

**Tillamook County
Transportation System Plan - Phase I**

An Evaluation and Identification of Future Transportation Planning Needs

**Prepared For:
Tillamook County
Community Development Department
&
Public Works Department
Tillamook County, Oregon**

**Prepared By:
TriLand Design Group, Inc.
Tigard, Oregon**

June 1999

Tillamook County Transportation System Plan - Phase I

*An Evaluation and Identification of Future Transportation Planning
1998-1999*

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

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I. PROJECT DESCRIPTION, OBJECTIVES, PROCESS & CONTACTS

PROJECT DESCRIPTION

Tillamook County is a growing coastal county with a population rate averaging 1.6% per year from 1990-1995. This growth rate is slightly below the state average (2.04%), but greater than 19 other Oregon counties, including Clatsop, Lincoln and Coos counties on the coast. Population growth understates the impacts upon transportation facilities and other infrastructure because of the even greater increase in tourist travel and second home development. For example, the growth rate in residences has exceeded 2% in each of the past five years. All of this places a tremendous burden on Tillamook County's infrastructure, beginning with the various modes of transportation.

Tillamook County has not updated the Goal 12 Transportation Element of its Comprehensive Plan since it was first drafted in the late 1970's. There have been marginal amendments to the implementing Land Use and Land Division Ordinances, but taken as a whole, these documents are out-of-date. This is often illustrated by the number of variances that are required to approve a reasonable road system for a new subdivision. Moreover, the transportation plans of other entities (including ODOT, the Ports of Nehalem and Tillamook Bay, airports, and the various cities and communities in Tillamook County) remain disconnected pieces of what must become an integrated plan for transportation.

The adverse consequences of ad hoc transportation planning have been mitigated in part by the excellent working relationship between the Community Development (Planning) and Public Works Departments. That relationship will enable Tillamook County to make the best possible use of any transportation planning resources.

A well-planned transportation system plan may be the most critical element for Tillamook County to maintain its high quality of life. This TGM funded project is an initial step to ensuring the County has a well-planned transportation system in the future.

PROJECT OBJECTIVES

- Develop a stakeholder involvement program;
- Review current transportation-related documents to determine relationships and conflicts;
- Update the inventory and review the format and content of the Goal 12 element of the comprehensive plan;
- Establish road design standards;
- Identify future needed planning studies and develop a workscope for Phase 2 of the Tillamook County Transportation System Plan.

PLANNING PROCESS

Task A. Goal Setting & Establish Public Involvement Program

Objectives:

- For primary participants to gain a thorough understanding and reach consensus on the planning process and schedule, project objectives, the public involvement process, and project responsibilities. Primary participants include Tillamook County, ODOT, and TriLand Design Group (TriLand).
- Establish a process to ensure on-going technical advise, stakeholder perspective and coordination among interested parties.

Task B. Research & Documentation

Objective:

Review and understand the relationship of and conflicts between transportation-related documents affecting this project.

Task C. Transportation Inventory & Goal 12 Format

Objective:

Establish an objective basis for subsequent planning; identify and clarify issues that need to be resolved in the Goal 12 Element of the Comprehensive Plan.

Task D. Road Design Standards

Objective:

Develop road design standards for cities and areas within urban growth boundaries, rural communities and rural areas.

Task E. Identify Future Needed Planning Studies & Ordinance Upgrades

Objective

Develop a work program for future planning studies that will provide clear and detailed direction to proceed with development of a comprehensive and cohesive Tillamook County transportation planning effort in compliance with state goals.

CONTACTS

There are several public agencies and organized committees that have a wealth of knowledge of the existing transportation system in Tillamook County, and will have valuable input on future transportation needs. It is important to involve these entities in the planning process. The planning process includes an exercise to obtain input and solicit ideas from the identified entities. At the December 3, 1998 Goal Setting meeting, the County, ODOT, and Consultant determined three methods for public involvement. A list of entities to be involved in the planning process and methods for their involvement are identified below:

The following entities (and representatives) will participate throughout the planning process.

<u>Entity</u>	<u>Representative</u>
• Tillamook County Community Development	Vic Affolter/George Plummer
• Tillamook County Public Works Department	Jon Oshel/Pat Oakes
• Economic Development Council of Tillamook County	Valerie Folkema
• Tillamook County Road Advisory Committee	Norm Meyers
• Tillamook County Traffic Safety Committee	Norm Meyers/Pat Oakes (staff rep.)
• Oregon Dept. of Transportation (ODOT)	Nancy Reynolds

The following entities are represented by one of the individuals identified above. These individuals will keep these entities informed of this project, as well as solicit input pertaining to this project.

<u>Entity</u>	<u>Representative</u>
• County Planning Commission	Vic Affolter
• County Futures Council	Vic Affolter
• Unincorporated Communities	Vic Affolter/George Plummer
- Barview	- Neahkahnie
- Beaver	- Neskowin
- Cape Meares	- Oceanside
- Cloverdale	- Netarts
- Falcon Cove	- Pacific City/Woods
- Hebo	- Syskeyville
- Idaville	- Tierra Del Mar
- Mohler	- Twin Rocks

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A questionnaire will be sent to the following entities to inform them of the project and solicit input from them.

<u>Entity</u>	<u>Contact</u>
• ODOT	Mo Dichari/Chuck Curtis
• Tillamook County Transit	Robin Phillips (ODOT)
• Public Transportation Technical Advisory Committee	John Reynolds
• Tillamook County Emergency Management	Tom Manning
• Ports	
- Port of Tillamook Bay	Jack Crider
- Port of Garibaldi	Don Bacon
- Port of Nehalem	Jean Peters
• Airports	
- Port of Tillamook Bay	Jack Crider
- Nehalem	
- Pacific City	Bob Rissel
• Cities	
- Bay City	Linda Dvorak
- Garibaldi	Elizabeth J.L. Reid
- Manzanita	Jerry Taylor
- Nehalem	Michael A. Nitzsch
- Rockaway Beach	Joanne Dickinson
- Tillamook	Mark Gervasi
- Wheeler	Randy Ealy

II. IDENTIFICATION OF RELEVANT TRANSPORTATION DOCUMENTS

There are several existing documents that will have an impact on future transportation planning. An important component of preparing Transportation System Plans, updating Goal 12, and establishing road design standards is to identify, summarize, and incorporate relevant findings of those documents. This section identifies several existing documents that will need to be reviewed and summarized as part of the Phase 2 component of the Tillamook County TSP project.

- Oregon Transportation Plan
- Oregon Highway Plan
- Highway 101 Corridor Study
- Access Management Plan
- Oregon Bicycle/Pedestrian Plan
- Oregon Coast Bike Plan
- Pacific Coast Scenic Highway Plan
- Oregon Department of Transportation Seismic Prioritization Report (for all public bridges in Tillamook County)
- DOGAMI Geologic Hazard Mapping (identifying potential problems on Lifeline Routes)
- Tillamook County Comprehensive Plan
- Tillamook County Land Use and Land Division Ordinances
- Transportation planning documents of the incorporated cities
- Tillamook County Public Transportation Plan
- Transportation plans for Ports of Nehalem, Bay City and Tillamook Bay
- Tillamook, Pacific City and Nehalem State Airport Plans
- Tillamook Futures Council's transportation objectives and benchmarks
- Tillamook County Draft Public Road Improvement Ordinance
- State and County Transportation Maps

III. EVALUATION OF EXISTING TRANSPORTATION INVENTORY

TSP requirements include the provision for developing plans for the following transportation modes: roads, public, air, water, rail, pipeline, bicycle, and pedestrian. Tillamook County currently has each of these transportation elements in place however, updated and well-established plans for each of these transportation elements have not been established. Hence, the need for the development of the TSP.

The road system is the primary transportation element in Tillamook County. A hierarchical overview of the primary road system in Tillamook County is provided below.

U.S. Highway 101

Development in Tillamook County has concentrated near the Pacific Ocean and U.S. Highway 101. Highway 101 is the principal arterial in the County and extends from north to south throughout the westside of the County. Collector roads connect to Highway 101 and generally have an east-west orientation. The collector roads extend westward from Highway 101 to the ocean, and eastward from Highway 101 to the Willamette Valley or forested lands (Siuslaw National Forest and Tillamook State Forest).

State Highway 6

State Highway 6 provides the primary east-west transportation route connecting Highway 101 at (the City of) Tillamook and the Portland area.

