate direction; NO=no separation; YES=separation;
16	Bike Lane Location	identifies if bike lanes are present or absent, notes which side has bike lanes and their width; whether or not separate lanes are present; if only a portion of the segment has bike lanes, this is noted with a percentage; it is also noted if a segment is part of the Oregon Coast Bike Route.	N, S, E, W indicate direction; OCBR=Oregon Coast Bike Route
17	On-Street Parking	identifies if on-street parking is allowed and on which side of the street; identifies whether parking is parallel or angle; if restricted or time-restricted; if not present along the entire segment, a percent is listed noting how much of the segment has parking	N, S, E, W indicate direction; =parallel parking //=angle parking R=restricted A=allowed
18	Segment Length	approximate segment length in feet, measured generally from center of intersection to center of intersection, or midblock if noted	

OREGON COAST BIKE ROUTE



J - BANDON BYPASS

This route avoids busy traffic, and takes you through historic Old Town. Beach Loop Road follows the shoreline with some spectacular views of ocean rock formations.

Area	Street Name	Segment	Street Segment or Intersection	ROW Width	Surface	Condition	Pavement Width	Lanes	Posted Speed	Function	Curb	Gutter	Sidewalk Local	Sidewalk Separation	Bike Lane Location	On-Street Parking	Segment
C	01st St NE	1	4Harlem to June	60	A	5.0	16-17	2	NP25	L	50% N	50% N					650
C	01st St NE	2	4June to Michigan	60	G			2	NP25	L							665
C	01st St NE	3	4North Av to North/Ohio MB	60	G			2	25	L							500
C	01st St NE	4	4North/Ohio MB to Ohio	60	G			2	25	L							150
C	01st St SE	1	7Oregon to Alabama	70+	A	2.5	368	2	NP25	C-Maj	N&S	S, 75% N	NO	(OCBR)	7 II S, restricted N	380	
C	01st St SE	2	7Alabama to Fillmore	60 typ	A	2.5	36 typ, 35 Fillmore to MB W	2	NP25	C-Maj	S, 80% N	80% N, 80% S	NO	(OCBR)	7 II S, restricted N	1415	
C	01st St SE	3	7Harlem to June	60	A	5.0	17 variable	2	NP25	L							650
C	01st St SE	4	7June Av to Michigan Av	60													665
C	01st St SE	5	7Michigan Av to US101	60	(vac)												
C	01st St SE	6	7North Av to North/Ohio MB	60	G			2	NP25	L							325
C	01st St SE	7	7North/Ohio MB to Ohio	60													325
C	01st St SW	1	2W end to Oregon Av	50													550
C	01st St SW	2	2Edison to Oregon	70 typ, 60-80	A	2.9	42	2	25	C-Maj	N&S	90% N, 90% S	N-NO, S-60%	(OCBR)		850	
C	02nd St NE	1	4June to Lexington	60 typ	A	3.5	24 typ	2	NP25	L							520
C	02nd St NE	2	4Lexington to Michigan	60 typ	A	3.9	22-27	2	NP25	L							145
C	02nd St NE	3	4Michigan to US101	60	C	2.5	36	2	NP25	L	N&S	60% S	NO				350
C	02nd St NE	4	4North Av to Ohio Av	60	G			2	NP25	L							650
C	02nd St SE	1	6Oregon W ROW to Oregon E ROW	30													125
C	02nd St SE	2	6Oregon av E ROW to Alabama	75	A	2.5	386	1	NP25	L	N&S	N&S	NO	R-N, 50%		100	
C	02nd St SE	3	6Alabama to Baltimore	60-90+	A	2.0	386-42	1	NP25	L	N&S	N&S	NO	R-N, // S		260	
C	02nd St SE	4	6Baltimore to Baltimore/Chicago MB	60	A	2.0	386	1	NP25	L	N&S	N&S	NO	R-N, // S		130	
C	02nd St SE	5	6Baltimore/Chicago MB to Chicago	60	A	2.0	42	1	NP25	L	N&S	N&S	NO	R-N, 146 // S		130	
C	02nd St SE	6	6Chicago to Delaware	60	A	2.0	386-396	2	NP25	L	N&S	N&S	NO	7 II N&S		420	
C	02nd St SW	1	4W Breakwater Add to Jelly Rd seg E of Madison	60	(vac)												1650
C	02nd St SW	2	4Jelly Rd curve E of Madison to Garfield	60													300
C	02nd St SW	3	4Edison to Douglas	60+													300
C	02nd St SW	4	4Douglas to Bandon	60	G			2	15	L							615
C	03rd St NE	1	2Michigan Av to US101	60													320
C	03rd St NE	2	2North Av to Ohio Av	60	G			2	25	L							650
C	03rd St SE	1	4Fillmore to Grand	60	A	5.0	37	2	NP25	L	25% N, 40% S	NO					520
C	03rd St SE	2	4Grand to Michigan	60	G			2	NP25	L							1850
C	03rd St SE	3	4Michigan to North/Ohio MB	60	G			2	NP25	L							1000
C	03rd St SE	4	4North/Ohio MB to Ohio	60													315
C	03rd St SW	1	5W Breakwater Add to Lincoln	60 (park lot)													430
C	03rd St SW	2	5Lincoln to Lincoln/Kensington MB	60	G			2	NP25	L							190
C	03rd St SW	3	5Lincoln/Kensington MB to Harrison/Garfield MB	60													1180
C	03rd St SW	4	5Edison to Cleveland	60													600
C	03rd St SW	5	5Cleveland to Oregon	50-60	G			2	NP25	L							575
C	04th St NE	1	5June to June/Klamath MB	25	G			2	NP25	L							140
C	04th St NE	2	5June/Klamath MB to Klamath/Lexington MB	50	G			2	NP25	L							250
C	04th St NE	3	5Klamath/Lexington MB to Michigan	50+	A	2.0	20 typ, 20-21	2	NP25	L							275

Table 3-3 Street Characteristics

Table 3-3 Street Characteristics

3/1/98

Area	Street Name	Seg	Total	Street Segment or Intersection	ROW Width	Surfac	Condit	Pavement Width	Lanes	Posted Sp	Funcld	Curb Gutter	Sidewalk Locat	Sidewalk Separat	Bike Lane Location	On-Street Parking	Segment
C	04th St NE	4	5	Michigan Av to US101	60'	-	-	-	-	-	-	-	-	-	-	-	330
C	04th St NE	5	5	North Av to Ohio Av	60	G	-	-	2	NP25	L	-	-	-	-	A	650
C	04th St SE	1	11	Oregon Av to US101	60	-	-	-	-	-	-	-	-	-	-	-	300
C	04th St SE	2	11	US101 to Chicago	60	-	-	-	-	-	-	-	-	-	-	-	475
C	04th St SE	3	11	Elmira to Fillmore	60	A	1.9	29	2	NP25	L	N&S	-	-	-	R	235
C	04th St SE	4	11	Fillmore to Fillmore/Grand MB	60	C	1.9	32	2	NP25	L	N&S	30%N	NO	-	II N, R-S	300
C	04th St SE	5	11	Fillmore/Grand MB to Grand	60	C	1.9	26	2	NP25	L	N&S	-	-	-	R-N&S	210
C	04th St SE	6	11	Grand to Harlem	60	-	-	-	-	-	-	-	-	-	-	-	520
C	04th St SE	7	11	June to Lexington	60	-	-	-	-	-	-	-	-	-	-	-	230
C	04th St SE	8	11	Lexington to Lexington/Michigan MB	60	G	-	-	2	NP25	L	-	-	-	-	A	150
C	04th St SE	9	11	Lexington/Michigan MB to Michigan	60	-	-	-	-	-	-	-	-	-	-	-	190
C	04th St SE	10	11	Michigan to Michigan/North MB	60	A	2.0	36 typ, 28'3 E end	2	NP25	L	N&S	-	-	-	A	350
C	04th St SE	11	11	Michigan/North MB to North/Ohio MB	60	-	-	-	-	-	-	-	-	-	-	-	540
C	04th St SW	1	7	W Breakwater Add to Madison	60	-	-	-	-	-	-	-	-	-	-	-	150
C	04th St SW	2	7	Madison to Lincoln/Kensington MB	60	G	-	-	2	NP25	L	-	-	-	-	A	490
C	04th St SW	3	7	Lincoln/Kensington MB to Harrison/Irvington MB	60	-	-	-	-	-	-	-	-	-	-	-	760
C	04th St SW	4	7	W of Ocean to Ocean	30-60	-	-	-	-	-	-	-	-	-	-	-	100
C	04th St SW	5	7	Ocean to Franklin	60-61	C	4.5	23	2	NP25	C-Maj	N&S	N, 75%S	N&S	{OCBR}	A	500
C	04th St SW	6	7	Franklin to Edison	60-61	C	1.9	23	2	NP25	C-Maj	N, 30%S	N	NO	{OCBR}	A	270
C	04th St SW	7	7	Edison to Oregon	60 typ, 50&60	A	2.5	30	2	NP25	C-Min	3%N	12%N, 12%S	N&S	-	A	1300
C	05th St SE	1	1	Michigan to Ohio	60	-	-	-	-	-	-	-	-	-	-	-	1325
C	05th St NE	1	3	Michigan Av to US101	60	-	-	-	-	-	-	-	-	-	-	-	335
C	05th St NE	2	3	North Av to E end (North/Ohio MB)	60	G	-	-	2	NP25	-	-	-	-	-	A	435
C	05th St NE	3	3	North/Ohio MB to Ohio	60	-	-	-	-	-	-	-	-	-	-	-	220
C	05th St SE	1	9	Oregon Av to US101	30	-	-	-	-	-	-	-	-	-	-	-	100
C	05th St SE	2	9	US101 to 130' E of US101	30	-	-	-	-	-	-	-	-	-	-	-	130
C	05th St SE	3	9	Alabama/Baltimore MB to Baltimore/Chicago MB	30	-	-	-	-	-	-	-	-	-	-	-	220
C	05th St SE	4	9	Baltimore/Chicago MB to Chicago	30	A	2.0	29'8	2	NP25	L	N&S	-	-	-	A	140
C	05th St SE	5	9	Chicago Av to Delaware/Elmira MB	30	-	-	-	-	-	-	-	-	-	-	-	400
C	05th St SE	6	9	Delaware/Elmira MB to Elmira	30	G	-	-	2	NP25	L	-	-	-	-	A	130
C	05th St SE	7	9	Elmira to Fillmore	60	G	-	-	2	NP25	-	-	-	-	-	A	235
C	05th St SE	8	9	Fillmore Av to Grand Av	60	-	-	-	-	-	-	-	-	-	-	-	515
C	05th St SE	9	9	Lexington to Ohio	60	-	-	-	-	-	-	-	-	-	-	-	1630
C	05th St SW	1	3	W Breakwater Add to Madison	60	-	-	-	-	-	-	-	-	-	-	-	215
C	05th St SW	2	3	Madison Av to Lincoln Av	60	G	-	-	2	NP25	L	-	-	-	-	A	300
C	05th St SW	3	3	Lincoln to Irvington	60	-	-	-	-	-	-	-	-	-	-	-	910
C	06th St NE	1	3	Michigan to US101	60	-	-	-	-	-	-	-	-	-	-	-	340
C	06th St NE	2	3	North Av to E end (North/Ohio MB)	60	G	-	-	2	NP25	-	-	-	-	-	A	430
C	06th St NE	3	3	North/Ohio MB to Ohio Av	60	-	-	-	-	-	-	-	-	-	-	-	215
C	06th St SE	1	3	Elmira to Harlem	60	-	-	-	-	-	-	-	-	-	-	-	1270
C	06th St SE	2	3	Michigan to North	60	-	-	-	-	-	-	-	-	-	-	-	660

Table 3-3 Street Characteristics

3/1/98

Area	Street Name	Segn	Total	Street Segment or Intersection	ROW Width	Surfac	Condit	Pavement Width	Lanes	Posted Sp	Function	Curb	Gutter	Sidewalk Locat	Sidewalk Separat	Bike Lane Location	On-Street Parking	Segment
C	06th St SE	3	3	North Av to Ohio Av	60	G	-	-	2	NP25	L	-	-	-	-	-	A	660
C	06th St SW	1	3	W Breakwater Add to MB W of Madison	60	-	-	-	-	-	-	-	-	-	-	-	-	120
C	06th St SW	2	3	MB W of Madison to Lincoln	60	G	-	-	2	NP25	L	-	-	-	-	-	A	300
C	06th St SW	3	3	Lincoln to Kensington	60	-	-	-	-	-	-	-	-	-	-	-	-	300
C	07th St NE	1	3	Michigan Av to US101	60	-	-	-	-	-	-	-	-	-	-	-	-	350
C	07th St NE	2	3	US101 to North Av	60	-	-	-	-	-	-	-	-	-	-	-	-	100
C	07th St NE	3	3	North Av to Ohio Av	60	-	-	-	-	-	-	-	-	-	-	-	-	650
C	07th St SW	1	5	Beach Loop to Ocean	60 typ, 55-60	A	2.0	216-226	2	NP25	C-Maj	-	-	-	-	(OCBR)	A	1130
C	07th St SW	2	5	Ocean to Kensington/Jackson MB	60	G	-	-	2	NP25	L	-	-	-	-	-	A	290
C	07th St SW	3	5	Kensington/Jackson MB to Jackson W ROW	60	-	-	-	-	-	-	-	-	-	-	-	-	210
C	07th St SW	4	5	Jackson W ROW to Jackson E ROW	60	A	2.5	36	2	NP25	L	N&S	-	-	-	-	A	80
C	07th St SW	5	5	Jackson E ROW to E End	60	-	-	-	-	-	-	-	-	-	-	-	-	90
C	08th Ct SW	1	1	W end to Franklin	60	A	2.0	36	2	NP25	L	N&S	N&S	NO	-	-	A	590
C	08th St NE	1	3	Michigan Av to US101	60	-	-	-	-	-	-	-	-	-	-	-	-	350
C	08th St NE	2	3	US101 to North Av	60	-	-	-	-	-	-	-	-	-	-	-	-	90
C	08th St NE	3	3	North Av to Ohio Av	60	-	-	-	-	-	-	-	-	-	-	-	-	640
C	08th St SW	1	5	Ocean to Beach Loop	60	G	-	-	2	NP25	L	-	-	-	-	-	A	300
C	08th St SW	2	5	Beach Loop Dr to Jackson Av	60	G	-	-	2	NP25	L	-	-	-	-	-	A	1630
C	08th St SW	3	5	Jackson to Bluff	60	G	-	-	2	NP25	L	-	-	-	-	-	A	900
C	08th St SW	4	5	Bluff to Franklin	60	A	3.9	44	2	NP25	L	N&S	50%N	NO	-	-	A	310
C	08th St SW	5	5	Franklin to Oregon	60 typ, 50-65	G	-	-	2	NP20	L	5%N	10%N,6%S	N-30%, S-YES	-	-	A	1530
C	09th St NE	1	3	Michigan Av to US101	60	-	-	-	-	-	-	-	-	-	-	-	-	360
C	09th St NE	2	3	US101 to North Av	60	-	-	-	-	-	-	-	-	-	-	-	-	90
C	09th St NE	3	3	North Av to Ohio Av	60	-	-	-	-	-	-	-	-	-	-	-	-	640
C	09th St SE	1	7	US101 to Baltimore	30	-	-	-	-	-	-	-	-	-	-	-	-	520
C	09th St SE	2	7	Baltimore to Chicago	30+	A	1.0	32	2	NP25	L	N&S	N	NO	-	-	A	270
C	09th St SE	3	7	Chicago to Elmira	30+	G	-	-	2	NP25	L	-	-	-	-	-	A	545
C	09th St SE	4	7	Elmira to Grand	60	-	-	-	-	-	-	-	-	-	-	-	-	750
C	09th St SE	5	7	Grand to Harlem	60	G	-	-	2	NP25	L	-	-	-	-	-	A	535
C	09th St SE	6	7	Harlem to Michigan	28-30 to 50"	-	-	-	-	-	-	-	-	-	-	-	-	1315
C	09th St SE	7	7	Michigan to North	60	-	-	-	-	-	-	-	-	-	-	-	-	665
C	09th St SE	8	8	North to Ohio	60	N	-	-	2	-	L	-	-	-	-	-	A	665
C	09th St SW	1	7	Ocean to Portland	(vac)?	-	-	-	-	-	-	-	-	-	-	-	-	170
C	09th St SW	2	7	Portland to Madison/Lincoln MB	60	-	-	-	-	-	-	-	-	-	-	-	-	1240
C	09th St SW	3	7	Madison/Lincoln MB to Lincoln	60	G	-	-	2	15	L	-	-	-	-	-	A	165
C	09th St SW	4	7	Lincoln to Jackson	60	-	-	-	-	-	-	-	-	-	-	-	-	675
C	09th St SW	5	7	W end of cul de sac to Harrison	50/R50	C	3.0	28	2	NP25	L	N&S	-	-	-	-	A	280
C	09th St SW	6	7	Harrison to Franklin	50	A	3.9	30	2	NP25	L	N&S	40%N, 60%S	N-NO, S-60%	-	-	A	585
C	09th St SW	7	7	Franklin to US101	60	A	4.5	402-42	2	20/20	L	N&S	N, 80%S	N-NO, S-NO	-	-	N&S; S-part 1 hr	1600
C	10th St NE	1	5	Michigan Av to Michigan/US101 MB	60	G	-	-	2	NP25	L	-	-	-	-	-	A	300
C	10th St NE	2	5	Michigan/US101 MB to US101	60	-	-	-	-	-	-	-	-	-	-	-	-	70

Table 3-3 Street Characteristics

Area	Street Name	Segm Total	Street Segment or Intersection	ROW Width	Surfac Condit	Pavement Width	Lanes	Posted Sp	Function	Curb Gutter	Sidewalk Locat	Sidewalk Separatio	Bike Lane Location	On-Street Parking	Segment
C	10th St NE	3	US101 to North Av	60	-	-	-	-	-	-	-	-	-	-	80
C	10th St NE	4	5 North Av to North/Ohio MB	60	G	-	-	-	-	-	-	-	-	-	300
C	10th St NE	5	5 North/Ohio MB to Ohio Av	60	G	-	-	-	-	-	-	-	-	-	330
C	10th St SE	1	US101 to Alabama	60	A	45	44	2	NP25	L	N&S	N&S	N-NO.S-NO	II N&S	240
C	10th St SE	2	Alabama to Baltimore	60	A	25	44	2	NP25	L	N&S	N&S	N	II N&S	270
C	10th St SE	3	Baltimore to Elmira	60	A	25	206	2	NP25	L	-	-	-	-	815
C	10th St SE	4	Fillmore to Grand	60	-	-	-	-	-	-	-	-	-	-	515
C	10th St SE	5	Grand Av to Harlem Av	60	G	-	-	-	-	-	-	-	-	-	530
C	10th St SE	6	Indiana to June	60	-	-	-	-	-	-	-	-	-	-	250
C	10th St SE	7	Lexington to Michigan	60	-	-	-	-	-	-	-	-	-	-	280
C	10th St SE	8	Michigan to Ohio	60	-	-	-	-	-	-	-	-	-	-	1320
C	10th St SW	1	W of Portland Av (vac)?	60	-	-	-	-	-	-	-	-	-	-	330
C	10th St SW	2	Portland to Beach Loop Dr	60	G	-	-	-	-	-	-	-	-	-	400
C	10th St SW	3	Beach Loop Dr to Newport Av	60	G	-	-	-	-	-	-	-	-	-	340
C	10th St SW	4	Newport Av to Madison Av	60	-	-	-	-	-	-	-	-	-	-	340
C	10th St SW	5	Kensington to Kensington/Jackson MB	60	-	-	-	-	-	-	-	-	-	-	170
C	10th St SW	6	Kensington/Jackson MB to Jackson Av	60*	G	-	-	-	-	-	-	-	-	-	170
C	10th St SW	7	Jackson to Block E of Jackson	60*	A	25	30	2	NP25	L	N&S	-	-	-	160
C	10th St SW	8	Block E of Jackson to Harrison	50	A	25	30	2	NP25	L	N&S	-	-	-	456
C	10th St SW	9	Harrison to Franklin	50	A	35	30	2	NP25	L	N&S	-	-	-	560
C	10th St SW	10	Franklin to Franklin/Douglas MB	50	G	-	-	-	-	-	-	-	-	-	320
C	10th St SW	11	Franklin/Douglas MB to Bandon	50 (vac)?	-	-	-	-	-	-	-	-	-	-	780
C	10th St SW	12	Allegheny to US101	60	A	25	4310	2	NP25	L	N&S	N&S	N-NO.S-NO	-	230
C	10th St SE	1	US101 to Baltimore	60	A	40	42	2	NP25	L	N&S	75%N S	N-NO.S-NO	-	525
C	10th St SE	2	Baltimore to Elmira	60	C	30	36	2	NP25	L	N&S	N, 30%N S	N-NO.S-NO	6 N&S	820
C	10th St SE	3	Elmira to Fillmore	60	A	29	247	2	NP25	L	-	-	-	-	230
C	10th St SE	4	Fillmore to Harlem	60	A	29	24	2	NP25	L	-	-	-	-	1060
C	10th St SE	5	Harlem to June	60	A	25	236-24	2	NP25	L	50%N S	-	-	-	500
C	10th St SE	6	June to June/Kalamath MB	60	A	20	26	2	NP25	L	S	-	-	-	130
C	10th St SE	7	June/Kalamath MB to Michigan	60	-	-	-	-	-	-	-	-	-	-	690
C	10th St SE	8	Michigan to North/Ohio MB	60	-	-	-	-	-	-	-	-	-	-	0
C	10th St SE	9	North/Ohio MB to Ohio	60	N	-	-	-	-	-	-	-	-	-	60
C	10th St SW	11	Ocean/Portland MB to Beach Loop Dr	60	A	20	36	2	NP25	L	N&S	30%N, 30%N S	N-NO.S-NO	6 N&S	560
C	10th St SW	12	Beach Loop to Newport/Madison MB	60	C	19	27	2	NP25	C-Min	N&S	N&S	N-NO.S-NO	R-N&S	575
C	10th St SW	3	1-way pair N side	11	C	15	14	1	15	C-Min	N&S	N	YES	R	1120
C	10th St SW	4	1-way pair S side	11	C	15	14	1	15	C-Min	N&S	N	YES	R	1120
C	10th St SW	11	Kensington/Jackson MB to Jackson	60	C	15	14	1	15	C-Min	N&S	S	YES	R	1120
C	10th St SW	6	Jackson to 1 Block E of Jackson	60*	C	15	26-27, 29 at Jack, W of int	2	25	C-Min	N&S	S	NO	A	150
C	10th St SW	7	Block E of Jackson to Harrison	50*	A	25	266-27	2	NP25	C-Min	-	-	-	-	160
C	10th St SW	8	Harrison to Franklin	50	A	25	266-27	2	NP25	C-Min	-	-	-	-	450
C	10th St SW	9	Franklin to Douglas	50	A	25	216-22	2	25/20	C-Min	-	-	-	-	650

Table 3-3 Street Characteristics

3/1/98

Area	Street Name	Segn	Total	Street Segment or intersection	ROW Width	Surface	Condit	Pavement Width	Lanes	Posted Sp	Function	Curb	Gutter	Sidewalk Locat	Sidewalk Separat	Bike Lane Location	On-Street Parking	Segment
C	11th St SW	10	11	Douglas to Bandon	60	A	2.5	126-22	2	25/20	C-Min	-	-	-	-	-	A	475
C	11th St SW	11	11	Bandon to US101	60	A	2.5	436-44	2	25/20	C-Min	N&S	N, 50%S	N-NO,S-NO	-	R-50%N	480	
C	12th Ct SE	1	1	Michigan to Ohio	60	-	-	-	-	-	-	-	-	-	-	-	-	1290
C	12th Ct SW	1	2	Jackson/Harrison MB to Franklin	50	A	2.0	36	2	NP25	L	N&S	-	-	-	A	1000	
C	12th Ct SW	2	2	Franklin Av to E end	50	-	-	-	-	-	-	-	-	-	-	-	-	645
C	12th St SE	1	3	US101 to Baltimore	60	A	2.5	44	2	NP25	L	N&S	N&S	N-NO,S-NO	-	II N&S	515	
C	12th St SE	2	3	Baltimore to Chicago	60	-	-	-	-	-	-	-	-	-	-	-	-	275
C	12th St SE	3	3	Michigan to Ohio	60	-	-	-	-	-	-	-	-	-	-	-	-	1300
C	12th St SW	1	7	Kensington to Kensington/Jackson MB	60	-	-	-	-	-	-	-	-	-	-	-	-	170
C	12th St SW	2	7	Kensington/Jackson MB to Jackson	60	G	-	-	2	NP25	L	-	-	-	-	-	A	170
C	12th St SW	3	7	Jackson to 1 Block E of Jackson	60	A	2.5	36-46 (to curb, to edge)	2	NP25	L	N&S	N&S	N-NO,S-NO	-	A	170	
C	12th St SW	4	7	1 Block E of Jackson to Harrison	50	A	2.5	36-46 (to curb, to edge)	2	NP25	L	N&S	N&S	N-NO,S-NO	-	A	415	
C	12th St SW	5	7	Harrison to Franklin	50	G	-	-	2	NP25	L	-	-	-	-	-	A	560
C	12th St SW	6	7	Franklin to E end (Douglas)	50	-	-	-	-	-	-	-	-	-	-	-	-	640
C	12th St SW	7	7	Allegheny to US101	60	G	-	-	2	NP25	L	-	-	-	-	-	A	230
C	13th St SE	1	5	US101 to Alabama	60?	G	-	-	2	NP25	L	-	-	-	-	-	A	250
C	13th St SE	2	5	Alabama to Baltimore	60?	-	-	-	-	-	-	-	-	-	-	-	-	320
C	13th St SE	3	5	Baltimore to Baltimore/Chicago MB	60?	G	-	-	2	NP25	L	-	-	-	-	-	A	190
C	13th St SE	4	5	Baltimore/Chicago MB to Harlem	60?	-	-	-	-	-	-	-	-	-	-	-	-	1930
C	13th St SE	5	5	Michigan Av to Ohio Av	60?	-	-	-	-	-	-	-	-	-	-	-	-	1300
C	13th St SW	1	7	Kensington/Jackson MB to Jackson	30	-	-	-	-	-	-	-	-	-	-	-	-	175
C	13th St SW	2	7	Jackson W ROW to Jackson E ROW	50?	G	-	-	2	NP25	L	-	-	-	-	-	A	150
C	13th St SW	3	7	Jackson E ROW to Franklin	50?	-	-	-	-	-	-	-	-	-	-	-	-	1010
C	13th St SW	4	7	Franklin Av to Edison Av	50?	G	-	-	2	NP25	L	-	-	-	-	-	A	300
C	13th St SW	5	7	Edison Av to Gross Creek	45?	N	-	-	2	NP25	L	-	-	-	-	-	A	350
C	13th St SW	6	7	Gross Creek to Allegheny Av	30-60?	G	-	-	2	NP25	L	-	-	-	-	-	A	650
C	13th St SW	7	7	Allegheny to US101	60	A	2.0	24	2	NP25	L	-	-	-	-	-	A	310
C	14th St SE	1	3	E of US101 to ECL (Baltimore/Delaware MB)	60?	-	-	-	-	-	-	-	-	-	-	-	-	575
UGB	14th St SE	2	3	Baltimore/Delaware MB to Grand	60	-	-	-	-	-	-	-	-	-	-	-	-	1470
C	14th St SE	3	3	Grand Av to Harlem Av	(vac)?	-	-	-	-	-	-	-	-	-	-	-	-	520
UGB	14th St SW	1	5	W of Jackson to Jackson	60	-	-	-	-	-	-	-	-	-	-	-	-	330
UGB	14th St SW	2	5	Jackson to Jackson/Harrison MB	60	G	-	-	2	-	L	-	-	-	-	-	A	280
UGB	14th St SW	3	5	Jackson/Harrison MB to Harrison	60	N	-	-	2	-	L	-	-	-	-	-	A	180
UGB	14th St SW	4	5	Harrison to Franklin	60	G	-	-	2	-	L	-	-	-	-	-	A	560
UGB	14th St SW	5	5	Franklin to Edison	60	-	-	-	-	-	-	-	-	-	-	-	-	300
C	15th St SE	1	6	E of US101 to Baltimore	60	-	-	-	-	-	-	-	-	-	-	-	-	330
C	15th St SE	2	6	Baltimore to Baltimore/Delaware MB	60	G	-	-	2	NP25	L	-	-	-	-	-	A	120
UGB	15th St SE	3	6	Baltimore/Delaware MB to Delaware	60	G	-	-	2	-	L	-	-	-	-	-	A	390
UGB	15th St SE	4	6	Delaware to Fillmore/Grand MB	60	-	-	-	-	-	-	-	-	-	-	-	-	810
C	15th St SE	5	6	WCL (Fillmore/Grand MB) to Grand	60	-	-	-	-	-	-	-	-	-	-	-	-	280
C	15th St SE	6	6	Grand Av to Harlem Av	(vac)	-	-	-	-	-	-	-	-	-	-	-	-	0

Table 3-3 Street Characteristics

3/1/98

Area	Street Name	Segm	Total	Street Segment or Intersection	ROW Width	Surfac	Condit	Pavement Width	Lanes	Posted Sp	Function	Curb	Gutter	Sidewalk Locat	Sidewalk Separatio	Bike Lane Location	On-Street Parking	Segment
UGB	15th St SW	1		4 W of Jackson to Jackson	60	G	-		2		L	-	-				A	330
UGB	15th St SW	2		4 Jackson to Harrison/Franklin MB	60	-	-				-	-	-					700
UGB	15th St SW	3		4 Harrison/Franklin MB to Franklin	60	G	-		2		L	-	-			A	280	
UGB	15th St SW	4		4 Franklin to Edison	60	-	-				-	-	-					300
C	16th St SE	1		6 E of US 101 to ECL (Baltimore)	60	-	-				-	-	-					260
UGB	16th St SE	2		6 Baltimore to Delaware/Fillmore MB	60	-	-				-	-	-					830
UGB	16th St SE	3		6 Delaware/Fillmore MB to Fillmore	60	G	-		2		L	-	-			A	250	
UGB	16th St SE	4		6 Fillmore to Fillmore/Grand MB	60	-	-				-	-	-					250
C	16th St SE	5		6 WCL (Fillmore/Grand MB) to Grand	60	-	-				-	-	-					280
C	16th St SE	6		6 Grand Av to Harlem Av	(vac)	-	-				-	-	-					0
UGB	16th St SW	1		3 W of Jackson to Harrison	60	-	-				-	-	-					790
UGB	16th St SW	2		3 Harrison to Franklin	60	G	-		2		L	-	-			A	560	
UGB	16th St SW	3		3 Franklin to Edison	60	-	-				-	-	-					300
C	17th St SE	1		3 US 101 to ECL (Baltimore)	60	G	-		2	NP25	L	-	-			A	460	
UGB	17th St SE	2		3 Baltimore to Delaware	60	G	-		2		L	-	-			A	520	
UGB	17th St SE	3		3 Delaware to Harlem	60	-	-				-	-	-					1600
UGB	17th St SW	1		1 W of Jackson to Edison	60	-	-				-	-	-					1650
UGB	18th St SE	1		4 US 101 to Delaware	60	G	-		2		L	-	-			A	970	
UGB	18th St SE	2		4 Delaware to Delaware/Fillmore MB	60	-	-				-	-	-					290
UGB	18th St SE	3		4 Delaware/Fillmore MB to Fillmore	60	G	-		2		L	-	-			A	280	
UGB	18th St SE	4		4 Fillmore to Harlem	60	-	-				-	-	-					1030
UGB	18th St SW	1		2 Jackson to Douglas	60	-	-				-	-	-					1640
UGB	18th St SW	2		2 Douglas to US 101	60	G	-		2		L	-	-			A	980	
UGB	19th St SE	1		1 US 101 to Harlem	60	-	-				-	-	-					2570
UGB	19th St SW	1		2 Jackson to Bandon	60	-	-				-	-	-					2140
UGB	19th St SW	2		2 Bandon to US 101	60	G	-		2		L	-	-			A	470	
UGB	20th St SE	1		3 US 101 to US 101/Baltimore MB	60	G	-		2		L	-	-			A	230	
UGB	20th St SE	2		3 US 101/Baltimore MB to Fillmore	60	-	-				-	-	-					1320
UGB	20th St SE	3		3 Fillmore to Harlem	60	G	-		2		L	-	-			A	1030	
UGB	20th St SW	1		2 Jackson to Douglas/Bandon MB	60	-	-				-	-	-					1920
UGB	20th St SW	2		2 Douglas/Bandon MB to US 101	60	G	-		2		L	-	-			A	700	
UGB	21st St SE	1		1 US 101 to Harlem	60	-	-				-	-	-					2570
UGB	21st St SW	1		2 Jackson to Bandon/US 101 MB	60	-	-				-	-	-					2470
UGB	21st St SW	2		2 Bandon/US 101 MB to US 101	60	G	-		2		L	-	-			A	150	
UGB	22nd St SE	1		1 US 101 to Harlem	60	-	-				-	-	-					2570
UGB	22nd St SW	1		1 Jackson to US 101	60	-	-				-	-	-					2620
UGB	23rd St SW	1		1 W of Douglas to US 101	60	-	-				-	-	-					1300
UGB	24th St SW	1		2 W of Harrison to Harrison	40	-	-				-	-	-					2170
UGB	24th St SW	2		2 Harrison to US 101	40&60	G	-		2		L	-	-			A	680	
UGB	25th St SW	1		1 W of Douglas to US 101	30	-	-				-	-	-					1300
C	Alabama Av	1		4 1st St SE to 2nd St SE	60	A	2.0	256	2 (1-w	NP25	L	E&W	W-obstructed,	NO		R	300	

Table 3-3 Street Characteristics

3/1/98

Area	Street Name	Segn	Total	Street Segment or Intersection	ROW Width	Surfac	Condit	Pavement Width	Lanes	Posted Sp	Function	Curb	Gutter	Sidewalk Locat	Sidewalk Separatio	Bike Lane Location	On-Street Parking	Segment	
C	Alabama Av	2	4	10th St SE to 11th St SE	60	A	3.9	44	2	NP25	L	E&W	E&W	NO	-	-	II E&W	325	
C	Alabama Av	3	4	11th St SE to 12th St SE	60	A	2.0	44	2	NP25	L	E&W	E&W	NO	-	-	II E&W	325	
C	Alabama Av	4	4	12th St SE to 13th St SE	60	G	-	-	2	NP25	L	-	-	-	-	-	A	325	
C	Allegheny Av	1	3	8th/9th SW MB to 9th SW	60	G	-	-	2	NP25	L	-	-	-	-	-	A	280	
C	Allegheny Av	2	3	9th St SW to 11th St SW	60	G	-	-	2	NP25	L	-	W	NO	-	-	R-90%W	650	
C	Allegheny Av	3	3	11th St SW to 13th St SW	60	-	-	-	-	-	-	-	-	-	-	-	-	650	
C	Angell Av	1	1	E of Water St to Meander St	30	-	-	-	-	-	-	-	-	-	-	-	-	1100	
C	Austin Av	1	4	Riverside Dr to Michigan Av	50	G	-	-	2	25	L	-	-	-	-	-	A	200	
C	Austin Av	2	4	Michigan Av to Michigan/US101 MB	50	Eng G	-	20	2	NP25	L	-	-	-	-	-	A	0	
C	Austin Av	3	4	Michigan/US101 MB to US101	50	-	-	-	-	-	-	-	-	-	-	-	-	0	
C	Austin Av	4	4	US101 to Ohio Av	50	-	-	-	-	-	-	-	-	-	-	-	-	635	
C	Baltimore Av	1	12	1st St SE to 2nd St SE	60	A	2.0	41'6"	2	NP25	L	E&W	E&W	NO	-	-	7' II E&W	315	
C	Baltimore Av	2	12	US 101 to S MB	75	C	1.9	34	2	NP25	L	E&W	-	-	-	-	A	60	
C	Baltimore Av	3	12	S MB to 5th St SE	75	-	-	-	-	-	-	-	-	-	-	-	-	520	
C	Baltimore Av	4	12	5th St SE to 9th St SE	60	-	-	-	-	-	-	-	-	-	-	-	-	560	
C	Baltimore Av	5	12	9th St SE to 10th St SE	60	A	1.0	32	2	25	L	E&W	W	NO	-	-	A	315	
C	Baltimore Av	6	12	10th St SE to 11th St SE	60	A	2.5	36	2	NP25	L	E&W	75%E	NO	-	-	E&W	325	
C	Baltimore Av	7	12	11th St SE to 12th St SE	60	A	4.5	36	2	NP25	L	E&W	E&W	W-40%, E-NO	-	-	A	325	
C	Baltimore Av	8	12	12th St SE to 13th St SE	60	A	3.5	36	2	NP25	L	E&W	?	N	-	-	A	325	
C	Baltimore Av	9	12	13th St SE to 17th St SE	60	G	-	-	2	NP25	L	-	-	-	-	-	A	1010	
C	Baltimore Av	10	12	17th St SE to 17/18 MB	60	G	-	-	2	NP25	L	-	-	-	-	-	A	135	
UGB	Baltimore Av	11	12	17/18 SE MB to 18	60	G	-	-	2	-	L	-	-	-	-	-	A	130	
UGB	Baltimore Av	12	12	18 to Vine	60	-	-	-	-	-	-	-	-	-	-	-	-	1240	
C	Bandon Av	1	7	1st St SW to 1st/2nd MB (see Oregon)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
C	Bandon Av	2	7	1st/2nd MB to 2nd St SW (see Oregon)	-	-	-	-	-	-	-	-	-	-	-	-	A	-	
C	Bandon Av	3	7	2nd St SW to end	57-60	G	-	-	2	15	L	12%W	12%E	YES	-	-	A	1000	
C	Bandon Av	4	7	9th St SW to 11th St SW	507, 25 va?	-	-	-	-	-	-	-	-	-	-	-	-	650	
UGB	Bandon Av	5	7	18th St SW to 20th SW	60	G	-	-	2	-	L	-	-	-	-	-	A	540	
UGB	Bandon Av	6	7	20th SW to 24th SW	60	-	-	-	-	-	-	-	-	-	-	-	-	1090	
UGB	Bandon Av	7	7	24th SW to end (25th St SW)	60	G	-	-	2	-	L	-	-	-	-	-	A	250	
C	Beach Access	1	1	all	20+	G	-	-	2	-	L	-	-	-	-	-	A	300	
C	Beach Loop Dr	1	9	7th St SW/Ocean Dr to 8th St SW	60 typ, 55-60	A	2.5	19'6"-21'6"	2	25	C-Maj	-	-	-	-	-	{OCBR}	A	270
C	Beach Loop Dr	2	9	8th St SW to 11th St SW	60 typ, 55-60	A	4.9	19'6"-21'6"	2	25	C-Maj	-	-	-	-	-	{OCBR}	A	1030
C	Beach Loop Dr	3	9	11th St SW to 800' N of Face Rock Dr	60 typ, 55-80	A	4.5	19'6"-21'6"	2	25	C-Maj	13%E, 13%W	13%E, 13%W	NO	-	-	{OCBR}	A	1850
C	Beach Loop Dr	4	9	800' N of Face Rock Dr to Face Rock Dr	60 typ, 55-80	A	3.5	19'6"-21'6"	2	25	C-Maj	-	-	-	-	-	{OCBR}	A	800
C	Beach Loop Dr	5	9	Face Rock Dr to Strawberry Ln	60 typ, 55-60	A	3.5	19'6"-21'6", 29'3" at Strawberry Ct	2	25	C-Maj	10%E	-	-	-	-	{OCBR}	A	1000
C	Beach Loop Dr	6	9	Strawberry Ln to Caryll Ct	60 typ, 55-60	A	3.0	19'6"-21'6", 28'6" at Caryll Ct	2	25	C-Maj	25%E, 25%W	-	-	-	-	5'6" W at Caryll (OCBR)	A	650
C	Beach Loop Dr	7	9	Caryll Ct to Seabird Dr	60 typ, 55-60	A	3.5	19'6"-21'6"	2	25	C-Maj	25%W	-	-	-	-	5'6" W at Caryll (OCBR)	A	1700
C	Beach Loop Dr	8	9	Seabird Ln to Golf Links Rd	60 typ, 55-60	A	3.5	21'8"	2	25	C-Maj	-	-	-	-	-	{OCBR}	A	880
C	Beach Loop Dr	9	9	Golf Links Rd to SCL	60 typ, 55-60	A	4.0	19'6"-21'6"	2	25	C-Maj	-	-	-	-	-	{OCBR}	A	2050
UGB	Beach St	1	2	W end to Gould Av	60	-	-	-	-	-	-	-	-	-	-	-	-	260	

Table 3-3 Street Characteristics

3/1/98

Area	Street Name	Segn	Total	Street Segment or Intersection	ROW Width	Surfac	Condit	Pavement Width	Lanes	Posted Sp	Funcctio	Curb Gutter	Sidewalk Locat	Sidewalk Separatio	Bike Lane Location	On-Street Parking	Segment
UGB	Beach St	2	2	Gould Av to Bradley Lake Mkt Rd	60	G	-	-	2	-	L	-	-	-	-	A	820
C	Bennett St	1	1	all	70 (vac)	-	-	-	-	-	-	-	-	-	-	-	400
C	Bluff Av	1	1	Cross St to 8th St SW	50-52	G	-	-	2	NP25	L	E	-	-	-	A	720
UGB	Bradley Lake Road	1	1	SCL to S UGB	60	A	3+	196-216	2	25	C-Maj	-	-	-	(OCBR)	A	3080
C	Broadway St	1	2	Beach Loop Dr to alley	24	G	-	-	2	NP25	L	-	-	-	-	A	130
C	Broadway St	2	2	alley to Clay St	24	-	-	-	2	NP25	-	-	-	-	-	-	120
C	Bryan St	1	1	Cody Av to Angell Av	60	-	-	-	-	-	-	-	-	-	-	-	1235
C	Caroline St	1	1	Riverside Dr to Harlem Av	60	A	2.5	175-20	2	25	L	-	-	-	-	A	930
UGB	Carter St SW	1	1	W of Harrison to E of Franklin	30	-	-	-	-	-	-	-	-	-	-	-	1560
C	Caryll Ct	1	1	Beach Loop Dr to end	50/R50	C	2.0	28	2	NP25	L	2S	-	-	-	A	250
C	Chicago Av	1	9	1st St SE to 1st/2nd MB	75	A	2.0	50	2	NP25	L	E&W	E&W	NO	-	// E, // W	150
C	Chicago Av	2	9	1st/2nd MB to 2nd St SE	75	A	2.0	57.6	2	NP25	L	E&W	E&W	NO	-	// E&W	140
C	Chicago Av	3	9	2nd St SE to US 101	-45-85	A	2.0	28 typ, to 60'6	2	NP25	L	E&W	E&W	NO	-	R	250
C	Chicago Av	4	9	US101 to 3rd St SE	20	-	-	-	-	-	-	-	-	-	-	-	80
C	Chicago Av	5	9	3rd St SE to 5th St SE	60	G	-	-	2	NP25	L	-	-	-	-	A	685
C	Chicago Av	6	9	5th St SE to 9th St SE	33-55	A	2.0	29-30	2	NP25	L	E&W	E&W	NO	-	A	490
C	Chicago Av	7	9	9th St SE to 11th St SE	60	-	-	-	-	NP25	-	-	-	-	-	A	650
C	Chicago Av	8	9	11th St SE to 11/12 MB	60	G	-	-	2	NP25	L	-	-	-	-	A	250
C	Chicago Av	9	9	11/12 MB to 13th St SE	60	-	-	-	-	-	-	-	-	-	-	-	400
C	Clay St	1	1	all (Jennie to S end)	15	-	-	-	-	-	-	-	-	-	-	-	430
C	Cleveland Av	1	4	N end (N of 1st St SW) to 2nd St SW	60	-	-	-	-	-	-	-	-	-	-	-	470
C	Cleveland Av	2	4	2nd St SW to 2nd/3rd MB	60	G	-	-	2	15	L	-	-	-	-	A	120
C	Cleveland Av	3	4	2nd/3rd MB to 3rd SW	(vac)	-	-	-	-	-	-	-	-	-	-	-	150
C	Cleveland Av	4	4	3rd to end (S of 4th)	60	-	-	-	-	-	-	-	-	-	-	-	460
C	Cliff St	1	1	all	(vac)	-	-	-	-	-	-	-	-	-	-	-	-
C	Cody Av	1	2	W end to Meander St	30	-	-	-	-	-	-	-	-	-	-	-	1950
C	Cody Av	2	2	Michigan Av to US101	60	-	-	-	-	-	-	-	-	-	-	-	370
C	Creek St	1	1	N MB to US 101	38.5	-	-	-	-	-	-	-	-	-	-	-	200
C	Cross St	1	1	Garfield to Franklin	30-50	G	-	-	2	NP25	L	-	-	-	-	A	340
C	Cutty Sark Ln	1	1	all (priv. easement)	-	-	-	-	-	-	-	-	-	-	-	-	-
C	Delaware Av	1	6	1st St SE to 2nd St SE	60	A	2.5	48	2	NP25	L	E&W	E&W	NO	-	7 // E&W	250
C	Delaware Av	2	6	US 101 to 3/4 MB	60	-	-	-	-	-	-	-	-	-	-	-	350
C	Delaware Av	3	6	3/4 MB to 10th St SE	60	G	-	-	2	NP25	L	-	-	-	-	A	1360
C	Delaware Av	4	6	10th St SE to 11th St SE	60	-	-	-	-	-	-	-	-	-	-	-	330
C	Delaware Av	5	6	11th St SE to end (12/13 MB)	50	-	-	-	-	-	-	-	-	-	-	-	420
UGB	Delaware Av	6	6	13th St SE to end (Vine St)	70	-	-	-	-	-	-	-	-	-	-	-	2600
C	Division St	1	5	Harlem Av to June Av	60	G	-	-	2	NP25	L	-	-	-	-	A	640
C	Division St	2	5	June Av to W of Michigan Av	60	-	-	-	-	NP25	-	-	-	-	-	-	560
C	Division St	3	5	W of Michigan Av to Michigan Av	60	-	-	-	-	-	-	-	-	-	-	-	70
C	Division St	4	5	Michigan Av to US101	(vac)	-	-	-	-	-	-	-	-	-	-	-	-
C	Division St	5	5	North Av to E end (W of Ohio)	60	G	-	-	2	NP25	L	-	-	-	-	A	600

