Malheur County Transportation System Plan

March 1998

Prepared for:
Malheur County
251 "B" Street West
Vale, Oregon 97918
and
ODOT - Region #5

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The Malheur County Transportation Advisory Group (TAG) devoted a substantial amount of voluntary time and effort to the Malheur County Transportation System Plan, and their participation was instrumental in the development of the recommendations that are presented in this report. Project team members (including both the consultants and management team) would like to take this opportunity to express their appreciation for the TAG members' commitment of time, their perceptive questions, their fastidious representation of their constituents, and their valuable suggestions. We believe that the Malheur County, and the Oregon Department of Transportation's future transportation system will be better because of this commitment, and would like to take this opportunity to recognize individually each member of the TAG:

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EXECUTIVE SUMMARY

Malheur County, the Oregon Department of Transportation (ODOT), and the Cities of Ontario, Nyssa, Vale, Adrian, and Jordan Valley have undertaken a study of the Malheur County rural area transportation system. The Malheur County Transportation System Plan (TSP), a joint venture between Malheur County and the Oregon Department of Transportation, is fundamentally based on the goals and strategies of the Malheur County Strategic Plan (1996). As such, the Malheur County TSP is a *multi-modal* plan that includes strategies to manage rural growth and the community's transportation needs during the next twenty years. The Malheur County TSP is also an *inter-modal* plan - identifying important facilities and linkages between major agricultural activity centers, services and shippers (truck, rail and air) within and through the Malheur County region. This plan includes a comprehensive analysis of the Malheur County transportation system and has been prepared in accordance with the Oregon Revised Statute 197.712, OAR 660 Division 12 and the Transportation Planning Rule (TPR).

How Was the Study Done?

A TSP Management Team, included representatives from the participating jurisdictions, including Malheur County, ODOT, and Cities of Vale, Adrian, and Jordan Valley, was formed and was responsible for serving as the technical liaison and providing day-to-day direction to the consultant and for providing technical assistance to the Transportation Plan Advisory Committee (TAG).

The TAG, because of their diverse representation of special interest groups, brought differing perspectives and concerns to the project and served as one of the key conduits for disseminating the information to and soliciting ideas from the public. One of the key functions of the TAG Committee was to ensure that the development and evaluation of alternatives matched the character, vision, resources, and needs of the greater Malheur County community. To accomplish this, a set of goals and objectives were identified to guide the course of the study.

In accordance with the goals of the study, the TSP addresses the provision of a safe, affordable, and accessible transportation system for all users. As such, the plan includes an assessment of the existing transportation system, an evaluation of the impacts of growth on the transportation system, an identification of rural transportation system improvement projects that are included in the preferred alternative, a transportation financing plan, transportation and land use policy recommendations that can assist Malheur County in implementing the TSP, and a description of the plan's compliance with the TPR.

CHAPTER 1:
INTRODUCTION

The Malheur County Transportation System Plan (TSP) guides the management of existing and future transportation facilities for the next 20 years. This TSP document will replace the existing Transportation chapter of the County's Comprehensive Plan (Chapter 12) and satisfies the requirements of the Oregon Transportation Planning Rule (TPR).

PLANNING AREA

The Malheur County TSP planning area covers unincorporated Malheur County. TSPs for the incorporated cities of Vale, Jordan Valley and Adrian were prepared in conjunction with the county's TSP. The cities of Ontario and Nyssa have separate TSP documents. The planning area is shown in Figure 1-1. Roadways studied in this plan are under several different jurisdictions:

- US Department of the Interior, Bureau of Land Management
- State of Oregon
- Malheur County,
- Ironside Road District,
- Juntura Road District,
- Ontario Road District,
- Nyssa Road District

Malheur County is located in the southeastern corner of Oregon, and is bordered to the east by Idaho, and to the south by Nevada. Baker County Oregon is to the north and Harney County to the east. It is 9,926 square miles and had a population of 28,200 in 1995. The City of Vale is the county seat, which is located in the northeastern portion of the county. Approximately 71 percent of the county are within federal land ownership, primarily used for cattle ranching and grazing.

The primary roadways through the county include Interstate 84, State Highways 20, 26, 78, 95, and 201. The major economic activity is agriculture and agricultural processing, which are both centered in the northeastern part of the county. Other economic factors for the county include cattle ranching, timber production, and tourism. The recently completed Strategic Plan calls for an increased diversity in economic activity.

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Review and Inventory of Existing Plans, Policies and Public Facilities

The following documents were reviewed as a part of the TSP and are summarized in Chapter 2:

Malheur County
- Malheur County Comprehensive Plan, 1982
- Public Facilities and Services Report, 1976
- Malheur County Development Ordinances
- Malheur County Strategic Plan, 1996

State of Oregon
- ODOT Statewide Transportation Improvement Program, 1998-2001 Draft
- Oregon Transportation Plan
- ODOT Highway 95 Corridor Plan, June 1996 Draft
- Draft Interim Corridor Strategy for the Sisters to Ontario Corridor (OR Highway 126/Highway 26), September 1997 Draft
- Draft Highway 20 Corridor Strategy (Bend - Vale), June 1996 Draft

State of Idaho
- Idaho Department of Transportation General Highway Maps

Federal Government
- Intermodal Surface Transportation Efficiency Act of 1991
- National Highway System
- Surface Transportation Program
- Bridge Program
- Safety

Goals and Objectives

A set of draft goals and objectives is outlined in Chapter 3. These goals and objectives were developed to guide the TSP planning process and decisions about various potential improvement projects.

Inventory of Existing Transportation System

Chapter 4 provides a summary of the existing conditions inventory of transportation facilities in the county. This inventory was completed in August 1997.

Future Transportation System Demands

The Transportation Planning Rule (TPR) requires that all TSPs address a 20-year forecasting period. Future traffic volumes for the existing plus committed transportation systems was projected using *ODOT's Level 1 -- Trending Analysis methodology for the County, Adrian and Jordan Valley. A Level 1 analysis – was also used for the City of Vale.* Chapter 5 summarizes and illustrates the travel demand forecasting analysis, as well a identifying future transportation needs.

Transportation System Potential Improvements

Once the travel forecasts were developed, the consultant team evaluated a series of potential transportation system improvements. These alternatives included a "no action" alternative as the base case. Transportation demand management alternative which emphasizes carpooling, public transit and park and ride projects were analyzed. Chapter 6 addresses each alternative, and the rationale for the final selection of a preferred alternative.

Transportation System Plan

Chapter 7 addresses each mode of transportation and provide an overall implementation program. The elements include a street system, a bicycle and pedestrian plan, a public transportation element/discussion, as well as airport, pipeline and rail elements.

Funding Options

Malheur County will likely need additional funding mechanisms, and the funding options chapter reviews existing and potential financing opportunities. The financing and funding options available to the County and local jurisdictions are described in Chapter 8.

Recommended Policies and Ordinance Amendments

Suggestions for specific changes to the Comprehensive Plan policies and implementation of revised zoning and subdivision/road standards are included in Chapter 9.

Coordination on Regional and District Highway

An evaluation of the Regional and District Highways in Malheur County and the associated coordination issues with ODOT are addressed in Chapter 10.

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CHAPTER 2:
EXISTING PLANS, POLICIES AND CODES

The Malheur County TSP started with a review and summary of all existing plans, policies and codes relevant to transportation in the county. They are summarized below in the following order:

- Malheur County,
- Other local jurisdictions,
- State of Oregon,
- State of Idaho,
- Federal government.

Recommendations for amendments to various County plans and policies are found in Chapter 9 of this document.

MALHEUR COUNTY PLANS, POLICIES AND CODES

Malheur County Comprehensive Plan, 1982

The transportation chapter of the County's Comprehensive Plan (pages 193 to 208) identifies a roadway classification system, describes the responsibility of the County and the four road districts for maintenance, lists planned improvements, describes public transportation, and discusses bicycle, pedestrian and horse trails.

Functional Classification

The comprehensive plan lists the following roadway classifications:

Principal Arterial: Roadway of national, interstate and statewide significance
Minor Arterial: Roadways of statewide and interstate significance
Major Collector: Roadways of intraregional and intracounty significance
Minor Collector: Roadways of local and intracounty significance serving areas not already served by a higher-order roadway.
Local Roads: Roadways of local significance that provide access to adjacent properties. Local roads may be divided into Primary local roads, Secondary local roads, and Special-use local roads.

Primary local roads: Roadways providing access to adjacent property within an urban growth boundary or serving an urban/non-rural situation. (Includes but not limited to cul-de-sacs, commercial/industrial streets, and minor streets).
Secondary local roads Roadways providing access to adjacent property in a rural situation. (Includes rural minor roads, rural cul-de-sacs, and rural public roads).

Special-use local roads: Roadways established by the county as having a special purpose and not intended for unrestricted public use.

Maintenance Responsibility

The comprehensive plan distinguishes between the repair and maintenance responsibilities of the County and the four road districts Ironside, Juntura, Ontario and Nyssa. The road districts are responsible for roads within their boundaries (as shown in Figure 2-1), and the County maintains all major bridges and dedicated public right-of-way (except state roadways) in the remainder of the County.