State Highway 22

Highway 22 provides a northwest-southeast connection between Highway 101 at Hebo and State Highway 18 at Valley Junction.

State Highway 18

Highway 18, a major east-west connection between Highway 101 and the Willamette Valley traverses the extreme southeast corner of Tillamook County for a total distance of approximately 5 miles.

State Highway 26

Similar to Highway 18, State Highway 26 provides a connection between Highway 101 and the Portland area, and traverses the northeast corner of Tillamook County for approximately 10 miles.

Cape Meares Loop – Cape Lookout Road – Sandlake Road

This oceanfront roadway system connects Highway 101 at Tillamook with Highway 101 near Pacific City. Other than Highway 101, this is the other road system that provides access to urban areas by connecting the unincorporated communities of Oceanside, Netarts, and Pacific City/Woods. This road system also provides access to several scenic and recreational locations including Cape Meares, Oceanside Beach State Wayside, Netarts Bay, Cape Lookout State Park, Sandlake Recreation Area, Cape Kiwanda State Park, Nestucca Bay and River, and Bob Straub State Park.

Highway 131

Highway 131 provides a connection between Tillamook and Oceanside.

Highway 53

Highway 53 provides a connection between Highway 101 near Wheeler and Highway 26 at Necanicum.

Miami/Foley Highway

IV. SUMMARY OF WORKSHOPS AND QUESTIONNAIRE RESPONSES

QUESTIONNAIRE RESPONSES

A brief questionnaire was distributed to solicit input on transportation-related needs and desires in Tillamook County. The questionnaire was mailed to 29 entities and individuals including the incorporated cities within the county, the Ports, ODOT representatives, other Tillamook County agencies, and members of the Tillamook County Transportation Advisory Committee. A summary of the completed questionnaires is provided below.

City of Manzanita

Key transportation issues facing your entity and the county

- Lack of adequate funding for road maintenance.
- Upgrade of county roads within City limits to City standards and for City maintenance.

Future transportation issues facing your entity and the county

- City need north-south collector through golf course connecting Laneda and Necarney City Road.

Specific county roads in need of improvement (and specific improvements needed)

- Laneda Avenue (drainage, widening, sidewalks)

Policies needed and opinions

- Need policies for gated communities

Coordination between your entity and the County

- Relationship is cooperative. Probably could be improved with adoption of formal policies for County facilities in UGB.

Available transportation-related documents

- Transportation and Street Policies from Comprehensive Plan (provided)
- Road Design Standards (provided)

City of Wheeler

Key transportation issues facing your entity and the county

- Connectivity of all transportation modes (bike/ped, etc.)
- Parking and shops on opposite sides of Highway 101

Future transportation issues facing your entity and the county

- Tying land use development to a TSP and upgrades transportation ordinance. Developers must pay for their costs to the entire system.

Specific county roads in need of improvement (and specific improvements needed)

- County road needs improvement, or simply turn over to the City. Wheeler will procure funding to better maintain this road.

Policies needed and opinions

- Main concern is safety. Tourists park on the opposite side of Highway 101 then must cross 101 to get to downtown business core.

Coordination between your entity and the County

- The County has been extremely busy after a very rough fall/winter. They are doing the best they can with limited resources.

Available transportation-related documents

- Yes! Hopefully (transportation-related documents will be available) if the City is successful in efforts to procure a TGM grant for a Wheeler Transportation Plan.

Marlin Clark

Key transportation issues facing your entity and the county

- Pave roads

Future transportation issues facing your entity and the county

- Getting the roads passable and safe to drive on and less wear and tear on autos

Specific county roads in need of improvement (and specific improvements needed)

- The main (improvement needed) is widening, complete new surfaces

Policies needed and opinions

- All county roads need improvement

Coordination between your entity and the County

- Better management needed

Available transportation-related documents

- First, the roads have to be fixed
- Second, there has to be a management plan for upkeep.

Irene Ertell

Ms. Ertell stated she was recently appointed to the Tillamook County Transportation Advisory Committee in April 1999. She has not attended any meetings yet and does not have enough knowledge at this time to complete the questionnaire.

John Reynolds

Key transportation issues facing your entity and the county

- Expand public transportation to handle more of the increased load
- Service needs – commuters, employers, and schools

Coordination between your entity and the County

- Incorporate public transportation (Tillamook County Transportation District) in the long range plan

Available transportation-related documents

- Contact Mr. Reynolds for work in progress on service needs assessments.

Source Unknown

Key transportation issues facing your entity and the county

- Lack of it, variety of access points, high cost with sparse population

Future transportation issues facing your entity and the county

- Lack of population to support ridership
- The professional management of new created district
- Ability to partner in order to best utilize transportation services countywide.

Specific county roads in need of improvement (and specific improvements needed)

- Highway 101 – southbound need to be bicycle/pedestrian friendly
- Scenic coast – Thee Capes Drive – widened and surface improvements
- Flooding – throughout flood plain

Policies needed and opinions

- The EDC would support community direction, which leans towards public access and stewardship of beaches, rivers and bays.

Coordination between your entity and the County

- Many – local transportation district is a new taxing entity that has struggled with developing partnerships and support from local agencies

Source Unknown

Key transportation issues facing your entity and the county

- Money and management – know how

Future transportation issues facing your entity and the county

- Continuous growth

Specific county roads in need of improvement (and specific improvements needed)

- Drainage and surfacing and some widening

Policies needed and opinions

- Highway 101 is a disaster, for two years ODOT has messed up Highway 101 and will be another year before finishing only one mile of highway improvement

Coordination between your entity and the County

- They could be honest in cost, especially number of riders involved

Additional Comments Provided By Jon Oshel, Tillamook County Public Works Director

Lifeline Routes

A vital interest to Tillamook County is the development of “Lifeline Routes.” Data critical to the Lifeline Routes is the existing ODOT Seismic Prioritization Report for all public bridges in Tillamook County. DOGAMI is also doing mapping of geologic hazard areas. One of the scopes of their work is to identify potential problems on Lifeline Routes. The development of this needs close coordination of ODOT and the County Road Department activities.

Road Capacity

Mr. Oshel’s current belief is that the vast majority of the roads do not have capacity of level of service (LOS) problems. LOS analysis is needed at a few locations to demonstrate that “capacity” is not a main problem in the county. The worst case LOS conditions need to be identified.

Unsafe Roads

Tillamook County main (existing) problem is roadways that are currently unsafe, usually due to narrow width, limited shoulders and nearby fixed object hazards. Mr. Oshel believes this needs to the primary objective of determining needed projects in the near future.

V. DRAFT RECOMMENDED FORMAT FOR UPDATING GOAL 12

The Goal 12 Transportation Element of the Tillamook County Comprehensive Plan has not been updated since it was first drafted in the late 1970's. Statewide planning Goal 12 requires cities and counties to develop a transportation plan which considers all modes of travel including mass transit, air, water, pipeline, rail, highway, bicycle, and pedestrian. The transportation plan should be based on an inventory of local, regional and state needs, and should consider the differences in social consequences that would result from using differing combinations of transportation modes and avoids principal reliance upon any one mode of transportation.

The Phase 2 project of the Tillamook County Transportation System Plan will include an updated Comprehensive Plan Goal 12 Transportation Element. The Goal 12 element will include policies reflecting the changes outlined in the state Transportation Planning Rule (OAR 660-12, 1991). A recommended format for updating the Goal 12 Transportation Element is provided below. When the updated Goal 12 element is developed, this format may be revised however, it is important to maintain those elements that will satisfy the requirements of the Transportation Planning Rule.

The purpose of the Tillamook County Comprehensive Plan Goal 12 Transportation Element is to develop a transportation system that meets the short and long-term needs of Tillamook County residents, while also considering regional and state needs at the same time. The Goal 12 chapter should address a balanced transportation system that includes automobile, bicycle, rail, transit, air, pedestrian and pipelines. It should reflect existing land use plans, policies and regulations that affect the transportation system. The chapter should also address:

- the Statewide Transportation Planning Goal 12 which is "To provide and encourage a safe, convenient and economic transportation system";
- Transportation Planning Rule Requirements;
- Summary of Major Issues (identification and description of major issues, changed circumstances, and conditions considered in updating the Goal 12 Transportation Element.);
- Overall Transportation Goals, Policies, and Implementing Strategies

Based on the requirements of the Transportation Planning Rule (TPR), Tillamook County will periodically analyze, prepare and plan for the transportation needs of the county. The mechanisms for the periodic review and update will be the Transportation System Plan and Comprehensive Plan Goal 12 Transportation Element. Toward this end, the goals and policies should be developed that will assist in the implementation of the Tillamook County Transportation System Plan, and thereby meet the requirements of the TPR.