Table 3-3 Street Characteristics

Area	Street Name	Segm	Total	Street Segment or Intersection	ROW Width	Surfac	Condit	Pavement Width	Lanes	Posted Sp	Function	Curb	Gutter	Sidewalk Locat	Sidewalk Separatid	Bike Lane Location	On-Street Parking	Segment
C	Douglas Av	1	10	1st St SW to 1st/2nd MB	60	-	-	-	-	-	-	-	-	-	-	-	-	100
C	Douglas Av	2	10	1st/2nd MB to 2nd St SW	60	G	-	-	2	15	L	-	-	-	-	-	A	130
C	Douglas Av	3	10	2nd St SW to 3rd St SW	60	-	-	-	-	-	-	-	-	-	-	-	-	260
C	Douglas Av	4	10	3rd SW to 4th SW	(vac)	-	-	-	-	-	-	-	-	-	-	-	-	200
C	Douglas Av	5	10	4th St SW to S MB	60	A	4.0	19	2	NP25	L	-	-	-	-	-	A	130
C	Douglas Av	6	10	S MB to S Blk	60	G	-	-	2	NP25	L	-	-	-	-	-	A	100
C	Douglas Av	7	10	S Blk to end	50	G	-	-	2	NP25	L	-	-	-	-	-	A	250
C	Douglas Av	8	10	9th St SE to 11th St SE	(vac)	-	-	-	-	-	-	-	-	-	-	-	-	600
UGB	Douglas Av	9	10	18th St SW to 19th St SW	60	-	-	-	-	-	-	-	-	-	-	-	-	270
UGB	Douglas Av	10	10	19th St SW to end (25th St SW)	60	-	-	-	-	-	-	-	-	-	-	-	-	1620
C	Edison Av	1	5	1st St SW to Jetty Rd	60+	A	2.5	246	2	NP25	C-Maj	-	-	-	-	(OCBR)	A	250
C	Edison Av	2	5	Jetty Rd to 4th St SW	57-60	C	2.0	27	2	NP25	C-Maj	E&W	W	NO	-	(OCBR)	A	520
C	Edison Av	3	5	4th St SW to 8th St SW	60-65	G	-	-	2	NP25	L	-	-	-	-	-	A	930
UGB	Edison Av	4	5	13th St SW to 15th St SW	30	N	-	-	2	-	L	-	-	-	-	-	A	540
UGB	Edison Av	5	5	15th St SW to end (18th St SW)	30	-	-	-	-	-	-	-	-	-	-	-	-	800
C	Elmira Av	1	4	1st St SE to US 101	60	A	1.9	39	2	NP25	L	E&W	E&W	NO	-	7 II E	270	
C	Elmira Av	2	4	US 101 to 100' S of US101	60	A	2.5	36	2	30	L	W	W	NO	-	-	A	100
C	Elmira Av	3	4	100' S of US101 to 11th St SE	60	A	2.5	22	2	25&30	L	@ 4th SE only	-	-	-	-	A	1980
C	Elmira Av	4	4	11th St SE to end (11/12 MB)	60	-	-	-	-	-	-	-	-	-	-	-	-	190
C	Face Rock Dr	1	2	Beach Loop Dr to ECL	60	G	-	-	2	NP25	L	-	-	-	-	-	A	900
UGB	Face Rock Dr	2	2	ECL to Jackson Av	60	G	-	-	2	-	L	-	-	-	-	-	A	1350
C	Face Rock Wayside	1	1	all	40 (public property)	A	2.9	226-82	2	NP25	L	2S	50%	NO	-	-	50%	0
C	Fahy Av	1	4	Michigan to US101	50	C/A	3.9	21	2	NP25	L	?	?	-	-	-	A	425
C	Fahy Av	2	4	Across US101	?	C	2.5	26	2	NP25	L	?	?	-	-	-	A	200
C	Fahy Av	3	4	US101 to US101/Ohio MB	50	C/A	3.9	18	2	NP25	L	?	?	-	-	-	A	500
C	Fahy Av	4	4	US101/Ohio MB to Ohio Av	50	G	-	-	2	NP25	L	-	-	-	-	-	A	200
C	Fairway Ct	1	2	Golf Links Rd to MB South	60	A	2.9	28	2	NP25	L	E&W	-	-	-	-	A	400
C	Fairway Ct	2	2	MB South to S end	60 (priv. easement)	A	2.5	28	-	NP25	L	E&W	-	-	-	-	A	310
C	Ferris St	1	1	Cody Av to Water St	60	-	-	-	-	-	-	-	-	-	-	-	-	500
C	Fillmore Av	1	7	1st St SE to US 101	70	A	2.0	49	2	NP25	C-Maj	E&W	E&W	NO	-	7 II E&W	220	
C	Fillmore Av	2	7	US 101 to 4th St SE	70	A	2.0	51	2	NP25	L	E&W	E&W	NO	-	II E&W	470	
C	Fillmore Av	3	7	4th St SE to 6th St SE	70	G	-	-	2	NP25	L	-	-	-	-	-	A	650
C	Fillmore Av	4	7	6th St SE to 10th St SE	70	-	-	-	-	-	-	-	-	-	-	-	-	690
C	Fillmore Av	5	7	10th St SE to 11th St SE	70??	N	-	-	-	-	L	-	-	-	-	-	-	270
C	Fillmore Av	6	7	11th St SE to SCL (13th)	70??	A	2.9	24	2	NP25	L	-	-	-	-	-	A	620
UGB	Fillmore Av	7	7	13th SE to Vine	70	A	4+	24	2	25	L	-	-	-	-	-	A	2600
C	Franklin Av	1	10	4th St SW to Cross St	52.5	A	4.0	32	2	NP25	L	E&W	50%E, 50%W	W-NO, E-YES	-	-	A	280
C	Franklin Av	2	10	Cross St to N of 8th St SW	50+/-	A	4.5	32	2	25	L	E&W	W, 25%E	W-40%YES, E-NO	-	-	A	570
C	Franklin Av	3	10	N of 8th St SW to 8th St SW	55+/-	A	4.0	32	2	25/20	L	E&W	E	NO	-	-	A	160
C	Franklin Av	4	10	8th St SW to 11th St SW	55-60	A	4.9	32	2	NP25/20	L	E&W	85%W, 40%E	NO	-	E&W W-1 hr	1030	
C	Franklin Av	5	10	11th St SW to 12th Ct SW	60	A	4.9	16 variable	2	NP25	C-Min	-	-	-	-	-	A	515

Table 3-3 Street Characteristics

3/1/98

Area	Street Name	Segm	Total	Street Segment or Intersection	ROW Width	Surfac	Condit	Pavement Width	Lanes	Posted Sp	Funcio	Curb Gutter	Sidewalk Locat	Sidewalk Separatio	Bike Lane Location	On-Street Parking	Segment
C	Franklin Av	6	10	12th St SW to 13th St SW	60	G	-	-	2	NP25	C-Min	-	-	-	-	A	150
UGB	Franklin Av	7	10	13th St SW to 16th St SW	60	G	-	-	2	-	L	-	-	-	-	A	810
UGB	Franklin Av	8	10	16th St SW 22nd St SW	60	-	-	-	-	-	-	-	-	-	-	-	1620
UGB	Franklin Av	9	10	22nd St SW to 24th St SW	60	-	-	-	-	-	-	-	-	-	-	-	540
UGB	Franklin Av	10	10	24th St SW to end (Carter St SW)	60	-	-	-	-	-	-	-	-	-	-	-	520
C	Franklin Av?	1	1	1st St SW to 2nd St SW	(vac)	-	-	-	-	-	-	-	-	-	-	-	-
C	Fulton Av	1	1	Water St to Meander St	60	-	-	-	-	-	-	-	-	-	-	-	1400
C	Garfield Av	1	5	N Plat to 2nd St SW	60	-	-	-	-	-	-	-	-	-	-	-	180
C	Garfield Av	2	5	2nd SW to 3rd SW	60	-	-	-	-	-	-	-	-	-	-	-	200
C	Garfield Av	3	5	3rd St SW to 4th St SW	60	A	4.5	176-196	2	NP25	L	-	-	-	-	A	200
C	Garfield Av	4	5	4th St SW to Cross St	40-60	A	4.9	30	2	NP25	L	E&W	<25% W	W-YES	-	A	360
C	Garfield Av	5	5	Cross St to end	40	G	-	-	2	NP25	L	-	-	-	-	A	370
C	George's St	1	1	all	60	N	-	-	-	-	-	-	-	-	-	A	530
C	Golf Links Rd	1	2	Beach Loop Dr to Fairway Ct	60-75	A	2.9	28	2	NP25	L	N&S	-	-	-	A	600
C	Golf Links Rd	2	2	Fairway Ct to E end	50 (private)	G	-	-	-	-	-	-	-	-	-	A	-
UGB	Gould Av	1	3	N of Vesta to Mars	60	-	-	-	-	-	-	-	-	-	-	-	460
UGB	Gould Av	2	3	Mars to Jupiter	60	G	-	-	2	-	L	-	-	-	-	A	1010
UGB	Gould Av	3	3	Jupiter to S of Saturn	60	-	-	-	-	-	-	-	-	-	-	-	450
C	Grand Av	1	6	US 101 to 3rd St SE	60	A	4.0	216	2	NP25	L	-	-	-	-	R-WEST	130
C	Grand Av	2	6	3rd St SE to 4th St SE	60	C	2.0	26	2	NP25	L	E&W	-	-	-	E&W	330
C	Grand Av	3	6	4th St SE to 9th St SE	60	-	-	-	-	-	-	-	-	-	-	-	970
C	Grand Av	4	6	9th St SE to 11th St SE	60	G	-	-	2	NP25	L	-	-	-	-	A	650
C	Grand Av	5	6	13th St SE to SCL (16/17 MB)	60	-	-	-	-	-	-	-	-	-	-	-	950
UGB	Grand Av	6	6	SCL (16/17 MB) to Vine	60	-	-	-	-	-	-	-	-	-	-	-	1650
C	Grant Place	1	1	all	50/R50	A	2.5	24	2	NP25	L	-	-	-	-	A	700
C	Harlem Av	1	10	N end (ext 2nd St NE) to 1st St NE	38-40	G	-	-	2	NP25	L	-	-	-	-	-	270
C	Harlem Av	2	10	1st St NE to Division St	30-40	A	4.5	166	2	NP25	L	-	-	-	-	A	280
C	Harlem Av	3	10	Division St to 1st St SE	30-40	A	2.5	17-19 variable	2	NP25	L	-	-	-	-	A	280
C	Harlem Av	4	10	1st St SE to US101	30-40	A	4.0	17-19 variable	2	NP25	L	-	-	-	-	A	230
C	Harlem Av	5	10	US 101 to 3rd St SE	60?	G	-	-	2	NP25	L	-	-	-	-	A	130
C	Harlem Av	6	10	3rd St SE 4th St SE	30	G	-	-	2	NP25	L	-	-	-	-	A	330
C	Harlem Av	7	10	4th St SE to 9th St SE	30	-	-	-	-	-	-	-	-	-	-	-	970
C	Harlem Av	8	10	9th St SE to 11th St SE	60	G	-	-	2	NP25	L	-	-	-	-	A	650
C	Harlem Av	9	10	11th St SE to SCL (16/17 MB)	30-60??	A	4.5	17-20	2	NP25	L	-	-	-	-	A	650
UGB	Harlem Av	10	10	16/17 SE MB to Vine	38-54?	-	-	-	-	-	-	-	-	-	-	-	1650
C	Harrison Av	1	13	N Plat to 3rdSW/4thSW MB	60	-	-	-	-	-	-	-	-	-	-	-	490
C	Harrison Av	2	13	Ocean Dr to N of 8th St SW	45	A	2.0	296	2	NP25	L	E&W	25%W, 5%E	NO	-	A	770
C	Harrison Av	3	13	N of 8th St SW to 8th St SW	45	G	-	-	2	NP25	L	-	-	-	-	A	160
C	Harrison Av	4	13	8th/9th MB to 9th St SW	29-30	-	-	-	-	-	-	-	-	-	-	-	100
C	Harrison Av	5	13	9th St SW to 10th St SW	29-30	G	-	-	2	NP25	L	-	-	-	-	A	240
C	Harrison Av	6	13	10th St SW to 12th St SW	60+/-	G	-	-	2	NP25	L	-	-	-	-	A	515

Table 3-3 Street Characteristics

3/1/98

Area	Street Name	Seg	Total	Street Segment or Intersection	ROW Width	Surfac	Condit	Pavement Width	Lanes	Posted Sp	Func	Curb	Gutter	Sidewalk Locat	Sidewalk Separat	Bike Lane Location	On-Street Parking	Segment
C	Harrison Av	7	13	12th St SW to 12th Ct SW	60'	-	-	-	-	-	-	-	-	-	-	-	-	260
C	Harrison Av	8	13	12th Ct SW to 13th St SW	60	A	2.5	36	-	-	-	-	-	-	-	-	-	150
UGB	Harrison Av	9	13	13th St SW to 13th/14th MB	60	G	-	-	2	NP25	L	E&W	-	-	-	-	A	120
UGB	Harrison Av	10	13	13th/14th MB to 15th St SW	60	N	-	-	2	-	L	-	-	-	-	-	A	410
UGB	Harrison Av	11	13	15th St SW to 22nd St SW	60	-	-	-	-	-	-	-	-	-	-	-	-	1900
UGB	Harrison Av	12	13	22nd St SW to 24th St SW	60	N	-	-	2	-	L	-	-	-	-	-	A	550
UGB	Harrison Av	13	13	24th St SW to end (Carter St SW)	60	-	-	-	-	-	-	-	-	-	-	-	-	520
C	Harrison Street?	1	1	Franklin/Douglas MB to Bandon Av	{vac}?	-	-	-	-	-	-	-	-	-	-	-	-	775
C	Helena St	1	1	all	60	-	-	-	-	-	-	-	-	-	-	-	-	530
C	Indiana Av	1	3	9th St SE to 9/10 MB	60	-	-	-	-	-	-	-	-	-	-	-	-	200
C	Indiana Av	2	3	9/10 MB to 11th St SE	60	G	-	-	2	NP25	L	-	-	-	-	-	A	430
C	Indiana Av	3	3	11th St SE to S end	50/R50	A	2.5	20 N 1/2, 24 S 1/2, 40' R	2	NP25	L	45%W, E	-	-	-	-	A	510
C	Irvington Av	1	1	N Breakwater Add to end (S of 5th SW)	60	-	-	-	-	-	-	-	-	-	-	-	-	970
C	Jackson Av	1	8	N Breakwater Add to S Breakwater Add	60	-	-	-	-	-	-	-	-	-	-	-	-	1060
C	Jackson Av	2	8	Ocean Dr to 7th St SW	60' (alignment)	A	2.5	36	2	NP25	L	E&W	-	-	-	-	A	310
C	Jackson Av	3	8	7th St SW to 8th St SW	60'	A	2.5	36	2	NP25	L	E&W	-	-	-	-	A	290
C	Jackson Av	4	8	8th St SW to 11th St SW	60	A	2.0	36	2	NP25	L	E&W	-	-	-	-	A	1030
C	Jackson Av	5	8	11th St SW to 13th St SW	60	G	-	-	2	NP25	L	-	-	-	-	-	A	680
UGB	Jackson Av	6	8	13th St SW to 15th St SW	55?	G	-	-	2	-	L	-	-	-	-	-	A	530
UGB	Jackson Av	7	8	15th St SW to 17th St SW	55?	G	-	-	2	-	L	-	-	-	-	-	A	540
UGB	Jackson Av	8	8	17th St SW to end (22nd St SW)	60	-	-	-	-	-	-	-	-	-	-	-	-	1380
C	Jennie St	1	2	Beach Loop Dr to alley	15	G	-	-	2	NP25	L	-	-	-	-	-	A	110
C	Jennie St	2	2	alley to Clay St	15	-	-	-	-	-	-	-	-	-	-	-	-	110
C	Jetty Rd	1	2	Lincoln Av to Garfield Av	60	A	4.0	21 to paint, 22-23 EOP	2	25	L	-	-	-	-	-	A	1880
C	Jetty Rd	2	2	Garfield Av to Edison Av	60-100	A	4.0	21 to paint, 22-23 EOP	2	25	L	-	-	-	-	-	A	610
C	Jetty Rd curve	1	1	Madison Av to Lincoln Av	60	A	2.5	21 to paint, 22-23 EOP	2	25	L	-	-	-	-	-	A	450
C	June Av	1	8	4th St NE to 2nd St NE	55	G	-	-	2	NP25	L	-	-	-	-	-	A	480
C	June Av	2	8	2nd St NE to 1st St NE	60	A	3.9	239	2	NP25	L	-	-	-	-	-	A	290
C	June Av	3	8	1st St NE to US101	60	A	2.5	20	2	NP25	L	-	-	-	-	-	A	800
C	June Av	4	8	US 101 to 3rd St SE	60	G	-	-	2	NP25	L	-	-	-	-	-	A	130
C	June Av	5	8	3rd St SE to S end	29-30	G	-	-	2	NP25	L	-	-	-	-	-	A	650
C	June Av	6	8	9th St SE to 10th St SE	60	-	-	-	-	-	-	-	-	-	-	-	-	280
C	June Av	7	8	10th St SE to 11th St SE	60	G	-	-	2	NP25	L	-	-	-	-	-	A	350
C	June Av	8	8	11th St SE to S end	50/R50	A	2.9	24, 40' R	2	NP25	L	E&W	-	-	-	-	A	520
UGB	Juno St	1	3	W end to Gould Av	60	G	-	-	2	-	L	-	-	-	-	-	A	280
UGB	Juno St	2	3	Gould Av to Rohrer Av	60	-	-	-	-	-	-	-	-	-	-	-	-	270
UGB	Juno St	3	3	Rohrer Av to Bradley Lake Mkt Rd	60	-	-	-	-	-	-	-	-	-	-	-	-	540
UGB	Jupiter St	1	2	W end to Gould Av	60	G	-	-	2	-	L	-	-	-	-	-	A	280
UGB	Jupiter St	2	2	Gould Av to Bradley Lake Mkt Rd	60	-	-	-	-	-	-	-	-	-	-	-	-	820
C	Kensington Av	1	2	N Breakwater Add to S plat	60	-	-	-	-	-	-	-	-	-	-	-	-	1110
C	Kensington Av	2	2	7th St SW to S of 12th St SW	60	-	-	-	-	-	-	-	-	-	-	-	-	1770

Area	Street Name	Segt Total	Street Segment or Intersection	ROW Width	Surf/Condit	Pavement Width	Lanes	Posted Sp/Function	Curb, Gutter	Sidewalk Local	Sidewalk Separatd	Bike Lane Location	On-Street Parking	Segment
C	Kean St	1	1 Cody Av to Angel Av	60	-	-	-	-	-	-	-	-	-	1235
C	Kiamah Av	1	3/4SNE MB to 4th St NE	50	G	-	2	NP25	L	-	-	-	-	1700
C	Kiamah Av	2	3/2nd St NE to 4th St NE	50	G	-	2	NP25	L	-	-	-	-	480
C	Kiamah Av	3	3/3rd St SE to S end (-5th SE)	60	G	-	2	NP25	L	-	-	-	-	510
C	Lexington Av	1	4/4SNE MB to 4th St NE	50	G	-	2	NP25	L	-	-	-	-	140
C	Lexington Av	2	4/2nd St NE to 4th St NE	50	A	20-21	2	NP25	L	-	-	-	-	510
C	Lexington Av	3	4/3rd St SE to S end (-5th SE)	50?	G	-	2	NP25	L	-	-	-	-	510
C	Lexington Av	4	4/9th St SE to 11th St SE	60	-	-	-	-	-	-	-	-	-	670
C	Lincoln Av	1	7/N Breakwater Add to Jelly Rd curve	60	-	-	-	-	-	-	-	-	-	240
C	Lincoln Av	2	7/Jelly Rd curve to Jelly Rd (5th)	60	A	25	2	NP25	L	-	-	-	-	520
C	Lincoln Av	3	7/Jelly Rd (5th) to 6th St SW	60	G	-	2	NP25	L	-	-	-	-	250
C	Lincoln Av	4	7/6th St SW to S Breakwater Add	60	-	-	-	-	-	-	-	-	-	60
C	Lincoln Av	5	7/7th St SW to 8th St SW	50	C	19 27	2	NP25	L	E&W	W	NO	-	320
C	Lincoln Av	6	7/8th St SW to 9th St SW	60	G	-	2	15	L	-	-	-	-	335
C	Lincoln Av	7	7/9th St SW to 10/15W MB	60	G	(City property)	2	15	L	-	-	-	-	440
C	Madison Av	1	6/N Breakwater Add to 2nd St SW	60	-	-	-	-	-	-	-	-	-	100
C	Madison Av	2	6/2nd St SW to 3rd St SW	60	G	(vac)	-	-	-	-	-	-	-	-
C	Madison Av	3	6/3rd St SW to S Breakwater Add (S of 6th SW)	60	G	-	2	NP25	L	-	-	-	-	970
C	Madison Av	4	6/S Breakwater Add to N West Bandon Add	20	G	-	2	NP25	L	-	-	-	-	400
C	Madison Av	5	6/N West Bandon Add to 7th St SW	60	G	-	2	NP25	L	-	-	-	-	250
C	Madison Av	6	6/7th St SW to S West Bandon Add (S of 12th)	60	G	-	2	NP25	L	-	-	-	-	1770
UGB	Mars St	1	3/W end to Gould Av	60	-	-	-	-	-	-	-	-	-	250
UGB	Mars St	2	3/Gould Av to Smith Av	60	G	-	2	-	L	-	-	-	-	540
UGB	Mars St	3	3/Smith Av to Bradley Lake Mkt Rd	60	G	-	2	-	L	-	-	-	-	270
C	Mary St	1	1/all	60	-	-	-	-	-	-	-	-	-	890
C	Mary St	1	1/all	60	N	-	-	-	-	-	-	-	-	890
C	Meander St	1	1/Cody Av to Angel Av	30	-	-	-	-	-	-	-	-	-	1355
C	Michigan Av	1	11/Riverside Dr to Austin Av	30	-	-	-	-	-	-	-	-	-	270
C	Michigan Av	2	11/Austin Av to Fairy Av	30	G	-	2	NP25	L	-	-	-	-	490
C	Michigan Av	3	11/Fairy Av to Cody Av	30	-	-	-	-	-	-	-	-	-	460
C	Michigan Av	4	11/Cody Av to 10/11 MB	55	-	-	-	-	-	-	-	-	-	370
C	Michigan Av	5	11/10/11 MB to 4/5 MB	50	G	-	2	NP25	L	-	-	-	-	1680
C	Michigan Av	6	11/4/5 MB to 4th St NE	30-50?	A	29 20	2	NP25	L	-	-	-	-	100
C	Michigan Av	7	11/4th St NE to 2nd St NE	40-50?	C	25 36	2	NP25	L	E&W	75%E,25%W	NO	-	480
C	Michigan Av	8	11/2nd St NE to US 101	60	C	25 36	2	NP25	L	E&W	75%E,25%W	NO	-	1080
C	Michigan Av	9	11/US 101 to 4th St SE	60	G	-	2	NP25	L	-	-	-	-	400
C	Michigan Av	10	11/4th St SE to 12/12 MB	60	-	-	-	-	-	-	-	-	-	2020
C	Michigan Av	11	11/12/1201 MB to 13th St SE	30	-	-	-	-	-	-	-	-	-	310
C	Morse St	1	1/Cody Av to Angel Av	60	-	-	-	-	-	-	-	-	-	500
C	Natalie Way	1	1/all	50/R50	A	25 24	2	NP25	L	-	-	-	-	1000
C	Newport Av	1	1/Ocean Dr to 7th St SW	60	-	-	-	-	-	-	-	-	-	190

Table 3-3 Street Characteristics

Table 3-3 Street Characteristics

3/1/98

Area	Street Name	Segn	Total	Street Segment or Intersection	ROW Width	Surfac	Condit	Pavement Width	Lanes	Posted Sp	Function	Curb	Gutter	Sidewalk Locat	Sidewalk Separat	Bike Lane Location	On-Street Parking	Segment
C	Newport Av	2	7	7th to 8th St SW	60	-	-	-	-	-	-	-	-	-	-	-	-	320
C	Newport Av	3	7	8th St SW to 10th St SW	60	G	-	-	2	NP25	L	-	-	-	-	-	A	660
C	Newport Av	4	7	10th St SW to 10/11 MB	60	-	-	-	-	-	-	-	-	-	-	-	-	150
C	Newport Av	5	7	10/11 MB to 11th St SW	60	G	-	-	2	NP25	L	-	-	-	-	-	A	160
C	Newport Av	6	7	11th St SW to end of block	60	G	-	-	2	NP25	L	-	-	-	-	-	A	450
C	Newport Av	7	7	end of block to end of cul-de-sac	50/R50	C	2.0	28	2	NP25	L	2S	-	-	-	-	A	300
C	North Av	1	5	N end (vac 11th St NE) to 6th St NE	60	-	-	-	-	-	-	-	-	-	-	-	A	1240
C	North Av	2	5	6th St NE to 2nd St NE	60	G	-	-	2	25	L	-	-	-	-	-	A	1040
C	North Av	3	5	2nd St NE to Hwy 42S	60	A	2.5	226	2	25	L	-	-	-	-	-	A	1040
C	North Av	4	5	Hwy 42S to 3rd St SE	60	G	-	-	2	NP25	L	-	-	-	-	-	A	120
C	North Av	5	5	3rd St SE to 13th St SE	60	-	-	-	-	-	-	-	-	-	-	-	-	2600
C	Ocean Dr (E)	1	5	7th St SW to Jackson Av	-60-100	A	4.9	19	2	NP25	C-Maj	-	-	-	-	-	(OCBR)	670
C	Ocean Dr (E)	2	5	Jackson Av to E of Jackson	60+/-	A	4.9	30	2	NP25	C-Maj	2S	N	YES	-	(OCBR)	A	130
C	Ocean Dr (E)	3	5	4th St SW to E of Jackson Av	60+/-	C	4.5	30	2	NP25	C-Maj	2S	N, 50%S	N-YES, S-YES	-	(OCBR)	A	750
C	Ocean Dr (W)	4	5	Madison Av to 7th St SW	20-60?	-	-	-	-	-	-	-	-	-	-	-	-	630
C	Ocean Dr (W)	5	5	7th St SW to N of 9th St SW	60	-	-	-	-	-	-	-	-	-	-	-	-	780
C	Ohio Av	1	6	NCL to Fahy Av	40	-	-	-	-	-	-	-	-	-	-	-	-	815
C	Ohio Av	2	6	Fahy Av to vac Cody Av	40	G	-	-	2	NP25	L	-	-	-	-	-	A	500
C	Ohio Av	3	6	vac Cody Av to 2nd St NE	60	G	-	-	2	NP25&25	L	-	-	-	-	-	A	2590
C	Ohio Av	4	6	2nd St NE to Hwy 42S	40?	-	-	-	-	-	-	-	-	-	-	-	-	1080
C	Ohio Av	5	6	Hwy 42S to 11th St SE	60?	G	-	-	2	NP25	L	-	-	-	-	-	A	2100
C	Ohio Av	6	6	11th St SE to 13th St SE	30	-	-	-	-	-	-	-	-	-	-	-	-	640
C	Oregon Av	1	6	within Bandon Av ROW (1st SW to 1/2 MB)	60	A/C	5.0	17-20	2	NP25	L	50%W, 10%E	-	-	-	-	A	120
C	Oregon Av	2	6	1st/2nd MB to 2nd SW	60+	-	-	-	-	-	-	-	-	-	-	-	-	90
C	Oregon Av	3	6	Bandon Av ROW to 3rd St SW	60+	A	4.5	16-20	2	NP25	L	25%E	25%E	NO	-	-	A	450
C	Oregon Av	4	6	3rd St SW to 4th St SW	60-100	A	3.5	16-20	2	NP25	L	-	-	-	-	-	A	280
C	Oregon Av	5	6	4th St SW to 8th St SW	60	A	2.5	23-24	2	NP25	C-Min	-	W, 90%E	YES	-	-	A	520
C	Oregon Av	6	6	8th St SW to US101	60+	A	2.0	~24-40	2	NP25	C-Min	-	-	-	-	-	A	110
C	Oregon Av (E ROW)	1	1	2nd St SW to 3rd St SW	60	-	-	-	-	-	-	-	-	-	-	-	-	220
C	Pelican Point Rd	1	1	(W of Beach Loop Dr)	50 (priv. easement)	-	-	-	-	-	-	-	-	-	-	-	-	-
C	Polaris St	1	2	Beach Loop Dr to W MB	50	G	-	-	2	NP25	L	-	-	-	-	-	A	250
C	Polaris St	2	2	W MB to W end	50/R50	C	2.0	20	2	NP25	L	2S	N side	NO	-	-	A	150
C	Portland Av	1	5	Ocean Dr to 9th St SW	60* (align)	-	-	-	-	-	-	-	-	-	-	-	-	350
C	Portland Av	2	5	9th St SW to 10/11 MB	60	-	-	-	-	-	-	-	-	-	-	-	-	480
C	Portland Av	3	5	10/11 MB to 11th St SW	60	A	2.0	26	2	NP25	L	E&W	W	NO	-	-	A	160
C	Portland Av	4	5	11th St SW to S MB	60	A	1.5	26	2	NP25	L	E&W	50%E	NO	-	-	A	230
C	Portland Av	5	5	S MB to end	60	-	-	-	-	-	-	-	-	-	-	-	-	120
C	Queen Ann Sq	1	1	all	20	G	-	-	2	NP25	L	-	-	-	-	-	A	470
C	Riverside Dr	1	2	NCL to Caroline St	60 typ	A	1.9	22-23	2	NP25/25	C-Maj	-	-	-	-	-	(OCBR)	5160
C	Riverside Dr	2	2	Caroline St to Fillmore Av	60 typ	A	2.0	22 to paint, 26 EOP	2	NP25	C-Maj	50%E, 50%W	50%E, 50%W	NO	-	(OCBR)	A	300
UGB	Rohrer Av	1	2	N of Venus to Mars	60	G	-	-	2	-	L	-	-	-	-	-	A	980

Table 3-3 Street Characteristics

3/1/98

Area	Street Name	Segn	Total	Street Segment or Intersection	ROW Width	Surfac	Condit	Pavement Width	Lanes	Posted Sp	Func	Curb Gutter	Sidewalk Locat	Sidewalk Separat	Bike Lane Location	On-Street Parking	Segment
UGB	Rohrer Av	2	2	Mars to S of Saturn	60	-	-	-	-	-	-	-	-	-	-	-	1340
UGB	Rosa Rd	1	1	Fillmore to S UGB	60	A	3+	24	-	-	L	-	-	-	-	A	350
C	Sandpiper Ln	1	1	all	40/R40	G	-	-	2	NP25	L	-	-	-	-	A	160
UGB	Saturn St	1	2	W end to Gould Av	60	-	-	-	-	-	-	-	-	-	-	-	290
UGB	Saturn St	2	2	Gould Av to Bradley Lake Mkt Rd	60	G	-	-	2	-	L	-	-	-	-	A	770
C	Seabird Dr	1	2	Beach Loop Dr to 1 block E Beach Loop	82+/-	A	3.0	?	2	45	L	-	-	-	-	A	200
C	Seabird Dr	2	2	1 block E Beach Loop to US 101	100	A	2.5	24'6	2	45	L	-	-	-	-	A	3800
C	Seabird Ln	1	1	all	40/R40	G	-	-	-	NP25	L	-	-	-	-	A	120
C	Seaview Ct	1	1	N end of cul-de-sac to 7th St SW	30/R30	G	-	-	-	-	L	-	-	-	-	A	260
C	Sherman St	1	1	Cody Av to Angell Av	60	-	-	-	-	-	-	-	-	-	-	-	1235
UGB	Smith Av	1	2	N of Venus to Venus	60	G	-	-	2	-	L	-	-	-	-	A	300
UGB	Smith Av	2	2	Venus to S of Saturn	60	-	-	-	-	-	-	-	-	-	-	-	2150
C	Strawberry Dr	1	2	W of Beach Loop Dr	50/R50	C	2.9	28	2	NP25	L	2S	-	-	-	A	200
C	Strawberry Dr	2	2	E of Beach Loop Dr	50+R50	C	3.9	28	2	NP25	L	2S	-	-	-	A	430
C	Taft St	1	1	Cody Av to Angell Av	60	-	-	-	-	-	-	-	-	-	-	-	1235
C	Tee Ct	1	1	Golf Links Rd to S end	50/R50 (priv. easeme)	A	2.5	20	2	NP25	L	2S	-	-	-	A	210
C	Timmons Av	1	1	Water St to Meander St	60	-	-	-	-	-	-	-	-	-	-	-	1080
C	Tish-A-Tang Rd	1	1	all	40/R40	G	-	-	2	NP25	L	-	-	-	-	A	150
C	Unnamed alley #1	1	2	Jennie St to Broadway St	22	G	-	-	2	NP25	L	-	-	-	-	A	220
C	Unnamed alley #1	2	2	Broadway St to S end	12	-	-	-	-	-	-	-	-	-	-	A	200
UGB	Venus St	1	3	W end to Rohrer Av	60	-	-	-	-	-	-	-	-	-	-	-	200
UGB	Venus St	2	3	Rohrer Av to Smith Av	60	G	-	-	2	-	L	-	-	-	-	A	270
UGB	Venus St	3	3	Smith Av to Bradley Lake Mkt Rd	60	-	-	-	-	-	-	-	-	-	-	-	270
UGB	Vesta St	1	2	W end to Rohrer Av	60	G	-	-	2	-	L	-	-	-	-	A	350
UGB	Vesta St	2	2	Rohrer Av to Bradley Lake Mkt Rd	60	G	-	-	2	-	L	-	-	-	-	A	540
UGB	Vine St SE	1	4	US 101 to Delaware/Fillmore MB	60+	-	-	-	-	-	-	-	-	-	-	-	1180
UGB	Vine St SE	2	4	Delaware/Fillmore MB to Fillmore	60+	G	-	-	2	-	-	-	-	-	-	A	960
UGB	Vine St SE	3	4	Fillmore to Rosa	60+	A	5.0	-	2	-	L	-	-	-	-	A	200
UGB	Vine St SE	4	4	Rosa to Harlem	60+	-	-	-	-	-	-	-	-	-	-	-	830
C	Water St	1	1	Cody Av to Angell Av	60	-	-	-	-	-	-	-	-	-	-	-	1390
C	Wavecrest Ln	1	1	all	40/R40	G	-	-	2	NP25	L	-	-	-	-	A	170
C	Whale Watch Way	1	1	all	40 (priv. easement)	C	2.0	24	2	NP25	L	2S	-	-	-	A	470

GREYHOUND LINES

PORTLAND—SAN FRANCISCO

READ DOWN		SCHEDULE NUMBER		READ UP	
1483	1489			1482	1490
		Folder No. 12	607	6-24-97	
		FREQUENCY			
5 50	1 10	Lv Seattle, WA	(601) GL	Ar 2 40	11 15
9 05	5 10	Ar Portland, OR		Lv 11 15	7 00
9 25	9 00	Lv ▲ PORTLAND, OR ⊙		Ar 9 15	6 15
9 50	9 25	▲Tigard (LB)		8 45	5 50
10 20	9 55	▲Newberg (LB)		8 15	5 25
f	f	Dundee		f	f
f	f	Lafayette		f	f
10 50	10 25	▲McMinnville		7 45	4 55
f	f	Sheridan		f	f
11 20	10 55	Willamina		7 15	4 15
f	f	Grand Ronde		f	f
f	f	Otis Junction		f	f
12 05	11 40	Ar ▲ Lincoln City		Lv 6 20	3 40
12 20	12 15	Lv ▲ Lincoln City		Ar × 5 50	× 3 25
f	f	Gleneden Beach		↑	f
f	f	Depoe Bay		↑	f
1 05	1 00	Ar ▲ Newport ⊙ (LB)		Lv 5 05	2 40
1 10	1 05	Lv ▲ Newport ⊙ (LB)		Ar 5 00	2 35
f	f	Seal Rock P.O.		↑	f
1 35	1 25	▲Waldport (LB)		4 35	2 10
↓	1 40	Yachats		↑	1 55
f	↓	Heceta Beach, OR		↑	↑
2 25	2 15	▲Florence (LB)		3 40	1 15
f	f	Gardiner		↑	f
2 55	2 55	▲Reedsport (LB)		3 10	12 40
f	f	Lakeside Junction		↑	f
3 35	3 35	North Bend		2 30	12 10
× 3 40	× 3 40	Ar ▲ Coos Bay (LB)		Lv 2 25	12 05
3 55	3 55	Lv ▲ Coos Bay (LB)		Ar × 2 10	× 11 30
4 25	4 25	▲Bandon		↑	11 00
f	f	Langlois		↑	↑
5 05	5 05	Ar Port Orford		Lv 1 00	10 20
5 10	5 15	Lv Port Orford		Ar 12 55	10 10
5 50	5 55	▲Gold Beach (LB)		12 15	9 40
f	↑	Pistol River Jct.		↑	f
6 30	6 35	▲Brookings, OR (LB)		11 35	8 55
× 7 10	× 7 20	Ar ▲ Crescent City, CA (LB)		Lv 10 55	8 10
7 55	8 00	Lv ▲ Crescent City, CA (LB)		Ar 10 40	× 7 40
f	↑	Redwood Hostel		↑	↑
8 25	8 30	Klamath		10 05	7 10
8 50	8 55	⊙ Orick		9 40	6 45
9 15	9 20	Trinidad		9 15	6 20
9 35	9 40	Arcata		8 55	6 00
9 55	× 10 00	Ar ▲ Eureka		Lv 8 35	5 40
10 05	10 20	Lv ▲ Eureka (LB)		Ar 8 25	5 30
15"	15"	Fuel Stop		15"	15"
10 45	10 55	▲Fortuna (LB)		7 45	4 50
11 00	11 10	Rio Dell		7 30	4 35
11 50	12 01	▲Garberville (LB)		6 30	3 45
12 25	12 35	Legget (Peg House/Eel River Hotel)		5 55	3 10
1 00	1 10	Laytonville		5 20	2 35
1 30	1 40	▲Willits (LB)		4 50	2 05
30"	15"	Rest stop (En Route) ⊙		30"	15"
2 30	2 25	Ar Ukiah		Lv 3 40	1 15
2 40	2 30	Lv Ukiah		Ar 3 35	1 10
2 55	2 45	Ar Hopland		Lv 3 25	12 55
3 15	3 05	Cloverdale		3 05	12 35
3 30	3 20	Geyserville		2 50	12 15
3 45	3 35	Healdsburg		2 35	12 01
4 05	3 55	Ar ▲ Santa Rosa (LB)		Lv 2 20	11 45
4 15	4 05	Lv ▲ Santa Rosa (LB)		Ar 2 15	11 40
4 40	4 30	Petaluma		1 50	11 15
↓	↓	Novato		↑	↑
5 05	5 00	▲San Rafael		1 25	10 50
5 40	5 35	Ar ▲ Oakland ⊙		Lv 12 45	10 15
5 50	5 45	Lv ▲ Oakland ⊙		Ar 12 35	10 05
6 20	6 05	Ar ▲ SAN FRANCISCO, CA ⊙	GL	Lv 12 15	9 45

⊙ — McDonak's in Willits.

Z607-0401ms

SCHEDULES

Schedules printed in this timetable are subject to change.
O.D.O.T. will not be responsible for errors in timetables.

A-2. AIRPORT FACILITIES

**TABLE 33
FACILITY AND CAPACITY INFORMATION OF MAJOR AIRPORTS**

Area	Facility	Owner	No. of Runways/Description	Comments
Ilwaco	Ilwaco Airport	Port of Ilwaco	one 2,000 ft. asphalt runway	Runway is lighted; airplane parking provided.
Astoria	Portland International	Port of Portland	11,011 ft. by 150 ft. asphalt; 8,004 ft. by 150 ft. asphalt; 7,000 ft. by 150 ft. asphalt	3,000 acres; international airport with 15 major passenger carriers and cargo service; located 95 miles east of Astoria.
Astoria	Astoria Regional	Port of Astoria	two 5,796 ft. by 150 ft. asphalt runways; two 4,990 ft. by 100 ft. asphalt runways; primary runway taxiway 2,700 ft. by 50 ft. partial	NAVAIDs VOR, GPS, ILS, LOC, REIL, ALS, PAPI VASI, beacon, wind sock; transient/commuter aircraft apron is 50,550 square yards; fuel storage is 12,000 gallons jet gas, 12,000 gallons avgas; terminal access road is two lanes, pave; auto parking is 50 spaces, paved.
Tillamook	Port of Tillamook Airport	Port of Tillamook	4,990 ft. by 100 ft. asphalt; 2,787 ft. by 75 ft. asphalt	315 acres; medium intensity lights on larger runway; NAVAIDs NDB, REIL.
Tillamook	Manzanita Air Strip	State	2,350 ft. by 60 ft. gravel	18 acres.
Newport	Siletz Bay State	State	3,000 ft. by 60 ft. asphalt	75 acres; located at Gleneden Beach.
Eugene	Mahlon Sweet Field Airport	City of Eugene	6,202 ft. by 150 ft. primary runway with full parallel taxiway; 5,221 ft. by 150 ft. secondary runway.	Located approximately 60 miles east of western Lane County; services the entire southern Oregon region with 3 major passenger carriers and cargo service.
Newport/ Toledo	Newport Municipal	City of Newport	5,398 ft. by 150 ft. asphalt primary with 3,000 ft. partial parallel taxiway; secondary 3,000 ft. by 75 ft. asphalt runway.	Located at 161 ft. The airport does not have regularly scheduled commercial air services. There is precision approach instrumentation; medium lighting on larger runway; NAVAIDs VOR/DME, VOR, GPS, NDB, ILS, LOC, REIL, ALS, PAPI VASI.
Western Lane County	City of Florence Municipal Airport	City of Florence	1 asphalt runway, 3,000 ft. by 60 ft. with a full parallel taxiway 20 ft. wide.	Medium lights on runway threshold; fuel and mechanic available; 20-50 takeoffs and landings per day; all weather charter service; 14 based aircraft; NAVAIDs PAPI VASI.
Reedsport	None			
Coos Bay	North Bend Municipal	City of North Bend	5,330 ft. by 150 ft. asphalt primary runway with full parallel taxiway; 5,045 ft. by 150 ft. secondary asphalt runway; 2,300 ft. by 150 ft. asphalt runway.	Located at elevation 14 ft. msl. The airport has commuter airline service. Precision approach instrument capability; high intensity lighting on 5,330 ft. runway, medium intensity lighting on 5,045 ft. runway; NAVAIDs GPS, ILS, LOC, REIL, ALS, PAPI VASI.
Bandon	Bandon State	State	3,600 ft. by 60 ft. asphalt	62 acres; medium intensity lights; NAVAIDs REIL, PAPI VASI.
Gold Beach	Gold Beach Municipal	Port of Gold Beach	3,200 ft. by 75 ft. asphalt	48 acres; medium intensity lights.
Brookings	Brookings State	State	2,600 ft. by 50 ft. asphalt	90 acres; low intensity lights.
Brookings	Medford/Jackson County	Jackson County	one 3,006 ft. by 150 ft. and one 6,700 ft. by 150 ft. asphalt	750 acres; medium and high intensity lights.
St. Helens	Scappoose Industrial Airpark	Port of St. Helens	one 3,999 ft. by 150 ft. asphalt	Medium intensity lights; NAVAIDs VOR DME, PAPI/VASI.