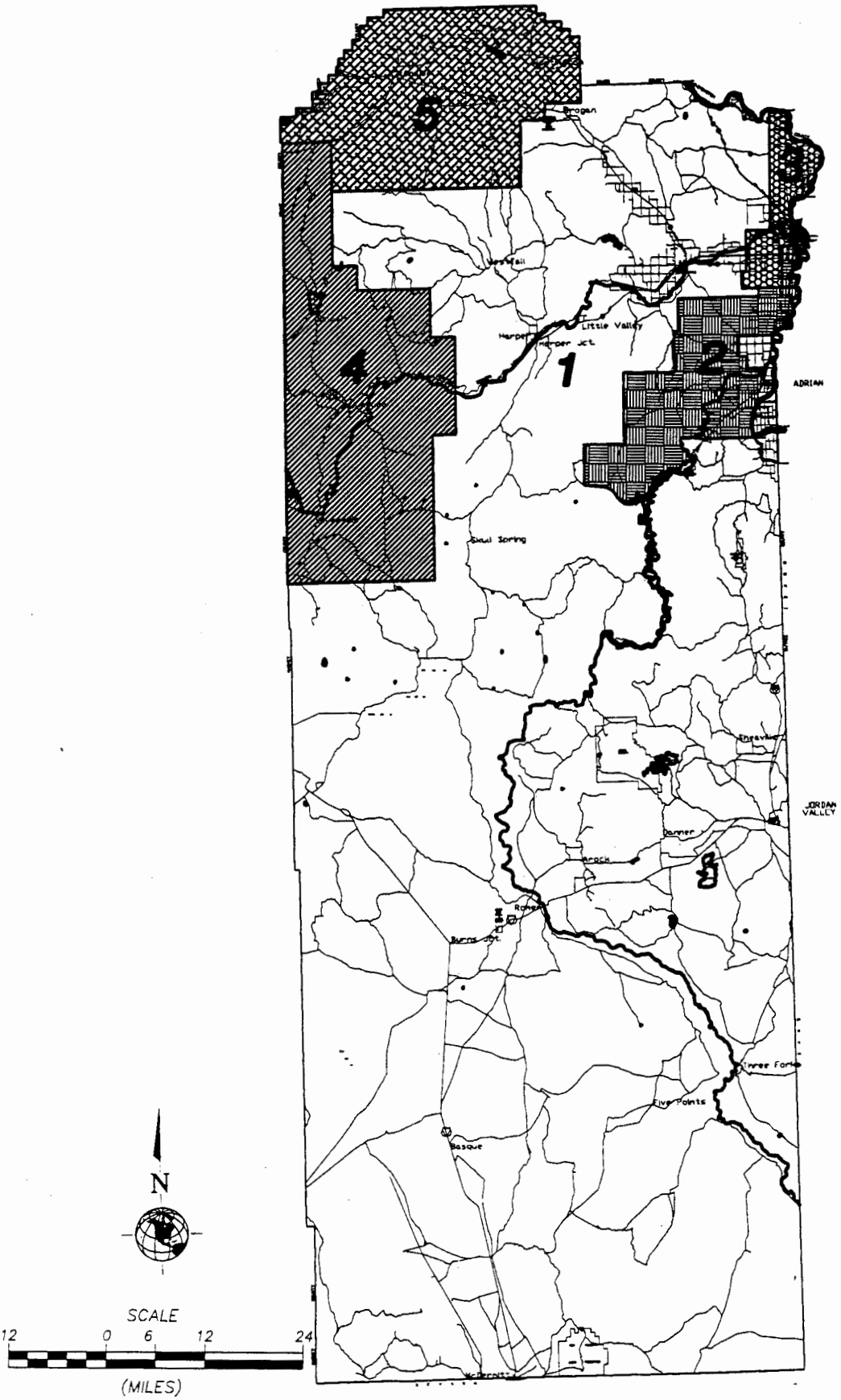
Public Facilities And Services Report, 1976

The Transportation section of this report (pages 24 to 29) summarizes the services (related to construction and maintenance of roads) provided by the State, County, four road districts and the cities of Ontario, Nyssa and Vale. The report summarizes the financing mechanisms and pertinent policies of each jurisdiction. The report also lists the following problems and issues:

- The lack of coordinated decisions and advance planning of streets and roads leads to traffic problems and expensive solutions.
- Maintenance of roads is often frequently inefficient, due to lack of coordination and illogical boundaries.
- Road construction standards are not consistent, which leads to problems for the cities as they annex new areas.
- Advance planning of street layout and size could help reduce public expenditures, reduce traffic problems, give the county knowledge of city intentions, and help support other elements of Comprehensive Plans.
- Malheur County is the only county in Oregon with autonomous road districts. This arrangement should be carefully reviewed to determine whether there is unnecessary duplication of equipment and personnel and inefficient road maintenance due to the shaping of jurisdictional boundaries.

Malheur County Development Ordinances

Title 7 of the Malheur County Code addresses Subdivisions and Land Partitions, and includes direction for road standards, as well as access to public roads and other development standards for the creation of new buildable lots in the County. This section of the County Code is broken into chapters which are briefly summarized below. Other than the zoning map, these chapters are the County's implementing ordinances for new development.



MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 2-1

ROAD DISTRICTS

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8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

4-3211-0101 PMALRD01 5/20/98 JTC

Chapter 1 includes the purpose statement and definitions. Chapter 2, discusses general requirements, including a requirement for consistency with the Comprehensive Plan; Chapter 3 has tentative platting requirements; Chapter 4 includes design requirements, that include Road Improvement Standards. This is a potential location for the proposed Access Management Guidelines proposed later in the TSP document. Chapter 5 sets forth the guidelines for developing a PUD. Chapter 6 includes the final approval process and criteria for a subdivision. Chapter 7 addresses Major and Minor Partitions, filing and approval requirements. Chapters 8 and 9 deal with Variances and Procedural guidelines.

Chapter 9 proposes specific changes to Title 7 (or a new Title if needed) to bring the County into compliance with specific sections of the TPR. None of the proposed amendments will result in major changes in the way the County currently processes or evaluates development applications. For the most part, the proposed changes address the need for mandatory coordination, new access management and roadway design standards. "

Malheur County Strategic Plan (1996)

The Strategic Plan recently adopted by the County includes Physical Infrastructure and Business Development goals that call for transportation improvements. These include the following suggested Strategies:

General Transportation Planing

- Collaborate with the Community Solutions Team, Oregon Department of Transportation, and NOVA Transportation Committee to forge a Transportation Master Plan outlining development plans and implementation schedules to complete the transportation projects in Malheur County.
- Coordinate with ODOT and other responsible public jurisdictions the priority for project funding, engineering and implementation.

Park and Ride Program

- Inventory the destinations of all commuters in the potential park and ride service areas.
- Explore and use tax enhancements to motivate private enterprise to become involved in a park and ride program.
- Create and advertise incentives for the use of the Park and Ride Program.
- Assist in the development of the Park and Ride program by obtaining grants to off-set the initial development costs.
- Encourage business to develop "staggered" shifts for employees.

Rail Improvements

- Inventory and promote the expansion of existing rail services that contribute to the use of rail service in the county.
- Develop a container transfer yard along a rail line in Malheur County.

New Financing Mechanisms

- Investigate the benefits and feasibility of establishing a Port District in Malheur County to fund infrastructure improvements for industrial site development projects.
- Investigate the merits of increasing the use of development fees to finance infrastructure improvements in the City of Ontario.

Airport Improvements/Construction

- Obtain funding for the construction of Vale airport improvements.
- Outline a development plan and implementation schedule for the Vale airport improvements.
- Obtain all necessary permit approvals from Oregon Department of Transportation (Aeronautics) to construct a state airport at Jordan Valley.

OREGON STATEWIDE PLANS, POLICIES AND PROGRAMS

ODOT Statewide Transportation Improvement Program 1998-2001 Draft

The following Malheur County projects are identified in the ODOT STIP (1998-2001):

PROJECT	ROUTE	BEG	END	TYPE	TOTAL	YEAR	SOURCE
Black Canyon Bridge #04347A	US-20	203.2	203.2	Bridge	$114,000	2000	Bridge
Cow Creek Bridge #05225A	US-95	10.9	11	Bridge	$107,000	2001	Bridge
Olds Ferry (Ontario) Interchange Reconstruction/ New Beltway Alignment	OR-201	27.4	30.3	Modernization	$12,051,000	1999	State/STP
I-84 Shoulder/Chip Sealing	I-84	345.8	368.1	Preservation	$1,530,000	2000	State
Central OR Hwy Preservation/Safety	US-20	223.1	258.2	Preservation	$7,210,000	1999	State
Succor Creek Highway Preservation/Safety	OR-201	0	20.1	Preservation	$3,561,000	2001	State

Oregon Transportation Plan

The Oregon Transportation Plan (OTP), in a policy element, defines the goals, policies and actions for the state over the next forty years. It directs the coordination of transportation modes and the relationship of transportation to land use, economic development, the environment and

energy use. It also addresses the coordination of transportation with federal, state, regional and local plans. In its system element, the OTP identifies a coordinated multimodal transportation system, a network of facilities and services for air, rail, highway, public transit, pipeline waterways, marine transportation, bikeways and other modes of transportation.

The OTP was adopted by the Oregon Transportation Commission on September 15, 1992. The financing program and legislation needed to implement the plan was submitted to the 1993 legislature, however, the financing plan failed to gain the support of the legislature at that time.

The OTP is part of an ongoing transportation planning process within the Oregon Department of Transportation (ODOT). ORS 184.168(1) requires the state agencies to use the OTP to guide and coordinate transportation activities. The goals and policies stated in the OTP define a balanced and efficient transportation system that promotes accessibility for all potential users.

Along with its associated modal plans (described subsequently), the OTP must comply with the state agency coordination program and the state-wide planning goals. The Land Conservation and Development Committee's (LCDC's) Transportation Planning Rule (TPR) which implements Goal 12 (transportation) requires ODOT to identify a system of transportation facilities and services adequate to meet identified state transportation needs to prepare a transportation system plan. The OTP, including the policy and system elements and adopted modal and facility plans, is intended to meet the requirements for the state TSP. Transportation Planning Rule requirements will be reviewed and listed in the development of Chapter 9.

Oregon Bicycle and Pedestrian Plan (1995)

The Oregon Bicycle and Pedestrian Plan outlines the general principles and policies that ODOT follows to provide bikeways along state highways and describes the framework for cooperation between ODOT and local jurisdictions. The Plan also offers guidance to cities and counties for the development of local plans. It also states ODOT's commitment to providing wide, paved shoulders in rural areas as a part of its standard construction practices. The state priority is to complete the bicycle and pedestrian networks within urban areas and to accommodate recreational improvements as a part of rural road improvements.

Oregon Highway Plan (1991)

The Oregon Highway Plan (OHP), adopted by the Oregon Transportation Commission in 1991, outlines the policies which enable the Department of Transportation to better manage the highway system for the period 1991-2010. A key component of the OTP, it merits special consideration. The adopted policies of the OHP that pertain to Malheur County include:

- Level of Importance (LOI)
- Access Management

Level Of Importance (LOI) Policy

Background and Purpose: The ODOT has devised a "level of importance" classification system to prioritize highway improvement needs and define operational objectives.

The highway classification system defines four levels of importance including:

1. Interstate
2. Statewide
3. Regional
4. District

The level of importance concept is based on the premise that the more important routes require a higher level of service. Interstate routes, for example, should maintain a higher level of service than district routes.

1. **Interstate Highways:** The primary function of highways in this level is to provide connections and links to major cities, regions of the state, and other states. A secondary function in metropolitan areas is to provide connections and links for regional trips within the metropolitan area. Connections are primarily with roadways that serve areas of regional significance or scope. Included in this level are highways on the federal interstate system, including I-5, I-84, I-205, and I-405. The management objective is to provide for safe and efficient high-speed continuous-flow operation in urban and rural areas.

2. **Statewide Highways:** The primary function of highways in this level is to provide connections and links to larger urban areas, ports and major recreation areas that are not directly served by interstate highways. Statewide highways provide links to the interstate system and alternate links to other states. A secondary function is to provide links and connections for intra-urban and intra-regional trips. Connections are primarily with roadways that serve areas of regional significance or scope.