Much of the background documentation, facility inventory, and forecast data referenced in the Goal 12 Transportation chapter will be located in the Transportation System Plan (TSP). The TSP will also contain a list of prioritized short and long-term projects.

DRAFT RECOMMENDED FORMAT FOR UPDATING THE TILLAMOOK COUNTY COMPREHENSIVE PLAN GOAL 12 TRANSPORTATION ELEMENT

This is a recommended format to be used in updating the Comprehensive Plan Goal 12 Transportation Element. The recommend format is divided into two primary sections:

- I. Existing Transportation System**
- II. Planned Transportation System, Goals, and Policies**

This format is based upon review of existing Goal 12 chapters currently in place in other jurisdictions in Oregon, review of Oregon Administrative Rules requirements, and review of ODOT's Transportation system Planning guidelines.

I. EXISTING TRANSPORTATION SYSTEM

I-A. Road System

Types of Roads in Tillamook County

Road System Configuration

Road Function Classifications

Highway/Principal Arterials

Urban and Rural Minor Arterials/Rural Collectors

Traffic Volumes

Level of Service

Accident Statistics

Pavement Type/Condition

Bridge Condition

I-B. BICYCLE FACILITIES

Paved Bikeways

Unpaved Bikeways

Alternative Routes

Other Facilities

I-C. PEDESTRIAN SIDEWALKS/WALKWAYS

I-D. PUBLIC TRANSPORTATION

Intercity

Fixed Route Transit

Local Demand Responsive Transportation

I-E. TRANSPORTATION DEMAND MANAGEMENT (TDM)

I-F. RAILROAD

Freight Rail

Passenger Rail

I-G. MOTOR FREIGHT/TRUCKING

I-H. AIR TRANSPORTATION

Public-Use Airports

Privately-Owned, Private-Use Airports and Heliports

Airfreight Service

I-I. WATER-BORNE TRANSPORTATION

I-J. PIPELINE TRANSPORTATION

I-K. TRANSPORTATION SYSTEM PLAN

II. PLANNED TRANSPORTATION SYSTEM, GOALS, AND POLICIES

II-A. COORDINATION AND IMPLEMENTATION OF THE TRANSPORTATION SYSTEM PLAN

II-B. ARTERIAL & COLLECTOR ROADS

- County Road Network
- State Highways
- Access Management
- Functional Classification
- Upgrade Functional Class
- Downgrade Functional Class
- Road and Street Standards
- Road Management System
- Level of Service
- Capacity
- Bridges
- Truck Routes
- Lifeline Routes
- Hazardous Material Routes
- Facility/Safety Improvements

II-C. PUBLIC TRANSPORTATION

- Special Transit Services
- Intercity Bus and Passenger Rail

II-D. BIKEWAYS AND PEDESTRIANS

- Rural Bikeways
- Rural Walkways
- On-Road Route Selection
- Off-Road Route Selection
- Facility Requirements

II-E. AIRPORTS

II-F. RAILROADS

II-G. WATERWAYS

II-H. PIPELINES

II-I. TRANSPORTATION SYSTEM MANAGEMENT (TSM) AND TRANSPORTATION DEMAND MANAGEMENT (TSM)

- Transportation System Management (TSM)
- Transportation Demand Management (TSM)

II-J. TILLAMOOK COUNTY TRANSPORTATION PROJECT LIST

VI. ROAD DESIGN STANDARDS

EXISTING ROAD DESIGN STANDARDS

Existing Tillamook County road standards generally are in accordance with the AASHTO Manual – A Policy on Geometric Design of Highways and Streets. The manual is published by the American Association of State and Transportation Officials (AASHTO). The current edition of this book outlines design standards for roads in Tillamook County.

In addition to the AASHTO standards, Tillamook County has developed a Standard Roadway Section and a Minimum Roadway Section. These two sections are described in the Tillamook County Draft Public Road Improvement Ordinance (enclosed in Appendix).

Summary of Standard (Residential) Roadway Section

- The width of travel way is in accordance with the AASHTO Manual and centered in the right-of-way.
- The width of shoulders is in accordance with the AASHTO Manual.
- The paved surface shall be crowned with a 2% slope from the centerline.
- Pavement shall consist of :
 - 3" Class 'C' A.C. Pavement (compacted);
 - 3" Aggregate Leveling Course (compacted);
 - 9" Aggregate Base (compacted).
- Shoulders shall be built up to match pavement level and slope using aggregate leveling course.
- Typical ditch depth shall be 2 feet with 4 feet from the edge of shoulder to bottom of ditch.
- Cuts shall be at a 1.5:1 slope and fill shall be a 2:1 slope.
- Aggregate and asphalt specifications shall be in accordance with the materials Specifications outlined in the Tillamook County Draft Public Road Improvement Ordinance, Section XI Standards.
- The County Engineer may require a higher standard per the Tillamook County Draft Public Road Improvement Ordinance, Section XII Variance From Standards. Additional improvement requirements shall be in conformance with the AASHTO manual.
- Left turn pockets and right turn tapers may be required based on traffic warrants.

Summary of Minimum Roadway Section

- The minimum roadway section is in accordance with of the Tillamook County Draft Public Road Improvement Ordinance, Section XI Standards and Section XII Variance From Standards.
- The width of traveled way shall be centered in the right-of-way.
- The minimum travel lane width shall be 8 feet.
- The paved surface shall be crowned with a 2% slope from the centerline.
- Pavement shall consist of :
 - 3" Aggregate Leveling Course (compacted);
 - 9" Aggregate Base (compacted).
- Typical ditch depth shall be 1 feet with a 3:1 slope from edge of roadway.
- Cuts shall be at a 1.5:1 slope and fill shall be a 2:1 slope.
- Aggregate and asphalt specifications shall be in accordance with the materials Specifications outlined in Section XI of the Tillamook County Draft Public Road Improvement Ordinance.

VII. FUTURE TRANSPORTATION PLANNING

IDENTIFICATION OF NEEDED TRANSPORTATION PLANNING STUDIES AND ORDINANCE UPGRADES

Recommended planning studies and ordinance upgrades that will provide clear and detailed direction for future transportation planning in Tillamook County are identified below.

1. Tillamook County Transportation System Plan

The primary transportation planning exercise needed in Tillamook County is the development of the *Tillamook County Transportation System Plan (TSP)*. This document provides a recommended draft scope of services for developing the Tillamook County TSP. The TSP will include goal and policy language to be utilized in upgrading the Tillamook County Comprehensive Plan and Tillamook County Land Use and Land Division Ordinance.

2. Tillamook County Comprehensive Plan - Goal 12 Transportation System Update

3. Tillamook County Land Use and Land Division Ordinance Update

4. Unincorporated Community Transportation Plans

DRAFT SCOPE OF SERVICES - TILLAMOOK COUNTY TRANSPORTATION SYSTEM PLAN – PHASE 2

Project Summary

The work program goal of the Tillamook County Transportation System Plan is to identify existing and future transportation issues facing the Tillamook County, and to develop comprehensive plan and development code amendments necessary to address these issues. Ordinances to implement the comprehensive plan and development code amendments will be finalized for the adoption process. As a result of this effort, Tillamook County will be brought into compliance with the Transportation Planning Rule (TPR) and other state and federal regulations, and assure consistency with county and regional transportation plans.

The primary elements of the work program are to:

- Incorporate an active public involvement program,
- Develop goals and policies,
- Collect an existing transportation system inventory,
- Develop future 20-year traffic projections,
- Prepare street, bicycle/pedestrian, and elements,
- Determine transportation improvement projects needed to address existing and future transportation problems, and
- Prepare implementation ordinance language for comprehensive plan and development code amendments.

General Requirements

All word processing shall be provided in Tillamook County compatible electronic format. All mapping products shall be submitted in electronic format compatible with the Tillamook County's mapping system.