Most Recent Estimates of Operations at Oregon Non-towered Airports

Airport	1992 to 1993	1993 to 1994	1994 - 1995	Corrected Estimate	Last Count
Corvallis Municipal			78,502	78,502	94
Aurora State	54,098		53,859	53,859	94
Astoria Regional	7,300			48,320	92
Creswell Municipal			38,561	38,561	94
McMinnville Municipal			37,663	37,663	94
North Bend Municipal				34,784	0
Scappoose Industrial				34,362	92
Bend Municipal	25,046	30,727	31,946	31,946	94
Independence State		25,053		25,053	93
Portland Mulino	17,392	22,949	21,470	21,470	94
Albany Municipal	12,479	16,054	21,407	21,407	94
Grants Pass	8,540			20,000	92
Sunriver		18,936		18,936	93
Roseburg Municipal			16,521	16,521	94
Starks Twin Oaks	14,738			14,738	92
Newport Municipal	6,288	10,865	13,582	13,582	94
Ashland	13,110			13,110	92
Cottage Grove State	11,796			11,796	92
Bandon State				11,177	94
LaGrande/Union County			10,880	10,880	94
Ontario Municipal		10,190		10,190	93
Baker Municipal			9,926	9,926	94
Madras City-County			9,396	9,396	94
Sportsman Airpark		9,322		9,322	93
Hermiston Municipal			9,069	9,069	94
Lebanon State			8,887	8,887	94
The Dalles Municipal		8,247		8,247	93
Florence Municipal			6,034	6,034	94
John Day State	2,212			6,000	92
Hood River	5,918			5,918	92
Gold Beach Municipal				5,358	94
Lenhardt Airpark		5,161		5,161	93
Brookings State				5,000	84
Enterprise		4,947		4,947	93
Tillamook	6,552			4,500	92
Burns Municipal	3,788			4,494	92
Sandy River (Sandy)				4,100	0
Prineville		4,082		4,082	93
Malin				4,000	0
Siletz Bay State				3,513	86
Valley View (Estacada)				2,962	92
Sisters Eagle Air		2,877		2,877	93
Chehalam Airpark				2,584	85
Lexington-Morrow Coun	2,527			2,527	92
Seaside Municipal	3,674			2,500	92
Daniels Field		2,358		2,358	93
Joseph State		3,007		1,980	93
Pacific City State	1,968			1,968	92

Airport	1992 to 1993	1993 to 1994	1994 - 1995	Corrected Estimate	Last Count
McDermitt State				1,734	87
Country Squire	1,700			1,700	92
Miller Memorial (Vale)		1,534		1,534	93
Wasco State		1,459		1,459	93
Oakridge State				1,377	89
Myrtle Creek Municipal			1,335	1,335	94
Chiloquin State				1,300	89
Vernonia				1,300	87
Condon State	1,280			1,280	92
Lakeview	1,256			1,256	92
Nehalem Bay	1,230			1,230	92
Wakonda Beach State		1,099		1,188	93
Felt Field			1,095	1,095	94
Lakeside State				1,039	93
Illinois Valley	890			1,000	92
Boardman				890	86
Arlington				861	86
Skyport				846	0
Lake Billy Chinook State			835	835	94
Monument				800	0
Cape Blanco State				710	84
Toledo State		393		696	93
Beaver Marsh State				664	81
Christmas Valley	600			630	92
Davis				600	0
Lake Woahink				600	0
Sheridan			533	533	94
Powers State				471	0
Crescent Lake				450	0
Pinehurst State				400	89
McKenzie Bridge State				393	89
Owyhee State				348	0
Cascade Locks State	276			300	92
Memaloose USFS				300	0
Paisley State				276	86
Prospect State	183			271	92
Alkali Lake State				183	0
Rome State				100	0
Santiam Junction State				100	0
Toketee State				100	0
Silver Lake USFS				75	0

Corrected Estimate = where no data or not enough data was available from sampling counts to calculate accurate estimate.

A-3. PORT FACILITIES

*Navigation and Other Activities On
Oregon Coastal and Columbia River
Waterways and Harbors In 1995*

Final Edition

prepared by

*The Research Group
Corvallis, Oregon*

prepared for

*Oregon Coastal Zone Management Association
Newport, Oregon*

October 1996

PREFACE

This report was prepared by the Oregon Coastal Zone Management Association, Inc. (OCZMA). Funding was provided by the coastal ports in Oregon; the Port of Ilwaco, Washington, and the Oregon Economic Development Department. The geographic coverage of the report is for Oregon waterways and harbors having navigation facilities, except for the area within the Port of Portland district boundaries. The Port of Portland and other organizations in the three county region already offer many publications describing activities and facilities in this area. The report has been prepared for the Oregon Coast jurisdictions since 1988. The Columbia River jurisdictions upriver from the Port of Astoria were added for data year 1995.

OCZMA is a voluntary association of forty local governments - counties, cities, ports, and soil and water conservation districts. Recognizing the critical importance of maintaining waterways for navigation and for other uses, the Association established and staffed a Coastal Ports Maintenance Dredging Committee. The Committee requested that current information about waterborne commerce and other activities be made available to better define the need for and benefits from jetty repair, maintenance dredging, and other waterway improvements. This report is the response to the Committee's request and is provided as either an advance or final edition as noted on the title page.

The Committee membership is all coastal ports having federal authorized projects.

<u>Port</u>	<u>Designated Representative</u>	<u>Alternate</u>
Port of Ilwaco, Washington	Bob Robinson	Robert M. "Skip" Wilson
City of Warrenton	Bill Robinson	-
Port of Astoria	Robert Filori	Glenn Taggart
Port of Nehalem	Charles Collin	Stan Jud
Port of Garibaldi	Doris Sheldon	Don Bacon, Robert Vanderhoef
Port of Tillamook Bay	Ken Bell	-
City of Depoe Bay	Wally Hall	Don Christensen
Port of Newport	Steve Felkins	Maureen Miller
Port of Toledo	Penny Mendenhall	-
Port of Alsea	Maggie Rivers	Berton Boyer
Port of Siuslaw	Leonard Van Curler	Jim Rice
Port of Umpqua	Linda Noel	-
Salmon Harbor Management Committee	Jeff Vander Kley	-
Oregon International Port of Coos Bay	Allan Rumbaugh	Mike Gall
Port of Bandon	Alex Linke	Kay Linke
Port of Port Orford	Gayle Paige	-
Port of Gold Beach	Scott Boley	Ron Armstrong
Port of Brookings Harbor	Russ Crabtree	Ed Gray

Ex Officio Members: Oregon Public Ports Association
U.S. Army Corps of Engineers
Ports Division, Oregon Economic Development Department

Port of Bandon

Port Name: *Port of Bandon*

County: *Coos*

Address: *P.O. Box 206*

Phone: *(541) 347-3206*

Bandon, OR 97411

Fax: *same as telephone #, call before sending*

Commissioners: *James Fleck; Hugh McNeil; Ken Messerle; Robert Pierce; Phyllis Stinnett*

Manager: *Alex Linke*

Staff: *4*

Facilities and Services

Airport: <input type="checkbox"/>	Launch Ramp: <input checked="" type="checkbox"/>	Building Leases: <input checked="" type="checkbox"/>
Industrial Park: <input type="checkbox"/>	Launch Hoist: <input checked="" type="checkbox"/>	Clearing/Marking Channels: <input checked="" type="checkbox"/>
Picnic Area: <input checked="" type="checkbox"/>	Wet/Dry Moorage: ¹ <input checked="" type="checkbox"/>	Pay Parking: <input type="checkbox"/>
RV Park/Campground: <input type="checkbox"/>	Land Leases: <input checked="" type="checkbox"/>	Other: <i>Free parking</i>
Shipping Terminal: ¹ <input type="checkbox"/>	Toll Bridges: <input type="checkbox"/>	

¹(These items have additional information as shown below.)

Budget	FY 1993	FY 1994	FY 1995	Indebtedness	FY 1993	FY 1994	FY 1995
Assessed Value (\$000):	543,719	599,867	641,077	GO:	205,000	100,000	100,000
Property Tax Rate:	0.51	0.45	0.45	Revenue:	0	0	0
				Other:	0	0	0
Operating Budget:	281,678	321,738	321,738	LTO/CP/LP:	0	0	0
				Pollution Control:	0	0	0

Population and Area	1993	1994	1995	District Size (square miles):	320
District Population:	14,004	14,048	13,939		
County Population:	62,500	62,800	62,100		

Economic Base	1989	1991	1993	1989	1991	1993
Fishing	8.0%	2.2%	2.2%	Net earnings	58.7%	56.8%
Agriculture	3.2%	3.0%	3.0%	Investment income	19.7%	19.0%
Timber	28.4%	12.9%	12.9%	Transfer payments	21.6%	24.2%
Tourism	7.8%	5.6%	5.6%	Total personal income	974.2	988.8
Other	52.7%	33.6%	33.6%			1,034.5
Net earnings	572.1	561.6	579.2			

(Impacts of selected industries on personal income net earnings; countywide information; income in millions of 1993 real dollars.)

Waterway Dependent Business

	Processors/ Charters	Buyers	Waterfront Retail	Ship Repair	Marine Supply	Marinas	Shipping Terminals
1993	6	1	50	0	3	0	0
1994	6	1	50	0	3	0	0
1995	6	1	50	0	3	0	0

Waterway Related Festivals

- a. *Coquille Indian Tribe Salmon Bake; June; 3,000*
- b. *Blessing of the Fleet; Memorial Day; 500*
- c. *Christmas Boat Parade; Christmas Day weekend; 2,500*

Shipping Terminal Facilities

Name	Owner/Operator	Name	Owner/Operator
Receiving Dock	Port of Bandon		

Shipping Services

Stevedoring <i>(none local)</i>	Pilotage Coos Bay Pilots Association	Tug and Towing <i>(none local)</i> Sause Brothers Ocean Towing Co.
Vessel Repair <i>one available locally for trailed vessels</i>	Environmental Services U.S. Coast Guard 240-9370 Oregon Department of Environmental Quality (800) 452-0311	Special Services <i>(none)</i>

Transportation Links

Highway <i>84 miles to I-5 via ORE 42</i>	Rail <i>None.</i>	Air <i>Bandon State (GA) North Bend Municipal (PR)</i>
--	----------------------	---

Moorage Facilities

Port Owned Slips: 83	Other Ownership: <i>none</i>
----------------------	---------------------------------

Home Port Boats by Type

	Charter	Commercial < 50'	Total Commercial	Recreational < 35'	Total Recreational	Research	Tour Boat	Tug	Barge
1993	3	35	41	50	59	0	1	0	2
1994	2	25	40	50	60	0	1	0	2
1995	2	20	25	60	70	0	0	0	2

Transient Boats by Type

	Charter	Commercial < 50'	Total Commercial	Recreational < 35'	Total Recreational	Research	Tour Boat	Tug	Barge
1993	5	24	29	115	135	0	1	0	0
1994	5	20	25	120	140	1	0	0	0
1995	5	20	25	150	160	1	0	0	0

Recreational Vessel Arrivals and Departures

	Charter Boats	Private Boats	Tour Boats	Total
1993	196	1,795	360	2,351
1994	0	0	250	250
1995	0	43	250	293

Commercial Vessel Arrivals and Departures

	Ocean Cargo Ships/Barges	Waterway Log Rafts	Waterway Barges	Ocean Other	Ocean Commercial Fishing	Total
1993	0	0	0	24	268	292
1994	0	1	0	22	246	269
1995	0	1	0	17	185	203

Waterborne Commerce Tonnage

	Logs and Wood Products	Waterway Log Rafts	Petroleum	Minerals, Aggregate	Other Commodity	Fish and Shellfish	Total
1993	0	300	0	0	0	23	323
1994	0	300	0	0	0	14	314
1995	0	300	0	0	0	14	314

Waterborne Commerce Value (\$000)

	Logs and Wood Products	Waterway Log Rafts	Petroleum	Minerals, Aggregate	Other Commodity	Fish and Shellfish	Total
1993	0	33	0	0	0	42	75
1994	0	50	0	0	0	29	79
1995	0	50	0	0	0	39	89

Coast Guard Activity

	1990	1991	1992	1993	1994	1995
Search and Rescue Cases:	208	207	283	220	218	216
Law Enforcement Boardings:	1,056	na	na	0	na	na

(North Bend Station statistics.)

Vehicle Traffic

	1992	1993	1994	1995
Hwy: ORE 42, Coos Bay-Roseburg Hwy. @ Brockway	ADT: 5,937	5,858	6,096	6,149
US 101, Oregon Coast Hwy. @ Bandon	6,248	6,219	6,444	6,306

Waterways

Estuary Description/Maintained Depth: *Shallow/13' Entrance, 13' Inside*
 Waterways: *Coquille River*
 Entrance: *43° 07' N, 124° 26' W*

COE Authorized Dredging Work

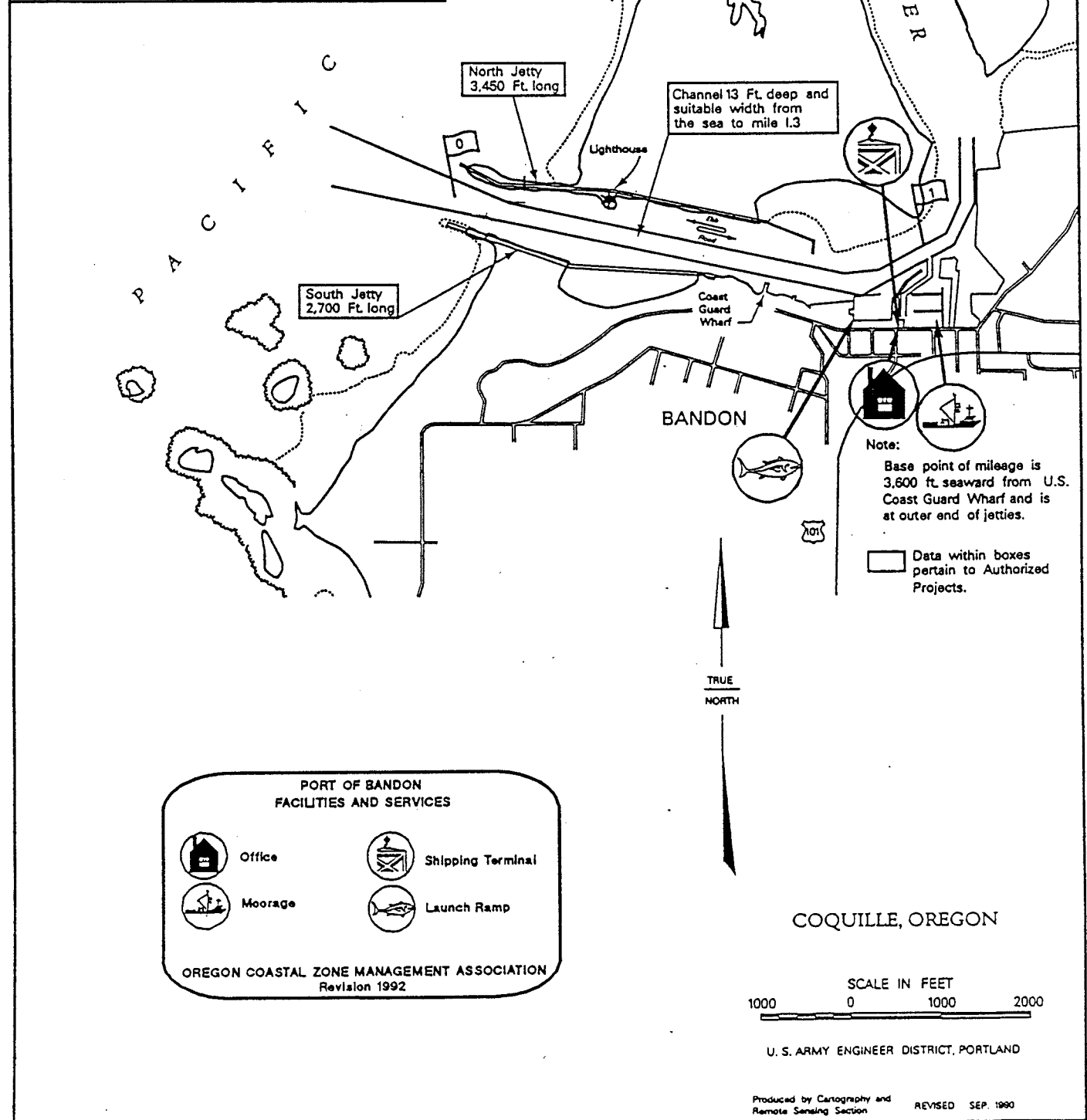
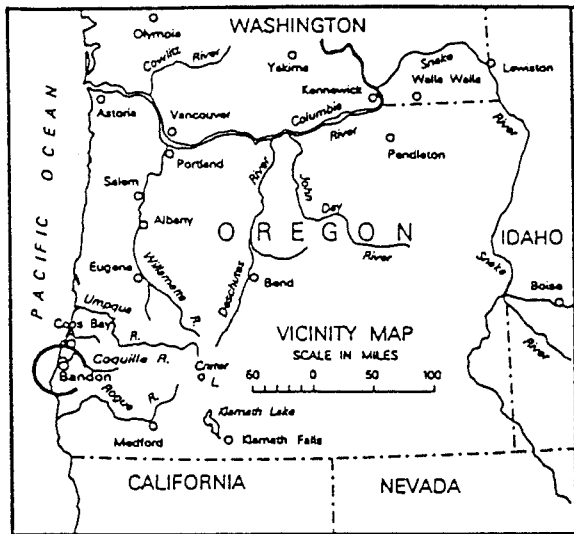
Coquille River - The project consists of two jetties and a channel 13' across the entrance and upstream to approximately mile 1 where there is another channel to the boat basin. The project was first authorized in 1910. Shoaling in the entrance channel is dredged annually by the YAQUINA while intermittent dredging by the SANDWICK is performed in the inside channel. A recent Section 107 study recommended the entrance channel be deepened to 18'. The feasibility study is completed and the Port of Bandon has signed a LCA for the last two years. Appropriations for construction have not been authorized.

Plans, Feasibility Studies, Governing Documents





1. *Business Plan. Richard Hill & Associates. February 1989.*
2. *Business Plan updated. Tom Notos, Dick Hill. 1995.*
3. *State Marine Board Engineering for old basin expansion.*
4. *Planning and Marketing Feasibility Study. Al Benkendorf and Assoc. For development of dock, retail, rentals, etc.*
5. *Planning and Design of Johnson Mill Pond. Stunzner Engineering. 1995.*
6. *Market Analysis for Boardwalk/Highdock. Recon, Inc. 1995.*

Development Projects for 1996

- a. *Continue 26 miles of River maintenance using Port owned self propelled barge*
- b. *Develop feasibility study of new commercial building*
- c. *Construct recreational dock and breakwater*
- d. *Develop architectural plan for boardwalk*
-
-
-
-
-
-




**PORT OF BANDON
 FACILITIES AND SERVICES**

	Office		Shipping Terminal
	Moorage		Launch Ramp

OREGON COASTAL ZONE MANAGEMENT ASSOCIATION
 Revision 1992

Note:
 Base point of mileage is 3,600 ft. seaward from U.S. Coast Guard Wharf and is at outer end of jetties.

 Data within boxes pertain to Authorized Projects.

A-4. TRANSIT DATA

**SPECIAL TRANSPORTATION FORMULA PROGRAM
1997-98 Governing Body Allocations**

Governing Body	July 1, 1997 Population	1997-98 Allocation	Admin. Allocation	Total Available
Baker	16,500	\$19,854	\$0	\$21,854
Benton	76,000	\$91,447	\$0	\$93,447
Columbia	40,100	\$48,250	\$0	\$50,250
Coos	61,700	\$74,240	\$0	\$76,240
Crook	15,900	\$19,132	\$0	\$21,132
Curry	22,000	\$26,472	\$0	\$28,472
Deschutes	98,000	\$117,919	\$0	\$119,919
Douglas	98,600	\$118,642	\$0	\$120,642
Gilliam	1,900	\$15,000	\$0	\$17,000
Harney	7,500	\$15,000	\$0	\$17,000
Jefferson	14,600	\$20,335	\$0	\$22,335
Josephine	72,000	\$86,634	\$0	\$88,634
Lake	7,550	\$15,000	\$0	\$17,000
Lincoln	42,200	\$50,777	\$0	\$52,777
Linn	100,000	\$120,325	\$0	\$122,325
Malheur	28,700	\$34,533	\$0	\$36,533
Morrow	9,000	\$15,000	\$0	\$17,000
Sherman	1,900	\$15,000	\$0	\$17,000
Tillamook	23,800	\$28,637	\$0	\$30,637
Umatilla	65,500	\$78,813	\$0	\$80,813
Union	24,500	\$29,480	\$0	\$31,480
Wallowa	7,250	\$15,000	\$0	\$17,000
Wasco	22,500	\$27,073	\$0	\$29,073
Wheeler	1,600	\$15,000	\$0	\$17,000
Yamhill	77,500	\$93,252	\$0	\$95,252
Subtotal		\$1,190,815	\$0	\$1,240,815
Sunset Empire Transportation District				
(Inside)	34,600	\$41,633	\$0	\$41,633
(Outside)	0	0	0	\$0
District Total	34,600	\$41,633	\$0	\$43,633
Basin Transit Service				
(Inside)	45,584	\$54,849	\$0	\$54,849
(Outside)	16,016	\$19,271	\$0	\$19,271
District Total	61,600	\$74,120	\$0	\$76,120
Hood River Transit Dist.				
(Inside)	19,000	\$22,862	\$0	\$22,862
(Outside)	0	0	0	\$0
District Total	19,000	\$22,862	\$0	\$24,862
Grant Transportation				
(Inside)	8,100	\$15,000	\$0	\$15,000
(Outside)	0	\$0	\$0	\$0
District Total	8,100	\$15,000	\$0	\$17,000
Lane Transit District				
(Inside)	253,294	\$304,777	\$0	\$304,777
(Outside)	52,506	\$63,178	\$0	\$63,178
District Total	305,800	\$367,955	\$0	\$369,955
Rogue Valley				
(Inside)	131,040	\$157,674	\$0	\$157,674
(Outside)	39,960	\$44,472	\$0	\$44,472
District Total	168,000	\$202,146	\$0	\$204,146
Salem Transit District				
(Inside)	178,696	\$215,016	\$0	\$215,016
(Outside)	140,404	\$168,941	\$0	\$168,941
District Total	319,100	\$383,957	\$0	\$385,957
Tri-Met				
(Inside)	1,246,158	\$1,499,442	\$0	\$1,499,442
(Outside)	79,542	\$95,708	\$0	\$95,708
District Total	1,325,700	\$1,595,150	\$0	\$1,597,150
Subtotal		\$2,702,823	\$0	\$2,718,823
Total Amount Distributed		\$3,893,638	\$0	\$3,959,638

PROGRAM YEAR 1996
TRANSIT COMPOSITE REPORT
THROUGH 12/31/96

	<u>DAYS</u>	<u>HOURS</u>	<u>MILES</u>	<u>TOTAL TRIPS</u>	<u>FARES & CONTRACTS</u>	<u>SENIOR & DISABLED TRIPS</u>	<u>**NON-RIDER TRIPS</u>
Bay Area	124	961	29,824	6,516	5,373 9,203	3,949	
Coquille	124	930	10,675	1,987	1,624	1,771	300
Myrtle Point	80	480	3,545	1,564	1,370	1,170	
Bandon	124	868	6,732	2,458	2,380	1,762	
Lakeside	25	125	1,682	39	181	31	
Coos Vets	91	728	14,560	466	435	466	
COOS TOTALS		4,092	67,018	13,030	20,566	9,149	
(PY 95 COOS TOTALS)		8,679	154,813	33,428	34,939	23,538	

1 & 2 - Revenues from fares, donations and any service contracts are not split for Coquille, Bandon and Myrtle Point.

*North Bend Senior Ctr.

0

n/a

0

0

n/a

*Note - North Bend Senior Ctr. operates volunteer transportation for patrons. The program is not affiliated with Coos County Public Transit.

Port Orford	124	620	3,052	778	434 586	564	
Gold Beach	124	744	7,672	3,505	870	3,277	516
Brookings	124	930	13,655	4,375	3,320 0	3,111	
Curry Vets	61	631	10,342	82	493	82	
CURRY TOTALS		2,925	34,721	8,740	5,703	7,034	
(PY 95 CURRY TOTALS)		5,732	69,433	19,020	9,941	14,464	

Curry service contracts include Port Orford - Langlois School District 2CJ and Alternative Youth Activities.

** Includes services such as delivering hot meals, groceries and other errands.

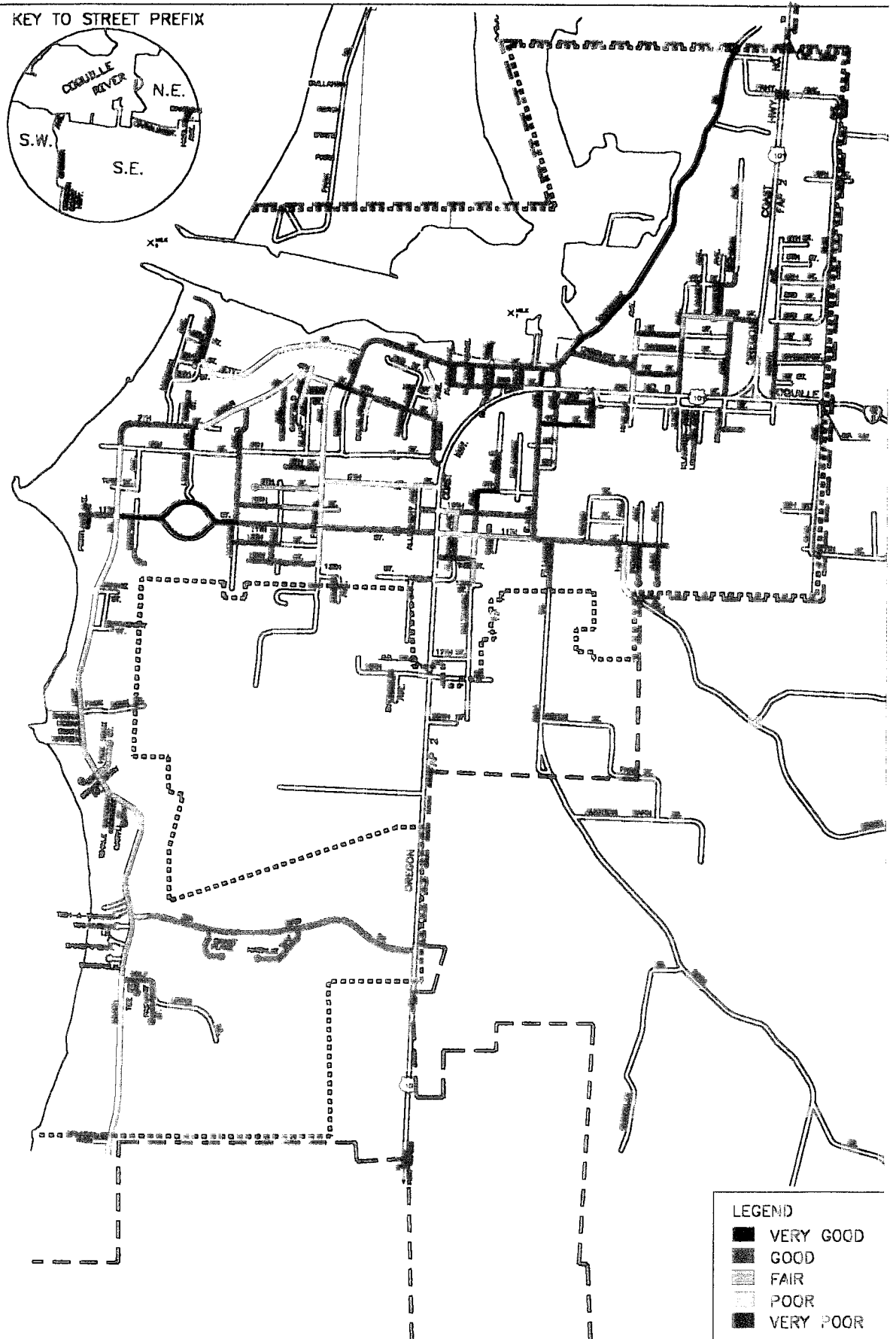
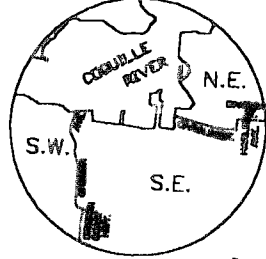
PROGRAM YEAR 1995
TRANSIT COMPOSITE REPORT
THROUGH 6/30/96

	<u>DAYS</u>	<u>HOURS</u>	<u>MILES</u>	<u>TRIPS</u>	<u>1 FARES</u> <u>2 CONTRACTS</u>	<u>TRIPS</u> <u>DIS/SENIOR</u>
Bay Area	248	1,922	73,226	17,050	1 10,656 2 13,000	9,316
Coquille	247	1,853	22,511	5,079	3,644	4,516
Myrtle Point	248	1,488	12,194	4,829	3,020	3,674
Bandon	248	1,736	13,282	5,400	3,872	4,962
Coos Vets	210	1,680	33,600	1,070	770	1,070
COOS TOTALS		8,679	154,813	33,428	34,962	23,538
(PY 94 COOS TOTALS)		8,790	155,456	35,893	32,391	24,841
<i>1 & 2 - Revenues from fares, donations and any service contracts are not split for Coquille, Bandon and Myrtle Point.</i>						
*North Bend Senior Ctr.	n/a	2,200	n/a	4,097	2,624	n/a
<i>*Note - North Bend Senior Ctr. operates volunteer transportation for patrons. The program is not affiliated with Coos County Public Transit.</i>						
Port Orford	248	1,240	9,987	2,207	1,229 1,461	1,722
Gold Beach	248	1,488	13,615	6,686	1,347	6,077
Brookings	248	1,860	31,659	10,009	6,401 1,918	6,547
Curry Vets	87	1,144	14,172	118	964	118
CURRY TOTALS		5,732	69,433	19,020	13,320	14,464
(PY 94 CURRY TOTALS)		5,892	68,497	20,011	14,155	16,503

Curry service contracts include Port Orford - Langlois School District 2CJ and Alternative Youth Activities.

A-5. FIGURE 3- 4. EXISTING PAVEMENT CONDITION

KEY TO STREET PREFIX



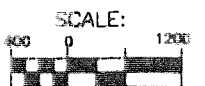
LEGEND	
	VERY GOOD
	GOOD
	FAIR
	POOR
	VERY POOR

CITY OF BANDON
 PO BOX 87
 BANDON, OR 97411
 (541) 756-4543

BANDON TRANSPORTATION SYSTEM PLAN

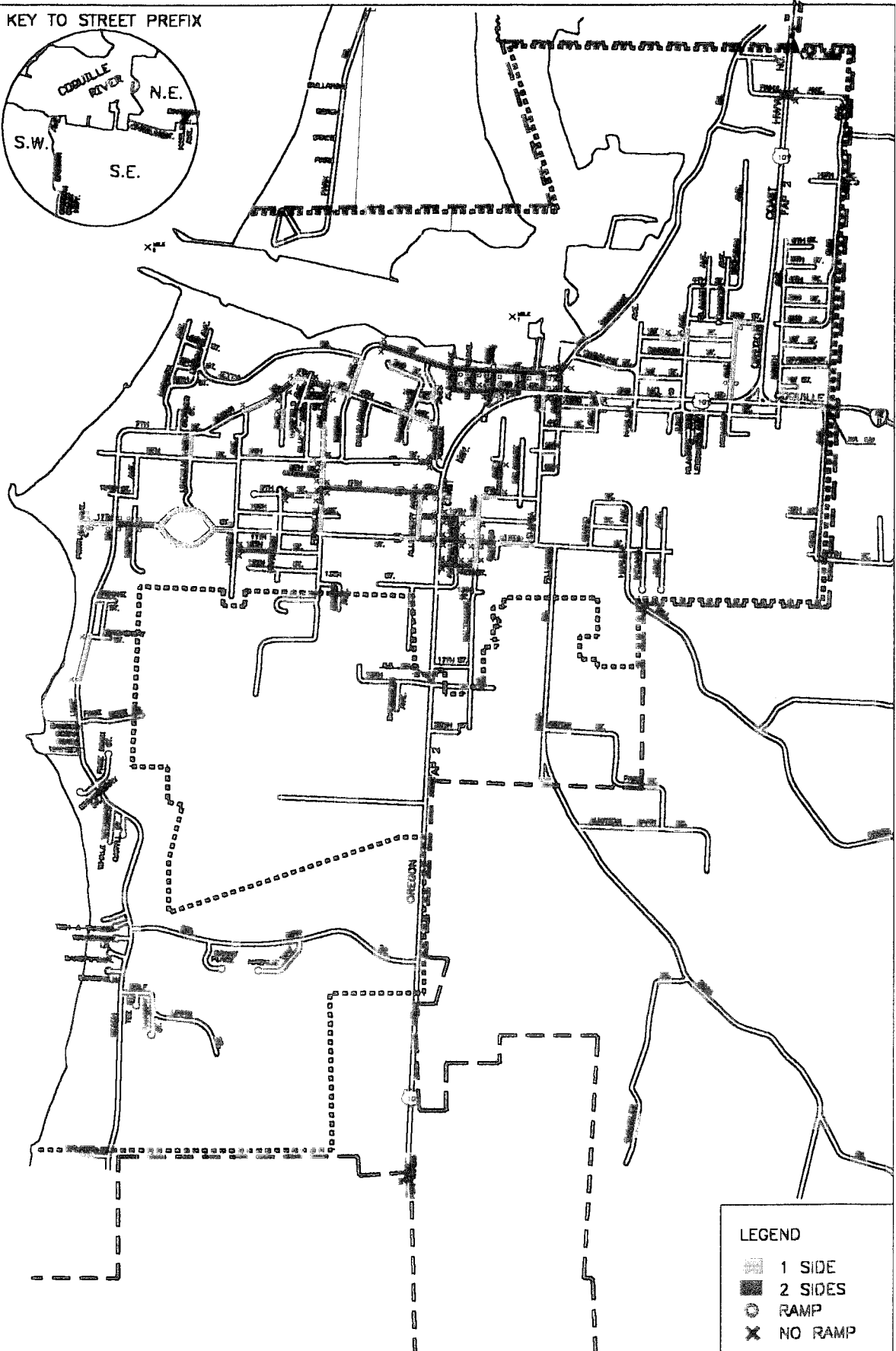
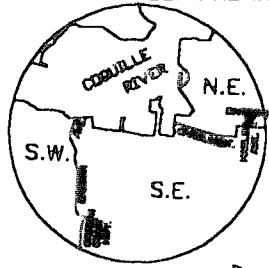
Figure 3-4. Existing Pavement Condition

Revision Date: June 17, 1997



A-6. FIGURE 3- 5. EXISTING PEDESTRIAN FACILITIES

KEY TO STREET PREFIX



LEGEND

- 1 SIDE
- 2 SIDES
- RAMP
- NO RAMP

CITY OF BANDON
 PO BOX 67
 BANDON, OR 97411
 (541) 756-4543

BANDON TRANSPORTATION SYSTEM PLAN

Existing Sidewalk Location

Revision Date: June 17, 1997



A-7. TRANSPORTATION STRUCTURE EVALUATION

JRH Transportation Engineering

1580 Valley River Drive Suite 160
Eugene, Oregon 97401

(541)-687-1081
fax (541)-345-6599
email jrhte@aol.com



To: Dennis Lewis

Organization: Bandon

Fax Number: 541-347-1415

From: Graham Carey

Date: 9/8/97

Project Number: _____

Comments: _____

Page **1** of 12

Original to be mailed - Yes

No

9-08-1997 10:51AM FROM JKH IRVING ENGR 541 345 6599



BRIDGE INSPECTION REPORT

OREGON STATE HIGHWAY DIVISION

BRIDGE NO. _____

BRIDGE TYPE Conc Slab NAME Ferry Creek 1st. Street (STATE, FAS, FAD, OS) HWY. NO. 1st. St
 CROSSING (OVER, UNDER) Ferry Creek COUNTY COOS INSP. FREQ. _____ MILE POST _____
 DISTRICT Bandon YEAR BUILT _____ A.C. (in.) _____ DATE 7-24-92 INSPECTORS' SIGNATURES Harold Parker

AR = As Repaired
 OM = Original Member

SUBSTRUCTURE (60)			OBSERVATIONS			DECK (58)				
		Condition Rating						Condition Rating		
		AR							OM	AR
1. END BENTS	Caps		6	1. Stringers		—	1. Deck — Structural Condition			
	Piles		8		2. Girder or Beams			—	2. Wearing Surface	6
	Footings		8			3. Flow beams <u>Conc. Slab</u>			8	3. Deck Joints
	Footing Piles			4. TRUSSES				Chords		4. Curbs, Felloe Guards
	Backwalls, Bulkheads		8		Web Members				5. Sidewalks	8
	Wings				Portals			6. Parapet, Concrete Barrier	8	
			Bracing			7. Railing, Posts		8		
2. INTERIOR PIERS OR BENTS	Caps		—	5. Diaphragms, Bridging		—		8. Median Barrier, Railing	—	
	Columns, Posts		—	6. Bearing Devices		—		9. Paint	8	
	Footings		—	7. Paint		—		10. Drains	8	
	Footing Piles		—	8. Rivets or Bolts		—		11. Lighting Standards	—	
	Piles		—	9. Welds		—		12. Utilities	8	
	Bracing		—	10. Collision Damage		8		13. Vibrations in Deck	8	
3. Debris on Seats			11. Deflection under Load		8	INSPECTOR'S CONDITION RATING (58)		8		
4. Paint			12. Alignment of Members		8	APPROACH CONDITION (65)				
5. Collision Damage			13. Vibrations under Load		8	1. Pavement & Embankment	8			
6. Scour		8	14. Machinery (Movable Spans)		—	2. Shoulder Embankment	8			
7. Settlement (Footing or Piling)		8	INSPECTOR'S CONDITION RATING (59)			8	3. Relief Joints	—		
INSPECTOR'S CONDITION RATING (60)		8	CULVERTS & RETAIN. WALLS (62)				4. Approach Slab	—		
CHANNEL & CHAN. PROTECT. (61)			1. Barrel or Wall				5. Guardrail	—		
Channel Scour		8	Concrete			INSPECTOR'S CONDITION RATING (65)		8		
Embankment Erosion		8	Steel			SAFETY FEATURES (36)				
3. Drift		8	Timber			APPR. ALINE. (72)				
4. Vegetation		8	2. Headwall & Parapet			SIGNING				
5. Channel Change		8	3. Aprons			1. Posted Loading	—			
6. Fender System		—	4. Wingwalls			2. Legibility	—			
7. Spur Dikes & Jetties		—	5. Adequacy			3. Visibility	—			
8. Riprap		8	6. Debris			INSPECTOR'S CONDITION RATING				
9. Adequacy of Opening		8	INSPECTOR'S CONDITION RATING (62)							
INSPECTOR'S CONDITION RATING (61)		8								

REMARKS (Key-in to item and number above)

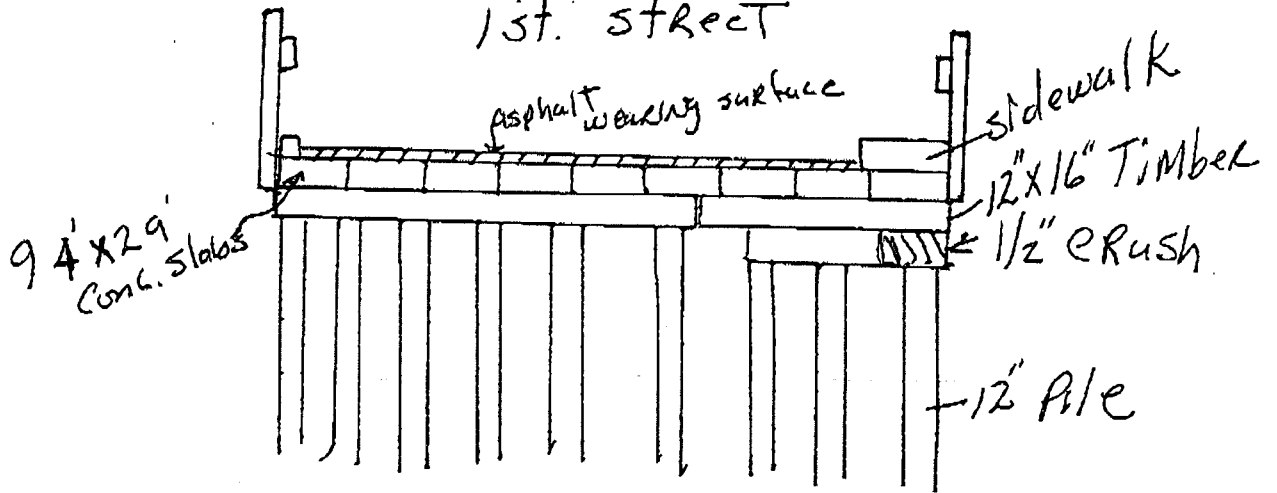
60-1 Caps on both ends show crush & rot on east end under sidewalk. (see attached sheet)
 58-6 wearing surface very rough. Needs overlay or repaving.