   Included in this level are US 20, 26, and 95 and other significant routes that connect the interstate system to urban areas, ports and major recreation areas throughout the state. Statewide routes generally serve centers of 5,000 or more population, have route lengths of 50 miles or more, do not parallel other statewide routes within 25 miles, connect at each end with interstate routes, statewide routes or major recreational areas, and carry at least 500 vehicles per day.

   The management objective is to provide for safe and efficient high-speed continuous-flow operation in rural areas and high to moderate-speed operations with limited interruptions of flow in urban and urbanizing areas.

3. **Regional Highways:** The primary function of highways in this level is to provide connections and links to areas within regions of the state, between small urbanized areas and larger population centers, and to higher level facilities. A secondary function is to serve land uses in the vicinity of these highways. Highway 201, between Cairo Junction and Nyssa, is the only regional highway designated by the COHP in Malheur County.

   The management objective is to provide for safe and efficient high-speed continuous-flow operation in rural areas, except where there are significant environmental constraints, and moderate to low-speed operation in urban and urbanizing areas with moderate interruptions to flow.

4. **District Highways:** The primary function of highways in this level is to serve local traffic and land access. Highways included in this level primarily serve local functions and are of relatively low significance from a statewide perspective. They are often routes that held a higher function during the early development of Oregon's highway system. With the passage of time and the construction of other through routes the importance of District highways from a statewide perspective has diminished. They now serve a similar function to county roads and city streets. Included in this level are Highway 201 (south of Nyssa and north of Ontario), 451, 455, 453, (Adrian-Caldwell), 454 (Adrian Arena) 450 Parma Spur in Malheur County.

   The management objective is to provide for safe and efficient moderate to high-speed continuous-flow operation in rural areas reflecting the surrounding environment, and moderate to low-speed operation in urban and urbanizing areas with a moderate to high level of interruptions to flow.

Table 2-1 summarizes the LOI designation for state highways in Malheur County.

Table 2 - 1
Level Of Importance Designation Malheur County Highways

LEVEL OF IMPORTANCE	ROADWAY
Interstate	I- 84
Statewide	Highway 20 Highway 26 Highway 95
Regional	Highway 78 Highway 201 (Between Cairo Junction and Nyssa)
Districts	Highway 201 Highways 450, 451, 453, 454, and 455

Level of Service (LOS) Standards: The LOI policy includes operational level of service (LOS) standards as summarized in Table 2-2. These standards are to be used by ODOT when making operating decisions (such as access management decisions) and when coordinating with local comprehensive planning. The ODOT's objective is to maintain LOS at or above the listed standards.

The standards depend on the highway level of importance and general land use characteristics. Special standards are provided for areas where highways are located in exclusive transitway corridors and where highways, other than interstate highways, pass through special transportation areas such as dense transit or pedestrian-oriented business districts. Other allowances are made for highway sections that are severely constrained by intensive land use development or major environmental limitations, and for highway sections that are operating at a substandard level but are not scheduled for improvement in the Six-Year Transportation Improvement Program.

Table 2-2
Operating Level of Service Standards Levels
for Design Hour Operating Conditions Through a 20-Year Horizon[1]

Level of Importance	Type of Area Highway Is In					
	Urban[2] Parts of Metropolitan Areas[3]	Urban Parts of Other Cities	Urbanizing[4] Areas and Rural Development Centers[5]	Rural Areas[6]	Special Transportation Areas[7]	Within Exclusive Transit Corridor[8]
Interstate	D	C	C	B	NA	D/E[9]
Statewide	D	C	C	B	E	E
Regional	D	D	C	C	E	E
District	E	D	D	C	E	E

1 Operating standards are not design standards. Operating standards are used by ODOT when making operating decisions, such as access management decisions. Design standards, which are used to guide the design of highway improvements, are often higher to provide acceptable operating conditions in the future.

2 Urban areas are those areas within an urban growth boundary that are generally developed at urban intensities as allowed by the comprehensive plan.

3 Metropolitan areas include Portland, Salem, Eugene, Medford, Ranier (part of Longview-Kelso) urban areas.

4 Urbanizing areas are those within an urban growth boundary that are undeveloped or are developing. They may include vacant lands and areas developed well below urban intensities as allowed by the local comprehensive plan.

5 Rural development centers are concentrations of development outside of urban growth boundaries. Included are rural unincorporated communities.

6 Rural areas are areas outside of urban growth boundaries but not including rural development centers.

7 Special Transportation Areas (STAs) are compact areas in which growth management considerations outweigh this policy. STAs include central business districts, transit-oriented development areas and other activity or business centers oriented to non-auto (principally pedestrian) travel. They do not apply to whole cities or strip development areas along individual highway corridors.

8 Exclusive transit corridors are corridors within which the highway runs generally parallel to an exclusivetransitway, such as a light rail line or exclusive busway.

9 LOS 'D' applies when the facility is located in an urbanizing area. LOS 'E' applies in an urbanized area.

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Access Management Policy

Purpose: Several factors, including the number, spacing, type and location of accesses, intersections, and traffic signals have a significant effect on the capacity, speed, safety and general operational efficiency of highways. These factors need to be effectively managed in order to operate the highway system. Collectively these factors comprise access management.

The OHP Access Management policy provides a framework for making access decisions which will be consistent with the function and operating levels of service identified in the LOI Policy. It will be used by the ODOT to carry out its responsibilities for managing access under statutes and administrative rules. It will also be used by the OSHD to guide the design of highways and coordination with local comprehensive planning.

Policy: The OHP Access Management Policy standards are defined by roadway category in Table 2-3. Table 2-4 summarizes the access management category designation for state highways in Malheur County.

Table 2-3
Access Management Classification System

Category	Access Treatment	LOI[10]	Urban Rural	Intersection				Signal Spacing[11]	Median Control
				Public Road		Private Drive[12]			
				Type[13]	Spacing	Type	Spacing		
1	Full Control (Freeway)	Interstate/ Statewide	U	Interchange	2-3 Mi	None	NA	None	Full
			R	Interchange	3-8 Mi	None	NA	None	Full
2	Full Control (Expressway)	Statewide	U	At grade/Intch	½-2 Mi	None	NA	½-2 Mi	Full
			R	At grade/Intch	1-5 Mi	None	NA	None[14]	Full
3	Limited Control (Expressway	Statewide	U	At grade/Intch	½-1 Mi	Rt Turns	800'	½-1 Mi	Partial
			R	At grade/Intch	1-3 Mi	Rt Turns	1200'	None[5]	Partial[15]
4	Limited Control	Statewide/ Regional	U	At grade/Intch	1/4 Mi	Lt/Rt Turns	500'	½ Mi	Partial/None[16]
			R	At grade/Intch	1 Mi	Lt/Rt Turns	1200'	None[5]	Partial/None[7]
5	Partial Control	Regional/ District	U	At grade	1/4 Mi	Lt/Rt Turns	300'	1/4 Mi	None
			R	At grade	½ Mi	Lt/Rt Turns	500'	½ Mi	None
6	Partial Control	District	U	At grade	500'	Lt/Rt Turns	150'	1/4 Mi	None
			R	At grade	1/4 Mi	Lt/Rt Turns	300'	½ Mi	None

10 The Level of Importance (LOI) to which the Access Category will generally correspond. In cases where the access category is higher than the LOI calls for, existing levels of access control will not be reduced.

11 Generally, signals should be spaced to minimize delay and disruptions to through traffic. Signals may be spaced at intervals closer than those shown to optimize capacity and safety.

12 Generally, no signals will be allowed at private access points on statewide and regional highways. If warrants are met, alternatives to signals should be investigated, including median closing. Spacing between private access points is to be determined by acceleration needs to achieve 70% of facility operating speed. Allowed moves and spacing requirements may be more restrictive than those shown to optimize capacity and safety.

13 The basic intersection design options are as listed. Special treatments may be considered in other than category 1. These include partial interchanges, jughandles, etc. The decision on the design should be based on function of the highway, traffic engineering, cost-effectiveness and need to protect the highway. Interchanges must conform to the interchange policy.

14 In some instances, signals may need to be installed. Prior to deciding on a signal, other alternatives should be examined. The design should minimize the effect of the signal on through traffic by establishing spacing to optimize progression. Long-range plans for the facility should be directed at ways to eliminate the need for the signal in the future.

15 Partial median control will allow some well-defined and channelized breaks in the physical median barrier. These can be allowed between intersections if no deterioration of highway operation will result.

16 Use of physical median barrier can be interspersed with segments of continuous left-turn lane or, if demand is light, no median at all.

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Table 2-4
Access Management Category Designation for Malheur County Highways

ACCESS MANAGEMENT CATEGORY	LOI	ROADWAY
1 - Rural	Interstate	I-84
3 - Rural	Statewide	Highway 20
3 - Rural	Statewide	Highway 26
5 - Rural	Regional	Highway 78
4 - Rural	Statewide	Highway 95
5 - Rural	Regional	Highway 201, (between Cairo Junction and Nyssa)
6 - Rural	District	Highway 201
6 - Rural	District	Highways 450, 451, 453, 454, and 455

* Subject to change upon completion of TSP

Oregon Benchmarks (1994)

The Oregon Benchmarks (updated in 1994) is a planning guide used by all State agencies to track quality of life issues throughout the State. In 1992, the Governor's Task Force on State Government recommended in their report, New Directions, that Oregon Benchmarks be integrated into the goals of state agencies, and their planning and budgeting be directed towards addressing the significant Benchmarks.

A number of transportation related Benchmarks guide ODOT planning efforts. One of the core benchmarks is to provide livable communities, a component of which entails providing transportation facilities to points near where people live and work. This same theme on improving transportation access options appears under the Developed Communities Benchmark. In addition, this Benchmark emphasizes access to alternative transportation modes. Under this same Developed Communities Benchmark, specific goals exist for improving state highways, transit facilities, and air service. Under the Benchmark to maintain Oregon's capacity for expansion and growth, transportation related goals are considered to be critical. Specifically, this Benchmark calls for improvements to telecommunication networks throughout the State. All of these goals are considered important to improving the livability, the developed environment, and the capacity for expansion and growth of communities throughout Oregon.

Oregon Aviation System Plan (1991)

The Oregon Aviation System Plan (ASP) provides state policy guidance and a framework for the planning and operation of a safe, convenient, and economic system of airports. The ASP contains the following elements:

- A classification of public and private airports;
- An analysis and projection of state and regional aeronautical facility and service needs;
- A strategic plan designed to carry out the purpose and policy of the aviation system planning rule (OAR 660-13);

- Policies that promote planning, coordination, and technical assistance in airport development and safety;
- A state aviation facility plan for each state owned airport; and
- A mechanism to change the classification of an airport, including coordination with affected local governments.