The TSP may have color, but will be reproducible in black and white. It will include text, maps, and charts to easily communicate the results and recommendations. One copy suitable for reproduction will be unbound.

Background

Tillamook County is a growing coastal county with a population rate averaging 1.6% per year from 1990-1995. This growth rate is slightly below the state average (2.04%), but greater than 19 other Oregon counties, including Clatsop, Lincoln and Coos counties on the coast. Population growth understates the impacts upon transportation facilities and other infrastructure because of the even greater increase in tourist travel and second home development. For example, the growth rate in residences has exceeded 2% in each of the past five years. All of this places a tremendous burden on Tillamook County's infrastructure, beginning with the various modes of transportation.

Tillamook County has not updated the Goal 12 Transportation Element of its Comprehensive Plan since it was first drafted in the late 1970's. There have been marginal amendments to the implementing Land Use and Land Division Ordinances, but taken as a whole, these documents are woefully out-of-date. This is often illustrated by the number of variances that are required to approve a reasonable road system for a new subdivision. Moreover, the transportation plans of other entities (including ODOT, the Ports of Nehalem, Bay City, Tillamook Bay, airports, and the various cities and communities in Tillamook County) remain disconnected pieces of what must become an integrated plan for transportation.

The adverse consequences of ad hoc transportation planning have been mitigated in part by the excellent working relationship between the Community Development (Planning) and Public Works Departments. That relationship will enable Tillamook County to make the best possible use of any transportation planning resources.

A well-planned transportation system plan may be the most critical element for Tillamook County to maintain its high quality of life. This is a county-wide transportation system plan for Tillamook County. This TGM project will implement the work program developed under the current TGM grant (TGM File Code: 2RR-97) for planning studies and ordinance upgrades to amend the Goal 12 element of the Tillamook County Comprehensive Plan and develop the Transportation System Plan consistent with the Goal 12 Administrative Rule.

Task 1 - Project Administration

Objectives

Provide project oversight and coordination.

Methodology

- Contractor will lead Management Team meetings to guide and track project progress. The following will be invited to participate:
 - Tillamook County Community Development Department
 - Tillamook County Public Works Department
 - ODOT
 - Contractor

- The Management Team should meet at critical milestones during of the project: assume a total of 8 meetings.

Contractor will be responsible for the following:

- Develop critical path schedule which specifically identifies Management Team and TAC meetings and public involvement events.
- Develop meeting agendas.
- Provide original copy of meeting handouts and exhibits.
- Lead meetings.
- Provide meeting minutes/summary.

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Tillamook County staff will be responsible for the following:

- Produce copies of meeting handouts as necessary.
- Schedule meeting and distribute meeting notice to all participants.
- Provide meeting rooms.

Primary Personnel:

Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule:

November 1999 - June 2001

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET
1.1 Preparation, conduct and summary of Management Team Meetings (8)	\$5,600
1.2 Critical path schedule which specifically identifies Management Team, TAC meetings, and public involvement events.	\$ 400
Total Task 1:	\$6,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Meeting handouts, schedule meetings, distribute meeting notices, provide meeting rooms, attend meetings.</i>	Community Dev. Director	30
	Senior Planner	30
	Public Works Director	30
	Senior Engineer	30
	Clerical	<u>15</u>
	Total Task 1 Hours:	135

Task 2. Stakeholder Involvement Program

Objective

To provide an environment in which stakeholder input shapes development of the TSP and the majority of stakeholders support the plan. To obtain on-going technical advise, stakeholder perspective and coordination among all interested parties. (Stakeholders include public and interagency personnel.) To achieve broad-based community and interagency involvement in the development of the TSP.

Methodology

Active participation between all the affected government agencies, business community, transportation users, and other local stakeholders will be sought through a public and interagency involvement program.

- Establish a Technical Advisory Committee (TAC).
- Develop/review project goals/objectives.
- Develop a public involvement program that involves the following participants:
 - ODOT
 - Tillamook County Community Development
 - Tillamook County Public Works Department
 - County Planning Commission
 - Road Advisory Committee
 - Public Transportation Technical Advisory Committee

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- County Futures Council
- Economic Development Council
- Tillamook County Transit
- Traffic Safety Committee
- Ports (including the Tillamook Railroad)
- Airports
- Cities
- Communities
- Conduct TAC and public meetings and tasks.

A continuous process of close cooperation and coordination between ODOT and Tillamook County will be maintained during the project.

Technical Advisory Committee Meetings

The Technical Advisory Committee should meet at critical milestones: assume a total of five meetings. This schedule allows the technical production to take place prior to meetings and review of the technical products by the Management Team prior to TAC and/or public meetings. The following will be invited to participate:

- ODOT
- Tillamook County Community Development
- Tillamook County Public Works Department
- Tillamook County Planning Commission
- Road Advisory Committee
- Public Transportation Technical Advisory Committee
- County Futures Council
- Economic Development Council
- Tillamook County Transit
- Traffic Safety Committee
- Ports (including the Tillamook Railroad)
- Airports
- Cities
- Communities

Contractor will be responsible for the following:

- Develop meeting agenda.
- Provide original copy of meeting handouts and exhibits.
- Lead meetings.
- Provide meeting minutes.

Tillamook County staff will be responsible for the following:

- Produce copies of meeting handouts as necessary.
- Scheduling meetings and distribute meeting notices to all participants.

Public Involvement Program

The Management Team will approve the Public Involvement Program. It is anticipated that three public meetings/open houses will be held throughout the County at critical project milestones (completion of the existing conditions and deficiencies report, development of alternatives, and publication of a draft TSP) to inform the public and obtain input.

Contractor will be responsible for the following:

- Develop a draft citizen involvement strategy/program.
- Develop a program to involve these entities throughout the process of this project.

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June 1999**

- Involving stakeholders throughout the process.
- Documenting meetings and/or phone conversations with the participants.
- Documenting stakeholder information and how it was used in the project.
- Develop meeting agenda
- Advertise each meeting (e.g., provide public announcement through local newspaper).
- Develop one original newsletter for each open house.
- Provide original copy of meeting handouts and exhibits. Ensure these are distributed at least one week in advance of any such meeting.
- Lead each meeting.
- Provide meeting minutes.

Tillamook County staff will be responsible for the following:

- Produce copies of meeting handouts as necessary.
- Schedule meetings and distribute meeting notices to all participants.
- Provide meeting rooms.

Primary Personnel:

Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule:

November 1999 - June 2001

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET
2.1 Project goals and objectives	\$ 500
2.2 Stakeholder/public involvement strategy/program	\$ 500
2.3 Preparation, conduct and summary of (5) TAC meetings and public involvement events.	\$ 4,000
2.4 Preparation, conduct and summary of (3) Community Open Houses	\$ 3,000
2.5 Preparation, conduct and summary of (3) Focus group meetings.	\$ 3,000
Total Task 2:	\$11,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Meeting handouts, schedule meetings, distribute meeting notices, provide meeting rooms, attend meetings.</i>	Community Dev. Director	24
	Senior Planner	24
	Public Works Director	24
	Senior Engineer	24
	Clerical	<u>48</u>
	Total Task 2 Hours:	144

Task 3 - Review Existing Plans, Policies, And Regulations

Objective

To understand the relationship of and conflicts between transportation-related documents affecting this project.

Methodology

Contractor will complete a thorough review of all relevant local, regional and state documents and policies that relate to transportation facilities and services in Tillamook County. This will include evaluating all of the existing transportation-related studies for the various modes.

County Documents

- Transportation Master Plan
- Comprehensive plan and zoning maps
- Zoning ordinances
- Subdivision and development ordinances
- Street standards
- Pavement management data
- GIS maps and data
- Facility plans
- Accident reports
- Other local plans, transportation objectives, benchmarks
- Any other documents relevant to the preparation of the TSP

State Documents

- Transportation Planning Rule
- Oregon Transportation Plan
- 1999 Oregon Highway Plan
- Applicable corridor study/strategy
- Oregon Bicycle and Pedestrian Plan
- ODOT Seismic Prioritization Report (for public bridges)
- DOGAMI Geologic Hazard Mapping (to identify problems on Lifeline Routes)
- Public Transportation Plan
- Airport Master Plans
- Corridor strategies and plans
- Reconnaissance studies
- Specific adopted project information
- SPIS reports
- ODOT accident history
- Oregon Coast Bike Plan
- Pacific Coast Scenic Highway Plan
- Public transportation/transit plans
- Port plans
- Airport plans
- Other state planning documents relevant to preparation of the TSP

Other Documents

- Railroad plans
- BPA Transmission Corridor Plans
- Northwest Natural Gas Transmission Plans
- Canal Plans

Contractor will:

- Identify relationships, conflicts and discrepancies within and between these documents and policies.
- Identify any inadequacies relevant to the TSP.
- Review existing street cross-section standards for both private and public streets.