MAINTENANCE RECOMMENDATIONS

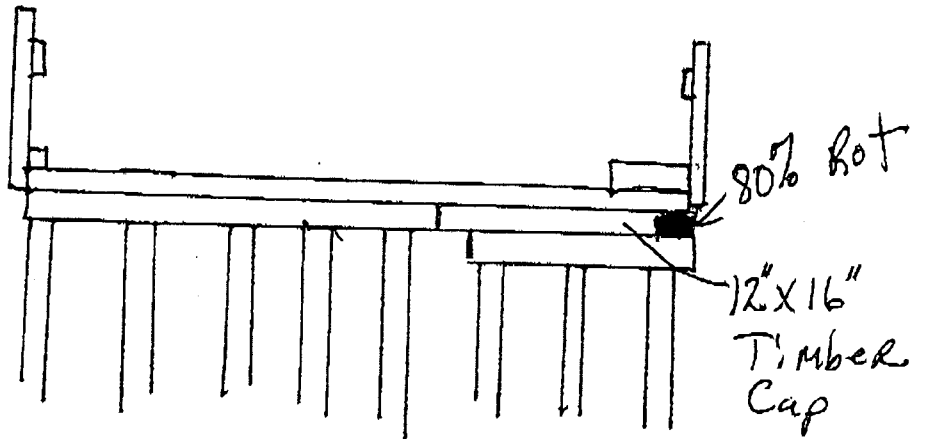
PREFIX	ITEM	COSTS		REPAIRS
		ESTIMATED	ACTUAL	COMPLETE

Gerald "Butch" Parker
 Land Use Planning & Development
 P.O. Box 548 • Coquille, OR 97423 • (541) 396-3946

Ferry Creek
 1st. Street



North Bent



South Bent

(Not to scale)
 7-24-97
 Gerald Parker



BRIDGE INSPECTION REPORT

OREGON STATE HIGHWAY DIVISION

BRIDGE NO. _____

BRIDGE TYPE Conc. 24" Culvert NAME Gross Creek
 CROSSING (OVER, UNDER) 8th Street COUNTY Coos
 TRICT Bandon YEAR BUILT _____ A.C. (in.) _____ DATE 7-23-97

(STATE, FAS, FAU, OS) HWY. NO. _____
 INSP. FREQ. _____ MILE POST _____
 INSPECTOR'S SIGNATURES [Signature]

AR = As Repaired
 OM = Original Member

SUBSTRUCTURE (60)		Condition Rating		OBSERVATIONS		Condition Rating		DECK (58)		Condition Rating	
		AR	OM			AR	OM				
1. END BENTS	Caps			1. Stringers			1. Deck — Structural Condition				
	Piles			2. Girder or Beams			2. Wearing Surface				
	Footings			3. Floor beams			3. Deck Joints				
	Footing Piles			4. TRUSSES	Chords			4. Curbs, Felloe Guards			
	Backwalls, Bulkheads				Web Members			5. Sidewalks			
	Wings				Portals			6. Parapet, Concrete Barrier			
			Bracing				7. Railing, Posts				
2. INTERIOR PIERS OR BENTS	Caps			5. Diaphragms, Bridging			8. Median Barrier, Railing				
	Columns, Posts			6. Bearing Devices			9. Paint				
	Footings			7. Paint			10. Drains				
	Footing Piles			8. Rivets or Bolts			11. Lighting Standards				
	Piles			9. Welds			12. Utilities				
	Bracing			10. Collision Damage			13. Vibrations in Deck				
3. Debris on Seats			11. Deflection under Load								
4. Paint			12. Alignment of Members								
5. Collision Damage			13. Vibrations under Load								
6. Scour			14. Machinery (Movable Spans)								
7. Settlement (Footing or Piling)											
INSPECTOR'S CONDITION RATING (60)				INSPECTOR'S CONDITION RATING (59)				INSPECTOR'S CONDITION RATING (58)			
CHANNEL & CHAN. PROTECT. (61)				CULVERTS & RETAIN. WALLS (62)				APPROACH CONDITION (63)			
Channel Scour		8		1. Barrel or Wall	Concrete	7		1. Pavement & Embankment			
Embankment Erosion		8			Steel	—		2. Shoulder Embankment			
3. Drift		—			Timber	—		3. Relief Joints			
4. Vegetation		7		2. Headwall & Parapet		—		4. Approach Slab			
5. Channel Change		—		3. Aprons		—		5. Guardrail			
6. Fender System		—		4. Wingwalls		—		INSPECTOR'S CONDITION RATING (65)			
7. Spur Dikes & Jetties		—		5. Adequacy		6		SAFETY FEATURES (38)			
8. Riprap		—		6. Debris		7		APPR. ALINE. (72)			
9. Adequacy of Opening		6						SIGNING			
INSPECTOR'S CONDITION RATING (61)			6	INSPECTOR'S CONDITION RATING (62)			6	1. Posted Loading			
								2. Legibility			
								3. Visibility			
								INSPECTOR'S CONDITION RATING			

REMARKS (Key-in to item and number above)

60-9 & 62-5 Culverts up stream 36" with 4th 32" over flow. 8th street culvert 24" with 4th street culvert 36"
 8th street could be bottle neck during heavy run-off. Need larger culvert or 2nd one placed under 8th street

MAINTENANCE RECOMMENDATIONS

PREFIX	ITEM	COSTS		REPAIRS COMPLETE
		ESTIMATED	ACTUAL	



36" CMP

BRIDGE INSPECTION REPORT

OREGON STATE HIGHWAY DIVISION

BRIDGE NO. _____

BRIDGE TYPE Culvert NAME Gross Creek (STATE, FAS, FAU, OS) HWY. NO. _____
CROSSING (OVER, UNDER) 4th Street COUNTY Cook INSP. FREQ. _____ MILE POST _____
TRICT Bend YEAR BUILT _____ A.C. (in.) _____ DATE 7-23-77 INSPECTORS' SIGNATURES Harold Fisher

AR = As Repaired
OM = Original Member

SUBSTRUCTURE (60)		Condition Rating		OBSERVATIONS		Condition Rating		(Rating Guide on back of sheet)	
		AR	OM	SUPERSTRUCTURE (59)		AR	OM	DECK (58)	
1. END BENTS	Footings			1. Stringers				1. Deck - Structural Condition	
	Footing Piles			2. Girder or Beams				2. Wearing Surface	
	Backwalls, Bulkheads			3. Floor beams				3. Deck Joints	
	Wings			4. TRUSSES				4. Curbs, Felloe Guards	
2. INTERIOR PIERS OR BENTS	Caps			Chords				5. Sidewalks	
	Columns, Posts			Web Members				6. Parapet, Concrete Barrier	
	Footings			Portals				7. Railing, Posts	
	Footing Piles			Bracing				8. Median Barrier, Railing	
	Piles			5. Diaphragms, Bridging				10. Drains	
	Bracing			6. Bearing Devices				11. Lighting Standards	
3. Debris on Seats			7. Paint				12. Utilities		
4. Paint			8. Rivets or Bolts				13. Vibrations in Deck		
5. Collision Damage			9. Welds				INSPECTOR'S CONDITION RATING (58)		
6. Scour			10. Collision Damage				APPROACH CONDITION (65)		
7. Settlement (Footing or Piling)			11. Deflection under Load				1. Pavement & Embankment		
INSPECTOR'S CONDITION RATING (60)			12. Alignment of Members				2. Shoulder Embankment		
CHANNEL & CHAN. PROTECT. (61)			13. Vibrations under Load				3. Relief Joints		
Channel Scour		8	14. Machinery (Movable Spans)				4. Approach Slab		
Embankment Erosion		8	INSPECTOR'S CONDITION RATING (59)				5. Guardrail		
3. Drift		8	CULVERTS & RETAIN. WALLS (62)				INSPECTOR'S CONDITION RATING (65)		
4. Vegetation		7	1. Barrel or Wall				SAFETY FEATURES (36)		
5. Channel Change		7	Concrete				APPR. ALINE. (72)		
6. Fender System		-	Steel		7		SIGNING		
7. Spur Dikes & Jetties		-	Timber		-		1. Posted Loading		
8. Riprap		-	2. Headwall & Parapet		-		2. Legibility		
9. Adequacy of Opening		8	3. Aprons		-		3. Visibility		
INSPECTOR'S CONDITION RATING (61)		8	4. Wingwalls		-		INSPECTOR'S CONDITION RATING		
			5. Adequacy		8				
			6. Debris		8				
			INSPECTOR'S CONDITION RATING (62)		7				

REMARKS (Key-in to item and number above)

MAINTENANCE RECOMMENDATIONS

PREFIX	ITEM	COSTS		REPAIRS
		ESTIMATED	ACTUAL	COMPLETE



72' CMP

BRIDGE INSPECTION REPORT
OREGON STATE HIGHWAY DIVISION

BRIDGE NO. _____

BRIDGE TYPE Culvert NAME Johnson Creek (STATE, FAS, FAU, OS) HWY. NO. _____
CROSSING (OVER, UNDER) Bench Loop Rd COUNTY Coos INSP. FREQ. _____ MILE POST _____
STRICT Based on YEAR BUILT _____ A.C. (in.) _____ DATE 7-23-97 INSPECTORS' SIGNATURES Herald Parker

AR = As Repaired
OM = Original Member

Condition Rating

OBSERVATIONS

Condition Rating

(Rating Guide on back of sheet)

SUBSTRUCTURE (60)		AR	OM
1. END BENTS	Caps		
	Piles		
	Footings		
	Footing Piles		
	Backwalls, Bulkheads		
	Wings		
2. INTERIOR PIERS OR BENTS	Caps		
	Columns, Posts		
	Footings		
	Footing Piles		
	Piles		
	Bracing		
3. Debris on Seats			
4. Paint			
5. Collision Damage			
6. Scour			
7. Settlement (Footing or Piling)			
INSPECTOR'S CONDITION RATING (60)			
CHANNEL & CHAN. PROTECT. (61)			
Channel Scour		8	
Embankment Erosion		—	
3. Drift		8	
4. Vegetation		7	
5. Channel Change		—	
6. Fender System		—	
7. Spur Dikes & Jetties		—	
8. Riprap		8	
9. Adequacy of Opening		8	
INSPECTOR'S CONDITION RATING (61)		8	

SUPERSTRUCTURE (59)		AR	OM
1. Stringers			
2. Girder or Beams			
3. Floor beams			
4. TRUSSES	Chords		
	Web Members		
	Portals		
	Bracing		
5. Diaphragms, Bridging			
6. Bearing Devices			
7. Paint			
8. Rivets or Bolts			
9. Welds			
10. Collision Damage			
11. Deflection under Load			
12. Alignment of Members			
13. Vibrations under Load			
14. Machinery (Movable Spans)			
INSPECTOR'S CONDITION RATING (59)			
CULVERTS & RETAIN. WALLS (62)			
1. Barrel or Wall	Concrete		
	Steel	8	
	Timber	—	
2. Headwall & Parapet			
3. Aprons			
4. Wingwalls			
5. Adequacy		8	
6. Debris		8	
7. Dam @ inlet		7	
INSPECTOR'S CONDITION RATING (62)		7	

DECK (58)		Condition Rating
1. Deck -- Structural Condition		
2. Wearing Surface		
3. Deck Joints		
4. Curbs, Felloe Guards		
5. Sidewalks		
6. Parapet, Concrete Barrier		
7. Railing, Posts		
8. Median Barrier, Railing		
9. Paint		
10. Drains		
11. Lighting Standards		
12. Utilities		
13. Vibrations in Deck		
INSPECTOR'S CONDITION RATING (58)		
APPROACH CONDITION (65)		
1. Pavement & Embankment		
2. Shoulder Embankment		
3. Relief Joints		
4. Approach Slab		
5. Guardrail		
INSPECTOR'S CONDITION RATING (65)		
SAFETY FEATURES (38)		
APPR. ALINE. (72)		
SIGNING		
1. Posted Loading		
2. Legibility		
3. Visibility		
INSPECTOR'S CONDITION RATING		

REMARKS (Key-in to item and number above)

62-7 1 1/2' dam at inlet to provide water for golf course.

Coos County Culvert.

MAINTENANCE RECOMMENDATIONS

PREFIX	ITEM	COSTS		REPAIRS COMPLETE
		ESTIMATED	ACTUAL	



BRIDGE INSPECTION REPORT

OREGON STATE HIGHWAY DIVISION

BRIDGE NO. _____

18" P.U.C.

BRIDGE TYPE Culvert NAME Tupper Creek (STATE, FAS, FAU, OS) HWY. NO. _____
 CROSSING (OVER-UNDER) Beach Loop Drive COUNTY COOS INSP. FREQ. _____ MILE POST _____
 STRICT Band on YEAR BUILT _____ A.C. (in.) _____ DATE 7-23-97 INSPECTORS' SIGNATURES Gerald Parker

AR = As Repaired
 OM = Original Member

SUBSTRUCTURE (60)			OBSERVATIONS			DECK (56)										
		Condition Rating			Condition Rating			Condition Rating								
		AR	OM			AR	OM	Condit Rating								
1. END BENTS	Caps			1. Stringers			1. Deck - Structural Condition									
	Piles				2. Girder or Beams				2. Wearing Surface							
	Footings					3. Floor beams					3. Deck Joints					
	Footing Piles							4. TRUSSES		Chords			4. Curbs, Felloe Guards			
	Backwalls, Bulkheads									Web Members				5. Sidewalks		
	Wings									Portals					6. Parapet, Concrete Barrier	
			Bracing				7. Railing, Posts									
2. INTERIOR PIERS OR BENTS	Caps			5. Diaphragms, Bridging					8. Median Barrier, Railing							
	Columns, Posts				6. Bearing Devices					9. Paint						
	Footings					7. Paint						10. Drains				
	Footing Piles						8. Rivets or Bolts						11. Lighting Standards			
	Piles							9. Welds							12. Utilities	
	Bracing										10. Collision Damage					
3. Debris on Seats			11. Deflection under Load													
4. Paint				12. Alignment of Members												
5. Collision Damage					13. Vibrations under Load											
6. Scour						14. Machinery (Movable Spans)										
7. Settlement (Footing or Piling)																
INSPECTOR'S CONDITION RATING (60)								INSPECTOR'S CONDITION RATING (59)				INSPECTOR'S CONDITION RATING (58)				
CHANNEL & CHAN. PROTECT. (61)							CULVERTS & RETAIN. WALLS (62)				APPROACH CONDITION (65)					
Channel Scour			1. Barrel or Wall	Concrete			8			1. Pavement & Embankment						
Embankment Erosion				Steel	-				2. Shoulder Embankment							
3. Drift				Timber	-			3. Relief Joints								
4. Vegetation		7	2. Headwall & Parapet				4. Approach Slab									
5. Channel Change			3. Aprons				5. Guardrail									
6. Fender System			4. Wingwalls				INSPECTOR'S CONDITION RATING (65)									
7. Spur Dikes & Jetties			5. Adequacy		6		SAFETY FEATURES (36)									
8. Riprap		8	6. Debris		8		APPR. ALINE. (72)									
9. Adequacy of Opening		6	INSPECTOR'S CONDITION RATING (62)		6		SIGNING									
INSPECTOR'S CONDITION RATING (61)							1. Posted Loading									
							2. Legibility									
							3. Visibility									
							INSPECTOR'S CONDITION RATING									

REMARKS (Key-in to item and number above)

60-9
62-5 18" Culvert too small carry heavy
 Run-off.

MAINTENANCE RECOMMENDATIONS

PREFIX	ITEM	COSTS		REPAIRS COMPLETE
		ESTIMATED	ACTUAL	



BRIDGE INSPECTION REPORT

OREGON STATE HIGHWAY DIVISION

BRIDGE NO. _____

BRIDGE TYPE 8' CMP Culvert NAME Ferry Creek (STATE, FAS, FAU, OS) HWY. NO. _____
 CROSSING (OVER, UNDER) Ohio Street COUNTY Coos INSP. FREQ. _____ MILE POST _____
 FRCT Bandon YEAR BUILT _____ A.C. (in.) _____ DATE 7-23-77 INSPECTORS' SIGNATURES [Signature]

AR = As Repaired
 OM = Original Member

SUBSTRUCTURE (60)		Condition Rating		OBSERVATIONS		Condition Rating		DECK (58)		Condition Rating						
		AR	OM			AR	OM									
1. END BENTS	Caps			1. Stringers			1. Deck— Structural Condition									
	Piles				2. Girder or Beams				2. Wearing Surface							
	Footings					3. Floor beams					3. Deck Joints					
	Footing Piles							4. TRUSSES		Chords			4. Curbs, Felloe Guards			
	Backwalls, Bulkheads											Web Members			5. Sidewalks	
	Wings													Portals		
			Bracing				7. Railing, Posts									
2. INTERIOR PIERS OR BENTS	Caps				5. Diaphragms, Bridging					8. Median Barrier, Railing						
	Columns, Posts					6. Bearing Devices					9. Paint					
	Footings							7. Paint				10. Drains				
	Footing Piles			8. Rivets or Bolts									11. Lighting Standards			
	Piles								9. Welds						12. Utilities	
	Bracing						10. Collision Damage									13. Vibrations in Deck
3. Debris on Seats			11. Deflection under Load							INSPECTOR'S CONDITION RATING (58)						
4. Paint					12. Alignment of Members						APPROACH CONDITION (65)					
5. Collision Damage						13. Vibrations under Load						1. Pavement & Embankment				
6. Scour				14. Machinery (Movable Spans)									2. Shoulder Embankment			
7. Settlement (Footing or Piling)								INSPECTOR'S CONDITION RATING (59)						3. Relief Joints		
INSPECTOR'S CONDITION RATING (60)							CULVERTS & RETAIN WALLS (62)								4. Approach Slab	
CHANNEL & CHAN. PROTECT. (61)			1. Barrel or Wall						Concrete	INSPECTOR'S CONDITION RATING (62)						5. Guardrail
Channel Scour					Steel						INSPECTOR'S CONDITION RATING (65)					
Embankment Erosion						Timber						APPR. ALINE. (72)				
3. Drift				2. Headwall & Parapet					1. Posted Loading							
4. Vegetation					3. Aprons			2. Legibility								
5. Channel Change						4. Wingwalls	3. Visibility									
6. Fender System			5. Adequacy							INSPECTOR'S CONDITION RATING						
7. Spur Dikes & Jetties											6. Debris					
8. Riprap												INSPECTOR'S CONDITION RATING (62)				
9. Adequacy of Opening																
INSPECTOR'S CONDITION RATING (61)																

REMARKS (Key-in to item and number above)

MAINTENANCE RECOMMENDATIONS

PREFIX	ITEM	COSTS		REPAIRS COMPLETE
		ESTIMATED	ACTUAL	



BRIDGE INSPECTION REPORT

OREGON STATE HIGHWAY DIVISION

BRIDGE NO. _____

BRIDGE TYPE 8'x10' Box Culvert NAME Johnson Creek
 CROSSING (OVER, UNDER) Highway 101 COUNTY Coos
 TRIBUT Bandon YEAR BUILT _____ A.C. (in.) _____ DATE 7-23-97

(STATE, FAS, FAU, OS) HWY. NO. _____
 INSP. FREQ. _____ MILE POST _____
 INSPECTORS' SIGNATURES Donald Parker

AR = As Repaired
 OM = Original Member

SUBSTRUCTURE (80)		Condition Rating		OBSERVATIONS		Condition Rating		(Rating Guide on back of sheet)	
		AR	OM			AR	OM		
1. END BENTS	Caps			1. Stringers				1. Deck - Structural Condition	
	Piles			2. Girder or Beams				2. Wearing Surface	
	Footings			3. Floor beams				3. Deck Joints	
	Footing Piles			4. TRUSSES	Chords			4. Curbs, Felloe Guards	
	Backwalls, Bulkheads				Web Members			5. Sidewalks	
	Wings				Portals			6. Parapet, Concrete Barrier	
			Bracing				7. Railing, Posts		
2. INTERIOR PIERS OR BENTS	Caps			5. Diaphragms, Bridging				8. Median Barrier, Railing	
	Columns, Posts			6. Bearing Devices				9. Paint	
	Footings			7. Paint				10. Drains	
	Footing Piles			8. Rivets or Bolts				11. Lighting Standards	
	Piles			9. Welds				12. Utilities	
	Bracing			10. Collision Damage				13. Vibrations in Deck	
3. Debris on Seats				11. Deflection under Load				INSPECTOR'S CONDITION RATING (58)	
4. Paint				12. Alignment of Members					
5. Collision Damage				13. Vibrations under Load				APPROACH CONDITION (65)	
6. Scour				14. Machinery (Movable Spans)				1. Pavement & Embankment	
7. Settlement (Footing or Piling)								2. Shoulder Embankment	
INSPECTOR'S CONDITION RATING (80)				INSPECTOR'S CONDITION RATING (59)				3. Relief Joints	
CHANNEL & CHAN. PROTECT. (81)				CULVERTS & RETAIN. WALLS (62)				4. Approach Slab	
Channel Scour		8		1. Barrel or Wall	Concrete		8	5. Guardrail	
Embankment Erosion		8			Steel		—	INSPECTOR'S CONDITION RATING (65)	
3. Drift		8		2. Headwall & Parapet			8	SAFETY FEATURES (36)	
4. Vegetation		7		3. Aprons			8	APPR. ALINE. (72)	
5. Channel Change		—		4. Wingwalls			8	SIGNING	
6. Fender System		—		5. Adequacy			8	1. Posted Loading	
7. Spur Dikes & Jetties		—		6. Debris			8	2. Legibility	
8. Riprap		—						3. Visibility	
9. Adequacy of Opening		8		INSPECTOR'S CONDITION RATING (62)			8	INSPECTOR'S CONDITION RATING	

REMARKS (Key-in to item and number above)

state highway 8'x10' Box Culvert

MAINTENANCE RECOMMENDATIONS

PREFIX	ITEM	COSTS		REPAIRS
		ESTIMATED	ACTUAL	COMPLETE



36 CMP

BRIDGE INSPECTION REPORT

OREGON STATE HIGHWAY DIVISION

BRIDGE NO. _____

BRIDGE TYPE Culvert NAME Gross Creek
 CROSSING (OVER, UNDER) 9th Street COUNTY Coos
 BRIDGE Brandon YEAR BUILT _____ A.C. (In.) _____ DATE 7-23-97

(STATE, FAS, FAU, OS) HWY. NO. _____
 INSP. FREQ. _____ MILE POST _____
 INSPECTORS' SIGNATURES Heath Porter

SUBSTRUCTURE (60)		Condition Rating		OBSERVATIONS	Condition Rating		(Rating Guide on back of sheet)																																																																																								
		AR	OM		AR	OM																																																																																									
1. END BENTS	Caps			1. Stringers			<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">DECK (58)</th> <th>Condition Rating</th> </tr> </thead> <tbody> <tr><td>1. Deck — Structural Condition</td><td></td><td></td></tr> <tr><td>2. Wearing Surface</td><td></td><td></td></tr> <tr><td>3. Deck Joints</td><td></td><td></td></tr> <tr><td>4. Curbs, Felloe Guards</td><td></td><td></td></tr> <tr><td>5. Sidewalks</td><td></td><td></td></tr> <tr><td>6. Parapet, Concrete Barrier</td><td></td><td></td></tr> <tr><td>7. Railing, Posts</td><td></td><td></td></tr> <tr><td>8. Median Barrier, Railing</td><td></td><td></td></tr> <tr><td>9. Paint</td><td></td><td></td></tr> <tr><td>10. Drains</td><td></td><td></td></tr> <tr><td>11. Lighting Standards</td><td></td><td></td></tr> <tr><td>12. Utilities</td><td></td><td></td></tr> <tr><td>13. Vibrations in Deck</td><td></td><td></td></tr> <tr><td colspan="3" style="text-align: center;">INSPECTOR'S CONDITION RATING (58)</td></tr> <tr><td colspan="3" style="text-align: center;">APPROACH CONDITION (65)</td></tr> <tr><td>1. Pavement & Embankment</td><td></td><td></td></tr> <tr><td>2. Shoulder Embankment</td><td></td><td></td></tr> <tr><td>3. Relief Joints</td><td></td><td></td></tr> <tr><td>4. Approach Slab</td><td></td><td></td></tr> <tr><td>5. Guardrail</td><td></td><td></td></tr> <tr><td colspan="3" style="text-align: center;">INSPECTOR'S CONDITION RATING (65)</td></tr> <tr><td colspan="3" style="text-align: center;">SAFETY FEATURES (36)</td></tr> <tr><td colspan="3" style="text-align: center;">APPR. ALINE (72)</td></tr> <tr><td colspan="3" style="text-align: center;">SIGNING</td></tr> <tr><td>1. Posted Loading</td><td></td><td></td></tr> <tr><td>2. Legibility</td><td></td><td></td></tr> <tr><td>3. Visibility</td><td></td><td></td></tr> <tr><td colspan="3" style="text-align: center;">INSPECTOR'S CONDITION RATING</td></tr> </tbody> </table>		DECK (58)		Condition Rating	1. Deck — Structural Condition			2. Wearing Surface			3. Deck Joints			4. Curbs, Felloe Guards			5. Sidewalks			6. Parapet, Concrete Barrier			7. Railing, Posts			8. Median Barrier, Railing			9. Paint			10. Drains			11. Lighting Standards			12. Utilities			13. Vibrations in Deck			INSPECTOR'S CONDITION RATING (58)			APPROACH CONDITION (65)			1. Pavement & Embankment			2. Shoulder Embankment			3. Relief Joints			4. Approach Slab			5. Guardrail			INSPECTOR'S CONDITION RATING (65)			SAFETY FEATURES (36)			APPR. ALINE (72)			SIGNING			1. Posted Loading			2. Legibility			3. Visibility			INSPECTOR'S CONDITION RATING		
	DECK (58)		Condition Rating																																																																																												
	1. Deck — Structural Condition																																																																																														
	2. Wearing Surface																																																																																														
	3. Deck Joints																																																																																														
	4. Curbs, Felloe Guards																																																																																														
5. Sidewalks																																																																																															
6. Parapet, Concrete Barrier																																																																																															
7. Railing, Posts																																																																																															
8. Median Barrier, Railing																																																																																															
9. Paint																																																																																															
10. Drains																																																																																															
11. Lighting Standards																																																																																															
12. Utilities																																																																																															
13. Vibrations in Deck																																																																																															
INSPECTOR'S CONDITION RATING (58)																																																																																															
APPROACH CONDITION (65)																																																																																															
1. Pavement & Embankment																																																																																															
2. Shoulder Embankment																																																																																															
3. Relief Joints																																																																																															
4. Approach Slab																																																																																															
5. Guardrail																																																																																															
INSPECTOR'S CONDITION RATING (65)																																																																																															
SAFETY FEATURES (36)																																																																																															
APPR. ALINE (72)																																																																																															
SIGNING																																																																																															
1. Posted Loading																																																																																															
2. Legibility																																																																																															
3. Visibility																																																																																															
INSPECTOR'S CONDITION RATING																																																																																															
Piles			2. Girder or Beams																																																																																												
Footings			3. Floor beams																																																																																												
Footing Piles			4. TRUSSES																																																																																												
Backwalls, Bulkheads						Chords																																																																																									
Wings						Web Members																																																																																									
						Portals																																																																																									
			Bracing																																																																																												
2. INTERIOR PIERS OR BENTS	Caps		5. Diaphragms, Bridging																																																																																												
	Columns, Posts		6. Bearing Devices																																																																																												
	Footings		7. Paint																																																																																												
	Footing Piles		8. Rivets or Bolts																																																																																												
	Piles		9. Welds																																																																																												
	Bracing		10. Collision Damage																																																																																												
3. Debris on Seats			11. Deflection under Load																																																																																												
4. Paint			12. Alignment of Members																																																																																												
5. Collision Damage			13. Vibrations under Load																																																																																												
6. Scour			14. Machinery (Movable Spans)																																																																																												
7. Settlement (Footing or Piling)																																																																																															
INSPECTOR'S CONDITION RATING (60)			INSPECTOR'S CONDITION RATING (59)																																																																																												
CHANNEL & CHAN. PROTECT. (61)			CULVERTS & RETAIN. WALLS (62)																																																																																												
Channel Scour		8	1. Barrel or Wall	Concrete	7																																																																																										
Embankment Erosion		8		Steel	7																																																																																										
				Timber	7																																																																																										
3. Drift		6	2. Headwall & Parapet		7																																																																																										
4. Vegetation		7	3. Aprons		7																																																																																										
5. Channel Change		8	4. Wingwalls		7																																																																																										
6. Fender System		7	5. Adequacy		8																																																																																										
7. Spur Dikes & Jetties		7	6. Debris		6																																																																																										
8. Riprap		8																																																																																													
9. Adequacy of Opening		8	INSPECTOR'S CONDITION RATING (62)		7																																																																																										
INSPECTOR'S CONDITION RATING (61)			INSPECTOR'S CONDITION RATING (62)																																																																																												

REMARKS (Key-in to item and number above)

61-3 Beaver dam 20' upstream inlet
 62-6 2 large truck tires blocking 70% inlet

MAINTENANCE RECOMMENDATIONS

PREFIX	ITEM	COSTS		REPAIRS COMPLETE
		ESTIMATED	ACTUAL	



BRIDGE INSPECTION REPORT

OREGON STATE HIGHWAY DIVISION

BRIDGE NO. _____

BRIDGE TYPE 36" CMP Culvert NAME Gross Creek (STATE, FAS, FAU, OS) HWY. NO. _____
 CROSSING (OVER, UNDER) 11th Street COUNTY Coos INSP. FREQ. _____ MILE POST _____
 RGT Bandon YEAR BUILT _____ A.C. (in.) _____ DATE 7-24-97 INSPECTORS' SIGNATURES Harold Parker

AR = As Repaired OM = Original Member		Condition Rating	OBSERVATIONS	Condition Rating	(Rating Guide on back of sheet)		
SUBSTRUCTURE (60)	AR	OM	SUPERSTRUCTURE (59)	AR	OM	DECK (58)	
END BENTS			1. Stringers			1. Deck — Structural Condition	
			2. Girder or Beams			2. Wearing Surface	
			3. Floor beams			3. Deck Joints	
			TRUSSES			4. Curbs, Felloe Guards	
				4. Chords			5. Sidewalks
				Web Members			6. Parapet, Concrete Barrier
			Portals			7. Railing, Posts	
			Bracing			8. Median Barrier, Railing	
INTERIOR PIERS OR BENTS			5. Diaphragms, Bridging			9. Paint	
			6. Bearing Devices			10. Drains	
			7. Paint			11. Lighting Standards	
			8. Rivets or Bolts			12. Utilities	
			9. Welds			13. Vibrations in Deck	
			10. Collision Damage				
			11. Deflection under Load				
			12. Alignment of Members				
			13. Vibrations under Load				
			14. Machinery (Movable Spans)				
INSPECTOR'S CONDITION RATING (60)			INSPECTOR'S CONDITION RATING (59)			INSPECTOR'S CONDITION RATING (58)	
CHANNEL & CHAN. PROTECT. (61)			CULVERTS & RETAIN. WALLS (62)			APPROACH CONDITION (63)	
			1. Barrel or Wall	Concrete	—	1. Pavement & Embankment	
				Steel	7	2. Shoulder Embankment	
			Timber	—	3. Relief Joints		
			2. Headwall & Parapet	—	4. Approach Slab		
			3. Aprons	—	5. Guardrail		
			4. Wingwalls	—	INSPECTOR'S CONDITION RATING (65)		
			5. Adequacy	8	SAFETY FEATURES (66)		
			6. Debris	8	APPR. ALINE. (72)		
			7. 36" Grate @ inlet	7	SIGNING		
			INSPECTOR'S CONDITION RATING (62)	7	1. Posted Loading		
					2. Legibility		
					3. Visibility		
INSPECTOR'S CONDITION RATING (61)			INSPECTOR'S CONDITION RATING (62)			INSPECTOR'S CONDITION RATING	

REMARKS (Key-in to item and number above)

62-1 36" CMP with 32" CMP overflow pipe

MAINTENANCE RECOMMENDATIONS

PREFIX	ITEM	COSTS		REPAIRS
		ESTIMATED	ACTUAL	COMPLETE



BRIDGE INSPECTION REPORT

OREGON STATE HIGHWAY DIVISION

BRIDGE NO. _____

BRIDGE TYPE Culvert ^{48"} NAME Gross Creek
 CROSSING (OVER-UNDER) 101 COUNTY COOS
 TRUCK Band on YEAR BUILT _____ A.C. (in.) _____ DATE 7-24-97

(STATE, FAS, FAU, OS) HWY. NO. _____
 INSP. FREQ. _____ MILE POST _____
 INSPECTORS' SIGNATURES Herold Parker

AR = As Repaired
 OM - Original Member

SUBSTRUCTURE (60)		Condition Rating		OBSERVATIONS		Condition Rating		(Rating Guide on back of sheet)	
		AR	OM			AR	OM		Condit Rating
1. END BENTS	Caps			1. Stringers				1. Deck - Structural Condition	
	Piles			2. Girder or Beams				2. Wearing Surface	
	Footings			3. Floor beams				3. Deck Joints	
	Footing Piles			4. TRUSSES	Chords			4. Curbs, Felloe Guards	
	Backwalls, Bulkheads				Web Members			5. Sidewalks	
	Wings				Portals			6. Parapet, Concrete Barrier	
2. INTERIOR PIERS OR BENTS	Caps			Bracing			7. Railing, Posts		
	Columns, Posts			5. Diaphragms, Bridging			8. Median Barrier, Railing		
	Footings			6. Bearing Devices			9. Paint		
	Footing Piles			7. Paint			10. Drains		
	Piles			8. Rivets or Bolts			11. Lighting Standards		
	Bracing			9. Welds			12. Utilities		
3. Debris on Seats			10. Collision Damage			13. Vibrations in Deck			
4. Paint			11. Deflection under Load						
5. Collision Damage			12. Alignment of Members			INSPECTOR'S CONDITION RATING (58)			
6. Scour			13. Vibrations under Load			APPROACH CONDITION (65)			
7. Settlement (Footing or Piling)			14. Machinery (Movable Spans)			1. Pavement & Embankment			
INSPECTOR'S CONDITION RATING (60)				INSPECTOR'S CONDITION RATING (59)			2. Shoulder Embankment		
CHANNEL & CHAN. PROTECT. (61)				CULVERTS & RETAIN. WALLS (62)			3. Relief Joints		
Channel Scour				1. Barrel or Wall	Concrete	8	4. Approach Slab		
Embankment Erosion					Steel		5. Guardrail		
3. Drift					Timber		INSPECTOR'S CONDITION RATING (65)		
4. Vegetation				2. Headwall & Parapet		8	SAFETY FEATURES (36)		
5. Channel Change				3. Aprons			APPR. ALINE. (72)		
6. Fender System				4. Wingwalls			SIGNING		
7. Spur Dikes & Jetties				5. Adequacy		8	1. Posted Loading		
8. Riprap				6. Debris		5	2. Legibility		
9. Adequacy of Opening				INSPECTOR'S CONDITION RATING (62)		5	3. Visibility		
INSPECTOR'S CONDITION RATING (61)			8	INSPECTOR'S CONDITION RATING (62)		5	INSPECTOR'S CONDITION RATING		

REMARKS (Key-in to item and number above)

62-6 Inlet silted in 75% (state highway to clean inlet per district office)

MAINTENANCE RECOMMENDATIONS

PREFIX	ITEM	COSTS		REPAIRS
		ESTIMATED	ACTUAL	COMPLETE

BANDON TRANSPORTATION SYSTEM PLAN

VOLUME 4

Transportation Needs Assessment

October, 1999

TABLE OF CONTENTS

TABLE OF CONTENTS	2
TABLE OF TABLES	3
TABLE OF FIGURES	4
P-1 PREFACE	5
1. GENERAL BACKGROUND	6
2. POPULATION FORECAST (STEP 1)	9
3. LAND USE FORECAST (STEP 2)	9
4. TRIP GENERATION (STEP 3)	13
5. TRIP DISTRIBUTION (STEP 4)	16
6. MODAL SPLIT (STEP 5)	16
7. VEHICLE TRIP ASSIGNMENT (STEP 6)	17
8. EXISTING AND NEW TRIPS (STEP 7)	17
9. LEVEL OF SERVICE/HIGHWAY PERFORMANCE ANALYSIS (STEP 8)	17

TABLE OF TABLES

TABLE 4-1	1996 - 2020 PROJECTED POPULATION	9
TABLE 4-2	VACANT HOUSING UNITS	10
TABLE 4-3	FUTURE HOUSING MIX AND RESULTANT NUMBER OF DWELLING UNITS	11
TABLE 4-4	EXISTING AND FUTURE COMMERCIAL AND INDUSTRIAL LAND NEEDS	11
TABLE 4-5	POTENTIAL DEVELOPMENT ASSIGNMENT	13
TABLE 4-6	VEHICLE TRIP GENERATION RATES PM PEAK HOUR	14
TABLE 4-7	VEHICLE TRIPS GENERATED PM PEAK HOUR	15
TABLE 4-8	HISTORICAL TRAFFIC DATA BY YEAR 1987 - 1996	15
TABLE 4-9	JOURNEY TO WORK TRIPS - 1990 CENSUS	17
TABLE 4-10	LEVEL OF SERVICE/ROADWAY PERFORMACE CONDITIONS FOR ARTERIAL AND COLLECTOR STREETS	18
TABLE 4-11	LEVEL OF SERVIC/ROADWAY PERFORMACE CRITERIA FOR UNSIGNALIZED INTERSECTIONS	19
TABLE 4-12	LEVEL OF SERVICE/ROADWAY PERFORMACE CRITERIA FOR SIGNALIZED INTERSECTIONS	19
TABLE 4-13	PERFORMANCE STANDARDS FOR STATE HIGHWAYS IN BANDON	21
TABLE 4-14	EXISTING LEVEL OF SERVICE/ROADWAY PERFORMACE 1997 WEEKDAY PM PEAK HOUR CONDITIONS	22

TABLE OF FIGURES

FIGURE 4-1 TRANSPORTATION NEEDS ASSESSMENT CHART 7

FIGURE 4-2 TRAFFIC ANALYSIS ZONES 12

FIGURE 4-3 EXISTING CONDITIONS 21

P-1. PREFACE

The City of Bandon has developed a Transportation System Plan (TSP) with a grant from the Oregon Department of Transportation. The TSP establishes a system of transportation facilities and services adequate to meet the City of Bandon's identified transportation needs for the next twenty years. The Plan is consistent with the County TSP and adopted elements of the State TSP, and meets the requirements of the Transportation Planning Rule (Oregon Administrative Rules, Chapter 660, Division 12). The planning work was conducted by the City of Bandon Planning Department and JRH Transportation Engineering, with assistance from the Oregon Department of Transportation. The citizens of Bandon have played a significant role in development of the plan, and other agencies and service providers have been involved in the process to ensure plan consistency.

The plan and supporting information have been developed in six reports that document the process followed to reach the final Transportation System Plan. The reports correspond to the major elements of the work program.

- Volume 1. Public Involvement and Interagency Coordination (PIIC).** This report outlines how the public was involved throughout the planning process and how other agencies and service providers were involved. The report describes the materials, publications, and meetings that allowed the City to disseminate information and receive input that helped shape the transportation system plan.
- Volume 2. Review of Existing Plans, Policies, and Standards.** This report identifies existing documents that establish policies, regulations, standards, and capital improvements planning that relate to Bandon's transportation system. The report includes a review of city, special district, county, state, and federal documents.
- Volume 3. Inventory of the Existing Transportation System.** This report describes the existing transportation system in Bandon and various characteristics of the system.
- Volume 4. Transportation Needs Assessment.** This report identifies what aspects of the transportation system need to be addressed to meet the City's transportation needs for the next twenty years.
- Volume 5. Development and Evaluation of Alternatives.** This report provides alternative ways to address the identified needs. Of several alternatives, one will be selected and refined as the course the City will follow to meet its transportation needs.
- Volume 6. Transportation System Plan.** This report establishes how existing plans and implementing measures will need to be revised to carry out the preferred alternative. It establishes a program for development and conservation of the City's transportation system for the next twenty years.
- Volume 7. Implementation Element.** This report was not produced.

1. GENERAL BACKGROUND

Transportation modeling is used to estimate future automobile traffic and transit ridership for the purpose of efficient and comprehensive planning of tomorrow's infrastructure. Transportation modeling is a four-step process including trip generation, trip distribution, mode split, and traffic assignment. The accuracy of its predictions depends heavily on the quality of its input data. Input data includes socioeconomic data (i.e., census and employment data) for the present and growth estimates and land use information for the future.

The year 2020 was chosen as the planning horizon for the plan to identify future demographic trends from which the travel forecasts were derived. This time span was chosen because beyond this time line population, employment, and future travel patterns become much more difficult to develop and, subsequently, generate less reliable travel forecasts.

A Level-2 (or "cumulative") analysis technique for traffic forecast for the City of Bandon was used. This technique, similar to the potential development impact analysis, is less detailed than a complete transportation model. It basically estimates future traffic volumes by adding traffic generated by future development to the existing base traffic. This technique is very efficient for analyzing traffic impacts from general overall growth; however, it does not allow for a combined comprehensive impact analysis of various developments throughout the study area. On the other hand, the development of a detailed transportation model (i.e., small zones, all streets included, several different trip purposes analyzed) is very time consuming and data intensive, and only worthwhile if it is maintained and updated over time.

The eight step process utilized to determine future transportation in the county is illustrated in the flow chart in Figure 4.1. A summary of the methods used for each step is given below. This is followed by a discussion of the results of the process as applied to Bandon's Transportation System.

Process Methods

Population Forecast (Step 1)

The transportation modeling process utilizes future population and land use estimates as its "yard stick" to determine likely transportation demand. The amount of future development that is likely to occur in a community is estimated by extrapolating the amount of development currently supported by the community, based on the population.

Figure 4.1

PageMaker Chart

Land Use Forecast (Step 2)

The land use forecast element predicts where future development is likely to occur. Vacant zoned land is identified in ODOT's Potential Development Impact Analysis (PDIA) reports. Based on the amount of projected development, City staff determined the most likely areas where development will occur in the community.

Trip Generation (Step 3)

The trip generation analysis has as its goal the development of functional relationships between trip end volumes, and the land use and socioeconomic characteristics of units from which they originate or are destined. There are two different kinds of trip ends: trip productions and trip attractions. Trip productions usually are defined as the total number of trips with home end in a zone, while trip attractions usually are defined as the total number of trips with the non-home end (e.g. working place) in a zone. The trip generation analysis utilized a land area trip rate analysis (*ITE Trip Generation Manual*) to determine the number of trips generated by a development.

Trip Distribution (Step 4)

Trip distribution is the analysis of trip interchanges to determine the travel patterns generated in the study area. Trip analysis distributes the trip productions to the attractions quantified during the trip generation analysis. The trip distribution technique utilized in this study was the gravity model. This model relates the attractiveness of each zone to the productivity of another zone by the spatial impedance (i.e., travel time, travel distance or travel cost) between both zones.

Mode Split (Step 5)

During the mode split process, all trips are allocated to the available transportation modes. Usually, this analysis is only performed in urban areas with fixed-route transit operation and a significant proportion of transit patronage.

Traffic Assignment (Step 6)

Traffic assignment is the analysis of the route taken by a trip maker. The trip assignment analysis assigns all trips made in the study area to a specific route of streets or transit route. Traffic assignment can be accomplished in a variety of ways; however, the underlying assumption for all of them is that every road user chooses the shortest path (shortest travel time) to reach his destination. An all-or-nothing assignment, where all traffic between two zones is assigned to the shortest route between both zones, was used in this study.

Existing and New Trips (Step 7)

Steps 7 and 8 form the Level 2 (cumulative) analysis. In Step 7, the future generated trips are combined with the existing (1997) traffic volumes. Adjustments are made to the through traffic to account for traffic growth over the design period.

Level of Service/Mobility Performance Analysis (Step 8)

The analysis of the ability of the street system to accommodate future traffic volumes accomplished using ODOT approved software.

space

2. POPULATION FORECAST (Step 1)

The purpose of this section is to identify expected future growth within the Bandon study area, as this forms the basis for all other projections.

Volume 2 presents a thorough explanation of the demographic changes that the City of Bandon has experienced over the last 20 years, as well as the anticipated growth in population through 2020.

The most current population allocation contained in the Department of Land Conservation and Development's letter of September 5, 1997, is indicated in Table 4-1

TABLE 4-1. 1996 - 2020 PROJECTED POPULATION

County/ City	1996	2000	2005	2010	2015	2020
Coos County	62,399	63,612	64,950	66,338	67,870	69,513
Bandon	2,791	2,826	3,041	3,265	3,503	3,754

3. LAND USE FORECAST (Step 2)

As indicated earlier in this report, population growth and business development activities in the Bandon study area will fuel future demands for increased urbanization. This includes land devoted to housing, as well as commercial and industrial uses. This section discusses the need for additional residential, commercial, and industrial acres of development through the planning period to 2020 based on the earlier assessment of likely population growth. It will further present an allocation of this development to specific geographic sub-areas within the larger study area. This geographic allocation (including number of dwelling units, as well as gross square footage of commercial and industrial development) will then form the basis for preparing travel demand projections.

Future Residential Land Needs

Residential land needs through 2020 will be a function of the anticipated population, the expected mix of housing (i.e., single versus multiple-family dwelling units) and the density of that development. As noted in Table 4-1, the population of Bandon will increase by 963 persons (35%) over the 23 year design period. Therefore, sufficient housing must be provided to accommodate this future population. The number of housing units that will need to be provided is dependent on the likely household size at the design year. The variable that can be used as an indicator of household size in a community such as Bandon is the average age of the population, the premise being that elderly households are generally smaller, as they are less likely to have children still living at home. As such, Bandon is expected to remain a popular place for retirement, with a lower household size than communities with a younger population. As little information is available to determine whether there is likely to be any change in the household size, existing figures were utilized.

Based on the 1990 census median persons per household figure of 2.09 persons/ dwelling unit, the City will need 461 additional housing units (963/2.09). However, at any one time there will be a number of units which are vacant as people move in and out of the community, particularly in a community such as

Bandon with a high seasonal recreational and occasional use component. Table 4-2 illustrates the number of vacant housing units.

TABLE 4-2. VACANT HOUSING UNITS

Type of Housing	Number of Vacant Units
Single family detached	109
Single family attached	7
Duplex 2	6
Duplex 3+	8
Mobile home or trailer	22
Other	4

Source: 1990 U.S. Census

The current overall residential vacancy rate is 13%, and this is assumed to continue into the future. Thus, assuming this vacancy rate, an additional 521 units will need to be provided.