A city or county with planning jurisdiction for an airport identified in the state ASP is required to prepare a local TSP. The city or county has the option of requiring the local airport owner or manager to prepare the TSP. Local TSPs must be coordinated with transportation system plans. In Malheur County, there are five general aviation airports identified in the state ASP. Table 2-5 summarizes the five airports by classification. Numerous other private airstrips are located throughout Malheur County.

Table 2-5
Oregon Aviation System Plan Malheur County General Aviation Airports

AIRPORT	CLASSIFICATION
Ontario Municipal	NPIAS*
McDermitt State	NPIAS
Miller Memorial Airpark (Vale)	Non-NPIAS (publicly owned)
Owyhee Reservoir State	Non-NPIAS (maintain only)
Rome State	Non-NPIAS (maintain only)

* National Plan of Integrated Airport Systems

Oregon Rail Freight Plan (1994)

The Oregon Rail Freight Plan (ORFP) presents an overview of the state's rail system, how it operates and how it is used. The Plan also examines rail lines that may be eligible for state or federal assistance. State and local government have little authority over rail, as it is privately owned.

Rail carrier service in Malheur County identified in the ORFP includes Union Pacific connecting Ontario, Nyssa, and Adrian to Portland and Boise and spur service between Ontario and Vale via the Oregon Eastern (OE) Spur.

Oregon Rail Passenger Policy and Plan (1992)

With the closure of Amtrak's Pioneer Line, there is no passenger rail service in Malheur County. The Oregon Rail Passenger Policy Plan focuses on intercity rail options. The Plan does not consider commuter rail opportunities.

Section 1.6.7 - Oregon Transportation Safety Action Plan (1995)

- The Oregon Transportation Safety Action Plan (OTSAP) is the safety component of the OTP. The OTSAP identifies 70 specific actions which constitute a safety agenda to guide ODOT and the state over the next 20 years. Of the 70 actions, the following 11 respond to most traffic-related deaths and injuries or other key areas of concern:
- Develop a traffic law enforcement strategic plan;
- Seek a dedicated funding source for traffic law enforcement services and support needs;
- Continue a sustained research-based transportation safety public information/education program;
- Support the expansion of local transportation safety programs;
- Complete a strategic plan for traffic records improvements and establish a traffic records system that will serve the needs of state and local agencies;
- Recognize the prevalence of driving under the influence of a controlled substance and revise DUII standards;
- Pass legislation to establish 0.04 percent blood alcohol count (BAC) as the standard for measuring alcohol impairment for all drivers 21 years and over. Continue zero tolerance law for persons under 21;
- Establish and fund a statewide accident management program designed to minimize traffic congestion and secondary crashes by clearing incidents as quickly as possible;
- Ensure access to child safety seats to all young children;
- Develop and implement a comprehensive youth transportation safety strategy for youth to age 21; and
- Increase emphasis on programs that will encourage pedestrian travel and improve pedestrian safety.

Corridor Planning

Corridor Planning is a program to develop a long-range "vision" and plan for improving and managing the state transportation system. The program aims to assure consistency of land use plans and transportation plans in these corridors. Corridor planning will identify the functions and levels of service of each corridor, needed transportation facility and service improvements, transportation management actions, priorities for actions, and any changes in comprehensive land use plans needed to make transportation improvements and to protect the integrity of the transportation investments.

ODOT Highway 95 Corridor Strategy Plan (Draft June 10, 1996)

This plan examines the Highway 95 corridor in terms of existing and forecast demands and facilities and translates the policies of the Oregon Transportation Plan into specific actions within the corridor. The draft findings and conclusions are summarized below:

- Highway level of service is expected to remain high over the 20-year planning horizon.
- Poor road geometry, along with a high percentage of truck traffic, average daily traffic (ADT), will generate occasional congestion at mile points 8 and 53 in the future.
- Road maintenance, especially in the winter, is vital to the economic existence of the small communities along the route.
- Pavement conditions along Highway 95 are poor by comparison to state highways.
- Accidents are primarily related to road geometry and weather.
- There are limited alternatives to the private automobile for the mobility-disadvantaged population in this corridor.
- Trucking is the only alternative for freight movement in the corridor.
- Partnering may be an option to facilitate implementation of specific objectives within the corridor, (i.e., rest stops, scenic waysides) which otherwise may not be completely funded by government sources in the near term.
- Traffic volumes on US 95 are extremely low for a federal highway.
- Neither capital investment or facility management will reduce travel time significantly.

Draft Interim Corridor Strategy for the Sisters to Ontario Corridor (OR Highway 126/Highway 26), September 1997

This draft plan, prepared by ODOT Region 5 Office, proposes an interim strategy and objectives for the operation, preservation and enhancement of transportation facilities within the Sisters to Ontario Corridor. Key finding include:

- Automobiles are the primary mode of passenger transportation in the corridor and public transportation services in the corridor primarily provide mobility for senior and disabled citizens who otherwise would not have a reliable means of transportation.
- The corridor is a popular route for bicycle touring enthusiasts. Sidewalks and paved shoulders are inadequate throughout the corridor.
- There is no rail freight through out the corridor. Rail freight service is limited to the western and eastern ends of the corridor.
- Amtrak service to Ontario was discontinued in 1997.
- There is no intercity bus service along the corridor east of Prairie City.
- Connections between modes of travel are minimal and could be improved.
- At the present rate of population and traffic growth, moderate congested areas will become more congested with high congestion stop-and-go traffic expected in Redmond, Prineville, and Ontario in the next 20 years.
- Investment in geometric and capacity improvements and facilities management techniques such as signal timing and driveway consolidation in urban areas would not substantially improve travel times in the corridor.
- The majority of accidents in the urban areas of the corridor are attributed to intersection or driveway access. Nighttime and icy conditions account for the majority of accidents in the rural mountainous segments of the corridor.
- Pavement conditions in the corridor are below the statewide average.

- Timber, agriculture and tourism generate a traffic mix that is often in conflict because of speed differentials, familiarity with the corridor and the ability to climb steep grades.
- There are numerous areas throughout the corridor that have a history of vehicle collision with deer and elk.
- Geometric limitation of Highway 26 restrict local freight shipments and affect local economies.

Draft Highway 20 Corridor Strategy (Bend - Vale), June 1996

This draft plan was prepared by ODOT. Key issues include:

- Non-Highway transportation facilities within the corridor are very limited.
- Favorable highway level of service is expected to persist over the 20-year planning horizon.
- Accidents in urban areas are primarily intersection-related.
- There are limited alternatives to the private automobile for the mobility-disadvantaged population in this corridor.
- Trucking is the only alternative for freight movement in the corridor.
- Partnering may be a viable solution to facilitating implementation of specific objectives within the corridor (i.e., rest stops, scenic waysides) which otherwise may not be completely funded by government sources in the near term.

IDAHO PLANNING TRANSPORTATION EFFORTS

Malheur County borders on four Idaho counties: (from north to south) Washington County, Payette County, Canyon County and Owyhee County. There are a number of major stateline crossings. A review of the Idaho Department of Transportation General Highway Maps suggests that most of the road classifications are the same or compatible with those established by Malheur County and ODOT.

FEDERAL TRANSPORTATION PLANNING REPORTS, CURRENT PLANNING EFFORTS AND RECENT AND FUTURE TRANSPORTATION IMPROVEMENTS

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

ISTEA set maximum funding levels for federal-aid highway and transit programs through the fiscal year 1997. The funding levels set by ISTEA could be reduced by congress each year as part of the appropriation process and were proposed to increase significantly in later years of the act. For Malheur County, the prioritization of projects and funding would not change significantly from past practice in that the County's priorities must compete with statewide priorities and needs.

The major programs funded under ISTEA that applied to Malheur County include:

National Highway System

Which includes the interstate system and other major highways. These other major highways are those routes designated in the Oregon Highway Plan as "statewide" significant routes.

Surface Transportation Program

Funds under this program can be used for any transportation project on any road except those classified as local or rural minor collector. The act sets aside 10% at this fund for safety improvements, 10% for transportation enhancement activities, 50% to be distributed to areas within the state based upon the states relative share of population between urbanized areas over 200,000 population and other areas, with the remaining 30% available to use in any area of the state.

Bridge Program

This program provides for inspection, maintenance, rehabilitation or replacement of bridges on any highway system.

Safety

As stated above, 10% of the surface Transportation Program funds are set aside for safety projects. Although there are a number of other programs funded by ISTEA, such as Congestion Mitigation, IVHS and Mass Transit, these programs would generally not apply directly to Malheur County.

In order for any needed project to balance the transportation and land use requirements, a thorough description of each project as well as its benefits, estimated cost and alternatives must be prepared in order to compete with the statewide needs. In addition, potential funding sources must be identified for each project.

The enactment of the ISTEA began moving decision-making for federal programs to states and this program and other state policies incorporated in the Oregon Transportation Plan encourage reassessment of responsibilities and obligations for funding. These changing relationships have resulted in significant issues for state and local governments. There is no clear definition of state responsibility. At one time, the state operated on an informal consensus that it should provide one-half the match on federally funded local and other projects that served statewide needs. No similar consensus seems to exist today. The state's responsibility for transit, airports and other local transportation infrastructure and services is not clear.

Congress will deliberate the reauthorization of the surface transportation legislation, and must reauthorize ISTEA by September 30, 1997. i:\project\32110101\rptmfin\chapt2m.doc

CHAPTER 3:
GOALS AND OBJECTIVES

The purpose of the TSP is to provide a guide for Malheur County to meet its transportation goals and objectives. The following goals and objectives are intended to guide the TSP planning process. Through the planning process, the projects and programs presented in the plan were evaluated against these goals.

GOAL STATEMENT

The Malheur County Transportation System Plan (TSP) shall meet all specifications and requirements set out in the 1995 DLCD Transportation Planning Rule (TPR) and the 1995 ODOT Transportation Plan. Additionally, it will ensure that all municipalities and jurisdictions located in Malheur County are appropriately and efficiently interlinked, thus maximizing public safety and economic development.

OVERALL TRANSPORTATION GOAL

Develop a transportation system that enhances the livability of each jurisdiction and accommodates growth and development through careful planning and management of existing and future transportation facilities.

Goal 1
Improve and enhance safety and traffic circulation on the local road systems

Objectives

- Develop an efficient road network
- Improve and maintain existing roadways
- Ensure planning coordination between local jurisdictions, the County and the State
- Identify truck routes to reduce truck traffic in urban areas
- Examine the need for speed reduction in specific areas
- Identify local problem spots and recommended solutions

Goal 2
Identify the 20-year roadway system needs to accommodate developing or undeveloped areas without undermining the rural nature of local communities.

Objectives

- Adopt policies and standards that address street connectivity, spacing and access management
- Integrate new arterial and collector routes into improved grid systems with an emphasis on taking the pressure off of traditionally heavy traffic collectors
- Improve access into and out of each jurisdiction for goods and services
- Improve the access onto and off of arterial roadways to encourage growth

Goal 3

Preserve the function, level of service and safety of county roads and state highways.