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- Review proposed improvements to the state, county, or local street system and any supporting traffic and environmental studies.
- Review existing sources for funding street construction and maintenance.
- Review land use policies and regulations that guide the relationships between land uses and transportation facilities, as well as their impacts on each other.
- Review economic plans and strategies (e.g., Regional Strategies and Governors Transportation Initiative) as they relate to transportation needs and land development
- Identify how the status of these existing plans, policies, and regulations affect Tillamook County's transportation system and services.

Primary Personnel:

Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule:

November 1999 - January 2000

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET
2.1 Technical memo/TSP chapter incorporating: <ul style="list-style-type: none"> - Major elements of existing plans, policies, regulations, and existing information. - How the plans, policies, and regulations relate to one another. - Any observed deficiencies. - Conflicts between these documents. - Comments. - Relationship to the TSP. 	\$3,000
Total Task 3:	\$3,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Collect relevant local and regional plans, documents, policies, standards, regulations, assessor's maps, and base maps. Provide feedback on contractor deliverables.</i>	Community Dev. Director	2
	Senior Planner	16
	Public Works Director	2
	Senior Engineer	8
	Clerical	<u>2</u>
	Total Task 3 Hours:	30

Task 4 - Transportation System Inventory

Objective

To determine existing transportation facilities.

Methodology

Contractor will collect information needed to complete a thorough inventory of the existing transportation system. The inventory will include transportation facilities and services by function, type, capacity, and condition.

Management systems (such as pavement, bridge, congestion) will be used for data to the maximum extent possible.

Contractor will obtain the following information for the inventory:

- Street inventory:
 - Street classifications (both state and local)
 - Jurisdictional responsibility for roadways
 - State highway log information
 - Intersection geometrics at study area intersections
 - Number of lanes
 - Traffic volumes
 - Roadway capacity
 - Speed limit
 - Sidewalk/pedestrian facility locations
 - Bike facility locations
 - Pavement type and conditions (for state highways within Tillamook County), obtain information from ODOT's most current Pavement Condition Report)
 - Crosswalk and wheelchair ramp locations
 - On-street parking locations
 - Crash data
 - Shoulder conditions
 - Bridge inventories, appraisals, and seismic prioritization report summary
 - Right-of-way widths
 - Lifeline Routes identification and evaluation, i.e. seismic and geologic hazards
- Public transportation inventory (includes bus, taxi, school bus, vanpool, rideshare, dial-a-ride, para-transit, inter-city transit, etc.):
 - Review planning documents to determine existing services, relevant policies and goals.
 - Identify service providers and capital equipment (from ODOT's Public Transit Section's Public Transportation Management System database).
 - Conduct telephone interviews with transit providers, social service providers, providers (including employers) of vanpool or rideshare programs, taxi services, and local planners to describe existing service, including: use, demand, cost, capital equipment and facilities, proposed service changes or additions, and problems and opportunities.
 - Inter-city recommendations (available from inter-city coordinator in ODOT Public Transit Section).
 - Multi-modal Corridor Evaluation matrix (available from public transportation planner in ODOT Statewide Mobility Unit of the Planning Section).
 - Identify service levels recommended for Tillamook County.
 - Review existing demographic data to ascertain information about potential target markets.
- Rail transportation inventory:
 - Owner/operator of rail line
 - Location
 - Classification (I, II, or III; short line, specify interchanging Class 1 line)
 - Recent/current traffic and revenue levels
 - List of industries served and commodities handled
 - Condition of line; whether line is identified in Rail Freight Plan for rehabilitation
 - Inventory of crossings and problems
 - Road impact if rail service is discontinued
 - Potential for passenger service

- For marginal lines, potential for rail banking, trail use or public use
- Air transportation inventory
- Pipeline service inventory
- Water transportation inventory

ADDITIONAL POSSIBILITIES:

- Freight routes
- Socioeconomic data
- Environmental constraints
- Major activity centers
- Vacant lands inventory
- Existing and projected future land uses

Contractor will document the information collected above in a Transportation System Inventory chapter to be incorporated into the TSP. The information will be summarized in tabular form for easy reference and have written descriptions. Up to five maps will be provided to indicate the existing roadway classification, pedestrian/bicycle facility locations, and posted speeds.

Primary Personnel:

Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule:

February 2000 - April 2001

Consultant Deliverables and Budget:

4.1 Technical memo/TSP chapter incorporating the above information	\$4,000
Total Task 4:	\$4,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Collect relevant local and regional plans, documents, policies, standards, regulations, assessor's maps, and base maps. Provide feedback on contractor deliverables.</i>	Community Dev. Director	2
	Senior Planner	16
	Public Works Director	2
	Senior Engineer	8
	Clerical	<u>2</u>
	Total Task 4 Hours:	30

Task 5 - Current Transportation Conditions

Objective

To determine the current traffic levels of service, capacity and accident history in the project area, and the current impacts on the transportation system.

Methodology

Collect and analyze all of the information needed to document the existing transportation/traffic system conditions.

Determine the existing transportation deficiencies through analysis of the level of service/capacity and accident analysis, geometric deficiencies of intersection or roadway design, access issues, and other relevant issues.

Information Collection

Contractor will conduct the following to determine the existing system conditions:

- Determine average daily traffic (ADT) volumes for state highways and relevant County roads. (If this information is not available from existing sources, then ADT traffic counts can be provided for additional budget.)
- Collect AM and PM Peak Hour turning movement traffic volumes on # road and #roadway segments.
- Collect accident data for Tillamook County from ODOT, Tillamook County, Fire Marshal, Sheriff's Office, etc.
- Current Census information for departure to work distribution and journey to work trip travel mode.
- Current accesses on state highways within Tillamook County.

Analysis

Contractor will perform level of service/capacity and accident analysis as described below:

- Conduct level of service calculations for all arterial and collector streets and their intersections (a maximum of 6 intersections and 8 roadway segments within Tillamook County). Use SIGCAP to determine the LSO and volume/capacity ratio for signalized intersections. Use The 1994 Highway Capacity Manual (Transportation Research Board) level of service methodologies to calculate the levels of service and volume/capacity ratios for other study area intersections and roadway segments. (The level of service analysis will estimate the capacities of the existing and committed street/roadway system and determine whether the traffic demand is at or near the estimated capacity.)
- Perform an origin/destination investigation to quantify commuting volumes and their associated routes and impact on the existing transportation system (as needed).
- Quantify the amount of state highway through traffic volumes for each state highway.
- Contact ODOT's Transportation Planning Analysis Unit to determine if a traffic model is needed. If needed, a traffic modeling work program and fee will need to be added to this work program.
- Accident analysis: collect accident data and traffic volumes to determine the accident rate for study area intersections and roadway segments. Perform accident analysis based on the accident data and traffic volumes collected. Summarize both accident rates and accidents by severity (property damage only, injury, fatal).
- Identify the worst intersections based on accident history.

Documentation

The contents of this technical memo/chapter will focus on the level of service/capacity (including volume/capacity ratios), accident analyses and existing transportation system deficiencies, including access issues. The information shall be summarized in tabular form for easy reference and shall have written descriptions. Maps shall be provided which incorporate the following: existing traffic volumes, AM/PM peak hour volumes, locations of existing traffic deficiencies, commuting routes and volumes, through traffic routes and volumes, roadway and intersection levels of service and accident history. Specify whether deficiencies are capacity-related, safety problems, geometric intersection deficiencies, roadway deficiencies, or access related problems.

Primary Personnel:

Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule:
 May 2000 – July 2000

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET
5.1 Technical memo/TSP chapter documenting the above information	\$5,000
Total Task 5:	\$5,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Provide feedback on contractor deliverables.</i>	Community Dev. Director	4
	Senior Planner	4
	Public Works Director	4
	Senior Engineer	<u>32</u>
	Clerical	
	Total Task 5 Hours:	44

Task 6 - Future Travel Demand Forecast; Transportation Needs And Deficiencies

Objective

To determine future transportation deficiencies based on the future (20-year) level of service/capacity analysis.