The current housing mix is summarized in Table 4-2. As there is no information available on future housing needs for the study area, assumptions as to the future mix were made. The future residential housing mix assumes that the proportion of multi-family homes remains unchanged, but that there will be an increase in the proportion of manufactured houses. Table 4-3 summarizes the future housing mix and resultant number of dwelling units.

TABLE 4-3. FUTURE HOUSING MIX AND RESULTANT NUMBER OF DWELLING UNITS

Type	% of total housing units	No. of Dwelling Units
Single-family residential	65	339
Manufactured housing	20	104
Multi-family residential	15	78
Total	100	521

Future Commercial and Industrial Land Needs

The estimated land needs for commercial and industrial land was determined by assuming that the future population will support the same relative amount of land. Existing amount of commercial and industrial space was obtained from ODOT's PDIA analysis. The following table illustrates the relative amount of commercial and industrial land in Bandon.

TABLE 4-4. EXISTING AND FUTURE COMMERCIAL AND INDUSTRIAL LAND NEEDS

Land Use	EXISTING			FUTURE	
	Development Currently Supported	1996 Population	Population per Acre	2020 Population	Land Needs
Commercial	133 acres	2,791	20.9	3,754	46
Industrial	51.3 acres	2,791	54.4	3,754	18.27

Available Developable Land

The Oregon Department of Transportation's Potential Development Impact Analysis (PDIA) of Bandon was utilized as the basis for identifying available developable land. The Potential Development Impact Analysis undertaken in 1995 was intended to provide a maximum development scenario for residential, commercial, and industrial land inside the Urban Growth Boundary. The PDIA study indicates that there is sufficient currently zoned land available to accommodate the projected demand for developable land. To facilitate identification of suitable land, the city was divided into nine zones. This zoning system would also assist the distribution of traffic in the city. Figure 4-2 illustrates the zone boundaries. The most likely areas to be developed were then identified by City staff, and these are also illustrated in Figure 4-2.

Figure 4-2 Traffic Analysis Zones

Needs revisions

Most of the population growth is concentrated in the western half of the City, with most of the growth expected to occur in South Bandon between Beachloop and US 101. The employment centers are concentrated in the Old Town and along US 101. Most of the employment growth over the next twenty years is expected to occur in the southern part of Bandon, adjacent to US 101. Table 4-5 summarizes the growth in development by major land use categories over the next twenty years for each traffic zone.

TABLE 4-5. POTENTIAL DEVELOPMENT ASSIGNMENT

Area	SFR	MFR	Comm AC	Ind AC	Other
A	22	--	1.50	--	--
B	5	--	1.50	--	--
C	180	42	4.15	--	--
D	22	22	3.10	10.00	Hospital
E	98	--	10.00	--	--
F	--	20	7.00	--	--
G	104	00	20.75	--	--
H	22	--	--	--	--
I	--	--	--	8.27	--
Total	453	84	48.00	18.27	00
Total Res	537				
Total C/I	66.27				

4. TRIP GENERATION (STEP 3)

Vehicle trip generation estimates were made for each zone in the planning area on the basis of the type and quantity of residential dwellings and employees. Trip generation rates applied to these land uses were derived from the Institute of Transportation Engineers' *Trip Generation, Fifth Edition, 1991*. These rates were modified to reflect generalized land use categories for planning purposes on the basis of experience in other similar size cities in Oregon. These rates are summarized in Table 4-6.

These trip rates were refined into four trip origin purposes and four trip destination purposes for the PM peak hour. These four purposes are:

- Home-based work -trips between home and work
- Home-based shopping -trips between home and shopping
- Home-based other -trips between home and other uses
- Non-home based -trips between other land uses except the home

The amount of traffic generated was estimated for the PM peak hour by multiplying the number of dwellings or employees by the appropriate origin and destination trip generation rate by trip purpose.

**TABLE 4-6. VEHICLE TRIP GENERATION RATES
PM PEAK HOUR**

Land Use		Single Family	Multi-Family	Retail/ Commercial	Industrial
		Trips/ Dwelling Unit	Trips/ Dwelling Unit	Trips/ Employee	Trips/ Employee
Home-based Work	Origin	0.03	0.02	0.10	0.40
	Designation	0.39	0.27	0.00	0.05
Home-based Shopping	Origin	0.10	0.07	0.93	0.00
	Designation	0.19	0.13	0.58	0.00
Home-based Other	Origin	0.16	0.11	0.00	0.00
	Destination	0.08	0.06	0.18	0.00
Non-Home-based	Origin	0.07	0.05	0.58	0.05
	Destination	0.08	0.06	0.79	0.05
Total Rates	Origin	0.36	0.25	1.61	0.45
	Destination	0.74	-.52	1.51	0.10

Four trip types are considered, these being:

- External to external trips - These trips are trips that originate outside the study and travel through the study area.
- External to internal trips - These trips are trips that are attracted to an origin within the study area from outside the study area.
- Internal to external trips - These trips originate within the study area and are destined somewhere outside the study area.
- Internal to internal trips - These trips originate from within the study area and are destined within the study area.

Table 4-7 illustrates the total number of PM peak hour trips generated by each land use.

**TABLE 4-7. VEHICLE TRIPS GENERATED
PM PEAK HOUR**

Zone	In	Out	In	Out	In	Out	In	Out	In	Out	Total In	Total Out
A	14	8			60	60					74	68
B	3	2			60	60					63	62
C	116	65	23	12	166	166			-18	-41	287	203
D	14	8	12	6	124	124	16	89	18	41	183	268
E	63	36			400	400					463	436
F			11	6	280	280					291	286
G	67	38			830	830					897	868
H	14	8									14	8
I							13	74			13	74

The external to external trip component within a study area is typically determined by a license plate survey. Since a license plate survey was not part of the scope of this work, the external to external trip component cannot be developed directly. Historical daily traffic volume data was used to determine the external to external growth rate and the external to external trip component was developed from daily traffic trends on US 101. This historical traffic volume data is illustrated in Table 4-8.

**TABLE 4-8. HISTORICAL TRAFFIC DATA BY YEAR 1987 - 1996
Annual Average Daily Traffic (AADT)
Permanent Counter Location: Bandon 06-004**

Year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Vehicles	4,961	5,402	5,661	5,760	5,908	6,064	6,248	6,219	6,444	6,306	6,332

Based on the growth rates shown in Table 4-8, the historical annual traffic growth rate on US 101 is 0.5% per annum. This annual growth rate was used to estimate the future increase in external to external trip travel.

5. TRIP DISTRIBUTION (Step 4)

The vehicle trips estimated in each PDIA zone are trip origins and trip destinations during the PM peak hour. The trips were then distributed to all of the destinations within the planning area and to the roads leading out of the study area. Trip origins were also calculated for the roads leading into the area. The trip distribution was based on a conventional gravity model, which distributes trips from one zone to all

other zones in direct relationship to the size of the attractions or destinations in each zone and inversely related to the travel time between zones. For example, if two designation zones of equal size were located 10 and 15 minutes from the origin zone, more of the trips from the origin zone would be distributed to the closer destination zone. Likewise, if two destination zones were located equal driving times from the origin zone, more trips would be distributed to the larger destination zone. This procedure was followed for trips originating in all zones and roads leading into the study area.

6. MODAL SPLIT (Step 5)

During the mode split process, all trips are allocated to the available transportation modes. Modal split data is not available for all types of trips; however, the 1990 census data does include statistics for journey to work trips as shown in Table 4-9.

Most Bandon residents travel to work via a private vehicle. In 1990, 80 percent of all trips to work were in an auto, van, or truck. Trips in single-occupancy vehicles made up 76 percent of all trips, and carpooling accounted for 4 percent.

Bicycle usage was low (approximately 1 percent of the total work trips); however, the census data does not include trips to school or other non-work activities.

Pedestrian activity was at a relatively high level (12 percent of trips to work), which is higher than some other communities. Again, census data do not include trips to school or other non-work activities.

TABLE 4-9. JOURNEY TO WORK TRIPS - 1990 CENSUS

Trip Type	Trips	Percent
Private Vehicle		
Drove Alone	561	76
Carpooled	31	4
Public Transportation	0	0
Motorcycle	0	0
Bicycle	9	1
Walk	92	12
Other	7	1
Work at Home	44	6
TOTAL	744	100

Source: U.S. Bureau of Census

As the percentage of non-private vehicle usage is small, the analysis did not consider these trips and assumed that all trips were undertaken by private vehicles.

7. VEHICLE TRIP ASSIGNMENT (Step 6)

The assignments of traffic to the street and highway system were made on the basis of trip generation and distribution from all origin zones and streets leading into the planning area to all destination zones and streets leading out of the area. A manual assignment procedure was utilized for each scenario.

8. EXISTING AND NEW TRIPS (Step 7)

The assigned traffic for each scenario was added to the existing traffic volumes.

9. LEVEL OF SERVICE/MOBILITY PERFORMANCE ANALYSIS (Step 8)

Initially, the analysis conducted for the TSP based roadway performance measures on Level of Service (LOS) and reported outcomes in terms of LOS letter grades. In response to changes in the 1999 Oregon Highway Plan, performance of intersections along US 101 and OR 42S was re-evaluated in terms of the ratio of traffic volume to engineered capacity of a given segment of roadway or intersection. Intersection performance is reported in terms of volume to capacity ratio (v/c). Bandon's local streets were not re-analyzed and descriptions of local street performance remain in terms of LOS letters. Below is a description of these two standards.

Level of Service (LOS) for Local Streets



The LOS concept requires consideration of factors that include travel speed, delay, frequency of interruptions in traffic flow, relative freedom for traffic maneuvers, driving comfort, and convenience and operating cost. Six standards have been established, ranging from Level A, where traffic flow is relatively free-flowing, to Level F, where the street system is totally saturated with traffic and movement is very difficult. Table 4-10 presents the level of service conditions for arterial and collector streets.

**TABLE 4-10. LEVEL OF SERVICE CONDITIONS
FOR ARTERIAL AND COLLECTOR STREETS**

Service Level	Typical Traffic Flow Conditions
A	Relatively free flow of traffic with some stops at signalized or stop sign controlled intersections. Average speeds would be at least 30 miles per hour.
B	Stable traffic flow with slight delays at signalized or stop sign controlled intersections. Average speed would vary between 25 and 30 miles per hour.
C	Stable traffic flow with delays at signalized or stop sign controlled intersections. Delays are greater than at level B but still acceptable to the motorist. The average speeds would vary between 20 and 25 miles per hour.
D	Traffic flow would approach unstable operating conditions. Delays at signalized or stop sign controlled intersections would be tolerable and could include waiting through several signal cycles for some motorists. The average speed would vary between 15 and 20 miles per hour.
E	Traffic flow would be unstable with congestion and intolerable delays to motorists. The average speed would be approximately 10 to 15 miles per hour.
F	Traffic flow would be forced and jammed with stop and go operating conditions and intolerable delays. The average speed would be less than 10 miles per hour.

Source: Transportation Research Board, *Highway Capacity Manual*, Special Report 209. National Research Council, 1985.

Based on the volumes determined in the traffic surveys, peak hourly traffic operations were analyzed at the key local intersections using ODOT's UNSIG10 and SIGCAP software.

UNSIG10 calculates level of service at unsignalized intersections based on Chapter 10 of the 1985 *Highway Capacity Manual*. This methodology relates level of service to reserve, or unused, roadway capacity (measured in passenger cars per hour). Reserve capacity is evaluated for all vehicles entering or crossing the major roadway traffic flow from side streets, as well as those making left turns on the major roadway. The relationship between various levels of service and reserve capacity is shown in Table 4-11.

At all-way stop controlled intersections, UNSIG10 calculates level of service based on saturation levels which are similar to the saturation values computed by SIGCAP at signalized intersections.

**TABLE 4-11. LEVEL OF SERVICE CRITERIA
FOR UNSIGNALIZED INTERSECTIONS**

Level of Service	Reserve Capacity (pcph¹)	Expected Delay to Minor Street Traffic
A	> = 400	Little or no delay
B	300 – 399	Short traffic delays
C	200 – 299	Average traffic delays
D	100 – 199	Long traffic delays
E	0 – 99	Very long traffic delays
F	0 <	Extreme delays, usually warrants intersection improvements

¹ pcph means passenger cars per hour

SIGCAP calculates level of service at signalized intersections based on a methodology developed by the Oregon State Highway Division. This methodology correlates level of service with saturation values. The saturation value is a measure of congestion levels which ranges from 0.00 to 1.00. The higher saturation value indicates higher levels of congestion. Table 4-12 summarizes the relationship between level of service and saturation values.

TABLE 4-12. LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service	Saturation Value
A	0.00 - 0.48
B	0.49 - 0.59
C	0.60 - 0.69
C-D	0.70 - 0.73
D	0.74 - 0.83
D-E	0.84 - 0.87
E	0.88 - 0.97
E-F	0.98 - 1.01
F	1.02 +

Performance Standards on State Highways

For those intersections on US 101 and OR 42S that were re-evaluated, new traffic counts were generated and each intersection was analyzed for existing performance, as well projected performance for the year 2020. In some cases, alternative roadway layouts were modeled for the year 2020 to provide some estimate of what changes may be necessary in the future should a given intersection fail to perform at acceptable levels. Performance at these intersections is reported in terms of v/c ratio—the higher the v/c ratio, the higher the level of congestion and the worse the performance of the highway.

The 1999 Oregon Highway Plan specifies acceptable v/c ratios for different categories of state highway. Table 4-13 outlines acceptable performance standards for State highways found in Bandon. These standards are for signalized intersections and for turns from the highway to the local road at unsignalized intersections. Turns at an unsignalized stop from a local road onto a state highway, within a UGB, can operate at a v/c ratio of 0.85.

Table 4-13: Performance Standards for State Highways in Bandon

Highway Category	Highways in Bandon	Inside UGBs	
		Speed <45 mph	Speed >=45 mph
Signalized Intersections and Unsignalized Turns from Highways onto Local Roads			
Statewide (NHS) Non-Freight Route	US 101	0.80	0.75
District/Local Interest Roads	42S	0.85	0.80
Unsignalized Turns from Local Roads onto Highways			
All Highway Categories	US 101; 42S	0.85	0.85

Source: 1999 Oregon Highway Plan

The Oregon Highway Plan also allows higher v/c ratios in areas that have been designated as Special Transportation Areas (STAs). However, because no sections of Bandon fall within the criteria established for an STA, the designation has not been included in this table.

Existing Roadway Performance

Based on current PM peak hour and daily traffic volumes, highway performance was calculated for the study area intersections. The results of this analysis are summarized in Table 4-14. Four of these intersections are operating within acceptable v/c standards: US 101/ 2nd NE, US 101/ OR 42S, US 101/ Chicago, and US 101/11th St. Four others are operating below acceptable standards: US 101/ 2nd St., US 101/ Oregon, US 101/ 9th St., and US 101/ Seabird.

Also shown are the LOS values for several local intersections of concern. All local intersections included in the analysis were shown to be operating at a Level of Service of "A".

**TABLE 4-14. ROADWAY PERFORMANCE ANALYSIS
1997 WEEKDAY PM PEAK HOUR CONDITIONS**

Intersection	V/C Ratio	LOS
State Highway Intersections		
US 101/ 2nd NE	0.10 ¹	
US 101/ OR 42S	0.70 ²	
US 101/ 2nd St	>1.00 ¹	
US 101/ Chicago	0.22 ³	
US 101/ Oregon	>1.00 ¹	
US 101/ 9th St	0.97 ¹	
US 101/11th St	0.71 ⁴	
US 101/ Seabird	>1.00 ¹	
Local Intersections		
Beachloop/ Seabird		A
Beachloop/ 11th		A
11th/ Elmira		A
4th/ Edison		A
1st/ Fillmore		A

¹ Movements reported are left turn onto state highway. Acceptable v/c is 0.85.

² Acceptable v/c on signalized statewide highway is 0.80.

³ Movements reported are for right turns onto state highway. Acceptable v/c is 0.85.

⁴ Acceptable v/c is 0.80.

Reviewing Table 4-14 and Figure 4-3, it is evident that all of the intersections which are operating at a lower v/c ratio are located on US 101. This is a typical situation where an intersection between a local street and a high volume state facility where the v/c ratio is based on the capacity of the worst single movement rather than the whole intersection.

Projections of intersection performance in the year 2020 are presented in Volume 5—*Alternative System Evaluation*. Projections are presented for a no-build scenario, as well as for several design options.

Figure 4-3. Existing Conditions

BANDON TRANSPORTATION SYSTEM PLAN

*VOLUME 5
Alternative System Evaluation*

October, 1999

TABLE OF CONTENTS

TABLE OF CONTENTS	2
TABLE OF TABLES	3
TABLE OF FIGURES	4
P-1 PREFACE	5
1. DESIGN PRINCIPLES	6
2. ALTERNATIVE STREET SYSTEM EVALUATION	8
2.1 NO-BUILD ALTERNATIVE	9
2.2 TRANSPORTATION SYSTEM MANAGEMENT (TSM) PLAN ALTERNATIVE	12
2.3 CITIZENS GROUP PLAN ALTERNATIVE	16
2.4 US 101 RE-ROUTE ALTERNATIVE	16
2.5 REFINEMENT PLAN ALTERNATIVE	19
2.6 COUPLET ALTERNATIVE	21
2.7 13TH STREET ALTERNATIVE	23
2.8 LAND USE ALTERNATIVES	24
3. NETWORK EVALUATION CRITERIA	24
4. EVALUATION OF ALTERNATIVES	27
5. CITY STAFF PREFERRED ALTERNATIVE	29
REVIEW OF CITY STAFF ALTERNATIVE	32
BICYCLE AND PEDESTRIAN NEEDS	32
PUBLIC TRANSPORTATION NEEDS	33

TABLE OF TABLES

TABLE 5-1	LEVEL OF SERVICE/Mobility Performance 2020 WEEKDAY PM PEAK HOUR CONDITIONS	11
TABLE 5-2	EFFECT OF SIGNALIZING OVER-CAPACITY INTERSECTIONS	11
TABLE 5-3	ACCESS MANAGEMENT CLASSIFICATION SYSTEM FOR STATE FACILITIES	12
TABLE 5-4	BANDON TRAFFIC SYSTEM DESIGN EVALUATION SHEET	28

TABLE OF FIGURES

FIGURE 5-1	2020 CONDITIONS (NO BUILD)	10
FIGURE 5-2	TSM ALTERNATIVE	14
FIGURE 5-3	EXISTING LAYOUT - OPTION 1 - OPTION 2	15
FIGURE 5-4	CITIZENS GROUP PROPOSAL	17
FIGURE 5-5	HIGHWAY 101 REROUTE	18
FIGURE 5-6	REFINEMENT PLAN PROPOSAL	20
FIGURE 5-7	COUPLET ALTERNATIVE	22
FIGURE 5-8	LAND USE ALTERNATIVES	25
FIGURE 5-9	HYBRID A ALTERNATIVE	30
FIGURE 5-10	HYBRID B ALTERNATIVE	31

P-1. PREFACE

The City of Bandon has developed a Transportation System Plan (TSP) with a grant from the Oregon Department of Transportation. The TSP establishes a system of transportation facilities and services adequate to meet the City of Bandon's identified transportation needs for the next twenty years. The Plan is consistent with the County TSP and adopted elements of the State TSP, and meets the requirements of the Transportation Planning Rule (Oregon Administrative Rules, Chapter 660, Division 12). The planning work was conducted by the City of Bandon Planning Department and JRH Transportation Engineering, with assistance from the Oregon Department of Transportation. The citizens of Bandon have played a significant role in development of the plan, and other agencies and service providers have been involved in the process to ensure plan consistency.

The plan and supporting information have been developed in six reports that document the process followed to reach the final Transportation System Plan. The reports correspond to the major elements of the work program.

- Volume 1. Public Involvement and Interagency Coordination (PIIC).** This report outlines how the public was involved throughout the planning process and how other agencies and service providers were involved. The report describes the materials, publications, and meetings that allowed the City to disseminate information and receive input that helped shape the transportation system plan.
- Volume 2. Review of Existing Plans, Policies, and Standards.** This report identifies existing documents that establish policies, regulations, standards, and capital improvements planning that relate to Bandon's transportation system. The report includes a review of city, special district, county, state, and federal documents.
- Volume 3. Inventory of the Existing Transportation System.** This report describes the existing transportation system in Bandon and various characteristics of the system.
- Volume 4. Transportation Needs Assessment.** This report identifies what aspects of the transportation system need to be addressed to meet the City's transportation needs for the next twenty years.
- Volume 5. Development and Evaluation of Alternatives.** This report provides alternative ways to address the identified needs. Of several alternatives, one will be selected and refined as the course the City will follow to meet its transportation needs.
- Volume 6. Transportation System Plan.** This report establishes how existing plans and implementing measures will need to be revised to carry out the preferred alternative. It establishes a program for development and conservation of the City's transportation system for the next twenty years.
- Volume 7. Implementation Element.** This report was not produced.

In this volume, a series of alternatives are developed that can meet the transportation needs of the community. This volume begins with the establishment of design principles which direct the development of the network alternatives. The alternatives are then evaluated from a traffic viewpoint and reviewed in terms of the City's comprehensive plan goals and objectives.

1. DESIGN PRINCIPLES

A series of principles were developed to guide the design of the alternative networks. The order in which the design principles are listed are not intended to imply an order of importance.

- **Avoid Skewed Intersections**

Roads that intersect at angles other than a right angle create a serious safety concern. The concern centers on sight distance issue in which, dependent on the angle of intersection, the driver will be required to look over one shoulder to observe approaching vehicles. For elderly persons, this can be difficult and may result in drivers executing maneuvers based on cursory observations.
- **Avoid Off-set "T" Intersections**

There is an increase in the number of conflicting maneuvers when two "T" intersections are placed too close to each other. The minimum spacing varies, dependent on the type of facility and the source of reference; however, there is general acceptance that the minimum spacing should be at least 150 feet.
- **Develop Function Classification of Network**

Streets perform various roles in the transportation system, ranging from carrying large volumes of primarily through traffic to providing direct access to adjacent property. These functions are often conflicting, and a hierarchical classification system needs to be applied to determine the appropriate function and purpose of each roadway.
- **Recognize Adjacent Land Uses/ Environment**

The type of facility that is developed can have a major impact on the development of adjacent land. If a street is developed to arterial or collector standards, then high trip generating land uses are likely to be permitted adjacent to the facility. In new areas, it is possible to direct development in a manner that minimizes negative impacts on the community. However, when changes are made to an existing street, particularly when the street is raised to higher functional class, the environment adjacent to the street normally experiences some significant change. A case in point would be a street that has a school located on it. The reclassification of the street to a higher classification would result in more traffic utilizing the street, which will raise some safety concerns.
- **Convenience/ Directness**

Wherever possible, drivers should be able to proceed from a lower to higher order facility in a convenient and direct manner. In this way, the amount of travel on the lower order streets which principally provide access to residential properties can be reduced. Care must be taken to ensure that the streets do not encourage speeding or form veritable "drag-ways" where drivers feel comfortable exceeding speed limits.
- **Ability to Upgrade**

The selection of a street as a future higher order facility is largely dependent on the ability of the street to be up-graded and possibly widened. While it is possible to buy additional right-of-way to accommodate future widening, it is unlikely that funding will be available in all but a few special cases.

- **Affordability**

The cost of construction and maintenance is critical for most communities. The desire for large, wide streets that provide sufficient capacity to accommodate all traffic demand must be tailored to the cost of the initial construction and the on-going maintenance of the facility. It is, therefore, important to develop a network which has sufficient capacity to accommodate what can be reasonably expected.

- **Reduce Need for Cul-de-sacs**

The street network should be designed in such a way as to enable lots to be developed with connected streets and reduce the necessity for cul-de-sacs. Cul-de-sacs tend to make emergency access more difficult, creating longer response times.

- **Connectivity**

One of the most critical problems with poor street connectivity is the longer emergency vehicle response times that result from a street network that does not allow through connections. A lack of connecting streets also tends to concentrate traffic onto fewer streets, which can cause congestion during peak travel periods, resulting in longer emergency response times. In areas of highly interconnected street systems, emergency vehicle access is enhanced due to the number of possible routes for getting to an emergency site.

The degree of street connectivity also affects utility distribution costs. Lack of street connections limit personal travel options and increase trip distances.

Increased street connectivity can result in reductions in the use of arterial and collector streets for local travel, more even traffic distribution, less out-of-direction travel, more efficient mass transit service, and reduced travel times. Areas with interconnected local street systems also promote the use of alternative modes, particularly for short trips, because out-of-direction travel is minimized.

- **Transit Provision**

The ability of a network to accommodate future public transport service is critical to the evaluation process. In short term it is anticipated that the existing Dial-a-Ride service will be the only form of public transport in the city. Dial-a-Ride requires no special facilities to accommodate the vehicles on the network; however, as the population of Bandon increases, the possibility of some form of fixed route public transport must be considered. From an operational point of view, the public transport routes should be located on the arterial and collector network. Routing on low order facilities should be avoided, as it tends to have a detrimental effect on the neighborhood environment.

As access to public transit is required from all areas, the access distance to the route then becomes a determinant in the spacing of the arterials and collectors. As a rule of thumb, maximum access distance is assumed to be approximately 1/4 mile. Therefore, the street systems should be comprised of arterials and collectors no further apart than 1/2 mile, to facilitate provision of fixed route public transport.

2. ALTERNATIVE STREET SYSTEM EVALUATION

A “no-build” alternative and six build-roadway alternatives were developed and examined to meet the City’s goals and the growth in traffic. These were reviewed with the Transportation Advisory Committee throughout the planning process to come to a conclusion on which alternative to detail in the Transportation System Plan.

In all of the alternatives, the automobile is expected to remain the dominant mode of travel in the future. There is some potential for a shift from autos to other modes for local trips; however, the continued use of automobiles for most trips is expected to demand more roadway improvements.

The alternatives incorporate Transportation System Management techniques where appropriate. Transportation Demand Management and Transit Alternatives are not expected to impact the travel patterns in Bandon, as a substantial portion of the traffic is regionally oriented.

The purpose of the alternative street system analysis is to compare 2020 travel patterns and critical roadway sections based on the following choices:

- **No-Build Alternative**
Includes only those currently planned State transportation improvements along Highway 101 through Bandon
- **Transportation Systems Management (TSM) Alternative**
The minimum amount of improvements necessary are applied in this alternative.
- **Citizens Group Plan Alternative**
This alternative is based on the concepts developed by a task group of citizens charged with defining a road network for the City.
- **Highway 101 Re-route Alternative**
In this alternative, Highway 101 is extended from the junction of Highway 101/ OR 42S east of the City to intersect with the existing Highway alignment south of the City.
- **Refinement Plan Alternative**
This alternative extends the concepts developed as part of the South Bandon Refinement Plan.
- **Couplet Alternative**
This alternative splits Highway 101 into a one-way north-south couplet arrangement.
- **13th Street Alternative**
13th Street is substituted as a major collector for 11th Street in this alternative.

The following describes each alternative and discusses its traffic implications. Because of changes made by ODOT to the method required for reporting highway performance, alternatives involving Highway 101 or Highway 42S have been converted from LOS letters to volume-to-capacity ratios.

Performance of local streets is reported in terms of level of service letters (LOS). A discussion of this change in requirements and its impacts on the Bandon TSP can be found in Volume 4.

2.1 NO-BUILD ALTERNATIVE

This alternative describes traffic conditions for year 2020 conditions for the City of Bandon's existing road network. Programmed ODOT improvements to US 101 and Highway 42S are assumed in the forecast. Year 2020 intersection level of service, assuming no improvements are made are shown in Figure 5-1.

Figure 5-1 and Table 5-1 show the results of the level of service analysis under year 2020 conditions. The level of service analysis of key intersections in the city indicates that there will be a substantial deterioration in the operation of the intersections along US 101. Most of the intersections on US 101, except those at OR 42S, Chicago, and 11th, will operate at or below minimum performance standards in the year 2020. The remaining intersections not on US 101 all operate at level of service "A".

Figure 5-1

Table 5-1. 2020 Weekday PM Peak Hour Conditions

	Signalized	Unsignalized	
Location	V/C or LOS	V/C or LOS	Acceptable V/C Ratio
State Highway Intersections			
US 101/ OR 42 S	0.72		0.80
US 101/ 11th Street	0.71		0.80
US 101/ 2nd NE		0.79	0.85
US 101/ 2nd Street		>1.00	0.85
US 101/ Chicago Ave.		0.22	0.85
US 101/ Oregon Ave.		>1.00	0.85
US 101/ 9 th St.		0.97	0.85
US 101/ Seabird Dr.		>1.00	0.85
Local Streets			
4th/ Edison	A		N/A
11th/ Elmira		A	N/A
1st/ Fillmore		A	N/A
Beachloop/ 11th		A	N/A

Signalization

The capacity problems at some of these could be improved by the installation of traffic signals. Table 5-2 indicates the expected change in intersection performance of the over-capacity intersections with the installation of traffic signals.

Table 5-2. Effect of Signalizing Over-Capacity Intersections

Location	Expected Unsignalized V/C Ratio	Expected Signalized V/C Ratio
US 101/ 2nd NE	0.79	0.52
US 101/ Oregon Ave.	>1.00	0.48
US 101/ 9 th St.	0.97	0.46
US 101/ Seabird Dr.	>1.00	0.47

However, while the installation of traffic signals markedly improved the operation of these intersections, the decision to signalize an intersection is evaluated in terms of the *Manual of Uniform Traffic Control Devices (MUTCD)* warrants and the Oregon Department of Transportation's Access Management Policy.

The MUTCD proposes eleven warrants for determining the need for signalization of an intersection. Three warrants, 1, 2, and 11, are often considered as key indicators for signalization.

- Warrant 1 Minimum Vehicular Volume
- Warrant 2 Interruption of Continuous Traffic
- Warrant 11 Peak Hour Traffic

ODOT also examines other warrants in considering traffic signals, as well as additional factors such as the urban/rural nature of the segment of highway, posted speeds, and sight distances.

ODOT's Access Management Policies address appropriate spacing for public and private streets that intersect state highways. Spacing standards for signalized intersections take precedence over those for unsignalized intersections. Signal spacing of one half mile is desirable on Statewide and Regional Highways. However, a number of technical criteria must also be met in addition to the signal warrants and other considerations mentioned above. Specific spacing standards are not given for District level highways such as OR42S. Each situation on these facilities is considered separately, although the signal should not inhibit the efficient progression of traffic.

**Table 5-3. Access Management Classification System
for Statewide Highways**

Facility	Functional Class	Level of Importance	Signal Spacing
US 101	Major Arterial	Statewide	1/2 mile
OR 42S	Major Arterial	District	Dictated by existing conditions and traffic flow

Source: 1999 Oregon Highway Plan

In terms of these two policy documents, only the intersection of US 101 and Seabird Drive may conform with criteria for signalization. It is more than ½ mile from the signal presently located at 11th Avenue and with expected traffic generated from current and future development, signal warrants will likely be met in the future. Discussions with ODOT indicate that, should warrants be met in the future, signalization would have to be accompanied by other improvements such as widening, leveling the vertical alignment and addressing the ditches on either side of the highway.

The intersections of US 101 with 2nd Street NE, with Oregon Avenue, and with 9th Avenue do not meet the recommended traffic signal spacing of ½ mile and are not expected to meet warrants in the future. Activity at the intersection of Oregon Ave. and US 101 is complicated by geometry of the intersection and by the location of various service and retail establishments, as well as the access to City Hall which is slightly offset on the opposite side of the highway. Further, because of the lack of a well-developed connection from Oregon Ave. to the street network to the south, traffic cannot be encouraged to travel to 11th Street and access the highway at the existing stoplight. Because of these limitations, no solutions are identified for the Oregon Ave./US 101 intersection. In the future, consideration may be given towards realignment of the intersection and development of connections to the street network to the south.

Capacity Widening

With the exception of US 101, which has four through lanes in most of the study area, most of the streets in Bandon have two through lanes with a peak hour directional capacity of 700 to 900 vehicles per lane. In terms of roadway capacity, the streets on which the traffic was assigned do not exceed 700 vehicles per lane capacity and therefore have sufficient capacity to accommodate the anticipated traffic, and no capacity widening is warranted.

2.2 TRANSPORTATION SYSTEM MANAGEMENT (TSM) PLAN ALTERNATIVE

The TSM alternative aims at making the most efficient use of the existing transportation infrastructure, thus reducing the need for roadway capacity expansions. The alternative includes signalizing intersections, coordinating traffic signals, re-striping lanes, and channelizing intersections in lieu of major new road construction projects.

The TSM alternative focuses on low capital cost projects which are easier and quicker to implement than new or reconstruction projects. This alternative also has the advantage of causing little or no disruption to traffic flow during construction and requires no/minimal right-of-way acquisition.

Locally, the TSM alternative is considered the "first choice" whenever system deficiencies are encountered. Local agencies have a good record of implementing the projects in the TSM alternative and are expected to meet the implementation period of the plan. Specific measures applicable to the TSM alternative are presented below.

The main focus of the TSM alternative is the management of the existing system. This alternative recognizes that US 101 will remain the major spine through the city, and that a framework of collector streets will channel vehicles on and off US 101. The specific improvements in this alternative address the problems with accessing and egressing US 101.

The high volume of through traffic on US 101 renders it extremely difficult to access US 101 without the aid of a traffic signal. This alternative recognizes that traffic signals will be needed and that State policies dictate the spacing of traffic signals on US 101. Where traffic signals do not meet State warrants, other TSM measures, such as channelization are utilized.

Figure 5-2 illustrates the proposed TSM network. The network consists of a series of major and minor collectors. The major collector system divides the city into one-half mile traffic blocks. East/west major collector streets include 4th Avenue, 11th Avenue, 21st Avenue, and Seabird Drive. The north/south major collectors include Beach Loop Drive, Franklin Street, and Fillmore Avenue. A minor collector network is developed in the Jetty area and along Riverside Drive. The installation of traffic signals may be warranted at the following intersections:

- US 101 and Fillmore Avenue
- US 101 and 21st Avenue
- US 101 and Seabird Avenue

The City has discussed the possibility of signals at Fillmore and at Seabird with ODOT. Both the City and the agency have agreed that a signal at Fillmore is likely in the near future and that, based on the level of development occurring in the south Bandon area, a signal at Seabird is likely in the future. The latter will have to be monitored to determine if it meets warrants. Any signalization of this location will require changes to the vertical alignment, roadside ditches, and the lane configuration. The intersection of 2nd Street SE and US 101 and Chicago Avenue do not meet traffic signal warrants. At these intersections it is proposed that the traffic management techniques illustrated in Figure 5-3 be introduced. These measures will mitigate the need for the introduction of traffic signals at these intersections.

Figure 5-2

Figure 5-3

2.3 CITIZENS GROUP PLAN ALTERNATIVE

This alternative was developed in 1995, as part of an initiative by the City of Bandon to develop a street plan. A group of concerned citizens met over a period of six months to allocate the functional class to each street in the city. The proposed street network, which essentially reinforces existing utilization of the network, is illustrated in Figure 5.4. US 101 is the major arterial with a grid of major collectors formed in an east/west direction by First Street, 7th Street, 11th Street, Face Rock Drive, 21st Street, Seabird Drive, and in a north/south direction by Beach Loop Drive, Franklin Street, Elmira/ Fillmore Avenue, and Riverside Drive. In order to provide access to and from US 101, it will be necessary to install traffic signals at the following locations:

- US 101 and 21st Street
- US 101 and Seabird Drive

The intersection of the arterial/collector system at Elmira Avenue and Fillmore/Riverside Drive is likely to be problematic. The high volume of traffic on US 101 will make it extremely difficult for left-turning vehicles to enter the highway. Future signalization in this area will be difficult, as the intersections are off-set by one block, which will result in an overlapping of the left-turn storage areas and do not meet ODOT traffic signal spacing criteria. Also, the individual intersections do not meet the *Manual of Uniform Traffic Control Devices (MUTCD)* traffic signal warrants.

The blocks formed by the major collectors are further divided by a series of minor collectors formed by Caroline/Harlem/ First Street, Ohio Avenue, Jetty Road, 4th, 8th, Jackson Avenue, and Carter Street.

The level of service of the arterial/major collectors system is essentially the same as the TSM alternative; the only difference is the Elmira/US 101/Fillmore area which, under priority control, will be unsatisfactory.

As in the TSM alternative, channelization of the Chicago/2nd Street/US 101 area is required.

2.4 US 101 RE-ROUTE ALTERNATIVE

The serpentine alignment of US 101 through Bandon presents the opportunity to re-route US 101 to more directly align the northern and southern sections of Highway 101 east of Bandon. The redundant section of US 101 would then be reclassified to major collector status to reflect the new function of the road.

Figure 5-4

TABLE 5-4. BANDON TRAFFIC SYSTEM DESIGN EVALUATION SHEET

CRITERIA	DO NOTHING	TSM	CITIZENS GROUP PLAN	US 101 RE-ROUTE	REFINEMENT PLAN	COUPLET	13TH STREET ALTERNATIVE
Environmental Impact	P	F	F	P	E	F	P
Political/Community Acceptability	P	G	G	P	E	P	F
Land Use Compatibility	P	F	F	P	G	P	G
Cost, Construction/ Maintenance	E	G	G	P	G	F	P
Safety	P	F	F	E	F	G	G
Traffic Congestion	P	G	F	G	F	G	F
Minimize Paved Area	F	G	G	F	F	F	G
Access Management	P	G	F	F	F	F	F
Residual Traffic Capacity	P	F	F	G	F	G	F
Route Connectivity	P	F	F	P	G	G	F
Bicycle/ Pedestrian Connectivity	P	F	F	F	F	P	F

E = Excellent G = Good F = Fair P = Poor

Figure 5-5

The collector system replicates the systems described in the TSM alternative. The major collectors, 11th Avenue and Face Rock/21st Street, are extended in an easterly direction to intersect with the re-routed US 101. Traffic signals may be warranted at the following intersections:

- US 101 and 21st Avenue
- US 101 and the reclassified section of US 101 through Bandon

The re-routing of the through traffic will result in a substantial reduction in traffic through the city. No additional traffic signalization will be necessary in the city. The level of service of the intersections of the major collectors and the re-routed US 101 remain within an acceptable range.

2.5 REFINEMENT PLAN ALTERNATIVE

Between March and June 1997, the City of Bandon undertook a refinement planning exercise for the South Bandon Area, colloquially referred to as the “Donut Hole”. The key design constraint in the study area is the extensive wetland area. The key recommendations of this study include the following concepts:

- The introduction of continuity breaks. The study recommended at least one continuity break along each collector in order that the collector does not extend through the area in a straight line. These continuity breaks result in offset and “tuning” form intersection configurations.
- Avoid or reduce natural area/wetland impacts. Reducing the number of street crossings will reduce the impact on the natural area.
- Reduce access points and turning movements on US 101. This measure will reduce reliance on US 101 by the provision of an alternative local network.
- Adopt requirements for pedestrian paths adjacent to greenway buffers. The development of pedestrian paths along the greenway will function as both transportation and recreational facility.

The conceptual circulation system consists of a major collector box formed by US 101, Seabird Drive, Beach Loop Drive, and 11th Avenue.

The minor collector street network consists of two overlapping “tuning forks” oriented in a north/south and west/east direction, utilizing Harrison and Franklin Avenues, and Face Rock Drive and 18th and 24th Streets.

Figure 5-6

The street network pattern developed in the South Bandon Refinement Plan is extended to cover the entire study area. The major collector system consists of Ocean Drive/4th Street, Fillmore Avenue, and the minor collector system consists of extensions of 11th, 18th, and 24th Streets, in an easterly direction, and Harrison and Franklin Streets in a northerly direction.

Bicycle and pedestrian movements are accommodated on a separate system which skirts the wetland areas.

As in the other alternatives, traffic signals may be warranted at the intersection of the major collectors and US 101. On the extended network in the northern section of the city, one-half mile traffic blocks are formed by the major collectors which will accommodate the introduction of traffic signals. The circulation system in the south Bandon area is developed around a one mile traffic block with minor collector streets at one-third mile spacing.

The one-half mile traffic blocks in the northern sector comply with the recommended traffic signal spacing for a facility of this classification. The one mile major collector spacing dictates that trips within this box travel to the major collector to access the arterial, i.e., US 101. Both 11th Avenue and Seabird Drive have sufficient capacity to accommodate the additional traffic. However, it is likely that as the south Bandon area develops, the growth in traffic will be such that the installation of traffic signals within the one mile traffic block will be requested by the community. At a collector spacing of only one-third mile, the installation of traffic signals at each location will adversely affect the capacity of US 101 and is unlikely to be supported by the State.

As with the previous alternative, TSM measures at the intersections of US 101 and 2nd Street and Chicago Avenue will be utilized.

2.6 COUPLET ALTERNATIVE

To provide additional capacity on the major north-south arterial to accommodate the high regional traffic, a one-way couplet is proposed. The traffic couplet utilizes the existing highway as the southbound one-way link and develops a second northbound link to the east of the existing US 101 alignment. The separation between the couplet legs is dependent on the envisaged land use between the streets and the likely queue lengths created by left-turning vehicles accessing the couplet. US 101 is shown bifurcating on the northern side at Fillmore Street and on the southern side at Seabird Drive. The creation of the couplet will, in the short term, allow for the reintroduction of some on-street parking as well as the development of landscaped areas which will enhance the overall street environment. The major collectors supporting the couplet consist of the following streets:

- 4th Street
- 11th Street

Figure 5-7

- 21st Street
- Seabird Drive
- Harlem Avenue

Intuitively it would seem that, with the introduction of the couplet, splitting the traffic would reduce the necessity for traffic signals at the intersection of the collectors and arterial streets. However, owing to the high volume of through traffic on US 101, the left-turn maneuvers during the peak period will be impaired, and traffic signals will be required in the twenty year design period at the intersections of the couplet and 11th and 21st Streets.

The introduction of the couplet does, however, affect the intersections of Chicago Avenue/ US 101 and 2nd Avenue. As there will be no left-turn maneuvers onto US 101, the need for TSM measures is ameliorated. An increase in the vehicle miles traveled (VMT) is likely to occur as a result of the out-of-direction travel caused by the one-way couplet. The remaining intersections all operate at an acceptable level of service.

2.7 13th STREET ALTERNATIVE (Not Mapped)

In all of the previous alternatives, the primary east/west link is 11th Street. The main motivation for the 11th Street collector is that it is currently performing this function and is already signalized at its intersection with US 101. However, 11th Street cuts through the center of the city park, as well as beside the school's property. The likely growth in traffic on the collector network brings into question the appropriateness of a major collector in this location.

An alternative to the 11th Street collector is to utilize 13th Street, which passes south of the city park area and the school property. In order to create the connection between US 101 and Beach Loop Drive, 13th Street would need to be extended, which may need the resolution of wetland and topographic constraints.

The remaining major collector network consists of 8th Street, Face Rock Drive/ 23rd Street and Seabird Drive, Franklin/ Edison Avenue and Harlem Avenue in a north/ south direction. Minor collectors consisting of 11th Avenue, Fillmore Avenue, and Ohio Avenue support the major collector network. The use of 13th Street as the major collector will result in the removal of the signal at 11th Street and placement of a signal at 13th Street.

Additional traffic signals may be warranted at

- US 101 - Seabird Drive
- US 101 - 23rd Drive

Spacing is a concern with the installation of traffic signals on US 101 between OR 42S and 13th Avenue. The designation of 8th Street and Fillmore Avenue as major collectors results in a sub-optimum traffic signal spacing.

2.8 LAND USE ALTERNATIVES

The alternatives developed above have assumed that the land use is based solely on previously adopted land use plans. Thus, future employment and dwelling units will be allocated to parcels according to the planned designations of the most recently adopted plans. However, there has been greater recognition of the inter-relationship between land use and transportation needs and how potential land use changes help reduce traffic in certain areas.

As part of this project, consideration was given to alternative land uses which will reduce the need for automobile usage. Figure 5-8 illustrates a conceptual plan which would reduce travel needs. The focus is on concentrating commercial development at specific nodes which are best able to accommodate the increased traffic.

3. NETWORK EVALUATION CRITERIA

As part of the identification, assessment, and review of future transportation alternatives, the Bandon Citizen's Advisory Committee, City staff, and ODOT staff helped develop evaluation criteria that were used to measure the success or failure of the alternatives and then choose a preferred alternative for recommendation in the Transportation System Plan.