Objectives:

- Develop access management standards
- Develop alternative, parallel routes where applicable
- Promote alternative modes of transportation
- Promote demand management (i.e., rideshare, park and ride)
- Promote transportation system management (e.g., signal synchronization, median barriers)
- Develop procedures for implementation during the development review process which will minimize impacts to and protect transportation facilities, corridors or sites

Goal 4

Increase the use of alternative modes of transportation (walking, bicycling, rideshare/carpooling, transit, and rail) through improved access, safety and service.

Objectives

- Provide sidewalks and safe crossings on arterial and collector streets
- Provide shoulders on rural collector and arterial streets
- Provide appropriate bikeways
- Promote alternative modes and rideshare/carpool programs through community awareness and education
- Plan for future expanded transit service by sustaining funding to local transit efforts and seeking consistent state support
- Promote railroad freight service to reduce truck-related traffic

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CHAPTER 4:
EXISTING TRANSPORTATION SYSTEM

A detailed assessment of the existing transportation system has been conducted for Malheur County. This section of the Malheur County Transportation System Plan (TSP) provides a summary of the existing system conditions within the county, and includes the following:

- physical characteristics and existing traffic control measures on state highways, major collectors and significant minor collectors;
- existing traffic operations (levels-of-service) and safety characteristics of state highway facilities within the County;
- existing traffic volumes;
- characteristics of existing pedestrian facilities;
- characteristics of existing bicycle facilities;
- existing public transit service; and
- existing rail, air, pipeline and waterway service.

ROADWAY FACILITIES

The transportation system in Malheur County consists almost entirely of roadway facilities for motorized vehicles, serviced by four roadway districts: Ironside, Juntura, Ontario and Nyssa, as well as the County Road Department. The emphasis on automobile, truck, and farm vehicle travel is unlikely to change within the 20-year planning horizon. In general, the Malheur County TSP focuses on roadway facilities with a functional classification of collector or higher (see below).

As the foundation of the most significant portion of the transportation network, all state highways, major collectors and those minor collectors in the Treasure Valley area were driven to collect and verify inventory information. Appendix B lists the complete inventory information gathered through the Oregon Department of Transportation, Malheur County and an extensive roadway survey.

Functional Classification

Malheur County recognizes six functional roadway classifications: interstate, principal (major) arterial, minor arterial, urban collector/major rural collector, minor collector and local. Figure 4-1 illustrates the location of these roadways within Malheur County. Table 4-1 shows the mileage distribution of all but local roads.

Interstates

Interstates link major cities, regions within a state and regions between states. Interstates are designed to carry traffic volumes at high speeds with continuous flow. Interstate 84 is Malheur County's only interstate facility.

Table 4-1
Malheur County Road Mileage By Functional Classification

Functional Classification	Miles
Interstate	27
Major Arterial	283
Minor Arterial	82
Urban Collector/Major Collector	207
Minor Collector	443
Total:	1,042

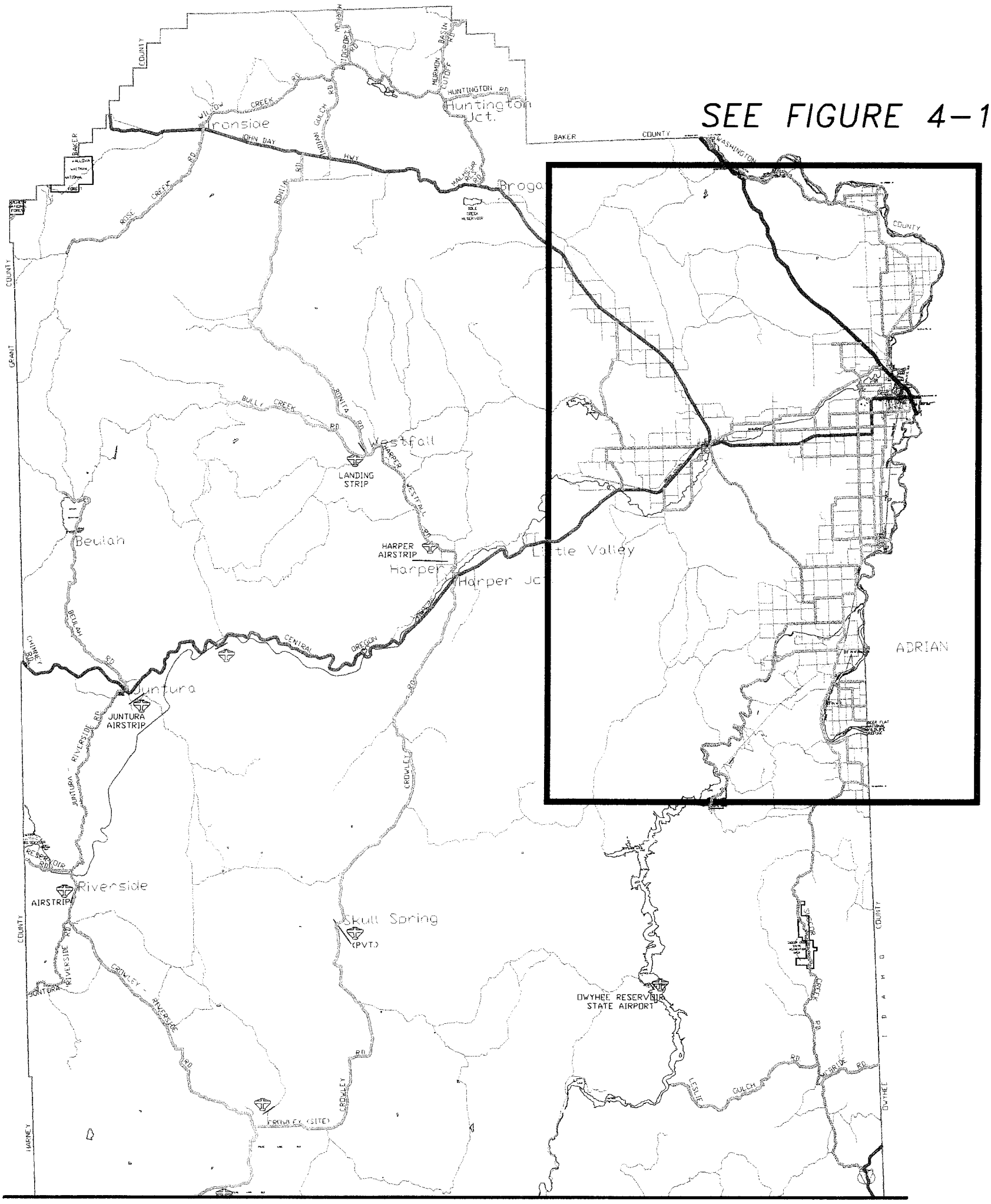
Major Arterials

Major arterials form the primary roadway network within and through a region. In Malheur County, every major arterial is a state highway linking major cities in the County with, and providing a connection between, urban areas outside the region. Such facilities are designed to safely carry high-speed traffic with continuous flow in rural areas, and with limited interruptions in urban and urbanizing areas. Major arterials in Malheur County include Highway 95, Highway 20 and Highway 26.

Minor Arterials

Minor arterials perform a similar function as major arterials, in addition to serving land uses in the vicinity. These facilities are designed to safely and efficiently carry high-speed continuous-flow traffic in rural areas, and moderate to low-speed operation in urban and urbanizing areas with moderate interruptions to flow. State highways 78 and 201 (south of Cairo Junction and north of Ontario to Weiser and Farewell Bend) are considered minor arterials. The only Malheur County road designated as a minor arterial is 18th Avenue from Highway 201 to 4th Street. This route serves as an important farm-to-market truck route at the southern boundary of the Ontario urban area.

SEE FIGURE 4-1.2



MATCHLINE SEE FIGURE 4-1.3

N

SCALE

8 0 4 8 16

(MILES)

LEGEND

ROADS

Existing	Future	
		Interstate
		Principal Arterial
		Minor Arterial
		Urban Collector/ Rural Major Collector
		Minor Collector
		Local

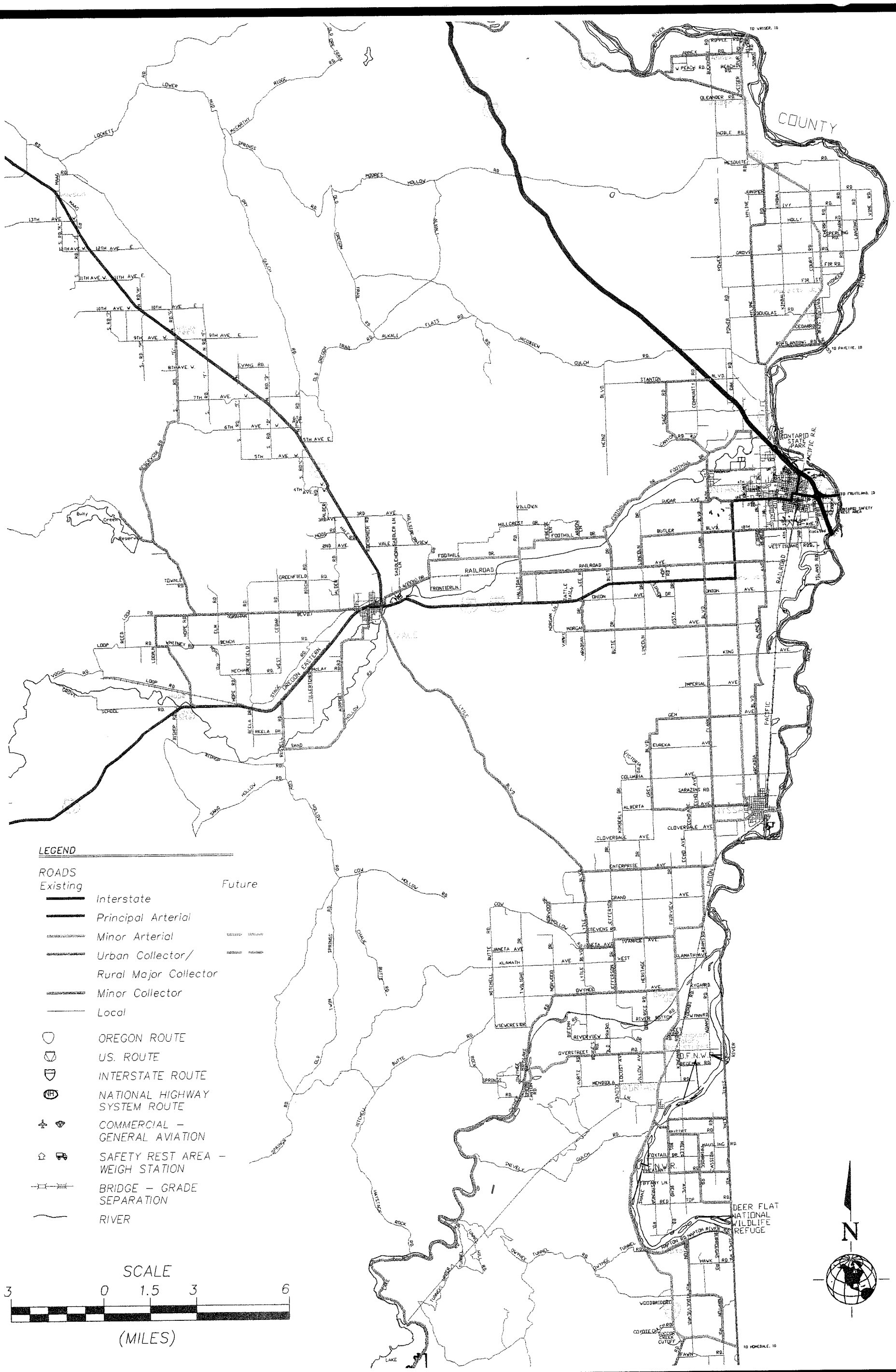
- OREGON ROUTE
- US. ROUTE
- INTERSTATE ROUTE
- NATIONAL HIGHWAY SYSTEM ROUTE
- COMMERCIAL – GENERAL AVIATION
- SAFETY REST AREA – WEIGH STATION
- BRIDGE – GRADE SEPARATION
- RIVER