Methodology

Future Travel Demand Forecast

The future travel demand forecast will be determined based on correlating the relationship between historical traffic volumes and 20-year forecasted change in population and employment growth rates. The following will be used as applicable:

- The population and growth rates will be coordinated and consistent with projections from Tillamook County.
- These ratios will then be applied to the future population forecast annual growth rate for Tillamook County to develop future annual growth factors.
- These annual rates will then be applied to the existing traffic volumes to derive the future travel demand forecasts.

The Contractor shall perform the following:

- Develop travel forecasts based on population scenarios;
- Determine transportation capacity needs;
- Determine other roadway needs, including safety, bridge, reconstruction, operations and maintenance, and opportunities for future street connections (*primary focus of Task 6*);
- Analyze signal operations with projected traffic;
- Analyze major unsignalized intersections;
- Discuss public transportation needs (including the transportation disadvantaged), service inadequacies and intercity connectivity;
- Determine bikeway system and pedestrian system needs, including timing of improvements.

In compliance with the TPR, contractor will:

- Identify likely future local street extensions and connections.
- Identify likely future activity centers and key routes.

Future Level of Service Analysis

Contractor will conduct level of service calculations for a maximum of 6 intersections and 8 roadway segments within the study area. SIGCAP will be used for all signalized intersections, and the 1994 Highway Capacity Manual (Transportation Research Board) level of service methodologies will be used in calculating the levels of service for the study area intersections and roadway segments.

Future Deficiencies

Based on the future level of service/capacity analysis, the intersection, roadway segment, and accident deficiencies will be identified. The 2020 traffic volume projections will be evaluated against the existing plus committed traffic improvements.

Documentation

Documentation will include the following:

- The travel demand forecast methodology and results.
- Description of the population and employment forecast and the process for projecting the future traffic volumes.
- Any capacity deficiencies that may occur in the future as a result of increased traffic volumes.
- Maps showing future traffic volumes and future capacity-related transportation system deficiencies.

Primary Personnel:

Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule:

August 2000 – September 2000

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET
6.1 Technical memo/TSP chapter documenting the above information	\$5,000
Total Task 6:	\$5,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Provide feedback on contractor deliverables.</i>	Community Dev. Director	4
	Senior Planner	4
	Public Works Director	4
	Senior Engineer	4
	Clerical	4
	Total Task 6 Hours:	16

Task 7 - Develop/Evaluate Transportation System Alternatives

Objective

To determine the transportation facility needs for a 20-year planning period.

Methodology

Develop Transportation System Improvements and Alternatives

Specific alternatives will be developed to mitigate the deficiencies identified in the prior task. All alternatives shall provide sufficient capacity for at least the 20-year planning period. The transportation system improvements and alternatives will be developed to mitigate identified existing and future deficiencies based on projected traffic volumes and capacities of improvements, volume-to-capacity ratios, and levels of service thresholds. These transportation system improvements will address short- and long-range traffic deficiencies, connectivity, and safety hazards. The following items will be addressed in developing the transportation system alternatives:

- Evaluate alternatives based on measures of effectiveness such as level of service, alleviating capacity problems, volume-to-capacity ratio, additional added capacity improvement cost, maintenance cost, consistency with project goals, environmental and social impacts, and effect on public safety;
- Evaluate what geometric and other improvements may be necessary to improve capacity and safety, to include locations with higher than average accident rates. The evaluation needs to include a consideration of access management solutions (such as medians, closing or consolidating access, and right or left-turn bays) that can be used to improve safety and/or add capacity.
- Identify where new additional arterial and collector streets may be needed to accommodate future growth.
- Identify other roadway needs, including safety, bridge, reconstruction, operations and maintenance, and opportunities for future street connections.
- Identify locations for new sidewalks, crosswalks, and bicycle lanes that would link activity centers together.
- Identify non-capacity improvements such as commuter options, connectivity options, and Transportation Demand Management (TDM) measures.
- Planning level cost estimates shall be developed for the improvements and alternatives.
- Alternatives shall be evaluated in accordance with OAR 660-12-035(3) of the Transportation Planning Rule.
- Identify the area(s) which exhibit the characteristics of a pedestrian-oriented environment.

Measures of Effectiveness of Transportation System Improvements/Alternatives

The transportation system improvements and alternatives will be evaluated based on measures of effectiveness (MOE) such as level of service, alleviating capacity problems, volume-to-capacity ratio, additional capacity added, cost, consistency with project goals and policies, historic nature of the County, social impacts, and affects on public safety. The actual MOEs will be developed in conjunction with the Management Team and/or TAC, and will be consistent with the 1999 Oregon Highway Plan.

Cost Estimates of Transportation System Alternatives

Planning level cost estimates will be developed for the transportation system improvements and alternatives. These cost estimates will be part of the evaluation process of the alternatives. Also, these cost estimates may be used in the TSP financing section.

Documentation

Documentation will include the following:

- A written description and matrix of the selected alternatives, the evaluation process, potential impacts, cost estimates of the proposed improvements, and recommendations.
- Maps showing the selected alternative(s) identifying the general locations of the improvements including the state highways.

- A table comparing the alternatives against the evaluation criteria/measures of effectiveness.

Primary Personnel:

Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule:

September 2000 – November 2000

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET
7.1 Technical memo/TSP chapter documenting the above information	\$6,000
Total Task 7:	\$6,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Provide feedback on contractor deliverables.</i>	Community Dev. Director	4
	Senior Planner	4
	Public Works Director	8
	Senior Engineer	8
	Clerical	
	Total Task 7 Hours:	24

Task 8 - Develop Transportation System Plan

Objective

To determine a Transportation System Plan which will guide Tillamook County transportation planning for the next 20 years.

Methodology

This task compiles all of the information produced above into a usable TSP. Included in this effort is the development of multi-modal plans to be implemented in conjunction with the more traditional capacity improvements. With the TSP, a priority of transportation projects will be developed with a discussion of possible funding mechanisms. This task includes the activities required to modify the plan based on public input.

This is also the task where the Contractor's team will work with the Management Team and TAC to review the roadway design standards.

The TSP will be prepared in accordance with OAR 660-12-020, and written using the "Transportation System Planning Guidelines," ODOT, August 1995. It will be based on realistic goals and objectives that were developed on the early stages of the TSP development process.

The TSP will include the following:

- Road plan which includes:
 - Designated arterials, collectors, significant local streets as specified in OAR 660-12-020-(2)(b),
 - Truck route plan,
 - Probable locations of future signals (using signal warrants),

- Traffic system management strategies (such as changes in lane striping),
 - Functional classifications for the existing and future roadway system,
 - Potential street modifications or improvements,
 - TDM opportunities,
 - Street design standards-driveway spacing, sight distances, and access management, facility improvement strategies. Local connections, realignments and closures associated with state highways.
 - Roadway needs, including safety, bridge, reconstruction, operations and maintenance, and opportunities for future street connections
- Public transportation plan as specified in OAR 660-12-020-(2)(c) - includes major transit stops, routes, park and ride locations.
 - Bicycle and pedestrian plan as specified in OAR 660-12-020-(2)(d) and consistent with ORS 366.514.
 - Air, rail, water, and pipeline plan as specified in OAR 660-12-020-(2)(e).
 - Proposed amendments to the comprehensive plans and development code necessary to achieve compliance with the TPR.
 - Proposed ordinances consistent with OAR 660-12-020-045, including the establishment of street standards.
 - Basic finance element with preliminary cost estimates for major improvements and a capital improvement section with the top three projects noted. This will include likely funding sources and will evaluate whether or not adequate funding is likely.
 - Standards and timing for the future layout of the local transportation system; and
 - Recommended Special Transportation Areas in lieu of transportation improvements.

The Contractor will identify the elements of the TSP recommended for adoption as part of the comprehensive plan and other policy documents.

ODOT will establish its own internal review team to ensure an appropriate level of review of all draft materials.

The Contractor will provide 4 copies of the draft TSP to Tillamook County and 2 to ODOT, allowing at least two weeks for review and comment.

Revisions to the TSP shall be considered part of the project scope.