A two-stage process was utilized to develop the criteria. The first stage of the criteria development was to select comprehensive plan policies which relate to or affect the transportation system. Clearly, the Transportation System Plan is an integral part of the City's Comprehensive Plan, and must, therefore, support and reinforce the goals and objectives of the plan. The following criteria summarize the relevant goals and objectives of the comprehensive plan.

1. Minimize vehicular trips through alternate modes and Transportation Demand Management, including land use
2. Improve emergency access
3. Further develop public transit services
4. Link major city areas via alternative modes
5. Improve access for the transportation disadvantaged

Figure 5-8

6. Establish alternate routes for pedestrian travel
7. Ensure connectivity for all modes
8. Encourage orderly city development patterns, via public works improvement
9. Support clustered development patterns
10. Ensure that road improvements are concurrent with other city services

The second stage of the criteria development was to identify a set of specific measures which more objectively expressed the implicit statements of the City's goals and objectives. The following criteria provide a set of specific evaluation standards which address the more general goals and objectives of the comprehensive plan.

1. Environmental Impact
2. Political
3. Land Use Compatibility
4. Cost, Construction/ Maintenance
5. Safety
6. Traffic Congestion
7. Minimize Paved Area
8. Access Management
9. Residual Traffic Capacity
10. Route Connectivity
11. Bicycle/ Pedestrian Connectivity
12. Emergency Service Access
13. Facilitate Public Transport
14. Minimize Vehicular Trips

4. EVALUATION OF ALTERNATIVES

The alternatives were evaluated in relation to the criteria using a planning balance sheet methodology, where each option was rated in relation to each of the criteria. The planning balance sheet methodology is an evaluation technique which is capable, in a consistent way, of dealing with "qualitative" or "soft" evaluation problems.

This methodology refrains from monetary judgment, thus avoiding the problem of costing in tangible effects (related inter alia to safety, environment quality, etc.)

Each alternative was assigned a rating (non-numeric) based on its ability to meet the specific criterion. The assessment of the implications of each network alternative for the different criteria is tabulated, as illustrated in Table 5-4.

The no-build alternative is acceptable to some community members, as there is no change and no construction costs incurred. However, there will be gradual deterioration of conditions to a point where construction works will be necessary to rectify the situation.

One of the positive elements of the TSM alternative is that the status quo is maintained and only the minimum of improvements are made. The formalization of the road network ensures that neighborhoods are protected from adverse environmental impacts, and facilities are developed to appropriate standards.

The Citizen Group Plan fared well in the evaluation for the same reasons as the TSM alternative. The major drawback of this alternative was in its treatment of the 2nd Avenue/ Chicago Avenue/ US 101 intersections.

The US 101 re-route alternative scored quite poorly, particularly in terms of public acceptability and its effect on the City. The alternative, however, achieved the highest safety rating and reduces traffic congestion in the City.

The Refinement Plan, by balancing the environmental with the land use issues, scored very highly. The only negative factor with this alternative is its ability to upgrade access from US 101, as the introduction of traffic signals at some future date will be problematic.

As with the re-route alternative, the couplet fared well in the safety and congestion area. This alternative performed poorly in such areas as political/ community acceptability and land use compatibility.

The major benefit of the 13th Street alternative is the lessened neighborhood impact, as the collector is located away from the school and the city park. As it will be necessary to complete 13th Street between Jackson Avenue and Beach Loop Drive, properties will need to be displaced, and the cost of constructing the new section will be higher, owing to the need to mitigate the wetland intrusion.

A public meeting was held where these alternatives were discussed with community members. The general consensus was that the TSM “do minimum” approach was the most acceptable, but the emphasis in the Refinement Plan option of minimizing the impact on the wetlands was supported.

Elements from the TSM and the Refinement Plan alternatives were combined into the alternative, referred to as the “Hybrid A” alternative, shown in Figure 5-9.

This alternative seeks to minimize the impact on the wetlands in south Bandon by positioning the major and minor wetland crossings at the narrowest points of the wetland area. Utilization of the narrowest wetland crossings has implications on future traffic signal spacing on US 101, as discussed in the Refinement Plan option presented earlier.

5 CITY STAFF PREFERRED ALTERNATIVE

Subsequent to the development of the “Hybrid A” alternative, City of Bandon staff reviewed and recommended some amendments to the alternative. In reviewing the alternatives, City Staff focused on differentiating between collector and local access streets only and made no attempt to subdivide these categories further. The premise being that the most significant difference in street environment occurs between the two categories of collector and local street, whereas the difference between a major and minor collector are relatively small. The classification of a street as a major or minor collector will be undertaken as part of a later stage. The City Staff’s Preferred Alternative “Hybrid B” is shown in Figure 5-10.

The following amendments to the “Hybrid A” Alternative are recommended by the City.

- Eighth Street should remain a local access street.
- Eleventh Street should be classified as a collector between Beach Loop Drive to the site of the hospital at Lexington.
- Face Rock Drive. City Staff’s preference is for Face Rock Drive to continue directly east to intersection with US 101 at 20th Street. As the environmental information is only at reconnaissance level and additional surveys will be necessary to determine the exact location of the wetlands, City Staff feel that the need to ensure adequate collector and traffic signal spacing are strong factors in determining the preferred alignment at this stage. City Staff, however, recognize that adjustments may be required at some further stage to satisfy environmental requirements.
- Seabird Drive should extend from Beach Loop Drive to US 101 only, i.e., within Bandon’s urban growth boundary.
- Jackson, Ohio, and Carter Streets should be eliminated as collectors.

Figure 5-9

Figure 5-10

REVIEW OF CITY STAFF ALTERNATIVE

The City Staff's preferred option provides collectors spaced one-half mile apart. The resultant one-half mile traffic boxes are optimal for a community such as Bandon. The existing street network in the jetty area is particularly circuitous, and the provision of a single collector street is likely to result in a number of streets operating as "de facto" collectors, which may cause some consternation among residents.

BICYCLE AND PEDESTRIAN NEEDS

The purpose of the bicycle and pedestrian element is to provide viable, safe transportation alternatives to the automobile. The development of an integrated bicycle and pedestrian network is aimed at making it more convenient for people to bike and walk.

There is very little data for bicycling and walking in the Bandon area. According to the U.S. Bureau of Census, bicycling currently accounts for a small number of trips (approximately 1%) in Bandon. These trips are mainly centered on home to school trips and some recreational bicycling.

Walking currently accounts for 12% of the journey-to-work trips in Bandon.

Clearly, with the current low bicycle and pedestrian mode choice, it is unlikely that there will be capacity problems. However, the upgrading of pedestrian and bicycle facilities in Bandon, as well as improvements to the pedestrian environment, will increase the mode share for journey-to-work trips and also, more importantly, increase the use of these modes for non-work trips.

The Transportation Planning Rule requirements with respect to pedestrian and bicycle facilities are detailed below, and these should be the minimum amount of facilities required.

Facilities providing safe and convenient pedestrian and bicycle access within and from new subdivisions, planned developments, shopping centers, and industrial parks to nearby residential areas, transit stops, and neighborhood activity centers, such as schools, parks, and shopping. (045(3)(b))

Sidewalks shall be provided along arterials and collectors in urban areas. (045(3)(b)(A))

Bikeways shall be provided along arterials and major collectors. (045(3)(b)(B))

PUBLIC TRANSPORTATION NEEDS

Public transit in small cities is difficult to achieve. The very factors that make small city living appealing - wide open spaces and low density development - make public transit troublesome to implement. Providing public transportation services to areas that contain very few people is

generally not economical. Providing a low-density community with a level of service high enough to attract a large, steady ridership can be very expensive and difficult to achieve over a wide geographical area.

The Federal government recommends density levels of between 2,500 and 4,500 people per square mile to successfully implement a public transit system. Clearly, densities in Bandon fall below the number that would possibly sustain a fixed transit system.

Public transportation in Bandon has been limited to a County wide dial-a-ride service that is operated by Coos County Transit. This service provides a significant number of trips annually. Ridership in Bandon in 1995 totaled 5,400 trips, but had fallen to 4,100 trips by 1998. This decline in the number of trips given is not indicative of the demand that exists, however. Trip totals have been limited by equipment limitations, manpower limitations, and funding limitations. The majority of the system ridership is made up of transportation disadvantaged, elderly and disabled, and youth.

The Coos Curry Transit Feasibility Study proposes a phased expansion of the county transit system that would continue local demand response service in Bandon, but also eventually provide "flexible" fixed route connections to northern and central Coos County, as well as south to Curry County. These routes would run at set times on given routes, but with adequate notice could respond to specific transit requests within an established distance from the fixed route.

BANDON TRANSPORTATION SYSTEM PLAN

VOLUME 6

***Implementing the Transportation System
Plan: Goals, Objectives, and Policies***

October, 2000

BANDON TRANSPORTATION SYSTEM PLAN VOL. 6

TABLE OF CONTENTS

INTRODUCTION	1
SECTION 1: Goals, Objectives, Policies	3
SECTION 2: Street Plan	11
Figure 1: Functional Classification of Street System (Appendix A)	
Figure 3: Street Plan	19
Figure 4: Index to Street Segments	20
Table 2: Arterial/Collector Street System Improvements	18
Figure 5: Index to Intersection Improvement Projects	22
Table 3: Intersection Improvement Projects	23
Figure 6: New Street improvement & Street Segment Elimination Projects	25
SECTION 3: Bicycle Plan	26
Figure 10: Bicycle Plan Map	30
Table 4: Recommended Bicycle Parking Spaces	30a
SECTION 4: Pedestrian Plan	31
Figure 11: Pedestrian Plan	34
SECTION 5: Transit Plan	35
SECTION 6: Air/Rail/Water/Pipeline Plan	37
SECTION 7: Access Management Plan	40
Table 5: Access Management Guidelines	44
SECTION 8: Implementation Plan	45
Appendix A: Capital Improvements and Costs	
Appendix B: Street Standards and Construction Typical	

VOLUME 6 - BANDON TRANSPORTATION SYSTEM PLAN

PREFACE

This document is Volume 6 of the Transportation System Plan (TSP) for the City of Bandon, Oregon, and the Bandon Urban Growth Area. It is an adopted element of the City's Comprehensive Plan. Six volumes constitute the TSP. Volume 1 lists the Citizen Involvement and Interagency Coordination process. Volumes 2-5 provide a factual base for the plans and policies contained in Volume 6.

- Vol. 1 Citizen Participation.
- Vol. 2 reviewed existing plans, policies and standards.
- Vol. 3 inventoried the existing transportation system.
- Vol. 4 assessed current and future transportation needs.
- Vol. 5 evaluated a range of transportation system alternatives.
- Vol. 6 describes the refinement and completion of the preferred alternative.

The TSP establishes a system of facilities and services to meet the City of Bandon's identified transportation needs for the next 20 years. It is consistent with the Coos County TSP, and applicable elements of the State's TSP. It also meets the requirements of the *Transportation Planning Rule* (Oregon Administrative Rules, Chapter 660, Division 12). The Plan has been prepared with a grant from the Oregon Department of Transportation. Plan preparation has been the responsibility of the Bandon Planning Department, assisted by JRH Transportation Engineering and the Dyer Partnership.

BACKGROUND

The Oregon *Transportation Planning Rule* (TPR) sets a high standard for local jurisdictions. It emphasizes provision and development of alternate modes of transportation. Bandon falls short of meeting the state-mandated standards and the challenge will be significant. This plan sets out the steps necessary for compliance. With public and private cooperation, the plan will create a more balanced and useful transportation system.

Lack of investment in building and maintaining the infrastructure, as well as inadequate street standards and requirements, has resulted in transportation system deficiencies. Addressing years of neglect will not be easy. Solutions will not come within the short term. Through sustained commitment to a vision of a system which enhances community and individual mobility, economic vitality, safety, and environmental sensitivity Bandon can make that vision a reality. Even with a shift in focus from other issues, it is not expected that there would be a substantial increase in public investment due to a lack of resources and budgetary constraints. The community will have to make choices regarding priorities and utilize the available scarce resources efficiently.

INTRODUCTION

The transportation system in Bandon consists of an existing road system, bicycle and pedestrian paths, public transportation, an airport, and port facilities. The proposed system has been designed to meet Bandon's future transportation needs and respond to the environment in a manner that contributes to a high quality of life.

Volume 6 begins with a list of the City's transportation Goal, Objectives and Policies (GOP). These statements guided the development of the TSP and will continue to guide implementation. Following the GOP are five sections, each describing plans for various modes of transportation. Section 7 deals with access management on arterial and collector streets. Section 8 presents an implementation plan, establishes priorities, estimates costs, and deals with funding.

The issues raised herein are based on service analysis and evaluation of alternative solutions, as well as discussions and workshops with City staff, residents, and representatives from ODOT. The analysis is a "best guess" of future conditions, and the solutions represent potential remedies to anticipated problems. As deficiencies appear in the future, proposed solutions will require additional study and refinement.

Section 1

Goal, Objectives, Policies

SECTION 1 - GOAL, OBJECTIVES, AND POLICIES

Goal, objective, and policy statements each have different purposes. It is important that the purpose and meaning of each be well defined. As used in this report:

Goal: provides the vision of desired future conditions in Bandon. It is value-based, and the achievement is not necessarily measurable. Generally, a goal will not change or be invalidated as a result of future events. In many cases, a stated goal indicates a direction for continuing effort rather than a point to be reached.

Objectives: specific, measurable statements of desired ends that would aid in achieving a goal. Objectives also describe directions in which the City wishes to progress.

Policies: courses of action which specify *how* the goal and objectives will be realized. Policies are the positions the City will take in order to reach stated objectives. They are used *to develop* standards for development review by the Planning Commission and the City Council, and are implemented in the Municipal Code.

Transportation Goal: A transportation system meeting the complete needs of individuals, businesses, and institutions for the transport of people and goods, by multiple means, in a safe, efficient and economical manner.

Objectives:

1. To prepare and adopt a Transportation System Plan which meets the requirements of the *Oregon Transportation Planning Rule*.
2. To inventory current public parking and prepare a parking improvement plan for the Old Town business district.
3. To inventory all platted streets in Bandon and determine which are open; adopt an official open street map; establish a clear process for opening streets as well as standards for improvement.
4. To recommend streets for vacation while protecting the local street network and providing for future transportation needs.
5. To establish a street system improvement program, and update annually.
6. To develop a system of sidewalks, walking paths, and bicycle facilities linking major areas of the community.

7. To increase participation in regional and statewide transportation planning in order to ensure the City's access to all modes of transportation and to gain the maximum financial support possible.
8. To maintain the Coquille River estuary as a shallow draft port.
9. To protect and enhance the development and operation of the Bandon State Airport.
10. To minimize vehicular trips to the greatest extent possible, given the practical opportunities for demand reduction and alternate modes of travel.
11. To complete the "backbone" bicycle system, as described in the Transportation System Plan (TSP), as soon as possible.
12. To complete a collector street bicycle system which provides connections among all activity centers within ten years.
13. To complete the "backbone" pedestrian system, as described in the TSP, as soon as possible.
14. To complete a collector street pedestrian system which provides connections among all activity centers within ten years.

Policies:

1. The adopted street plan shall be used in right-of-way acquisition in the subdivision and development process.
2. The City shall plan and implement a storm drainage system to allow all streets to be drained and improved.
3. All street improvements , with the exception of open, local access streets, shall comply with the Street Standards specified in Table 1 (Appendix B), "Street Standards by Classification" and shall be constructed according to the standards contained in Appendix B. Existing, open access streets may be rebuilt or improved to existing width provided the street complies with the minimum pavement and base rock depths. Existing, open local access streets shall not necessarily require sidewalks and bike lanes and may be permitted with drainage ditches.
4. The City shall encourage the use of local improvement districts for improvement of existing local access streets.

5. The City will require limited or shared access points along arterials and collectors, as necessary, to preserve traffic-carrying capacity.
6. The City will coordinate with the Oregon Department of Transportation on access management along State highways.
7. The City shall establish a street improvement program which:
 - a. Is subject to annual review and update (the Planning Commission, Planning Department, and public will be included in the process);
 - b. Is consistent with the land use policies of the Comprehensive Plan;
 - c. Establishes priorities for improvements;
 - d. Provides for the needs of all modes of travel within the right-of-way; and
 - e. Considers public economic benefits resulting from transportation improvements.
8. Special attention shall be given to major entryways into Bandon to ensure that they reflect and contribute to a positive image of the community. This may include requirements for tree planting, special buffer and setback conditions, access limitations, signage, right-of-way acquisition, and efforts to enhance the appearance of the Highway 101 and 42S corridors. Planning and implementation of gateway treatments will be coordinated with the Oregon Department of Transportation.
9. The City shall encourage better public transportation service between Bandon and other cities.
10. Special consideration in the design of the transportation system shall be given to the needs of those people who have limited choice in obtaining private transportation.
11. The City shall ensure adequate pedestrian safety by continued development of sidewalks and alternate routes for pedestrian traffic.
12. Development proposals shall be reviewed to assure the continuity of sidewalks, trails, bicycle facilities, and pedestrian ways with adjoining properties and rights-of-way.
13. The City shall encourage expanded commercial air service to the region.
14. The City shall work with the Port of Bandon and other agencies to improve, maintain, and

develop the Coquille River estuary in keeping with its designation as a shallow draft estuary (Cannot accommodate larger vessels with deeper drafts ie; barges or ships).

15. The City shall protect the function of existing and planned streets identified in the Transportation System Plan through the application of appropriate land use regulations.
16. The City shall consider the impact of land use actions, including subdivisions and other land decisions, on existing or planned transportation facilities. The City may impose conditions beyond those specified in the TSP which they, or other relevant transportation providers, consider necessary to ensure the use is compatible with the transportation facilities or services. In the case of development which impacts a State highway, the Oregon Department of Transportation will work with the City to determine what additional conditions may be required. Land use changes which result in 300 or more new vehicle trips per day will be required to provide a traffic impact study. The study will be used by the City and ODOT to determine what traffic mitigation measures will be required.
17. In order to achieve a balance between roadway size and facilitating efficient transportation, the arterial and collector street network shall be designed to and maintained at the following levels:
 - A. Collectors will operate at a *Highway Capacity Manual* Level of Service "D" during peak hours.
 - B. Arterials (State Highways) will operate at the volume-to-capacity standards specified in the most recently adopted Oregon Highway Plan.
18. Direct access onto arterials and collectors shall be controlled. Access to a state highway is subject to regulations of the Oregon Department of Transportation and reviewed with the City of Bandon. If regulations conflict, the more restrictive requirements apply.
19. The primary function of local access streets is to serve the circulation and access needs of adjacent and abutting properties. Through traffic on these streets shall be discouraged.
20. The City shall plan for, ensure development of, and maintain a local access street system at a service level and scale which:
 - a. Recognizes the multi-use functions of neighborhood streets for walking, bicycling, and social interaction, and which preserves the privacy, quiet, and safety of neighborhood living.
 - b. Provides for safe access to abutting land.
 - c. Allows adequate and safe circulation from residential properties to the major street systems and neighborhood activity centers.
 - d. In residential areas of 20 or more units, ensures that a secondary access be provided for emergency vehicles.

21. The City shall consider the potential to establish or maintain paths or trails prior to the vacation of any public easement or right-of-way.
22. The City shall work with private and public property owners to preserve right-of-way for planned transportation facilities through voluntary dedications, setbacks, or other means in order to ensure a street network that meets current and future needs.
23. The function of the Bandon State Airport shall be protected through the application of appropriate land use designations to assure that future land uses are compatible with continued operation of the airport.
24. It is City policy to have paved streets. Engineered gravel streets may be appropriate in previously platted areas where there was no development of streets at the time of subdivision, and where the predominant and appropriate street development standard is a gravel street. These areas are identified on the *Street Plan Map* (Figure 3, p.19). The following conditions shall apply to opening an undeveloped, platted street to gravel street standards.
 - a. The street is classified as a local access street.
 - b. The street is not an extension of a paved street.
 - c. It must be an engineered gravel street, including storm drainage.
 - d. The minimum width of the street will be 28 feet.
 - e. A dead-end street requires a vehicular turnaround.
 - f. The street opening requires anti-remonstrance agreements regarding future paving and drainage LID's.
25. Bicycle and pedestrian facilities shall be provided on new arterials and collectors. Sidewalks shall be provided on most new local streets in accordance with the Street Standards (Table 1, Appendix B). This shall occur:
 - a. at the time of construction of new streets.
 - b. as funding is available for street reconstruction.
26. Except as permitted in the Transportation System Plan (TSP), new development shall only occur on property abutting streets opened and developed to standards specified in the TSP. A street shall be considered substandard if not developed to TSP standards.
27. Development of property abutting existing, opened substandard streets shall be permitted only if one of the following occurs. (This applies to new development on an undeveloped parcel, and to substantial improvements on an existing parcel. Substantial improvements shall be defined as improvements which are likely to cause an increase of over 25% in vehicular traffic volumes.)

- a. The developer brings the street frontage of the property up to City standards; or
 - b. The developer signs an anti-remonstrance agreement regarding the formation of a Local Improvement District for street and drainage improvements for that street. This agreement shall be binding on all future owners of the subject property.
28. The City's policies on costs associated with the initial construction of streets are:
- a. Local access streets are entirely developer/property owner responsibility.
 - b. Where a collector street is required by the City, the cost differential between the local access street standard and the collector street standard is the City's responsibility.
29. Included in the City's parks and recreation Master Plan shall be the planning and development of shared facilities for bicycles and pedestrians, intended primarily as recreational trails. These facilities shall generally be designed to follow natural features, provide scenic views, and connect points of interest (public lands, parks, pedestrian districts, etc.) or facilities which generally serve the population with limited mobility options (schools, retirement centers, etc.). Examples may be found in the City Park master plan and the South Bandon Refinement Plan.
30. Businesses located along designated bicycle and pedestrian routes may advertise in "bike and pedestrian friendly" promotional materials produced by the City or community groups. Funds from the advertising shall be used to pay for the cost of promotional materials and toward the cost of planning, acquiring land for, and developing, and maintaining bicycle and pedestrian facilities.
31. In reviewing development projects, the City will require bicycle parking for new retail, office, industrial, and multi-family development (4 or more units) which is likely to generate bicycle traffic from customers, employees, or residents. These uses shall be assumed to generate bicycle traffic unless the applicant provides evidence to the contrary to the satisfaction of the Planning Director. The required number of bicycle parking spaces will be determined on a case-by-case basis, and the Oregon Bicycle and Pedestrian Plan (Table 4, p.30a), can be used to provide guidance. Bicycle parking shall be provided in a visible location which does not obstruct pedestrian traffic.
32. Parking accessible to persons with disabilities shall be required in compliance with ORS 447.233.
33. The City shall mail notices of land use actions, subdivision and partition applications, applications which affect private access to roads, and other applications which may affect

airport noise corridors or operations to the Department of Transportation and other affected transportation providers. This shall be done to ensure that proposed development or redevelopment is compatible with transportation facilities and services.

34. The City shall coordinate with the Department of Transportation to implement highway improvements listed in the Statewide Transportation Improvement Program (STIP) that are consistent with the Transportation System Plan and Comprehensive Plan.
35. Where off-site road improvements are required as a condition of development, they shall accommodate pedestrian and bicycle travel.
36. All development proposals, Comprehensive Plan amendments, and zone changes shall conform to the adopted Transportation System Plan.
37. It is the policy of the City to plan and implement a network of streets, access ways, and other improvements, including bikeways, sidewalks, and safe street crossings, to promote safe and convenient bicycle and pedestrian circulation within the community.
38. The City shall require streets and access ways to provide direct, convenient access to major activity centers, including commercial centers, employment centers, schools, and community facilities.
39. The School District will be allowed to continue closing sections of 8th Street which bisects the campus, thereby preventing through traffic during school hours.
40. The inclusion of an improvement project in the TSP does not commit the City or ODOT to allow, construct, or participate in funding the specific improvement. Should a project be allowed, the City will work with any relevant developer and, in the case of projects which affect state facilities, with ODOT, to discuss and refine project requirements and details. In addition, inclusion of a project in the TSP cannot be used as mitigation for future land use decisions which may affect the state highways.

Section 2

Street Plan

SECTION 2 - STREET PLAN

BACKGROUND

A street right-of-way (ROW) provides the means to accommodate motor vehicle traffic, bicyclists, and pedestrians. The predominant use is vehicular traffic. In the past, alternate modes were subordinate uses of the ROW. The Oregon *Transportation Planning Rule* (TPR) is designed to change that subordination. It puts all modes on an equal level and requires that these uses be appropriately accommodated within the street ROW.

The TPR also requires that land uses be coordinated with the transportation system. Street systems are developed to minimize traffic volumes and speeds within residential areas, and minimize conflict with other users. Street pavement widths and total right-of-way must remain consistent with the operational needs of the street.

FUNCTIONAL CLASSIFICATION and STREET STANDARDS

Volume 3 presented the concept of functional classification and reviewed the current classification of Bandon streets. It may be helpful to briefly review the concept. From the Encyclopedia of Community Planning and Environmental Management comes this definition of Functional Road Classification:

“The establishment of a hierarchy of road classes that divides roads by purpose and design. Classification of roads by function is undertaken for administrative, planning, design, and funding purposes. The determination of classification is a combination of the function of the road, the control of access to abutting streets and/or land uses, the spacing of roads of a similar nature, the length of the road, and linkages or interchanges with other roads and with major land uses.”

The following definitions of the three basic street classifications comes from the same source.

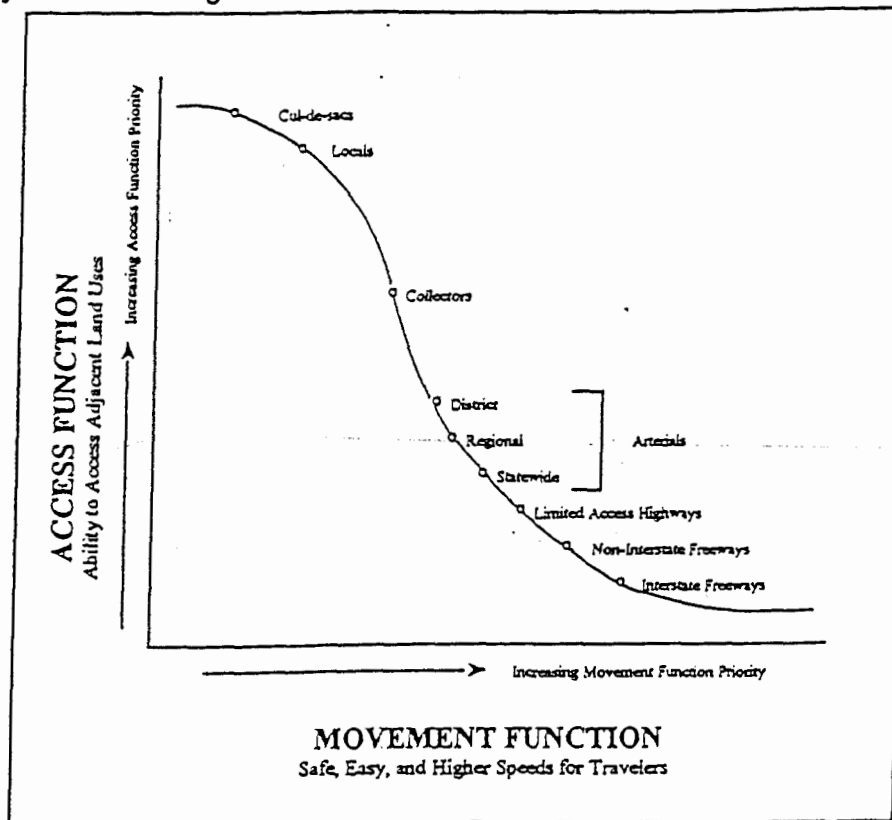
Arterial - A vehicular right-of-way whose primary function is to carry through traffic in a continuous route across an urban area while also providing some access to abutting land.

Collector - A street that carries traffic between urban arterials and local streets and provides access to abutting properties.

Local - A street that primarily provides access to abutting property. It typically has low traffic volumes and low speeds.

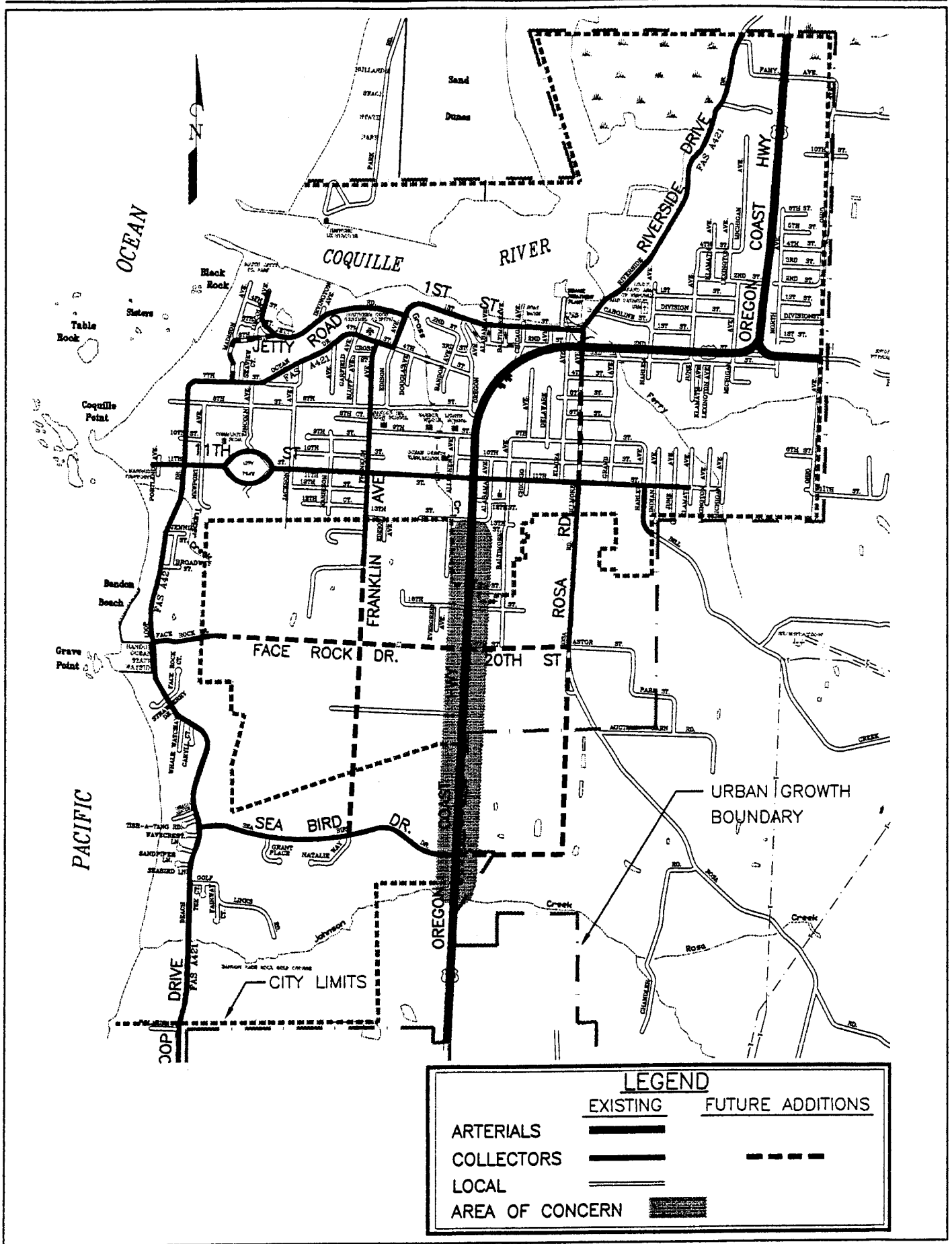
There is an inverse relationship between the access and movement for each functional class of

streets. As movement on the street increases, the access decreases. The relationship is shown graphically in the following illustration.

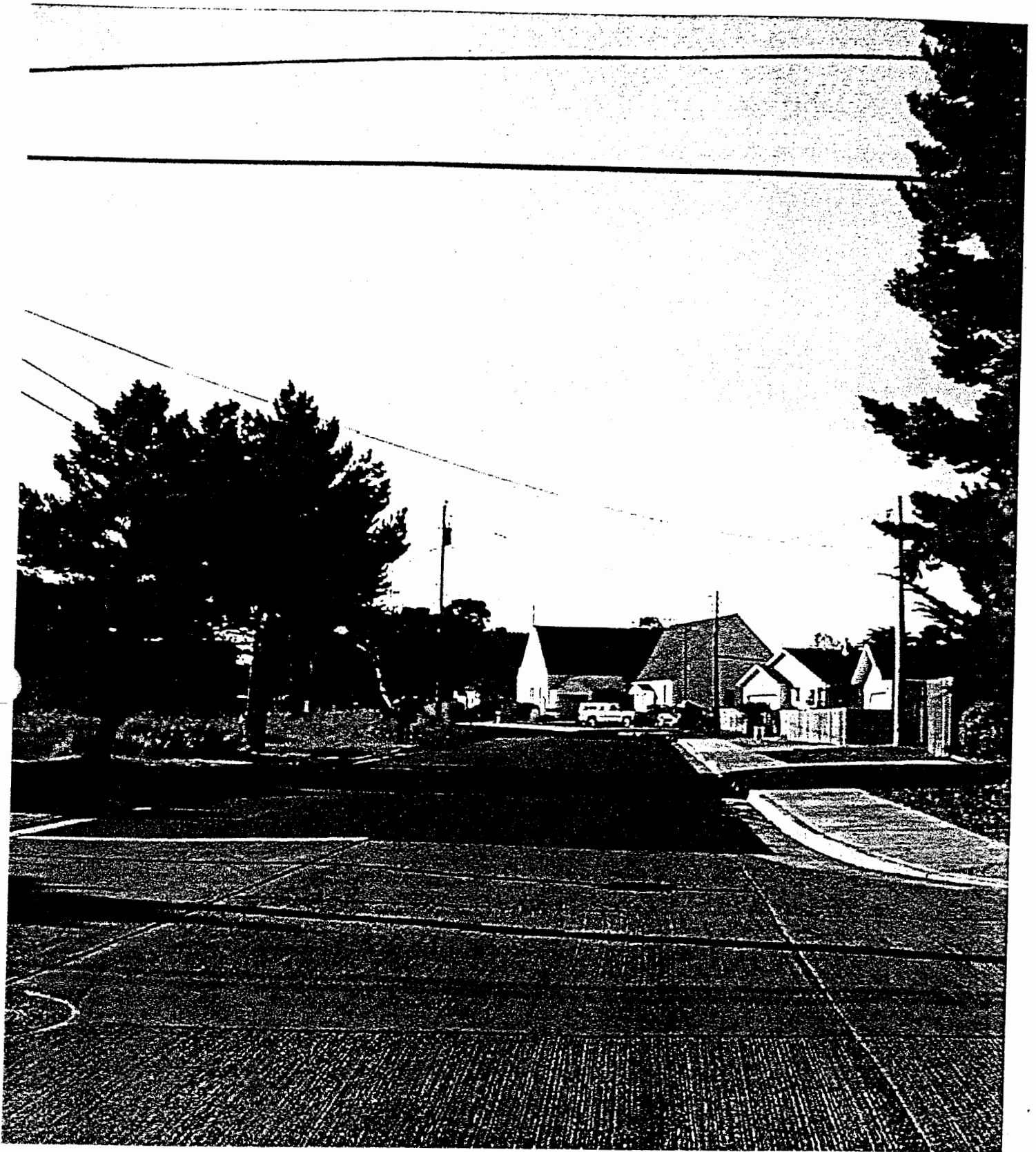


The functional classification of the existing street system was considered in the evaluation of alternatives. The preferred alternative is largely a continuation and extension of the existing classification. The selected alternative is the Transportation System Management (TSM) Plan Alternative (covered in Volume 5), with minor variations. The extension of Eleventh Street east across Bills Creek canyon, as proposed in the TSM Plan, is not deemed to be economically or environmentally feasible. Another change was to add First Street through Old Town as a collector street. Collector routes were classified as a single category rather than into major and minor collectors, based on simplification of the classification system. The 34' collector with two 12' travel lanes, two 5' bike lanes, and no parking is the planned standard for collector streets. In areas where it is not feasible, or where traffic volume does not require separate bike lanes, the 28' collector width would be used. The use of at least 12' travel lanes on collector streets is justified by the high percentage of recreational vehicle traffic within the City.

The functional classification of the street system is shown in Figure 1 (p.14). This figure shows existing streets and planned new streets as identified in Figure 6 (p.25). The standards for development of streets are presented in Table 1 (Appendix B). Street construction standards and typical sections are contained in Appendix B.



BANDON TRANSPORTATION SYSTEM PLAN		FIGURE 1
FUNCTIONAL CLASSIFICATION OF STREET SYSTEM		



EDISON STREET - A RECENTLY COMPLETED PROJECT BUILT TO THE LOCAL STREET STANDARDS

The commercial classification applies to streets serving areas zoned for commercial or industrial use. The following street segments are considered to be commercial:

First Street SE:	Edison Avenue SE to Riverside Drive
Second Street SE:	Alabama Avenue SE to Delaware Avenue SE
Third Street SE:	Fillmore Avenue SE to Grand Avenue SE
Fourth Street SE:	Elmira Avenue SE to Grand Avenue SE
Fifth Street SE:	Elmira Avenue SE to Grand Avenue SE
Sixth Street SE:	Fillmore SE to Grand Avenue SE
Ninth Street SE:	Allegheny Avenue SW to Highway 101
Tenth Street SE:	Allegheny Avenue SW to Delaware Avenue SE
Eleventh Street SE:	Allegheny Avenue SW to Fillmore Avenue SE
Twelfth Street SE:	Allegheny Avenue SW to Chicago Avenue SE
Thirteenth Street SE:	Allegheny Avenue SW to Alabama Avenue SE
Grand Avenue SE:	Third Street SE to Fourth Street SE
Fillmore Avenue SE:	First Street SE to Sixth Street SE
Elmira Avenue SE:	First Street SE to Fifth Street SE
Delaware Avenue SE:	First Street SE to Second Street SE
Chicago Avenue SE:	First Street SE to Highway 101
Baltimore Avenue SE:	First Street SE to Second Street SE
Alabama Avenue SE:	First Street SE to Second Street SE

STREET PLAN DESCRIPTION

Highways 101 and 42S are the Arterials in the Bandon street network. Collector streets are:

Riverside Drive	First Street
4 th Street-Ocean Drive-7 th Street	Beach Loop Drive
Edison-Franklin Avenue	Fillmore Avenue-Rosa Road
11 th Street	Face Rock Drive/20 th Street
Seabird Drive	

At the four intersections of collector streets with the arterial system, traffic signals either exist or may be necessary in the future. The state highway plan requires signal spacing of at least one-half mile. The planned collector system signalization will be designed to meet the state standard. Where a signal is proposed on a state highway, an investigation must be conducted to confirm whether established criteria are met.

One of the City's most significant safety hazards exists along Highway 101 from 13th Street SW to Johnson Creek. The combination of multiple intersections, numerous accesses to businesses and residences, high speeds, narrow road surface, minimal to non-existent shoulders, and open drainage ditches poses a serious threat to vehicular, pedestrian, and bicycle traffic. Between 1985 and 1999 a total of 65 reported accidents, involving 58 injuries and 4 fatalities, occurred

1985 and 1999 a total of 65 reported accidents, involving 58 injuries and 4 fatalities, occurred along this stretch of highway, according to state and local records. The improvement of this section of Highway 101 is the City's highest priority for inclusion in the Statewide Transportation Improvement Plan and subsequent funding from the Oregon Department of Transportation. This project may involve widening the road surface to include two travel lanes and a continuous left-turn lane, widening the shoulders, installing underground storm drainage, installing bicycle and pedestrian facilities, and posting lower speed limits with "no passing" for the entire length. The City and ODOT will cooperate on a refinement plan for this area in order to identify the specific problems and potential solutions. In addition, the City and ODOT recognize the importance of access management along this stretch of Highway 101, and any plan for this area would be accompanied by an access management agreement between the City and ODOT.

Signal spacing was one factor for the selection of Face Rock Drive-20th Street as a collector cross street; there was also an environmental factor. The South Bandon Refinement Plan identified a large wetland area west of Highway 101. The Face Rock Drive-20th Street alignment crosses this wetland at its narrowest point. Still, development of this collector is expected to require some wetland mitigation. Some right-of-way acquisition also would be necessary to complete this route through dedication as the underlying property is subdivided.

Planned street improvements influenced the selection of collectors. The Urban Renewal Agency is planning to develop Fillmore Avenue from Hwy 101 to 11th Street. The project would provide a continuous collector street from Riverside Drive to Rosa Road. In the future, this collector may be extended southward from Rosa Road, connecting with an eastward extension of Seabird Drive. This would provide a north-south travel route without having to use Highway 101.

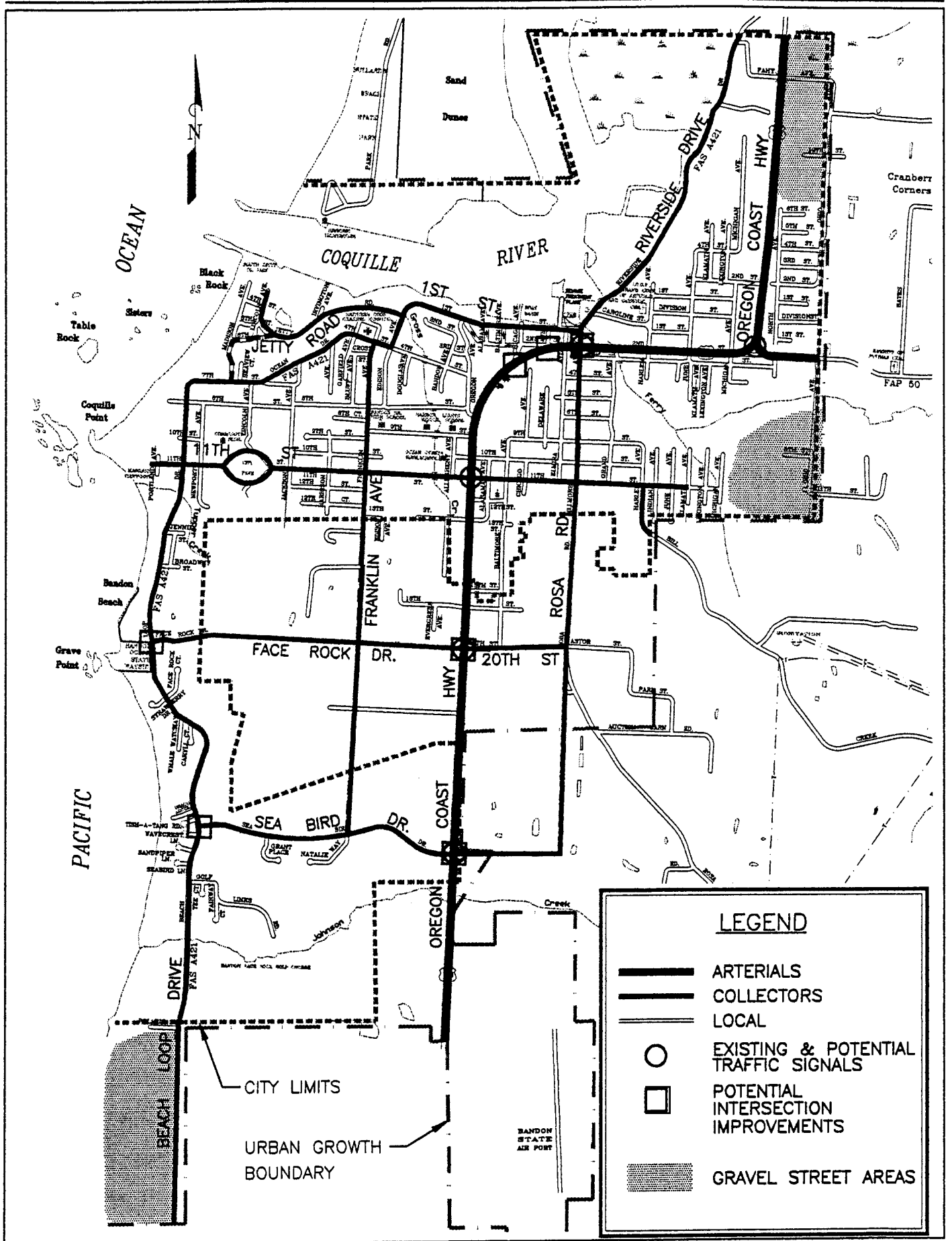
The Madison Avenue right-of-way shall remain "unopened" and designated to provide ingress and egress in the event of an emergency which required evacuation from, or emergency vehicle access to, the South Jetty. The road will be improved to gravel street standards with break-away barriers at the north and south ends.