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 4-1.1

Functional Classification

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455



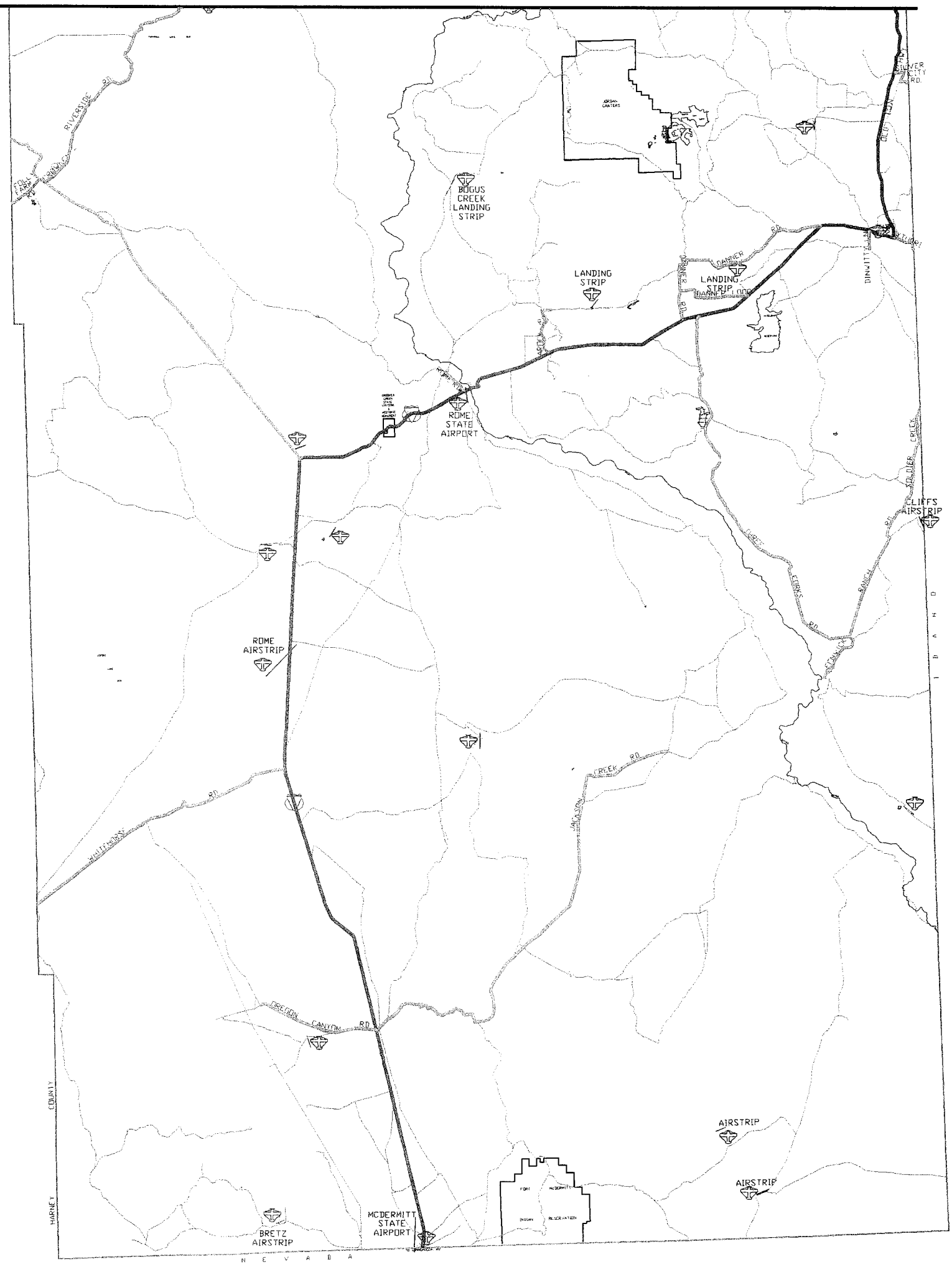
MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

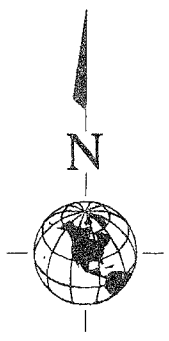
FIGURE 4-1.2

Functional Classification

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

MATCHLINE SEE FIGURE 4-1.1





SCALE

8 0 4 8 16

(MILES)

LEGEND

ROADS

- Interstate
- Principal Arterial
- Minor Arterial
- Urban Collector/ Rural Major Collector
- Minor Collector
- Local

- OREGON ROUTE
- US. ROUTE
- INTERSTATE ROUTE
- NATIONAL HIGHWAY SYSTEM ROUTE
- COMMERCIAL – GENERAL AVIATION
- SAFETY REST AREA – WEIGH STATION
- BRIDGE – GRADE SEPARATION
- RIVER

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 4-1.3

Functional Classification

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

Urban Collectors/Rural Major Collectors

Urban collectors and rural major collectors connect minor collectors and local roads to urban centers or to interstate, major arterial or minor arterial facilities. Generally, urban collectors are paved, while rural roads may be fully or partially paved, or may be gravel.

Major collector routes in Malheur County are generally paved, two-lane rural roadways carrying anywhere from 500 to 1,000 vehicle trips per day. These routes provide connection between cities, or between significant land uses (industrial, recreational, residential, etc.) and the state highway (arterial) system. State highways that serve as major collector routes in Malheur County include the Vale-West Highway (Graham Blvd.), Parma Spur, Payette Spur and Olds Ferry-Ontario Highway (Highway 201) west of Weiser Junction. Significant major collector county roads include Lytle Boulevard, Owyhee Avenue, Harper-Westfall Road (gravel), Bully Creek Road, Stanton Boulevard, Hyline Road and Succor Creek Road.

Minor Collectors

Minor collectors connect local roads with urban collectors and rural major collectors. Within the Vale - Nyssa - Ontario area, minor collectors are usually paved with chip-seal or an asphaltic concrete. Once away from the more populous areas of the county, minor collectors are generally gravel roads.

Minor collector routes in Malheur County are generally less than 500 vehicle trips per day. These routes provide secondary connection between significant land uses (industrial, recreational, residential, etc.) and the major collector and arterial road system. Paved minor collector county roads in the Vale-Nyssa-Ontario area include Clark Boulevard, Foothills Drive, Butler Boulevard, Sage Road, Railroad Avenue, Gem Avenue and Enterprise Avenue. These roads are typically 20-24 feet wide with narrow, gravel shoulders and posted speeds anywhere from 25-55 miles per hour.

Minor collector routes in the rural portions of Malheur County are typically gravel roads anywhere from 14-18 feet wide, serving rural uses (ranching, agriculture, recreation, etc.) These routes include Bonita Road, Crowley Road, Leslie Gulch Road and Danner Road (west of Jordan Valley). These routes typically do not have posted speed limits.

Local Roads

Local roads allow private residences and businesses to access any other type of roadway facility, except the interstate. In Malheur County, local roads frequently connect directly to major and minor arterials, especially in rural areas. Local roads were not inventoried as part of the Malheur County TSP.

W&H PACIFIC

Federal and State Highways

One federal interstate and seven federal and state highway facilities provide the primary access routes to and within Malheur County. Although the county is neither responsible for, nor owns or maintains these roadways, they form the backbone of County transportation and of the County's commercial and industrial development, which occur primarily along these corridors.

Interstate 84

This facility is described in the *Oregon Highway Plan* and the *City of Ontario Transportation System Plan* (draft in progress).

Highway 20

Largely a U.S. route of statewide importance, Highway 20 originates at the Pacific Ocean in Newport, Oregon. Traversing the state west-east, Highway 20 enters Malheur County from Burns (in Harney County), passes through Juntura, and connects Vale and Nyssa with Boise, Idaho. East of Cairo Junction, the route is classified at a regional level of importance.

West of Vale, Highway 20 operates as a two-lane, largely rural highway, serving intercity, recreational and some local traffic, with a posted speed limit of 55 mph. As Highway 20 approaches Vale from the west, the percentage of agriculture-related traffic volume increases; Highway 20 provides farm-to-market access between Vale and Ontario.

East of Vale, Highway 20 joins with Highway 26, and intersects Highway 201 at Cairo Junction, with connection to Nyssa and Ontario. The three legs of this intersection lead to Vale, Nyssa and Ontario. Traffic is heavy on Highway 20/26 between Vale and Nyssa. In this area, Highway 20/26 carries a significant portion of intercity traffic, as well as farm-to-market truck traffic. Outside of Vale and Nyssa, Highway 20/26 generally operates as a two-lane road with a posted speed of 55 mph, with numerous private drive and public road accesses.

Highway 26

Highway 26 is a U.S. route of statewide importance west of Cairo Junction, and a route of regional importance between Cairo Junction and Nyssa. Beginning in Astoria, on the Oregon Coast, the route enters Malheur County from the northwest, passing through Ironside, Brogan, Jamieson and Willow Creek, as well as the larger communities of Vale and Nyssa, before heading east to Boise, Idaho. Highway 26 is also the only Access Oregon Highway (AOH) in the county, according to the *1991 Oregon Highway Plan.* AOH status ensures that Highway 26 will receive top priority for funding improvements in the statewide Level of Importance system.