Primary Personnel:

Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule:

December 2000 – March 2001

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET
8.1 Draft TSP	\$ 8,000
8.2 Final TSP ready for adoption	\$ 2,000
Total Task 8:	\$10,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Provide feedback to consultant on the TSP.</i>	Community Dev. Director	8
	Senior Planner	8

	Public Works Director	8
	Senior Engineer	<u>8</u>
	Clerical	
	Total Task 8 Hours:	32

Task 9 - TSP Adoption And Implementation

Objective

To provide mechanisms to implement the TSP.

Methodology

This final task includes the activities required to secure final plan adoptions. A final TSP ready for adoption will be developed with all relevant implementing ordinances. The TSP implementation process involves the revision of comprehensive plan policies and zoning code to be consistent with the newly developed TSP. Ordinances will be drafted to be ready to be taken through the adoption process to implement the comprehensive plan and zoning amendments.

Implementation and adoption of ordinance and comprehensive plan changes will be performed by Tillamook county staff. This process may take several meetings with the Tillamook County Planning Commission and Tillamook County Board of Commissioners, and minor revisions to the TSP. Contractor will present the draft TSP to the Planning Commission and Board of Commissioners, will attend up to four meetings, and work closely with Tillamook County staff to get the TSP adopted.

Public hearings (one each) will be held before the Tillamook County Planning Commission and Tillamook County Board of Commissioners to present a final draft TSP for adoption.

Primary Personnel:

Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule:

April 2001 – June 2001

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET
9.1 Proposed changes to implementing ordinances (specific ordinance language to be included) and four meetings/hearings	\$5,000
Total Task 9:	\$5,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Review and provide feedback to consultant on the final TSP and implementing ordinances. County adoption of the TSP and relevant implementing ordinances.</i>	Community Dev. Director	20
	Senior Planner	20
	Public Works Director	20
	Senior Engineer	20
	Clerical	<u>8</u>
	Total Task 9 Hours:	88

Task 10 - Transportation Financing Plan

Objective

To determine financing methods to help make transportation improvements a reality.

Methodology

- This task will develop a comprehensive financing plan to implement the TSP, and shall include the following:
- A list of planned transportation facilities, including opportunities for low-cost improvements for bicycle and pedestrian needs. High priorities (within 5 years) shall be identified;
- A general estimate of the timing for completion of these improvements;
- A discussion of the facility provider's existing funding mechanisms and ability of these and possible new mechanisms to fund identified needed improvements.
- A recommended development of a county street systems development charge (SDC) based on the proposed improvements;
- A prioritization of maintenance needs for County-owned streets.

This task shall be documented in a separate draft plan chapter and shall include a tabular listing of all proposed improvements by priority, the total cost of each, proposed funding, and expenditure timing. A separate section shall address the proposed county SDC fee based on the recommended plan.

Primary Personnel:

Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule:

April 2001 – June 2001

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET
10.1 TSP finance plan	\$2,000
10.2 Final TSP ready for adoption	\$1,000
Total Task 10:	\$3,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Provide feedback to contractor on the TSP.</i>	Community Dev. Director	8
	Senior Planner	8
	Public Works Director	8
	Senior Engineer	<u>8</u>
	Clerical	8
	Total Task 10 Hours:	32

DRAFT SCOPE OF SERVICES - UNINCORPORATED COMMUNITY TRANSPORTATION PLANS (3)

This Draft Scope of Services identifies a draft program for developing transportation plans for the unincorporated communities of Neskowin, Netarts, and Oceanside. However, the draft scope of services can be applied to any unincorporated community.

Project Description

Tillamook County is requesting funds to prepare community transportation plans for the unincorporated communities of Neskowin, Netarts, and Oceanside. Tillamook County is currently completing preparation of a transportation plan for the unincorporated community of Pacific City/Woods through a TGM grant. This plan will serve as a model for other communities in the county.

The community transportation plans will include consideration of project development patterns, alternative routes to principle highways, community inter-connecting routes, alternative development styles, pedestrian and bicycle needs, transit needs, river and beach access, design of community gateways, street design, inventories, policies, implementing ordinances and other concerns raised by citizens. The community transportation projects will be in accord with the TGM objectives of revision of local plans consistent with state and local transportation plans, revision of local ordinances to implement transportation plans, and planning for alternative modes.

Public involvement will be incorporated throughout the planning process. The public involvement will be a collaborative process that includes Tillamook County, Oregon Department of Transportation (ODOT), community citizenry, and the Contractor. The Oregon Department of Land Conservation and Development (DLCD) will be invited to participate in the process. Public involvement mechanisms for each community plan will include:

- Four workshops with the Transportation Plan Task Force that consists of representatives from Tillamook County, ODOT, citizenry, DLCD, and the Contractor;
- One-on-one interviews to solicit transportation-related comments, needs and desires with approximately 30 citizens including residents, property owners, and the business community;
- A questionnaire to be distributed to property owners and placed in visible locations throughout the community.
- Community-wide open house for citizens to review and comment on alternative circulation plans.

Project Objectives

The work program goal of the community transportation plans is to identify and address community transportation issues. This effort will lead to draft language for comprehensive plan and development code amendments necessary to address these issues.

The work program will focus on:

- Private and public street, bicycle and sidewalk standards;
- Local connectivity;
- Potential for bicycle or multi-use paths separated from roadways;
- Pedestrian needs;
- Parking;
- Gateway and aesthetic issues;
- River and beach access;

The primary elements of the work program are to:

- Establish a public involvement program that will be a collaborative process amongst representatives from the community, county, and state;

- Develop goals and policies;
- Collect an existing transportation system inventory;
- Prepare street, bicycle/pedestrian, and transit plans;
- Develop build-out traffic projections;
- Produce transportation improvement projects to address existing and future transportation problems; and
- Prepare implementation ordinance language for comprehensive plan and development code amendments.

Methodology

Task A. Goal Setting & Establish Public Involvement Program

Objectives:

- For primary participants to gain a thorough understanding and reach consensus on the planning process and schedule, project goals, the public involvement process, and project responsibilities. Primary participants include Tillamook County, representative community citizens, ODOT, and the Contractor.
- To provide an environment in which input from stakeholders can shape the development of the transportation plan. For this to occur, active participation between affected government agencies, business community, transportation users, and other local stakeholders must be sought through the participation in a public and interagency involvement program.

Methodology

A.1 Transportation Plan Task Force Goal Setting Workshop

Conduct an initial workshop with the Transportation Plan Task Force to establish project goals, clearly define tasks and responsibilities, refine the project schedule, and reach consensus on the public involvement program.

A.2 Develop Project Notebooks

Primary Personnel: Vic Affolter, George Plummer, Jon Oshel, Pat Oakes, Contractor

Proposed Schedule: January 2000

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET PER TRANSP. PLAN	BUDGET FOR 3 PLANS
A.1 Prepare, conduct and summarize Goal Setting Workshop	\$1,000	\$3,000
A.2 Project Notebooks	\$ 500	\$1,500
Total Task A:	\$1,500	\$4,500

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
Establish Task Force, attend Goal Setting meeting. Generate list of approximately 30 citizens for one-on-one interviews.	Community Dev. Director	6
	Senior Planner	12
	Public Works Director	4
	Senior Engineer	4
	Clerical	<u>4</u>
	Total Task A Hours:	30

Task B. Research & Analysis

Objectives:

- To complete a thorough review of transportation-related documents that affect the transportation facilities and services in the community. These documents include existing ordinances, development code, zoning code, subdivision code, comprehensive plan, street standards, bicycle and pedestrian plan, Tillamook County TSP, other regional transportation plans, and state transportation plans such as the 1991 and proposed 1998 Oregon State Highway Plan;
- To collect and review the information needed to complete a thorough inventory of the existing transportation system. The inventory will include transportation facilities and services by function, type, capacity, and condition;
- To collect and analyze needed information to document the current transportation system conditions, and identify existing transportation system deficiencies;
- To develop a build-out traffic projection and to determine future transportation system deficiencies based on the future traffic volumes related to design standards;
- Prepare community base map.

Methodology

B.1 Base Map Preparation

Prepare base map in electronic format.

B.2 Review Plans, Policies & Regulations

Review relevant transportation related documents including ordinances, codes, plans, policies, design standards and tax maps. Document impacts on the community, i.e. planned improvements, deficiencies and conflicts.