Figure 3 (p.19) presents the Street Plan and includes potential traffic signals and planned intersection improvements. It shows existing streets to be improved to new standards, and new streets to be developed. The areas suitable for gravel street development are highlighted. Figure 6 (p.25) indicates new street routes. Figure 4 (p.20) provides an index to street segments, and Table 2 (p.18) lists the planned improvements to each identified street segments. This table lists the existing and planned street width. Improvements costs can be found in the Appendix A, and are keyed to the numbered street segments.

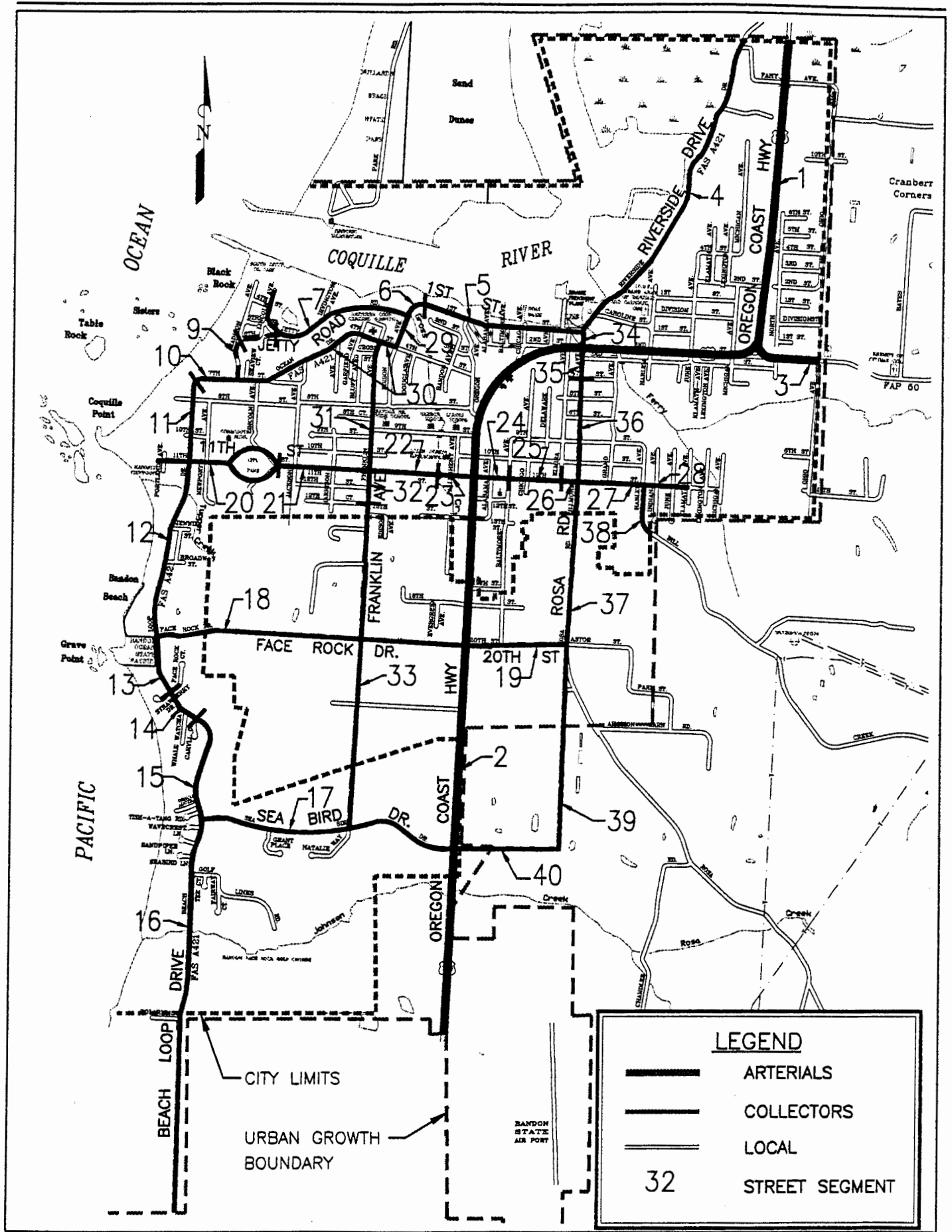
**Table 2 - Bandon Arterial/Collector Street System Improvements
(Including Bicycle Facilities)**

<u>Arterial Street Segments</u>	<u>Pavement Planned Width</u>	
	<u>Existing</u>	<u>Planned</u>
1. Highway 101: North to UGB to Thirteenth Street		add bicycle lanes *
2. Highway 101: Thirteenth Street to Seabird drive	24'	50**
3. Highway 42S: Highway 101 to UGB		Add bicycle lanes
* Pavement width and right-of-way may not allow striping for bicycle lanes in some locations, particularly south of Oregon Avenue. Existing ROW is 60' in most locations along this section. Design of future improvements may require alternative widths.		
4. Riverside Drive: North UGB to First Street	22 -23'	34'
5. First Street: Riverside Drive Dr. to Edison	42'	42'
6. Edison Avenue: First St. to Jetty Road	25'	34'
7. Jetty Road: Edison Ave. To Curve	22 - 23'	34'
9. Madison Avenue: Emergency Access	0'	20' gravel
10. Seventh Street: Madison to Beach Loop Drive	0'	28'
11. Beach Loop Drive Drive: Seventh St. to Eleventh St.	22 -23'	34'
12. Beach Loop Drive Drive: Eleventh St. to Face Rock Dr.	20 - 22'	34'
13. Beach Loop Drive Dr.: Face Rock to Strawberry Dr.	20 - 22'	34' **
14. Beach Loop Drive Dr.: Strawberry to Caryll Court	20 - 22'	34'
15. Beach Loop Drive Dr.: Caryll Ct. to Seabird Drive	28 - 29'	34'
16. Beach Loop Drive Drive: Seabird Drive to UGB	20 -22'	34'
17. Seabird Drive: Beach Loop Drive to Hwy. 101	20 -22'	28'
18. Face Rock Dr./Twentieth: Beach Loop Drive to Hwy. 101	25'	34'
19. Twentieth Street: Hwy. 101 to Rosa Road	0'	34'
20. Eleventh Street: Beach Loop Drive to Jackson Ave.	0'	34'
21. Eleventh Street: Jackson Ave. to Franklin Ave.	27'	27'
22. Eleventh Street: Franklin Ave. to Bandon Ave.	26'	34'
23. Eleventh Street: Bandon Ave. to Hwy. 101	22'	44'
24. Eleventh Street: Hwy. 101 to Baltimore Ave.	44'	44'
25. Eleventh Street: Baltimore Ave. to Elmira Ave.	42'	42'
26. Eleventh Street: Elmira Ave. to Fillmore Ave.	36'	36'
27. Eleventh Street: Fillmore Ave. to Harlem Ave.	24'	36'
28. Eleventh Street: Harlem Ave. to Hospital	24'	34'
29. Edison Ave.: Jetty Road to Fourth St.	24- 26'	32'
30. Fourth Street-Ocean Dr.-Seventh Street.: Edison to Madison Ave.	27'	34'
31. Franklin Ave.: Fourth St. to Eleventh St.	19 - 30'	34'
32. Franklin Ave.: Eleventh St. to Twelfth Court	32'	34'
33. Franklin Ave.: Twelfth Court to Seabird Drive	16'	34'
34. Fillmore Ave.: First Street to Hwy. 101	0'	34'
35. Fillmore Ave.: Hwy. 101 to Fourth Street	49'	49'
36. Fillmore Ave.: Fourth St. to Eleventh St.	51'	51'
37. Rosa Road: Eleventh St. to Twentieth Street	0'	50'
38. Bill Creek Road: Eleventh St. to UGB	24'	34'
39. Rosa Road: Twentieth Street to Seabird Drive	17 - 20'	28'
40. Seabird Drive: Hwy 101 to Rosa Road	0'	34'
	0'	34'

** Additional width will be needed to provide on-street parking in motel/restaurant/shop area.



BANDON TRANSPORTATION SYSTEM PLAN		FIGURE 3
STREET PLAN		
Page -19-		



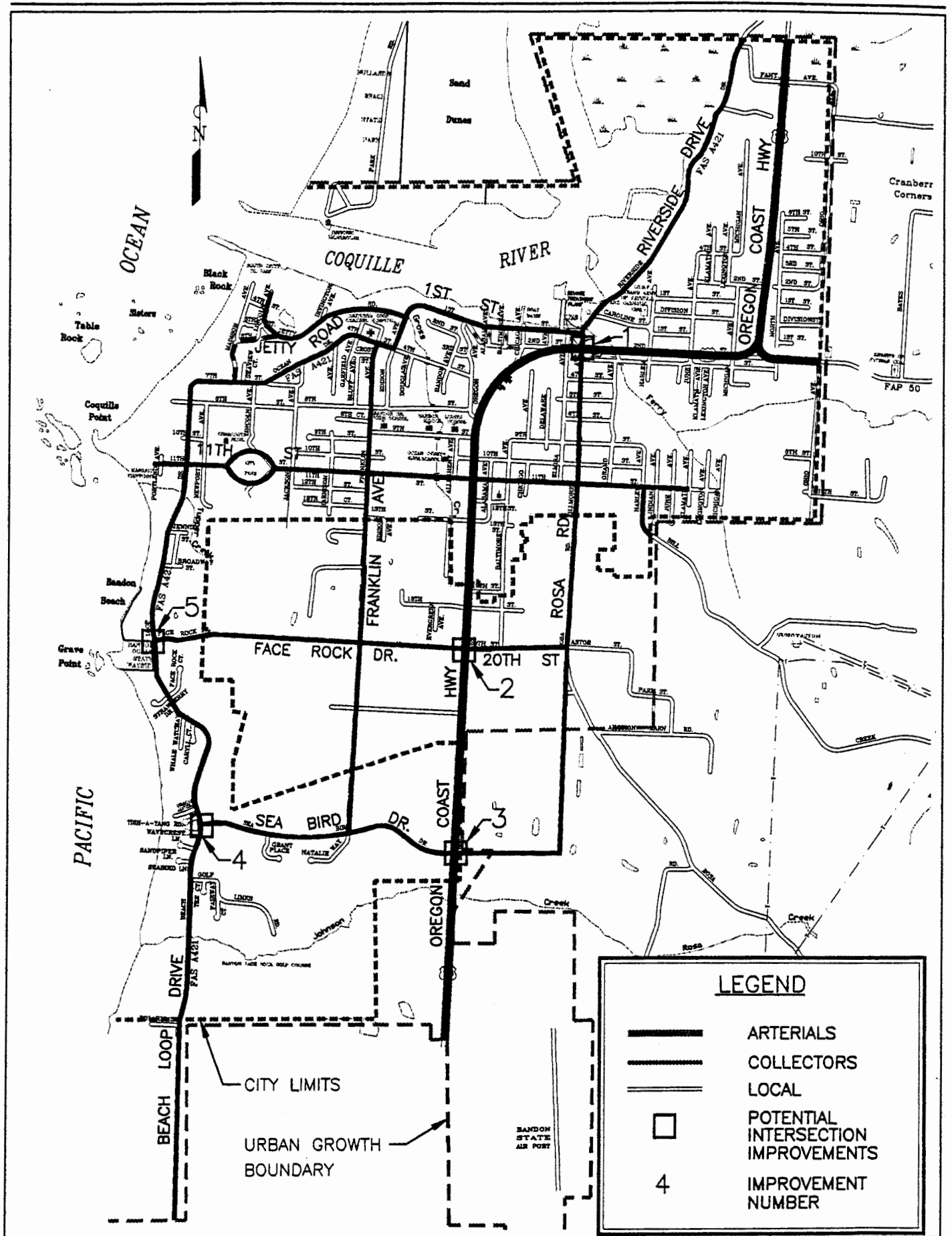
	BANDON TRANSPORTATION SYSTEM PLAN INDEX TO STREET SEGMENTS	FIGURE 4
--	---	---------------------

Figure 5 (p.22) is an index to intersection improvement projects, and Table 3 (p.23) describes the proposed improvements. Of the three potential signal projects on Highway 101, only the project at Fillmore Avenue is expected to be completed in the near term. There are pedestrian safety concerns at this intersection and when the City develops the Fillmore Avenue extension to Eleventh Street, traffic turning at this intersection will increase significantly. The intersection of Hwy 101 and Second St., which provides access to Old Town, has also been identified as a problem intersection and should be addressed by the City and ODOT in the future. This may involve realignment of the intersection, and will need to be studied further if the intersection continues to operate below standards. However, the City and ODOT believe that the construction of a signal at Fillmore Street, which is planned for 2000, will relieve some of the vehicular impact on the Old Town/101 intersections by creating gaps in the Highway 101 traffic as well as creating an alternate entrance exit to Old Town via Fillmore.

Signalization of the Seabird Drive-Highway 101 intersection is not expected to be necessary within the first five years of Plan adoption, depending on the level of development in the Seabird area. However, a previous traffic impact study showed that a northbound left turn lane from Highway 101 to Seabird Drive may be needed soon. Improvements at the Seabird Drive-101 intersection include changing the vertical alignment, improving drainage and widening the road surface. The Highway 101-20th Street intersection signalization may be necessary during the second ten years of the planning period. Development of Face Rock Drive-20th Street as a collector will be done as the South Bandon interior develops over the next twenty years.. This area is within the City's Urban Growth Boundary and signalization should not be required until this interior is substantially developed.

Figure 6 (p. 25) shows new collector streets to be developed. Most are in the South Bandon interior referred to as the "donut hole." This area is within the City's urban growth boundary, but outside the City limits. Development of these facilities will be coordinated with Coos County.

The City maintains a map which shows the platted but undeveloped (unopened) streets within the City limits. Prior to current land development standards, Bandon permitted land to be subdivided without the installation of public infrastructure. Land was surveyed and divided, the plat was recorded, and lots were sold. The purchasers of the lots assumed the responsibility and cost of infrastructure. This created subdivisions without adequate public facilities which the City is under no obligation, and cannot afford, to provide. The dilemma is how to install necessary public facilities in an affordable manner to individual property owners. The alternatives are: (1) a local improvement district, (2) a neighborhood improvement district, and/or 3) a cost recovery agreement. These options are discussed in the section on implementation.



	BANDON TRANSPORTATION SYSTEM PLAN	
	INDEX TO INTERSECTION IMPROVEMENT PROJECTS	
		FIGURE 5

Not all platted streets can or should be developed due to topographic, environmental, or planning considerations. Some street rights-of-way may be candidates for vacation when it is determined that no vehicular access will be needed to abutting properties, and the right-of-way is not needed to maintain a complete street network. Where a right-of-way may not be needed for street development, it may be suitable for pedestrian or bicycle access, or may be required to provide

Table 3 - Potential Intersection Improvement Projects

<u>Project Location</u>	<u>Project Description</u>
1. Highway 101/Fillmore Ave.	Left turn lanes on Hwy. 101 for eastbound and westbound traffic, pedestrian crosswalks and island refuges, left turn lanes on Fillmore for northbound and southbound traffic, and signalization..
2. Highway 101/20th Street	Left turn lanes on Hwy. 101 for northbound and southbound traffic, left turn lanes on 20th Street for eastbound and westbound traffic. *
3. Highway 101/Seabird Dr.	Left turn lane on Hwy. 101 for northbound traffic, left turn lane on Seabird Drive for eastbound traffic. *
4. Seabird Dr./Beach Loop Dr.	Left turn lane on Seabird Drive for westbound traffic, left turn lane on Beach Loop Drive for southbound traffic.

* Improvements at locations 2 and 3 may also include signalization. However, signals are not planned at these locations at this time and will be subject to warrant analysis and approval of the State Traffic Engineer.

** The inclusion of an improvement project in the TSP does not commit the City or ODOT to allow, construct, or participate in funding the specific improvement. Should a project be allowed, the City will work with any relevant developer and, in the case of projects which affect state facilities, with ODOT, to discuss and refine project requirements and details. In addition, inclusion of a project in the TSP cannot be used as mitigation for future land use decisions which may affect the state highways.

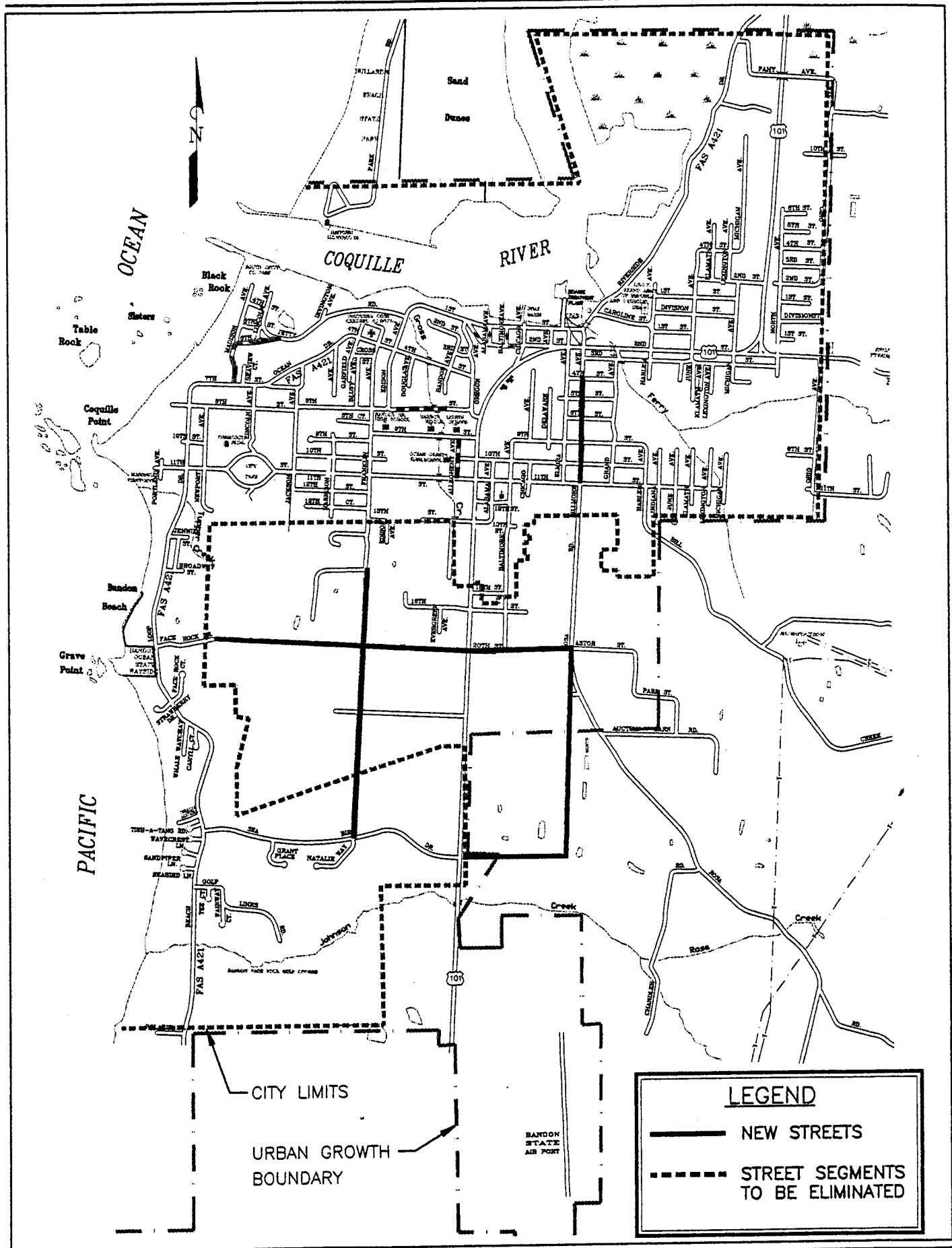
public utility services. Emergency vehicular access may be a consideration. All these factors must be weighed when deciding to approve street vacation request.

Where street development is suitable, the standard of improvement often becomes an issue. In some areas, as shown on Figure 3 (p.19), development of platted streets to an engineered gravel road standard may be appropriate when streets are classified as local access streets. The 28' street width standard for local streets would apply to such engineered gravel streets (See Appendix B).

Development of the property served by the unopened portion of Ohio Avenue SE requires the developer to open the unopened streets fronting that property as well as Ohio Avenue SE.

Local Street Connectivity

Approximately 75% of the UGA outside the City Limits is platted. Many of these platted streets have not yet been developed but the available rights-of-way have defined the local street system for the area. The issue of local street connectivity has been examined and addressed in the *South Bandon Refinement Plan* which provides a local street connection plan for the majority of the City's expansion area.



**BANDON TRANSPORTATION
SYSTEM PLAN**
**NEW STREET DEVELOPMENT AND
STREET SEGMENT ELIMINATION PROJECTS**

**FIGURE
6**

SECTION 3

BICYCLE PLAN

SECTION 3 - BICYCLE PLAN

BACKGROUND

At the current time, there is limited use of bicycles in Bandon. Whether there is a cause and effect relationship between the current poor condition of the bicycle system and low usage is not known. Other factors which contribute to low usage could include high average age of the population, severe winter weather, a preference for walking, and dangerous bicycling conditions. The City is obligated under the state *Transportation Planning Rule* to create a safe and convenient environment conducive to bicycle use.

Inadequate street widths and deteriorated surfaces create conditions inhospitable to bicyclists, which is problematic because Bandon is a major scenic point on the Oregon coast bicycle route. Little has been done to provide safe and convenient access to the scenic viewpoints for the bicycle tourist. In addition, there are few bicycle storage facilities at major activity centers.

Bandon is required to provide for bicycles on new collector streets. They may be striped bicycle lanes or unstriped shoulder bikeways. Shoulder bikeways are permissible where the average vehicular speed is less than 25 mph and traffic is less than 3,000 ADT (average daily trips). Conditions may initially be below those two thresholds on many collectors, but will exceed one or both markers over time. The choice of bicycle facility is more a function of current street system condition and usage rather than a local preference. In general, the Bandon street system will tend to concentrate traffic on the designated collector system. There are only a few through local streets which will function as alternate routes. Selection of the type of bicycle lane facility will be triggered by traffic growth on the collector system.

Little is known about current traffic volumes on the collector system. It is not believed that the current traffic volume exceeds 3,000 ADT on the City's collector streets. Posted speed on most collector routes is 25 mph, with average speed greater in several areas. One collector, Seabird Drive, has a posted speed of 45 mph. The ultimate bicycle system for Bandon should be based on the "bicycle lane" standard. On some routes, that standard must be implemented initially. On other routes, the "shoulder bikeway" standard may be used during an interim period until one or both threshold markers are exceeded. For planning purposes, the Plan designates all collectors for "bicycle lanes" unless there are specific, justifiable circumstances which preclude such development.

As guidance on when bicycle and pedestrian facilities must be provided on collector streets, the following quotes from Oregon Department of Transportation policy documents are provided.

1. "The law requires the Department of Transportation, counties, and cities to provide walkways and bikeways on all roadway construction, reconstruction, or relocation projects. The funding source or amount are not the determining factors. What is

important is that pedestrian and bicycle facilities be provided as part of road improvements”.

2. “Construction, reconstruction, and relocation refers to all projects where a roadway is built or upgraded. Walkways and bikeways don’t necessarily have to be provided on projects such as signal or signing improvements, landscaping, and other incidental work. Preservation overlays are also excluded if the only intent of the project is to preserve the riding surface in usable condition, without any widening or realignment. Projects where the entire depth of the roadway bed is replaced are usually considered reconstruction projects”.

ACTIVITY CENTERS

The bicycle and pedestrian systems need to provide safe and convenient access to, and links between, activity centers. Activity centers are destinations that attract people for a variety of reasons. Such centers include, but are not limited to:

1. Schools
2. Parks
3. Community center/Senior center
4. Library
5. City Hall
6. Shopping areas
7. Employment areas
8. Hospital/medical offices
9. Transit/paratransit stops

Figure 9 shows the major activity centers in Bandon by type.

FACILITY DESIGN STANDARDS

Development of the Bandon bicycle system will utilize and be consistent with the design standards contained on pages 65 through 90 of the Oregon Bicycle and Pedestrian Plan, adopted by the Oregon Transportation Commission June 14, 1995.

BICYCLE SYSTEM DESCRIPTION

The planned bicycle system, shown in Figure 10 (p.30), connects principal activity centers. Residential areas of the community are served by bicycle facilities insofar as people riding bicycles on the street. As bicycle usage increases, it may be necessary to add designated routes within residential areas. This may require the removal of some on-street parking.

The bicycle plan anticipates a system which relies mainly on striped bicycle lanes. Shoulder bikeways are expected to be in use where it has been determined that circumstances do not

warrant, or permit, pavement width for a striped bikeway.

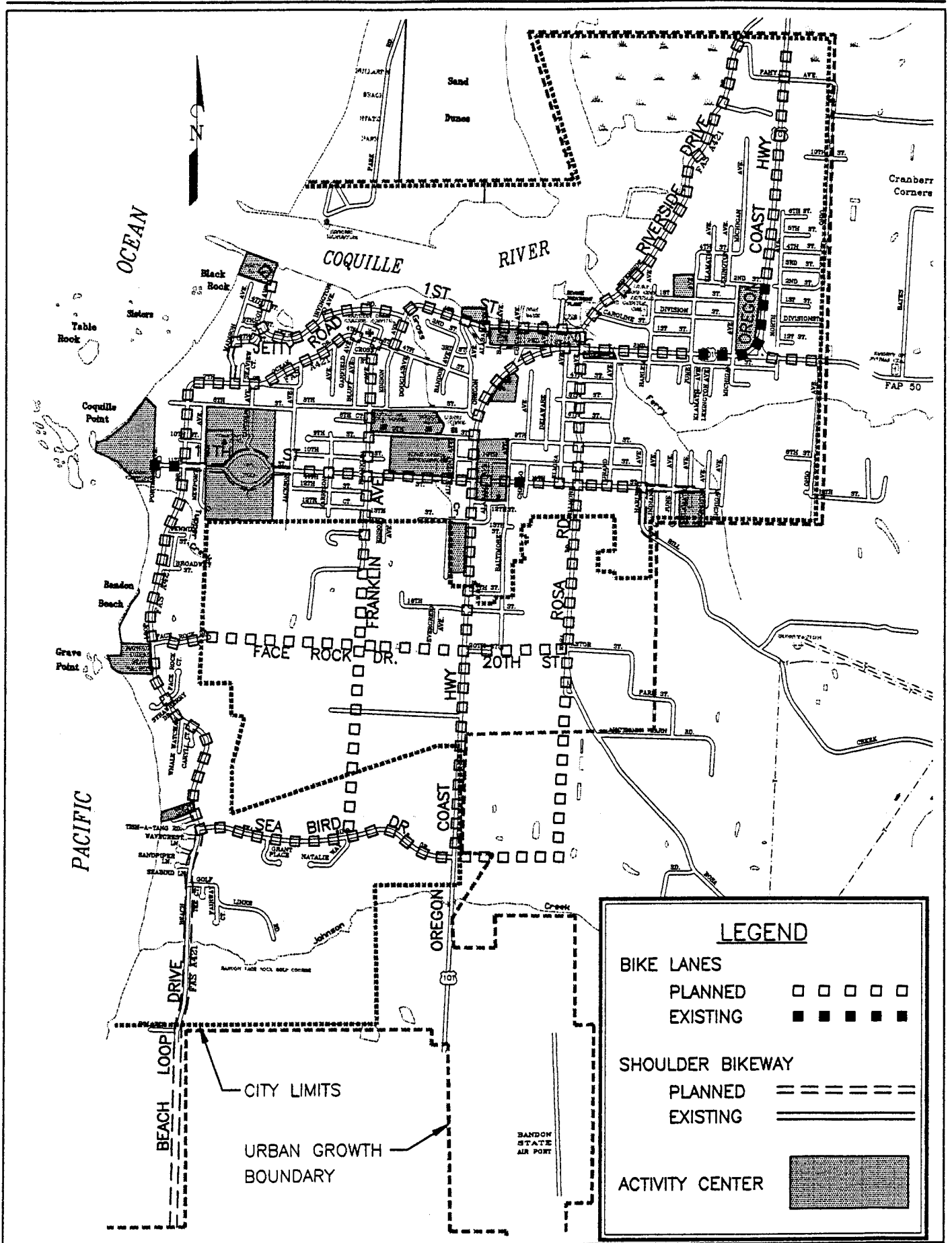
The street approaches to and through the City Park on Eleventh Street are planned for long-term shoulder bikeways. In making this determination, factors such as the low vehicle speeds through the park, the recent investment in street improvements in this segment, and the high cost of modifying the existing facilities were considered. Beach Loop Drive south of Seabird Drive, and Riverside Drive north of Ferry Creek, are other areas where shoulder bikeways would be adequate.

The highest priorities for bicycle system development should be Highway 101. In stage one, the bike lanes on Highway 101 should continue to Eleventh Street; they currently terminate near June Avenue. In the second stage, in conjunction with highway widening or drainage improvement projects, bike lanes should be continued south along Highway 101 to Seabird Drive. During the life of the Plan, the State and the City will work to secure funding to provide bike lanes along the entire length of Highway 101 within Bandon.

The Eleventh Street bike lane improvements should be made from Jackson Avenue to Harlem Avenue. Completion of the first stage of the Highway 101 bike lane project and the Eleventh Street bike lanes would provide a backbone system of bicycle facilities upon which the remainder of the system could be developed. This backbone system provides primary bicycle access to most significant activity centers.

Jetty Road and Riverside Drive are under Coos County jurisdiction. The County Parks Department has been pursuing bicycle facility development funding for these two routes for several years. Development of bicycle facilities on these routes is also important to the city, and the County is encouraged to continue giving such improvements a high priority. It is important that the facilities continue on to the end of Jetty Road which terminates in South Jetty County Park.

In general, highest priority would be given to development of bicycle facilities to serve the greatest number of people. In addition, a high priority should be given to the development of bicycle parking at major activity centers.



BANDON TRANSPORTATION SYSTEM PLAN		FIGURE 10
BICYCLE PLAN		

TABLE 4 - RECOMMENDED BICYCLE PARKING SPACES

Note: This table is to be used as a general guide in determining the number of bicycle parking spaces necessary to support various uses. The actual requirements for each use will be determined on a case-by-case basis, depending on the actual needs of that particular development.

LAND USE CATEGORY	MINIMUM REQUIRED BICYCLE PARKING SPACES	MINIMUM COVERED AMOUNT
Residential		
Multi-family residential, general	1 space per unit	100%
Multi-family residential, seniors or with physical disabilities	4, or 1 space per 5 units, whichever is greater	100%
Institutional		
Schools - Elementary	4 spaces per classroom	100%
Schools - Jr. Hi or Middle School	4 spaces per classroom	100%
Schools - Sr. High	8 spaces per classroom	100%
College	1 space per 4 students <i>(plus 1 space per student housing room/unit)</i>	100%
Transit Centers/Park & Ride Lots	5% of auto spaces <i>(or 100% of demand, depending on accessibility to bicyclists)</i>	100%
Religious Institutions	1 space per 40 seat capacity	25%
Hospitals	1 space per 5 beds	75%
Doctor, Dentist Offices	2, or 1 space per 1000 ft ² , whichever is greater	25%
Libraries, Museums, etc.	2, or 1 space per 1000 ft ² , whichever is greater	25%
Commercial		
Retail Sales	0.33 space per 1000 ft ²	50%
Auto-oriented Services	2 or 0.33 space per 1000 ft ² , whichever is greater	10%
Groceries/Supermarkets	0.33 space per 1000 ft ²	10%
Office	2, or 1 space per 1000 ft ² , whichever is greater	10%
Restaurant	1 space per 1000 ft ²	25%
Drive-in Restaurant	1 space per 1000 ft ²	25%
Shopping Center	0.33 space per 1000 ft ²	50%
Financial Institutions	2, or 0.33 space per 1000 ft ² , whichever is greater	10%
Theaters, Auditoriums, etc.	1 space per 30 seats	10%
Industrial		
Industrial Park	2, or 0.1 space per 1000 ft ² , whichever is greater	100%
Warehouse	2, or 0.1 space per 1000 ft ² , whichever is greater	100%
Manufacturing, etc.	2, or 0.15 space per 1000 ft ² , whichever is greater	100%
<i>Notes:</i>		
<i>Each individual use needs to be evaluated for bicycle parking - e.g. a commercial accessory use in an industrial district may have different requirements than the industrial uses around it. Similarly, in mixed-use developments, the amount of each use and required bicycle parking needs evaluation. Finally, within each use category one needs to consider the different user categories - residents, employees, customers, etc. - and parking requirements for each.</i>		
<i>Jurisdictions may wish to develop provisions to allow requirement of additional bicycle parking exceeding these minimums where it is appropriate.</i>		

SECTION 4

PEDESTRIAN PLAN

SECTION 4 - PEDESTRIAN PLAN

BACKGROUND

The pedestrian environment in Bandon is generally poor but, unlike the low incidence of bicycle use, there is remarkably high pedestrian activity. Many people in Bandon walk in spite of the general lack of facilities specifically designed for pedestrian use. While there are more pedestrian than bicycle facilities available, that alone cannot account for the different level of usage. Walking seems to be the preferred alternative mode of travel.

It is important that more and better pedestrian facilities be developed. Pedestrians expect a safe and convenient walking experience, and better facilities will result in more citizens walking as an alternative to driving. Because of the existing community preference for walking, it may be wise to give development and expenditure preference to pedestrian facilities over bicycle facilities.

Sidewalks can generally be developed independent of the roadway, whereas the same is not true for bicycle facilities. This generally makes the pedestrian facility the lower cost option. The same dollar amount expended will result in more sidewalk mileage than bike lanes. Generally, pedestrian facilities are one of the most cost-effective investment choices a community can make. Building walking paths and sidewalks is less expensive than building new roads, whether those pathways are constructed of concrete, asphalt, or other natural surfacing such as grass. Even so, the alternate modes development program cannot ignore bicycle facility development.

In residential areas, sidewalks should be separated from the street. This allows for planting of trees and landscaping which contributes to the beautification of the street and the neighborhood. This beautification, and the increased separation from traffic, also provides a pleasant and safer walking environment.

PLAN AND PRIORITIES

The commercial areas of Bandon, particularly Old Town and Uptown, are well provided with sidewalks. There are a few gaps Uptown, but these are being filled in as vacant parcels are developed. The sidewalk linkage of Old Town with the Bandon Shopping Center has been completed.

The pedestrian plan illustrated in Figure 11 (p.34) shows sidewalks on both sides of all arterial and collector streets, as required by the *Transportation Planning Rule*. When fully developed, this arterial-collector-pedestrian system will provide the basic link among activity centers. More will need to be done to better connect residential areas to the basic system and provide safe pedestrian circulation within residential neighborhoods.

There is a need to complete a backbone system of pedestrian facilities. It is the same Eleventh Street-Highway 101 backbone. In this case, Highway 101 from Second Street NE (Bandon Shopping Center) to Eleventh Street is provided with sidewalks on both sides. While

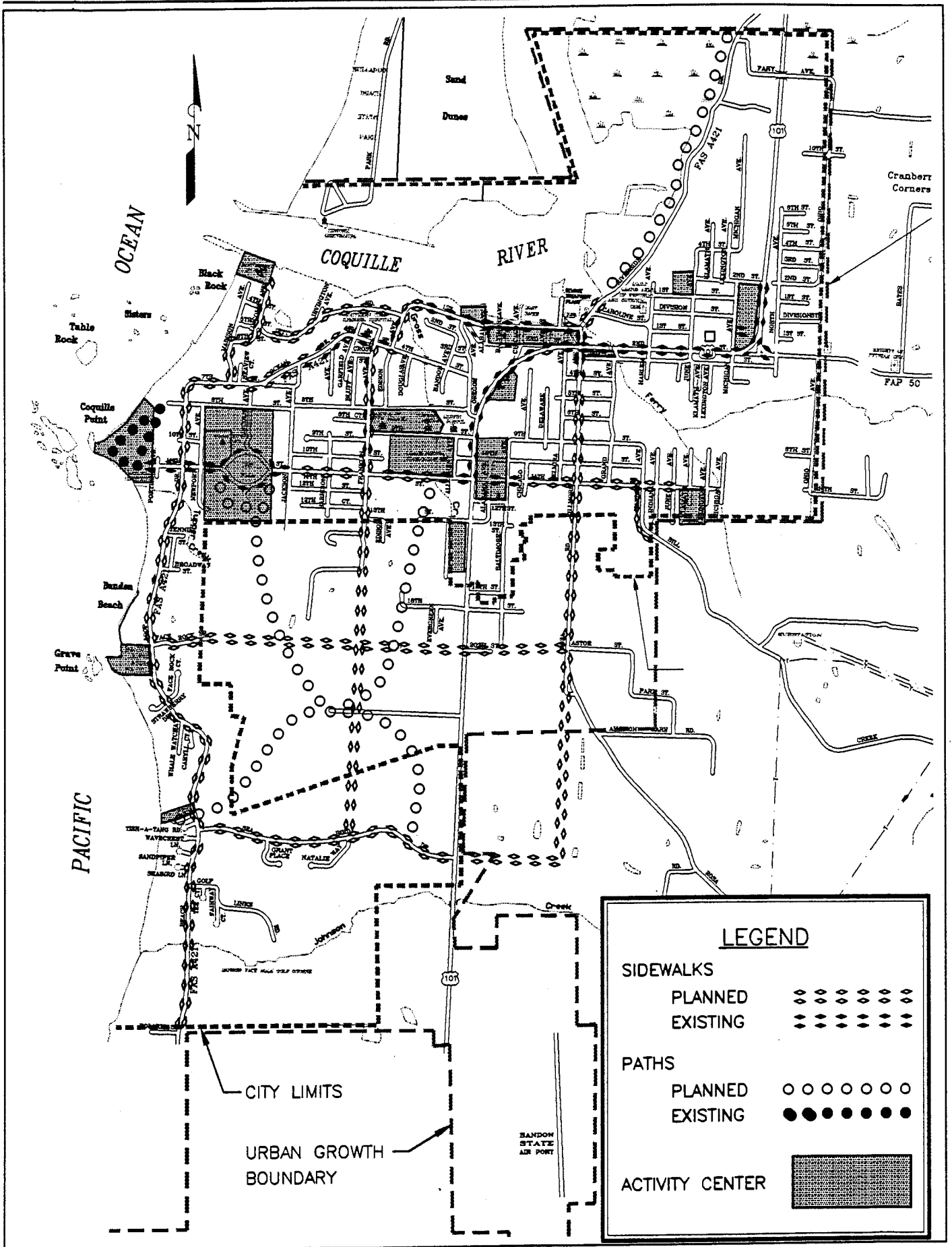
Eleventh Street has more pedestrian facilities than bicycle facilities, large areas remain without sidewalks. It is a very high priority that sidewalks be completed from Jackson Avenue to Klamath Avenue (site of the new hospital).

Other high priority sidewalk projects include Franklin Avenue-Edison Avenue from Eleventh Street to First Street, and Beach Loop Drive from Eleventh Street to Face Rock Park. The Franklin-Edison route has many blocks with sidewalks, but there are interruptions. The route needs to be completed. It is a high priority because a lower level of investment can achieve completion of a major route. The Beach Loop section from Eleventh Street to Face Rock Drive has potentially the highest pedestrian use along Beach Loop Drive. It connects two major parks which provide beach access. Beach Loop Drive is heavily traveled with vehicular and pedestrian traffic in this section.

The backbone pedestrian system is the starting point for development which complies with the TPR. While provision of bicycle facilities along all the collector streets basically fulfills the requirements of the TPR, the rule requires much more in the case of pedestrian facilities. The rule states that: "Sidewalks shall be required along arterials, collectors and *most local streets* in urban areas..." (emphasis added). Because few existing residential areas have sidewalks, the job of retrofitting these neighborhoods to be TPR-compliant is substantial. An attempt has been made to calculate the costs involved in this retrofit. It would be at least as costly as providing sidewalks for the arterial and collector system, which is estimated to be \$2.5 million.

While the highest priority should remain completion of the arterial-collector pedestrian facilities, the City should pursue development of residential neighborhood pedestrian facilities. Where local improvement districts are formed for street paving or reconstruction, sidewalks should be a required element. The development of new streets, and the development or redevelopment of private property, must always include the provision of pedestrian facilities.

The pedestrian plan provides a system of walking trails in the southern part of the community. Most of this area is currently undeveloped. It is mainly outside the City limits, but within the urban growth boundary. This area was the subject of a refinement planning effort undertaken by the City in 1997. That planning identified opportunities for pedestrian trail development in connection with conservation of drainage ways and wetland areas. The location of walking trails identified on the pedestrian plan is in conformance with the recommendation contained in the South Bandon Refinement Plan, June 1997. These trails may be developed as multiple use trails to accommodate both pedestrian and bicycle use. The planned trail on the west side of Riverside Drive north to the Bandon Marsh observation area should remain for the exclusive use of pedestrians. It is planned to accommodate bicycles along Riverside Drive in this area.



BANDON TRANSPORTATION SYSTEM PLAN		FIGURE 11
PEDESTRIAN PLAN		

SECTION 5

TRANSIT PLAN

SECTION 5 - TRANSIT PLAN

INTERCITY SERVICE

Greyhound Bus Lines provides bus service to Bandon three times a day, seven days a week. There is one daily northbound stop at 11:00 a.m., and two southbound stops at 3:55 a.m. and 3:55 p.m. The bus stop in Bandon is located on First Street SE, in front of the Sea Star hostel. No changes are anticipated. It is important to work with Greyhound to assure maintenance of at least the current level of service.

There is also a fixed-route bus service that serves the residents of Bandon between the coastal and inland cities of the region. The service is operated by the South Coast Business Employment Corporation in conjunction with Coos and Curry County Public Transit . The City, while not involved in this program, encourages and supports the use of public transportation.

LOCAL SERVICE

Transit in larger communities usually refers exclusively to the movement of people by means of bus or rail, typically on a fixed route service. In a smaller community, such as Bandon, the meaning of the term may be expanded to refer to any means of vehicular transportation of people other than by personal vehicle. For example, the term can include: para-transit (non-fixed route service by van or smaller bus), ride sharing and volunteer rides.

Fixed route bus service is generally not economically feasible in communities with populations under 10,000 due to lack of demand and financial constraints. While a fixed route bus system is not in Bandon's projected future, if demand for such a service becomes evident, and finances become available, the City will consider local bus service.

Para-transit service in Bandon is provided by Dial-A-Ride, which is operated by the South Coast Business Employment Corporation. The service is funded through cigarette tax revenues, state public transportation revenues, City of Bandon funds, grants, advertising revenue and rider fees. The City intends to continue its financial support to the service, subject to other demands on the City's financial resources. Dial-a-Ride offers service to Coos and Curry Counties from Brookings to Coos Bay.

SECTION 6

AIR/RAIL/WATER/PIPELINE PLAN

SECTION 6 - AIR/RAIL/WATER/PIPELINE PLAN

AIRPORT PLAN

The City of Bandon receives air service from two facilities. Scheduled commuter airline service is available at the North Bend, approximately 25 miles north of Bandon. General aviation service is provided at Bandon State Airport, located 2 miles south of Bandon. The airport is outside the City limits but within the City's urban growth boundary.

The 62-acre Bandon State Airport is owned by the State of Oregon. The airport has a single north-south runway, 3600 feet long and 60 feet wide, with a parallel taxiway, which is suitable for single and twin engine light aircraft. No expansion of the runway is planned at this time. Medium intensity runway lighting is provided, along with navigational and landing aids. There is no control tower. There is a fixed base operator at the airport, and hangar facilities are available.

The airport overlay zone in the zoning ordinance applies to any land impacted by the airport. The City's airport overlay zone would be amended, as necessary, to be consistent with the rules and guidance of the State's Aeronautics Division. Bandon will cooperate with Coos County and the State to assure that all development that occurs around the airport is compatible with the functions of the airport.

RAIL PLAN

Rail service is not available to Bandon and none is planned at this time. The closest service terminates in Coquille, some 17 miles to the east.