(The goal of the AOH system is to provide for the economic growth of Oregon by moving through traffic safely and efficiently through and between geographic and major economic areas within Oregon, between Oregon and adjacent states, and to and through major metropolitan areas.)

North of Vale, Highway 26 operates as a two-lane roadway with a posted speed limit of 55 mph, primarily serving intercity and recreational traffic, and to a lesser degree, farm-to-market access. East of Vale, Highway 26 and Highway 20 share the same roadway, which is described previously.

Highway 30

In greater Malheur County, the existing one-mile segment of Highway 30 is classified as a facility of district importance. This segment of Highway 30 is part of a loop off of Interstate 84, connecting travelers from the interstate to Farewell Bend State Park and gives commercial trucks a service and rest area.

Highway 78

Classified as a highway of regional importance, Highway 78 links Highway 20 in Burns (in Harney County) with Highway 95 at Burns Junction. Commercial and industrial development along this two-lane facility is minimal; the highway passes almost exclusively through ranches and public lands. The posted speed on this roadway is 55 mph.

Highway 95

Highway 95 is a facility of statewide importance. Highway 95 passes through Malheur County, connecting Idaho and Nevada. This facility operates primarily as an intercity traffic route; little commercial or industrial development exists along this corridor with the exception of Jordan Valley and Rome. Highway 95 is a two-lane roadway with a posted speed limit of 55 mph.

Highway 201

Highway 201 is classified as a facility of statewide, regional and district importance at intervals throughout its length in Malheur County. North of Ontario, Highway 201, also known as the Olds Ferry Ontario Highway, forms a loop off of Interstate 84, passing through residential and farmland areas. This segment of Highway 201, classified at a district level of importance, operates as a two-lane facility with a posted speed limit of 55 mph. Spurs from Highway 201 connect Idaho with both Annex and Payette Junction.

Between Interstate 84 and Cairo Junction, Highway 201 operates as a facility of statewide importance. This section of Highway 201 serves intercity, recreational, local and farm-to-market

traffic, as well as provides local land access. The posted speed along this four-lane corridor is 55 mph.

Between Cairo Junction and Nyssa, Highway 201 shares route designation with Highway 20/26 and has been described previously and is classified as a roadway of regional importance.

Between Nyssa and the Idaho border (south of Adrian), Highway 201 is classified as a roadway of district importance. This segment of Highway 201 connects the urban areas to the north with residential and farmland areas to the south, including the City of Adrian. Highway 201 in this area connects agricultural businesses with market and distribution centers, as well as serves residential developments throughout its length. Highway 201 also provides connection to the Succor Creek State Recreation Area. Highway 201 is a two-lane facility with a posted speed limit of 55 mph.

Highway 451

Also known as the Vale-West Highway and Graham Boulevard, Highway 451 is a facility of district importance. This two-lane roadway, with a posted 55 mph speed limit, almost exclusively serves local traffic and agricultural business between Vale and Highway 20. This facility carries truck traffic and serves, to a lesser extent, recreational traffic traveling from Highway 20 and Vale to the Bully Creek Reservoir.

Other Roadways

Although the state highway system forms the backbone of the roadway system in Malheur County, the County is responsible for the majority of road miles in the region. County roads primarily serve local and regional traffic, sometimes providing alternative routes to state highways. They also connect to state highways and recreational opportunities, towns or areas not otherwise accessible.

County roads, when paved, are almost always two-lane chip seal or asphaltic concrete facilities with a 16- to 24-foot travel surface. Normally, the roads do not have shoulders, except within a few distinct communities. A significant portion of county roadways are gravel facilities anywhere from eight to 26 feet wide.

In addition, the Bureau of Land Management (BLM) owns and maintains its own network of roads. These facilities are largely gravel or unimproved.

Existing Traffic Control

The majority of traffic control in Malheur County consists of stop signs on minor street approaches at significant intersections. Intersections along arterial roads and between major and minor collectors are generally significant.

Signalized intersections on roadways in rural Malheur County are limited to flashing lights. The only flashing red light exists at Cairo Junction, where the north and south legs of the intersection, (Highway 201 and Highway 20/26, respectively) have a yellow flasher, and the west leg (Highway 20/26) has a red flasher. The only other flashing yellow light exists at school crosswalk in Annex on Highway 201. Additional control devices regulate traffic at three railroad intersections. Located on Highway 201 just south of the Ontario city limit is a railroad crossing signal with lights and crossing gates. Painted stop bars exist at the crossing on Highway 201 north of Adrian, and crossbucks with stop bars exist at the crossing on the Vale-West Highway.

Pavement Condition

Pavement conditions along the arterial and collector roads vary throughout Malheur County. In keeping with ODOT general condition categorization, all inventoried roadways have been classified and are summarized in Figure 4-2. The majority of roadways in rural Malheur County exhibit *Very Good*, *Good* or *Fair* conditions. Table 4-2 lists those arterials and collectors with pavement in *Poor* condition. No arterial or collector in Malheur County is classified as *Very Poor*.

Table 4-2
Malheur County Arterials and Collectors With Pavement Exhibiting *Poor* Conditions

Facility	Segment	Total Miles
Highway 20*	Vale-West Highway to Cairo Junction	19
Highway 201	Olds Ferry Interchange to Annex Road	9
Highway 201* - Parma Spur	Highway 201 to Idaho State Line	2
Owyhee Avenue	Owyhee Junction to Overstreet Road	7
Total:		37

* ODOT has included in their Statewide Transportation Improvement Program (1998-2001) pavement reconstruction or overlay projects to improve Highway 201 and Highways 20/26 in these sections by the year 2001.

W&H PACIFIC

Bridges

The state and county own 70 and 109 bridges (over 20 feet in length), respectively, in rural and urban Malheur County. The County also has many bridges under 20 feet in length. Appendix B lists those bridges over 20 feet in length. These facilities have been ranked according to the status of their functionality. Bridges are classified by ODOT as either "functionally obsolete", "structurally deficient" or "not deficient", determined through state or county inspection (as of 1996).

In the greater Malheur County study area, the state owns seven bridges that may be functionally obsolete. These include:

- Highway 20 over the North Fork of the Malheur River (mp 190.84)
- Highway 20 over the Malheur River at Horseshoe Bend (mp 191.97);
- Highway 20 over the Malheur River at the Gwynn Bridge (mp 195.13);
- Highway 20 over the Malheur River at the Speery Bridge (mp 205.58)
- Highway 201 spur over the Snake River at Weiser (mp 13.66);
- Highway 201 spur over the Snake River at Payette (mp 21.30); and
- Highway 20/26 over the Snake River at Nyssa (mp 266.81).

Malheur County owns 14 bridges that may be structurally deficient, including:

- County Road #512 (Reservoir Road) over the Vale Main Canal (mp 2.70) south of Willow Creek School;
- County Road #551 (Bonita Road) over Clover Creek (mp 12.20) south of Highway 26;
- County Road #589 (Warm Springs Reservation Road) over the Malheur River (mp 2.74) west of Junction;
- County Road #657 (Bishop Road) over Sand Hollow Creek (mp 4.41) southwest of Highway 20;
- County Road #662 (Enterprise Avenue) over the Owyhee Canal (mp 3.52) west of Highway 201;
- County Road #793 (Old I.O.N. Highway) over Cow Creek (mp 9.96) west of the Charbonneau Grave;
- County Road #805 (Harper-Westfall Road) over a drainage ditch (mp 11.39) north of Harper School;
- County Road #843 (Jefferson Drive) over the Owyhee Canal (mp .39) south of Junction;
- County Road #853 (Lytle Boulevard) over the Cow Hollow drainage (mp .10) south of the Sunset Market in Strickland;
- County Road #857 (Clark Boulevard) over the Owyhee Canal (mp 4.22) north of Columbia Avenue;
- County Road #864 (Woodbridge Road) over Alkali Creek (mp .05) northeast of Highway 201;

SEE FIGURE 4-2.2

MATCHLINE SEE FIGURE 4-2.3

N

SCALE

8 0 4 8 16

(MILES)
1" = 8 MILES

LEGEND

ROADS

- Very Good
- Good
- Fair
- Poor
- Very Poor

BRIDGES

- Structurally Deficient
- Functionally Obsolete

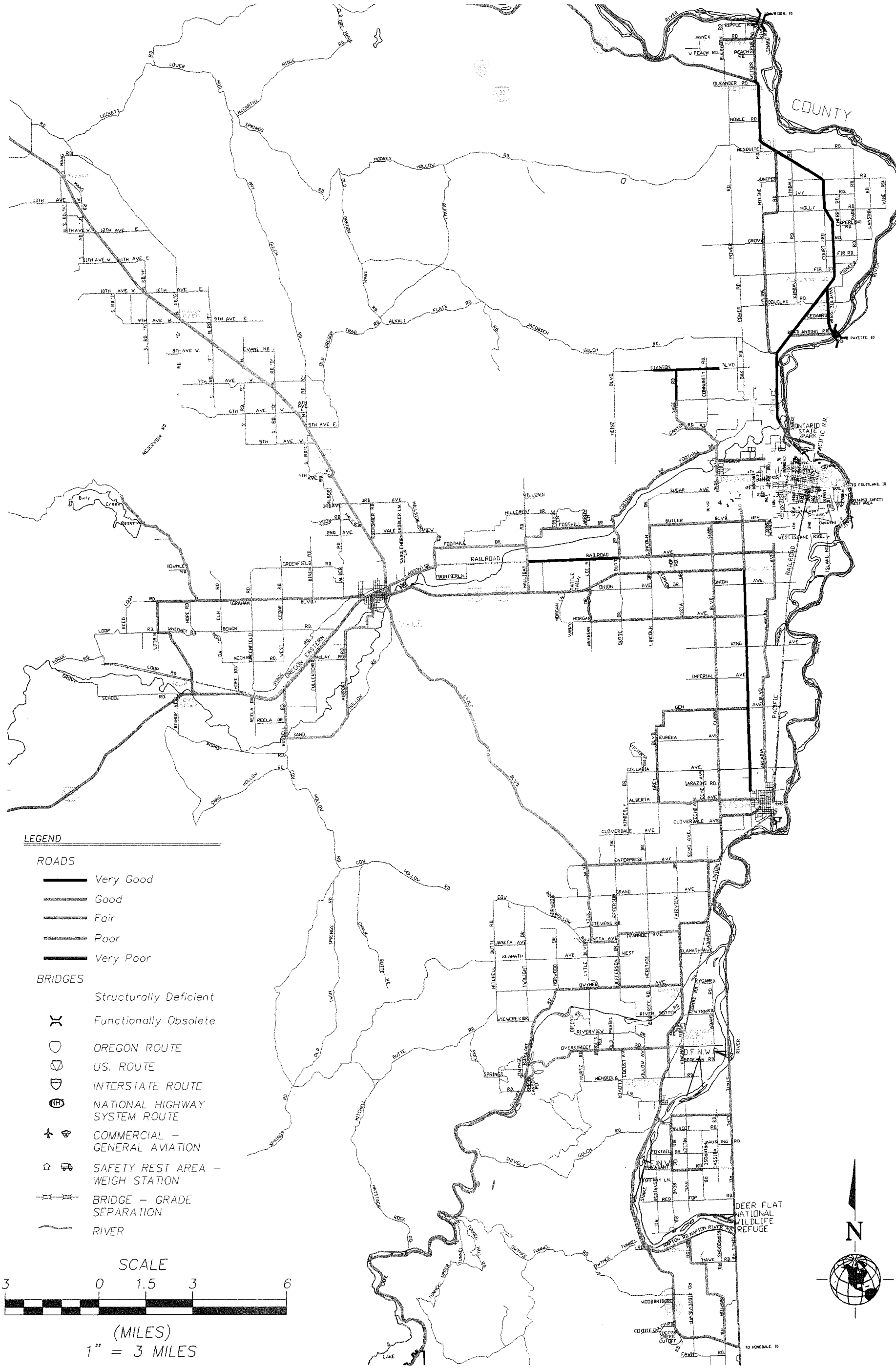
- OREGON ROUTE
- US. ROUTE
- INTERSTATE ROUTE
- NATIONAL HIGHWAY SYSTEM ROUTE
- COMMERCIAL – GENERAL AVIATION
- SAFETY REST AREA – WEIGH STATION
- BRIDGE – GRADE SEPARATION
- RIVER