B.3 Transportation Inventory

Through site reconnaissance and research, specify the jurisdictional responsibilities, and identify and assess the function, type, location, and condition of existing transportation facilities (streets; bicycle lanes, sidewalks, pathways, easements, crosswalks, wheelchair ramps, rights-of-way, water-related, private circulation, and relevant storm drainage issues); alternative modes of transportation (automobile, trucking, RV, transit, bicycling, walking, water transport, carts/three-wheelers); destinations (recreation amenities, commercial areas, etc.); gateway amenities; public beach and river access; parking; beach transportation and restrictions; enforcement issues; and safety. Provide up-to-date inventory and appraisal of Oregon bridges.

Primary Personnel: Vic Affolter, George Plummer, Jon Oshel, Pat Oakes

Proposed Schedule: February 2000 – May 2000

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET PER PLAN	BUDGET FOR 3 PLANS
B.1 Base map preparation	\$1,000	\$ 3,000
B.2 Summary of plans, policies, and regulations	\$1,500	\$ 4,500
B.3 Summary of transportation inventory	\$2,500	\$ 7,500
Total Task B:	\$5,000	\$15,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Collect and provide relevant sections of the Tillamook County Comprehensive Plan, Zoning Ordinance, Land Division Ordinance, Comprehensive Plan and Zoning Maps, 1997 Pavement Condition Report, tax assessor's maps, and base maps (in electronic format if available); review technical memoranda, provide written comments and direction</i>	Community Dev. Director	4
	Senior Planner	24
	Public Works Director	0
	Senior Engineer	4
	Clerical	4
	Total Task B Hours:	36

Task C. Develop Alternative Transportation Scenarios

Objective:

To determine the transportation facility needs for a 20-year planning period, and provide solutions developed through the public involvement process and technical input.

Methodology:

C.1 Public Involvement - Task Force Workshop, One-on-One Interviews, and Questionnaires

Conduct public involvement to solicit input on transportation needs and desires. Prepare and distribute questionnaires to property owners and in high activity centers, i.e. post office, community center, and library. One-on-one interviews will be conducted with approximately 30 citizens of the community. The results of the public involvement workshop and interviews will be summarized in graphic and narrative form. A workshop will be conducted with the Transportation Plan Task Force. All ideas solicited from the public involvement effort will be documented. Ideas that are shared by a majority will be highlighted.

C.2 Identify Alternative Transportation System Diagrams

Prepare alternative transportation system diagrams on the community base map. The diagrams will include information solicited during the Task C.1 Public Involvement and will include transportation system improvements which address short- and long-range transportation deficiencies, connectivity and safety. Information will include identification of:

- existing streets that may need to be upgraded for additional capacity and safety improvements. This will include potential widening for new or improved vehicular, bicycle and pedestrian facilities, landscaping, pavement treatment, and storm drainage;
- potential new streets;
- a street system for vehicular community connectivity and intra-community connectivity;
- a bicycle and pedestrian system for community connectivity and intra-community connectivity;
- access management on major streets;
- intersection improvements;
- beach and river access;
- potential transit options and routing;
- streetscape improvements;
- parking improvements;
- air transportation improvements;
- gateway improvements.

The potential benefits and deficiencies of alternatives and /or options will be provided to assist in the decision-making process. Criteria for evaluating the alternatives will be developed, e.g. planning level cost estimates,

neighborhood impacts, business impacts, visual impacts, pedestrian/bicycle safety/comfort, etc. The criteria will be utilized in the Task C.3 Task Force workshop.

C.3 Public Involvement - Task Force Workshop & Community Open House

Conduct public involvement to review and receive input on the alternative transportation system diagrams. A workshop will be conducted with the Transportation Plan Task Force. The criteria for alternative evaluation, developed in Task C.2, will be utilized in the workshop. Following the workshop, an open house will be conducted where the entire community is invited to review and comment on the alternative circulation system plans. A summary memorandum will be prepared summarizing the Task C.3 public involvement.

Primary Personnel: Vic Affolter, George Plummer, Jon Oshel, Pat Oakes

Proposed Schedule: June 2000 – September 2000

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET PER PLAN	BUDGET FOR 3 PLANS
C.1 Summary of questionnaires, interviews, and Task Force meeting.	\$4,000	\$12,000
C.2 Alternative Diagrams	\$1,500	\$ 4,500
C.3 Preparation, conduct and summarize Task Force meeting and Open House	\$1,500	\$ 4,500
Total Task C:	\$7,000	\$21,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
<i>Schedule, reserve meeting locations, and mail meeting notices for the Task C.1 Task Force Workshop and one-on-one interviews, and the Task C.3 Task Force Workshop and open house; provide comments and direction to Contractor on alternative transportation system diagrams and summary of public involvement.</i>	Community Dev. Director	12
	Senior Planner	24
	Public Works Director	8
	Senior Engineer	8
	Clerical	<u>12</u>
	Total Task C Hours:	64

Task D. Transportation Master Plan & Implementation

Objective:

This task compiles all information produced into a transportation plan. Included in this effort is the development of multi-modal plans to be implemented in conjunction with the more traditional capacity improvements. With the transportation plan, a priority of transportation projects will be developed with a discussion of possible funding mechanisms. Recommendations for revision of planning, zoning and development code revisions will be included.

Methodology:

D.1 Prepare Draft Transportation Plan

Prepare the draft Community Transportation Plan including plans and sections of recommended:

- existing streets that may need to be upgraded for additional capacity and safety improvements. This will include recommended widening for new or improved vehicular, bicycle and pedestrian facilities, landscaping, pavement treatment, and storm drainage improvements (such as standard cross-sections and

the storm drainage interface with the transportation facilities; this would not include detailed drainage information, such as baseline information on conduit requirements);

- new streets;
- a street system for vehicular community connectivity and intra-community connectivity;
- a bicycle and pedestrian system for community connectivity and intra-community connectivity;
- street, bicycle and pedestrian design standards;
- access management on major streets;
- intersection improvements;
- beach and river access;
- potential transit options and routing;
- streetscape improvements;
- parking improvements;
- air transportation improvements;
- gateway improvements.

D.2 Prepare Policy Recommendations

Prepare recommended transportation related revisions to the Tillamook County comprehensive plan, zoning and land division ordinance, and recommendations for the county-wide TSP. The policy recommendations will address design standards for transportation facilities, and recommended access and use provisions.

D.3 Develop an Implementation Plan

Identify specific projects, prepare cost estimates, identify implementation mechanisms and, establish priorities.

D.4 Task Force Workshop

Conduct a community open house and a workshop with the Transportation Plan Task Force to reach consensus on the draft Transportation Plan.

D.5 Prepare Final Transportation Plan

Based upon the results of the Task D.4 Task Force Workshop, prepare the final Transportation Plan including those elements identified in tasks D.1-D.3. Attend two public hearings/meetings.

Primary Personnel: Vic Affolter, George Plummer, Jon Oshel, Pat Oakes

Proposed Schedule: October 2000 – May 2001

Consultant Deliverables and Budget:

CONTRACTOR DELIVERABLES	BUDGET PER PLAN	BUDGET FOR 3 PLANS
D.1 Draft Transportation Plan including Transportation Plan graphics and narrative describing recommendations, policies, and implementation strategy).	\$3,000	\$ 9,000
D.2 Draft Policy recommendations	\$ 500	\$ 1,500
D.3 Draft Implementation plan	\$ 500	\$ 1,500
D.4 Prepare, conduct and summarize the Community Open House and Task Force meeting.	\$1,000	\$ 3,000
D.5 Final Plan and hearings/meetings.	\$3,000	\$ 9,000
Total Task D:	\$8,000	\$24,000

Tillamook County Deliverables and Estimated Hours for Task:

TILLAMOOK COUNTY DELIVERABLES	STAFF	ESTIMATED HOURS
Written comments and direction to Contractor regarding the draft and final transportation plan. Schedule, reserve meeting locations, and mail meeting notices for the Task D.4 Task Force Workshop.	Community Dev. Director	12
	Senior Planner	24
	Public Works Director	8
	Senior Engineer	8
	Clerical	12
	Total Task D Hours:	64

Total Task 11 Contractor Community Plan Budget	\$21,500	\$64,500
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APPENDIX

Draft Tillamook County Road Improvement Ordinance
Tillamook County Road List - November 1998
Tillamook County Road Department Key of Codes