PORT PLAN

The City is located at the mouth of the Coquille River, which is classified as a shallow draft estuary. Port facilities serving the City of Bandon are fully developed, with only completion of the high dock remaining. Shore-side development in the early implementation stage is the Coquille Riverwalk project. This project will provide improved pedestrian access to the Coquille River and the Port's boat basins from Elmira Avenue to Alabama Avenue. Included in the project are a mini-amphitheater and a wind-sheltered picnic area. No additional water-dependent transportation facilities or improvements are planned. Continued dredging of the eight-foot deep river channel is considered to be essential to the economic viability of what remains of the commercial and recreational fleet use of the Port. The Plan incorporates the view that continued channel dredging is vital to the Port of Bandon and City interests.

NATURAL GAS PIPELINE PLAN

Coos County voters approved a bond measure to bring natural gas from the Roseburg area to

Coos County. The County would own the transmission line, and gas service would potentially be available to North Bend-Coos Bay, Bandon, Coquille, and Myrtle Point. This is the only known possible pipeline service to the City. Too little is known at this time to determine the level of City participation in natural gas service. However, as information and costs become available, the City will explore the options pertaining to the pipeline.

SECTION 7

ACCESS MANAGEMENT

SECTION 7 - ACCESS MANAGEMENT PLAN

One of the best definitions of access management is contained in an article written by Elizabeth Humstone and Julie Campoli for the Planning Commissioners Journal, Issue 29, Winter 1998. The introductory part of that article is quoted in the following paragraphs.

"1. What is Access Management?

Access management is the planning, design and implementation of land use and transportation strategies that control the flow of traffic between the road and surrounding land. Access management can bring significant benefits to the community, such as:

- Postponing or preventing costly highway improvements
- Improving safety conditions along highways
- Reducing congestion and delays
- Providing property owners with safe access to highways
- promoting desirable land use patterns
- Making pedestrian and bicycle travel safer

2. The Land Use — Transportation Connection

In order to understand the role of access management, it is critical to keep in mind the close connection between land use and transportation. Highways provide access to land which enables development of that land. Land uses generate vehicle, pedestrian, bicycle, and transit trips. In order to manage traffic along a highway, both land use and transportation strategies are necessary. To manage one without the other will result in congestion, deterioration of the highway corridor, and resident, business and landowner dissatisfaction.

Not all highways influence land development in the same way. For example, interchanges attract industries and warehouses, whereas local streets pose problems for these uses due to weight limits, neighborhood conflicts, and limited maneuvering space.

Highway systems can be barriers or connectors between land uses. For example, interstates bisect communities and limit their interconnection to a few underpasses, overpasses or exits. Alternatively, local street networks connect destinations within communities.

Traffic congestion and delays affect the desirability of doing business along parts of a highway corridor. Improvements designed to ease congestion often attract more traffic, requiring more improvements in the future. Increased highway capacity may result in the spread of development to peripheral areas, leaving vacant and abandoned areas behind.

Traffic volumes and choices of mode of travel are influenced by the location, density and mixture of land uses. Communities that separate land uses reinforce driving as the mode of choice. Low density land uses also encourage driving and require longer travel times. More people walk in

compact, mixed use centers.

The layout and design of land uses can affect the choice of mode of travel. Low density commercial and residential developments, often with big road setbacks, large lots and low density, can discourage walking and bicycling. Buildings set far apart by vast parking areas, liberal landscaping and wide access roads discourage walking between uses. Connected sidewalks, attractive walking environments, and pedestrian crosswalks in compact settlements encourage more walking trips.

Land use planning and access management need to work together. When communities plan for the future, they should be aware of how their land use plans will affect the level of traffic, appearance, and points of congestion on highways.

3. Corridor Planning

The focus of the "Access Management Guide" which follows is on how access management strategies can be integrated into the planning and design of major roadway corridors. Note the work corridor. It is important in thinking about roadways to consider not just the physical right-of-way, but also the area along the roadway. By looking at the entire corridor, a community can evaluate the traffic conditions, land use conditions, and historic, scenic, and environmental features; identify future problem areas; and make broad recommendations for the area.

Corridor planning is most often undertaken with the assistance of a regional or county planning commission because many arterial and collector corridors serve regional transportation needs. If a corridor plan is being developed for a regional arterial highway, all communities along the highway will need to participate in the planning process.

Corridor planning requires broad public participation. Local officials, regional or county planning representatives, property owners, businesses and residents along the corridor, citizens, and representatives from the state transportation agency should be included. All of these people will be affected by the corridor plan and, therefore, must help establish the plan."

The *Access Management Guide* referred to in the article contains three parts: (1) Land Use Strategies, (2) Curb Cuts, Driveways, and Parking, and, (3) Site Development Strategies. The information contained in the guide is available at the City's Planning Department. The authors of the guide provide the following suggested planning policies to assist access management:

1. Focus development in villages, urban centers or other growth centers.
2. Provide for mixed uses and higher densities in these growth centers.
3. Do not plan narrow, commercial strips along highways.
4. Redesign existing strip development areas.
5. Limit development along arterial highways in rural settings.
6. Plan for a community street network.

7. Require master planning for large tract of land.
8. Plan and design transportation improvements that fit with community character.

The Oregon Department of Transportation's *State Highway Plan* provides standards and guidelines for regulating access to the State highway System. Recently adopted, OAR 734-051, *Highway Approaches, Access Control, Spacing Standards, and Medians*, governs the issuance of access permits onto state highways. The following are identified benefits of access management:

Fewer Accidents - Records from 1993 to 1995 indicate that over 55% of all traffic accidents on Oregon state highways (excluding the Interstate system) have occurred at intersections or driveways. These accidents accounted for over \$980 million in damages and 175 fatalities in three years. In other states, access management has been shown to drastically reduce the accident and injury rate.

Increased Capacity - Access management can increase the capacity of existing transportation facilities. Using access management techniques on a four lane highway in Colorado, the benefits equaled widening the highway to six lanes.

Travel Times - Overall traffic speeds increase where access management techniques are implemented, often by 50% or more. This translates into reduced travel times, lower emissions, and substantial fuel savings.

Protecting the Public Investment - Oregon's state highway system has an estimated value of \$50 billion. Access management is one means to ensure the maximum return on the highway system.

Good Business - Access management presents opportunities for financial savings in the form of reduced accident costs, eliminating the need to construct additional travel lanes, eliminating the need to purchase additional right-of-way, and extending the life of interchanges.

The standards and guidelines which will be used for access management on the collector street system in Bandon are shown in Table 5 (p.44).

The two highest priority segments of the roadway system in Bandon needing coordinated access management planning are Highway 101 from 13th Street south to the Urban Growth Boundary, and Seabird Drive from Highway 101 to Beach Loop Drive. The City will initiate corridor planning for these two areas as a part of the Comprehensive Plan update process.

Table 5 - Access Management Guidelines

Functional Classification	Minimum Posted Speed	Minimum Spacing Between Driveways and/or Streets¹	Spacing Between Intersections	Appropriate Adjacent Land Uses
Collector	25-40	100 Ft.	500 Feet	<ul style="list-style-type: none"> • Buffered low or medium density residential • Neighborhood Commercial near some intersections
Local Residential Street	25	access to each lot permitted	250 Feet	<ul style="list-style-type: none"> • Primarily low density residential

¹ Desirable design spacing (existing spacing will vary)

Source: Washington County Department of Land Use and Transportation and Oregon Department of Transportation

SECTION 8
IMPLEMENTATION PLAN

There is no statutory or ordinance limitation on spending this revenue on capital projects.

Systems Development Charges (from the street portion of SDC fees)

\$ 50,000 - currently used for capital projects

This revenue must be used for street system improvements.

Capital Improvement Fund (from utility tax and urban renewal loan repayments)

\$ 143,000 per year for next seven years

\$ 70,000 per year after seven years (upon repayment of the urban renewal loan)

Must be spent on capital improvement projects. This Fund supports all General Fund departments, including but not limited to: Administration, Finance, Police, Fire, Streets, Parks & Recreation, and Planning. Very limited funding is available for streets.

State Revenue Sharing (from State income tax)

\$16,000 per year. Currently disbursed: \$ 12,500 pothole repair
3,500 Dial-A-Ride

There is no statutory or ordinance limitation on spending this revenue on capital projects.

The maximum practical amount the City currently has to spend on transportation system improvement projects is \$274,000. This figure is not sustainable for more than a few years. Expenditures at this level assume: 1) no street maintenance, 2) no capital equipment purchases for the Police Department, and 3) no support for Dial-A-Ride. These are not realistic assumptions. Postponing street maintenance increases long term costs. Removing money from the Police Department capital fund is short-sighted. Taking money from Dial-A-Ride would yield little in street construction and harm a valuable transportation service.

A few of the identified street projects fall below the annual revenue estimate, but many are well above. It would not be possible to do an annual project with current revenues. In fact, there is no way to complete the planned system improvements with current revenues. The most optimistic scenario places the City's projected revenues about \$7,475,000 short of the projected system improvement costs over the twenty year planning period. A realistic estimate of the projected revenue shortfall over the twenty year period is \$11,000,000.

Possible sources of revenue the City will need to investigate include:

1. General Obligation Bonds - This is a property tax issue and requires a vote of the citizens of Bandon.
2. Systems Development Charges - The City has the information to calculate new street system development charges. New charges require voter approval.
3. Street System Utility Tax requires voter approval.
4. Revenue Bonds - It is feasible for revenue bonds to be sold and paid back through revenues generated by a street utility tax.

5. Local Improvement Bonds - The formation of Local Improvement Districts (LID) to qualify for these bonds requires the approval of a percentage of the property owners within the LID. This is the likely source of funding for local street improvements.
6. State and Federal Grant Funds - The City will continue to actively pursue this funding source.

The two most likely sources of new revenue to finance street improvements are 1 and 2 above. Revenue would need to be generated from both sources to carry out the planned improvements. General obligation bonds are the most likely single source. If system development charges were to be used as the single source, it would have a negative impact on property affordability and could be a self-defeating. Determining a correct ratio between the sources of revenue will take study. Revenue generated from SDCs will be significantly less than from general obligation bonds and property tax increases.

Following is one scenario which could be used to fund the planned transportation improvement projects over the next twenty years. The most likely amount of revenue needed (\$11,000,000) is used in the analysis.

This scenario assumes the SDC for transportation projects would increase by an additional \$1,000 per EDU (equivalent dwelling unit), bringing the total SDC charge for transportation projects to \$2,333 per EDU. The recent Bandon Storm Water Management Plan calculates there will be an additional 637 EDU's in Bandon over the next twenty years. This SDC increase would generate \$637,000 over that period. This reduces the amount needed from general obligation bonds to \$10,363,000.

For purposes of this analysis, it is assumed that the revenue would be generated over twenty years in four increments of five years each. There would be a sale of \$2,590,750 of bonds at the beginning of every five year period. At an assumed 6% bond interest rate, the annual debt repayment amount will be \$615,044. Given the City's current total property valuation, the property tax rate necessary to make the general obligation bond repayment is \$3.22 per \$1,000 of assessed valuation. This is \$322 of additional property taxes on a \$100,000 house, a significant property tax increase. It is unlikely that City voters will tax themselves at this rate for twenty years. It is more likely that a smaller bond issue would be passed after a period of public information and debate, and the project list would be significantly trimmed back.

APPENDIX A

CAPITAL IMPROVEMENTS AND COSTS

**CITY OF BANDON TSP - Volume 6
Adopted by Resolution 00-42**

Project Priorities

Street System Improvements

0 - 5 years (after TSP adoption)

<u>Project Location</u>	<u>Private Costs</u>	<u>Public Costs</u>
9. Madison Avenue: Emergency route	—	178,340 (URA)
10. Seventh Street: Madison to Beach Loop	—	156,033
11. Beach Loop Drive: 7 th St. to 11 th St.	Storm drain.	344,674
12. Beach Loop Drive: 11 th St. to Face Rock Dr.	Storm drain.	727,671
36. Fillmore Ave.: Hwy 101 to Eleventh St.	—	869,350 (URA)
		<u>\$2,276,068</u>

6 - 10 years (after TSP adoption)

<u>Project Location</u>	<u>Private Costs</u>	<u>Public Costs</u>
1. Highway 101: North UGB south to 13 th St.	—	20,000(ODOT)
6. Edison Avenue: First St. to Jetty Road	—	78,460
7. Jetty Road: Edison Ave. To Curve	—	466,854
13. Beach Loop Dr.: Face Rock to Strawberry Dr.	Storm drain.	286,663
14. Beach Loop Dr.: Strawberry to Caryll Court	Storm drain.	162,636
15. Beach Loop Dr.: Caryll Ct. to Seabird Drive	Storm drain.	448,679
21. Eleventh Street: Jackson Ave. to Franklin Ave.	—	309,607
22. Eleventh Street: Franklin Ave. to Bandon Ave.	—	453,800
26. Eleventh Street: Elmira Ave. to Fillmore Ave.	—	84,568
27. Eleventh Street: Fillmore Ave. to Harlem Ave.	—	490,156
28. Eleventh Street: Harlem Ave. to Hospital	—	237,888
30. Fourth/Ocean/Seventh: Edison to Madison	—	749,053
		<u>\$3,768,364</u>

11 - 20 years (after TSP adoption)

<u>Project Location</u>	<u>Private Costs</u>	<u>Public Costs</u>
2. Highway 101: 13 th Street to Seabird drive	—	2,121,653
3. Highway 42S: Highway 101 to UGB	—	133,890
4. Riverside Drive: North UGB to 1 st Street	—	921,190
16. Beach Loop Drive: Seabird Drive to UGB	Storm drain.	671,982
17. Seabird Drive: Beach Loop to Hwy. 101	—	763,551
18. Face Rock Dr./20th: Beach Loop to Hwy. 101	704,256	154,593
19. 20 th Street: Hwy. 101 to Rosa Road	357,114	78,391
29. Edison Ave.: Jetty Road to Fourth St.	—	101,861
31. Franklin Ave.: Fourth St. to Eleventh St.	—	429,093
32. Franklin Ave.: Eleventh St. to 12 th Court	—	131,844
33. Franklin Ave.: 12 th Court to Seabird Drive	2,069,427	454,265
37. Rosa Road: Eleventh St. to 20 th Street	—	468,400
38. Bill Creek Road: Eleventh St. to UGB	—	226,221
39. Rosa Road: 20 th Street to Seabird Drive	897,013	196,905
40. Seabird Drive: Hwy 101 to Rosa Road	475,545	104,388
	<u>\$4,503,335</u>	<u>\$6,958,227</u>

Totals **\$4,503,335** **\$13,022,659**

Intersection Improvements

	<u>Priority(yrs)</u>	<u>Public Costs</u>
1. Highway 101/Fillmore Ave	0-5	285,000
2. Highway 101/20th Street	11-20	120,000
3. Highway 101/Seabird Drive	6-10	500,000
4. Seabird Drive/Beach Loop Drive	11-20	50,000
5. Beach Loop Drive/Face Rock Drive	11-20	<u>50,000</u>
	Total	\$1,005,000

***The inclusion of an improvement project in the TSP does not commit the City or ODOT to allow, construct, or participate in funding the specific improvement. Should a project be allowed, the City will work with any relevant developer and, in the case of projects which affect state facilities, with ODOT, to discuss and refine project requirements and details. In addition, inclusion of a project in the TSP cannot be used as mitigation for future land use decisions which may affect the state highways.

APPENDIX B

STREET STANDARDS AND CONSTRUCTION TYPICALS

**CITY OF BANDON TSP - Volume 6
Adopted by Resolution 00-43**

TABLE 1 - STREET STANDARDS BY CLASSIFICATION

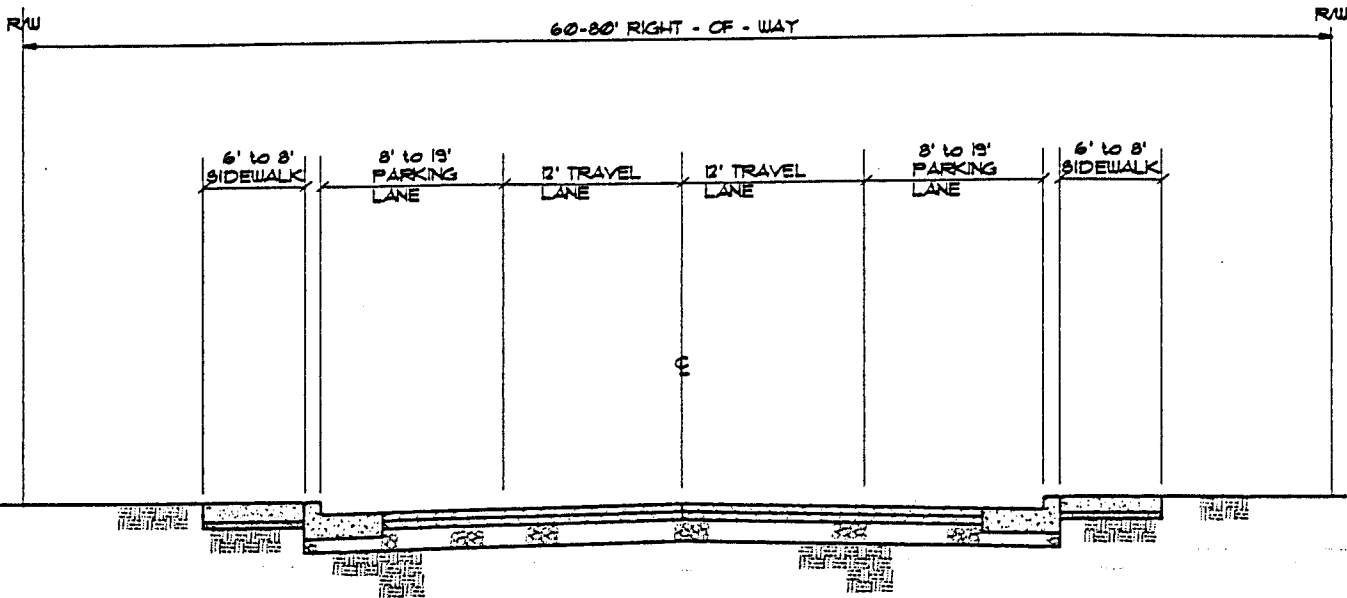
Street Characteristic	Arterial	Commercial	Collector		Local	
			28' Wide	34' Wide	Continuous	Cul-de-sac
Right-of-Way	80' to 100'	60' - 80'	60'	60'	60'	60' plus cul-de-sac
Vehicular Travel Width	24' to 48'	24'	28'	24'	20'	20'
Travel Lanes	2 or 4 @ 12' each	2 @ 12' each	2 @ 14' each	2 @ 12' each	2 @ 10' each	2 @ 10' each
Parking	0 to 2 @ 8'	2 @ 8 - 19' each	None	None	1 @ 8'	1 @ 8'
Curb and Gutter	Yes	Yes	Yes	Yes	Yes	Yes
Bike Lanes	2 @ 6'	No	No	2 @ 5'	No	No
Sidewalks	2 @ 8'	2 @ 6' - 8'	2 @ 5' or 6'	2 @ 5' or 6'	1 @ 5' Required 1 @ 5' Optional	1 @ 5' Required for full length
Turn-around Radius	--	---	--	--	--	40'
Pavement Width	36' to 76'	40' to 62'	28'	34'	28'	28'
Min. Pavement Depth	ODOT Standards	3"	3"	3"	2"	2"
Min. Base Rock Depth	ODOT Standards	10"	10"	10"	10"	10"

Notes:

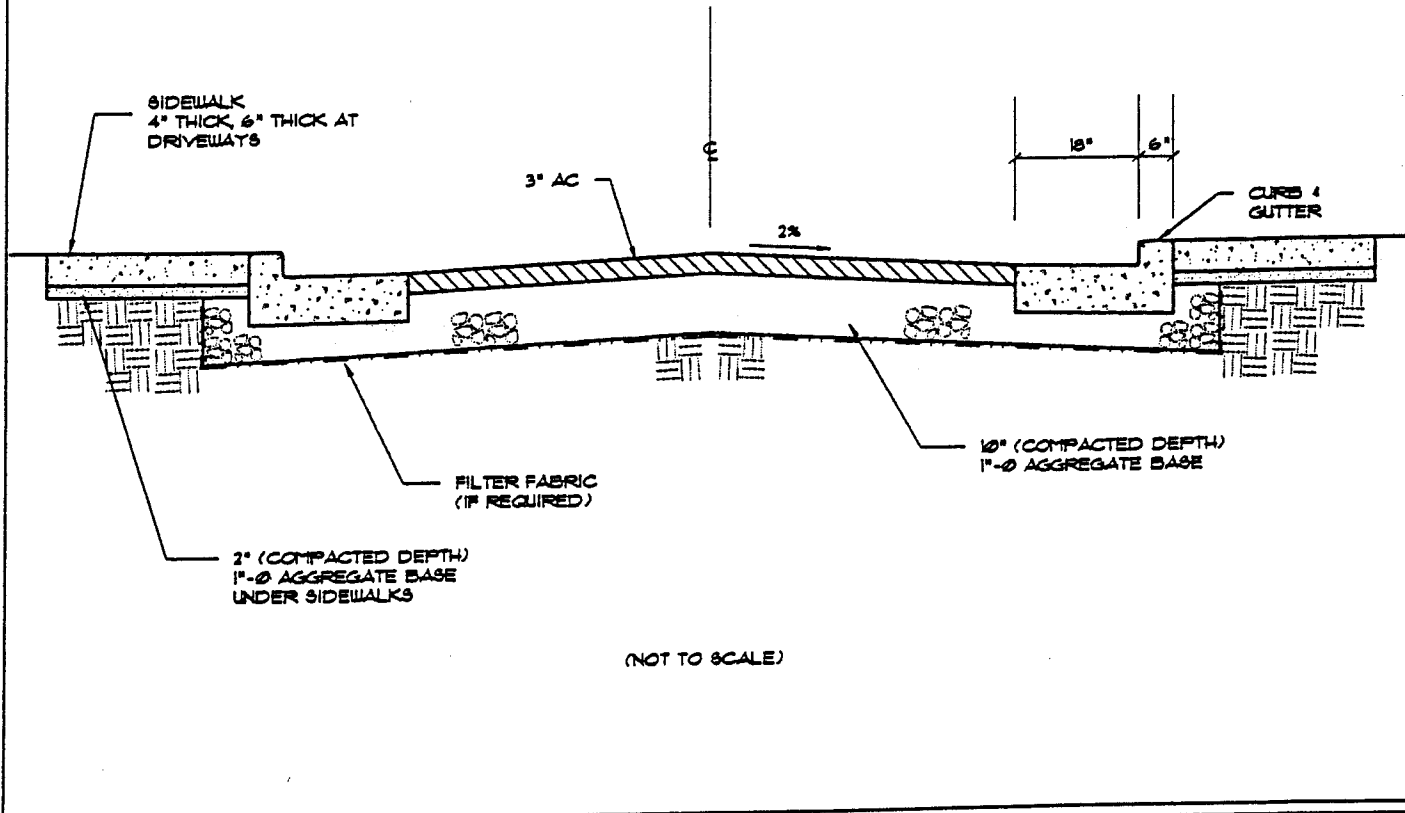
1. These standards apply to new and existing facilities. Existing, previously opened local access facilities shall be permitted to be rebuilt or improved to existing sub-standard width and shall not necessarily require sidewalks and bike lanes and may be permitted with drainage ditches and facilities which do not include curbs and gutters, provided the street complies with the minimum pavement and base rock depths.
2. State law requires arterials and collectors to incorporate bicycle and pedestrian facilities.
3. Where average daily traffic (ADT) is less than 3,000 bicycle traffic may be accommodated by 28' pavement width and no parking.
4. These are variable standards within street classification based on localized need. See the Bandon Transportation System Plan for planned improvements to arterials and collectors.
5. Concrete may be used as a surfacing material subject to City Engineer approval.

What is sub-standard width?

COMMERCIAL STREET

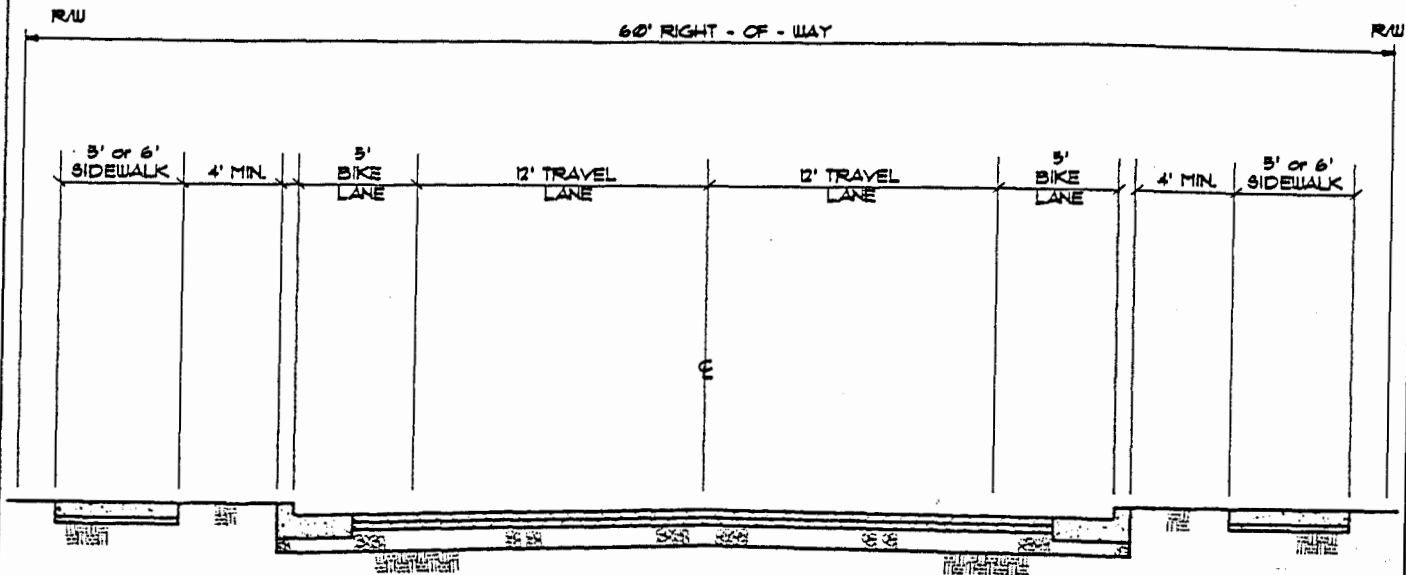


COMMERCIAL
(PARKING BOTH SIDES)
(NOT TO SCALE)

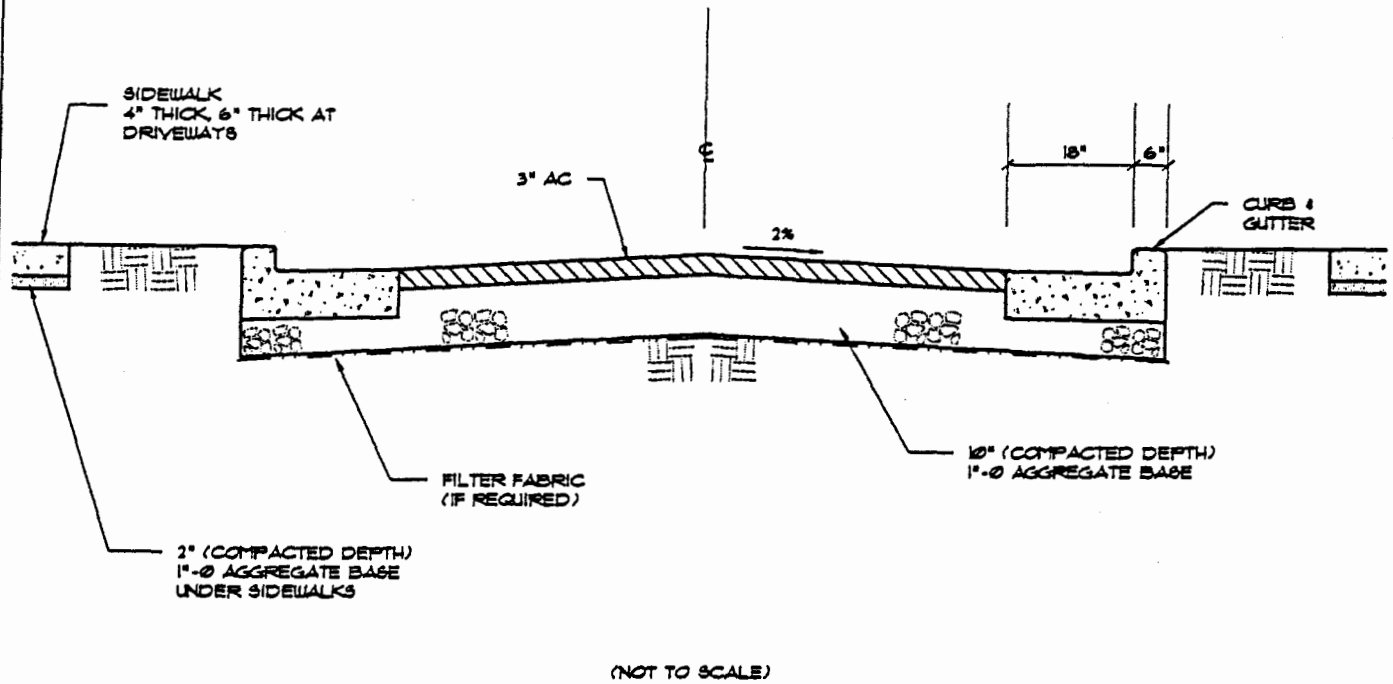


	BANDON TRANSPORTATION SYSTEM PLAN		FIGURE A
	STREET DEVELOPMENT STANDARDS COMMERCIAL		

COLLECTOR STREET - 34' WIDE

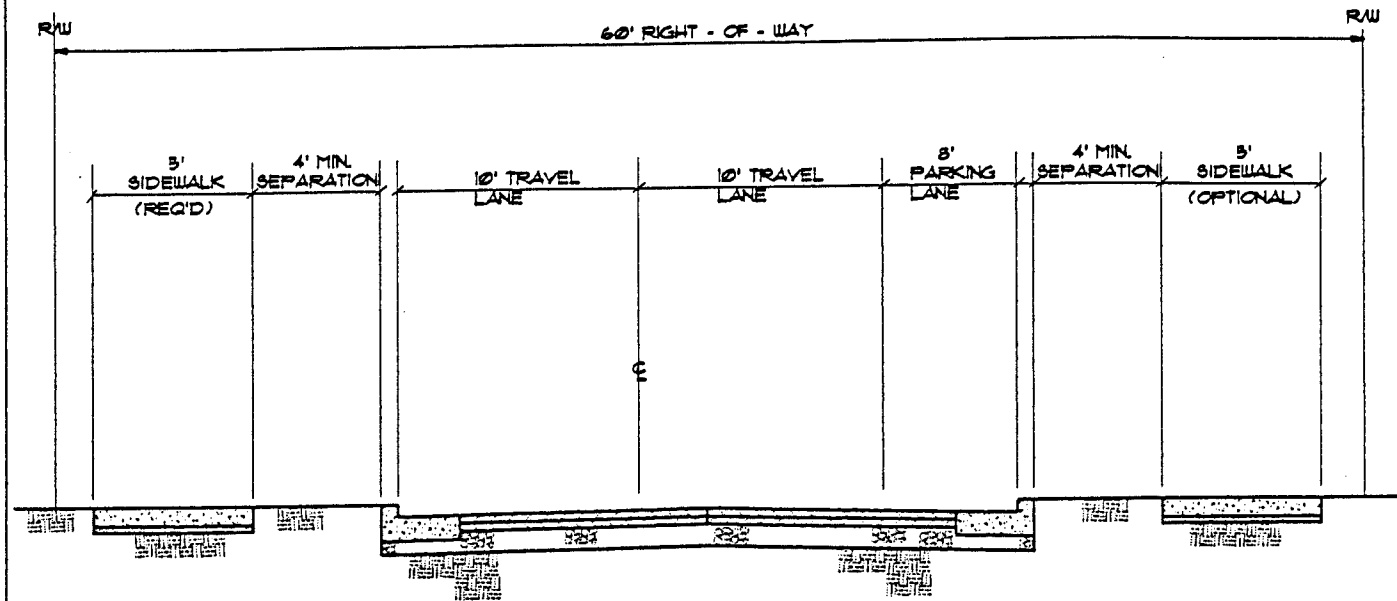


COLLECTOR - 34' WIDE
(NO PARKING WITH BIKE LANES)
(NOT TO SCALE)

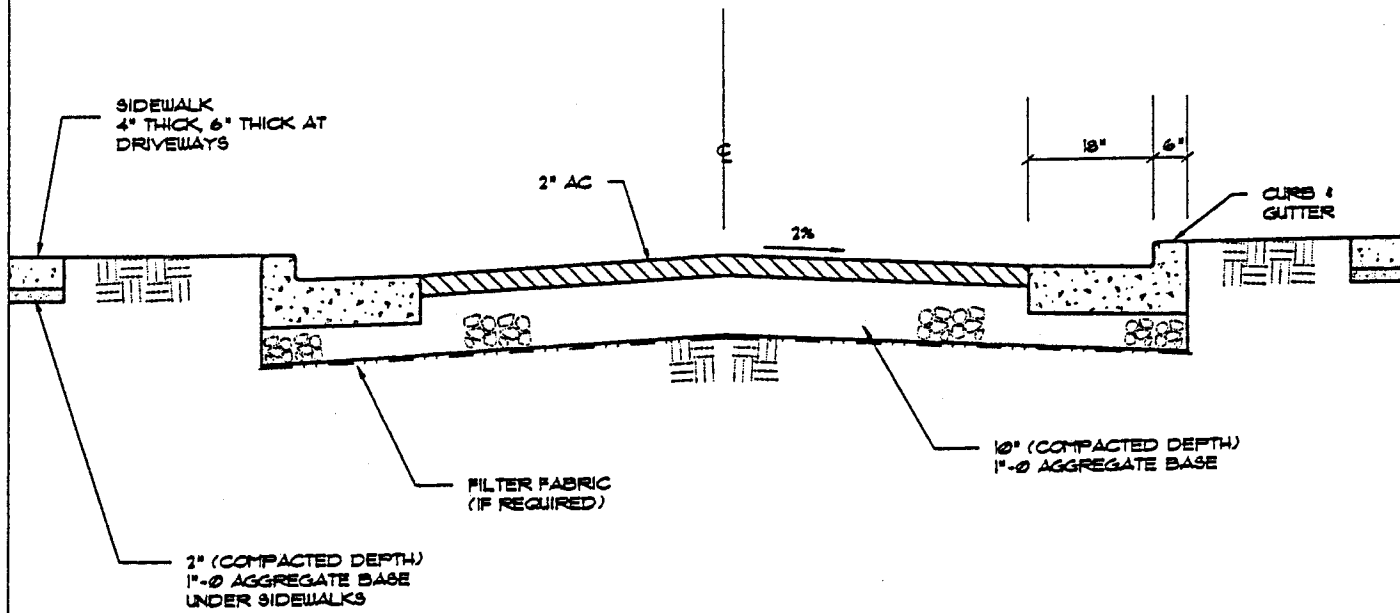


	BANDON TRANSPORTATION SYSTEM PLAN		FIGURE B
	STREET DEVELOPMENT STANDARDS COLLECTORS		

LOCAL ACCESS - PAVED

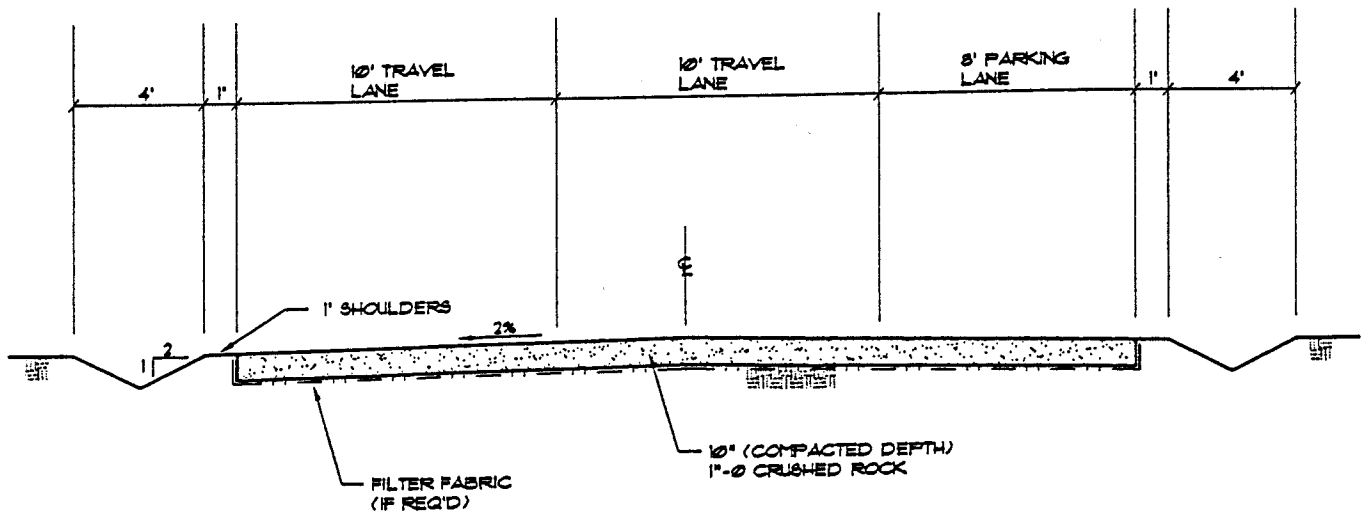


LOCAL STREET - 28' WIDE
(NOT TO SCALE)

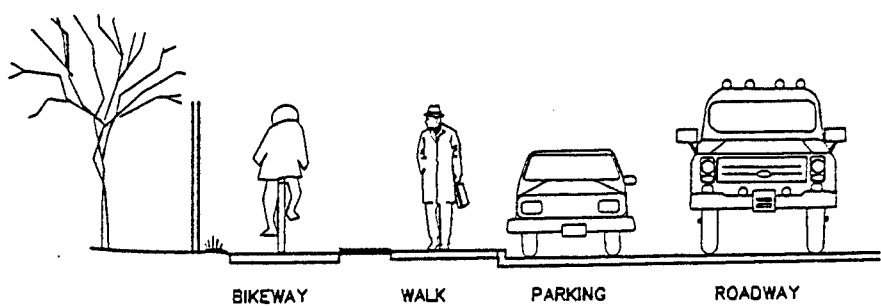


	BANDON TRANSPORTATION SYSTEM PLAN		FIGURE C
	STREET DEVELOPMENT STANDARDS LOCAL ACCESS		

LOCAL ACCESS - GRAVEL

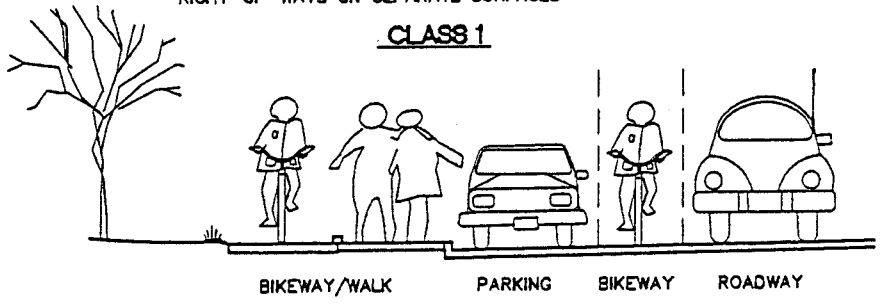


	BANDON TRANSPORTATION SYSTEM PLAN		FIGURE D
	STREET DEVELOPMENT STANDARDS LOCAL ACCESS		



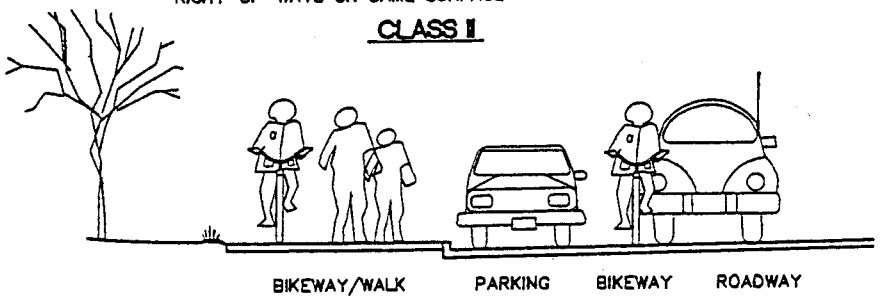
NOTE: TOTAL SEPARATION - DIVIDING STRIP BETWEEN RIGHT-OF-WAYS ON SEPARATE SURFACES

CLASS I



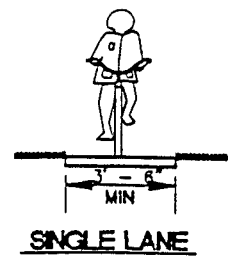
NOTE: PARTIAL SEPARATION - ADJACENT, BUT SEPARATED RIGHT-OF-WAYS ON SAME SURFACE

CLASS II

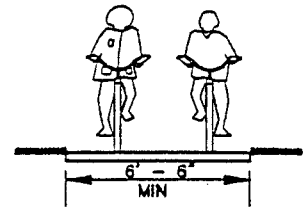


NOTE: NO SEPARATION - SHARED RIGHT-OF-WAY ON SAME SURFACE

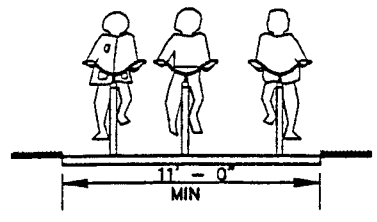
CLASS III



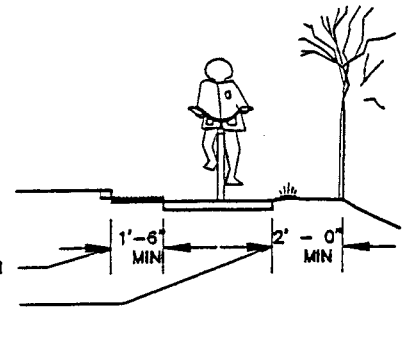
SINGLE LANE



DOUBLE LANE

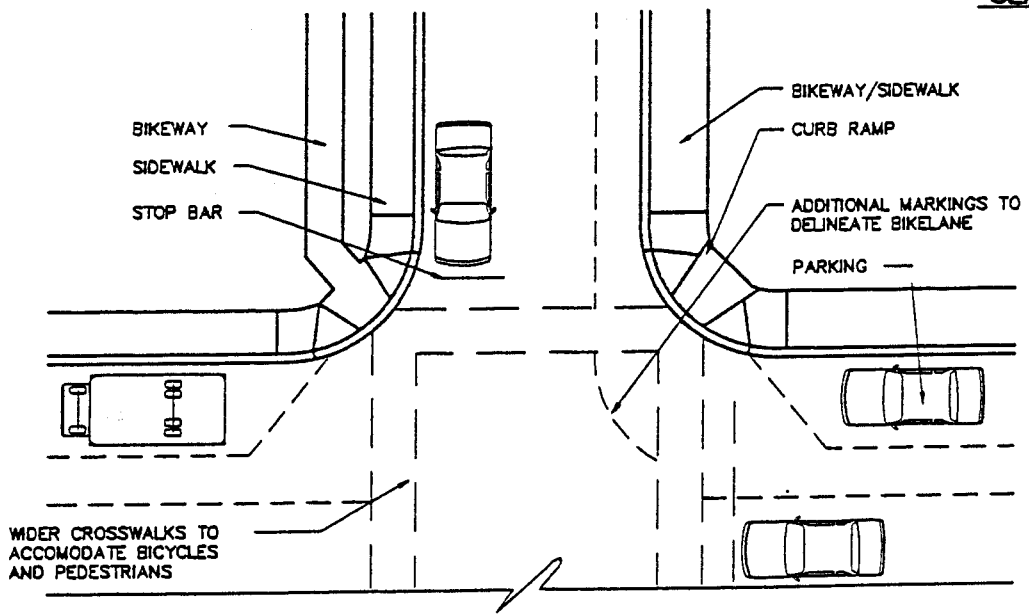


TRIPLE LANE



MIN. TO RAISED CURB
MIN. TO DROP IN GRADE OR STATIC OBSTACLE

CLASS I



WIDER CROSSWALKS TO ACCOMMODATE BICYCLES AND PEDESTRIANS

BANDON TRANSPORTATION SYSTEM PLAN		FIGURE E
STREET DEVELOPMENT STANDARDS BICYCLES AND PEDESTRIANS		