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 4-2.1

Pavement Condition Summary

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455



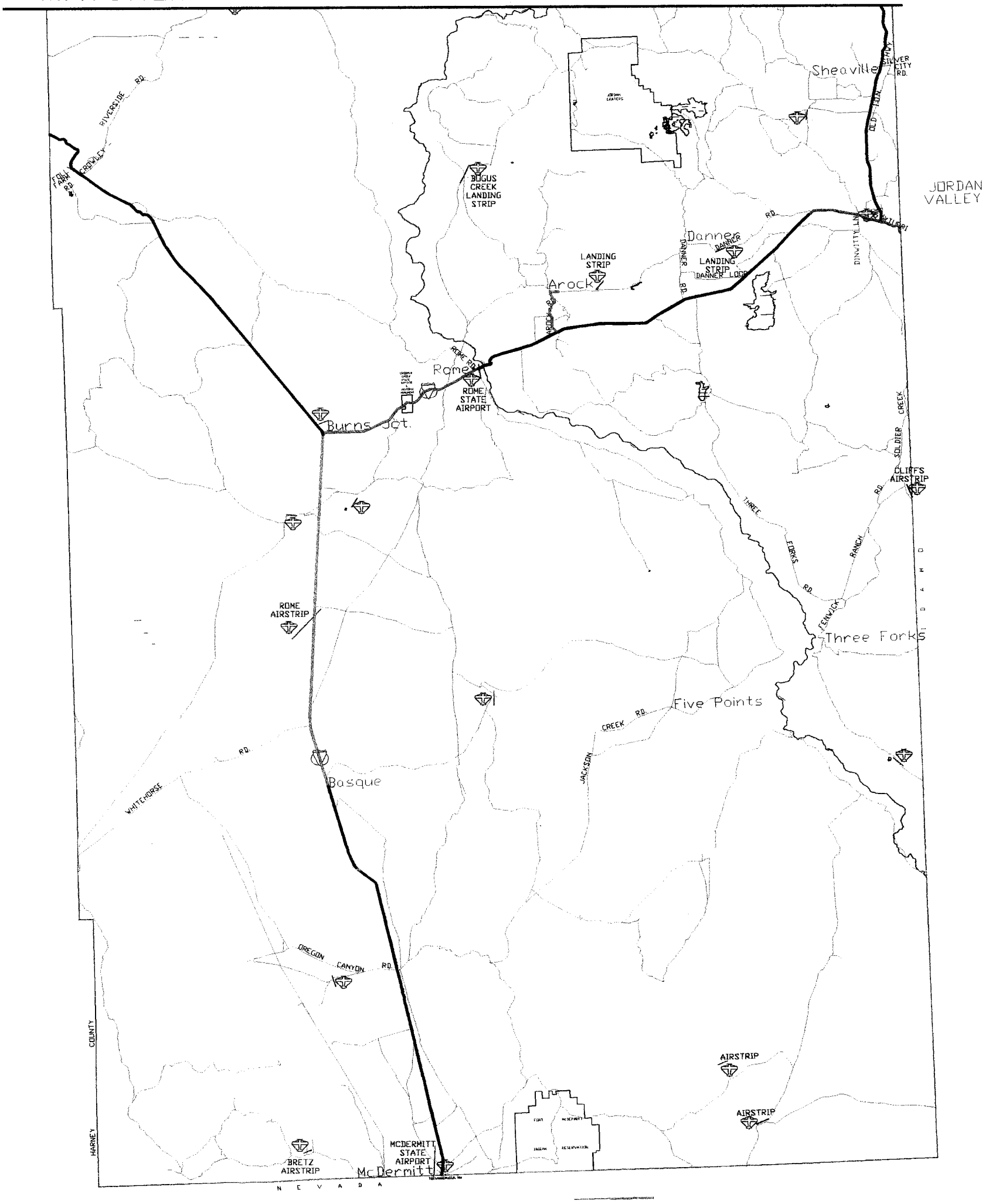
MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

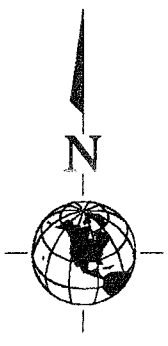
FIGURE 4-2.2

Pavement Condition Summary

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

MATCHLINE SEE FIGURE 4-2.1





SCALE

8 0 4 8 16

(MILES)

1" = 8 MILES

LEGEND

ROADS

- Very Good
- Good
- Fair
- Poor
- Very Poor

BRIDGES

- Structurally Deficient
- Functionally Obsolete

- OREGON ROUTE
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- COMMERCIAL – GENERAL AVIATION
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- BRIDGE – GRADE SEPARATION
- RIVER

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 4-2.3

Pavement Condition Summary

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

- County Road #980 (Cloverdale Avenue) over the Owyhee Canal (mp .44) west of Clark Boulevard;
- County Road #1059 (Desert Glen) over Lower Succor Creek (mp .94) northwest of the Idaho State Line (this project is currently under contract and will be completed by March of 1998); and
- County Road #1111 (North Maag Road) over Willow Creek (mp .39) north of Highway 26.

The opening of the new 36th Street Bridge over the Malheur River is too small, and contributes to floodwater problems.

Malheur County also owns the NW 36th Street bridge over the Malheur River. The NW 36th Street bridge is substandard (22 feet wide) to accommodate current traffic, and the small bridge opening contributes to flood water damage.

Traffic Volumes

According to 1996 average daily traffic (ADT) volume data gathered by ODOT and shown in Figure 4-3, the majority of state highways in Malheur County serve 1,500 or fewer vehicles per day. This is particularly true west of Vale, north of Ontario and south of Nyssa. Near these three urban areas, traffic volumes generally increase to between 1,500 and 3,000 vehicles per day. On Highway 20, Highway 26 and Highway 201 between Vale, Ontario and Nyssa, ADTs reach 9,800 vehicles.

No traffic counts were collected on rural Malheur County roads. Traffic volumes typically range from 50-1,000 vehicles per day on rural, collector roads.

Traffic Safety

A summary of the reported accidents on State highway facilities in the study area over a five-year period (January 1992 to December 1996) was assembled from ODOT records and listed in Appendix B. The accidents reported for intersections and roadway segments are listed by severity (property damage only, injury, or fatality) and type (angle, head-on, rear-end, sideswipe, turning, fixed object, pedestrian and other).

Using this data, analyses were performed to determine the accident rates on state highway segments within Malheur County. The average number of accidents per year is divided by the product of the roadway volume and segment length in miles, and then reported as accidents per million vehicle miles traveled (ACC/MVM).

Highway segments with accident rates greater than the state average for similar facilities are listed in Table 4-3.[1]

Table 4-3
State Highways In Malheur County With Near- Or Above-Average Accident Rates

Facility	Segment	Mileposts	Accident Rate (ACC/MVM)
Highway 20	Juntura to Dry Wash Crossing	189.90 to 193.07	1.63
Highway 20	Dry Wash Crossing to Big Swamp Creek	193.07 to 202.90	1.40
Highway 95	Jordan Valley to Sheep Creek	21.64 to 25.90	1.72
Highway 201	Interstate 84 to Annex Road	0.00 to 9.03	1.59

PEDESTRIAN FACILITIES

Pedestrian travel within Malheur County is generally limited to cities, towns and adjacent residential communities. Little demand exists for pedestrian facilities between these areas, as the distances are fairly extensive. Other than recreational hiking trails, and urban areas, pedestrian facilities do not exist in Malheur County.

BICYCLE FACILITIES

As with pedestrian traffic, most bicycle travel occurs in urban and residential areas, although distances between cities and towns are not as limiting as for foot traffic. Greater Malheur County contains no explicit bicycle facilities. However, wide, paved shoulders exist on several state highways. On the majority of county-owned roads, bicycle travel is feasible in vehicle travel lanes due to relatively low traffic volumes. On state highways, where volumes and vehicle speeds may be somewhat higher, paved shoulders become an important component of the bicycle facilities network.

State highways with wide (at least six-foot) shoulder lanes extending more than 0.5 miles are listed in Table 4-4. With the exception of Highway 20 west of Vale, paved shoulders providing safe bicycle facilities in greater Malheur County are limited. Both Highway 20 and Highway 95 are designated Statewide Bicycle Routes.

[1] The 1995 state highway accident rate for Primary, Non-Freeway facilities is 1.86 ACC/MVM. For Secondary, Non-Freeway facilities the rate is 1.68 ACC/MVM.

SEE FIGURE 4-3.2

MATCHLINE SEE FIGURE 4-3.3

N

SCALE

8 0 4 8 16

(MILES)

LEGEND

AVERAGE DAILY TRAFFIC VOLUMES*

- 0-1500
- 1501-3000
- 3001-4500
- >4500

* Measured on State Highways

- OREGON ROUTE
- US. ROUTE
- INTERSTATE ROUTE
- NATIONAL HIGHWAY SYSTEM ROUTE
- COMMERCIAL - GENERAL AVIATION
- SAFETY REST AREA - WEIGH STATION
- BRIDGE - GRADE SEPARATION
- RIVER

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 4-3.1

1998 Average Daily Traffic Volumes

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

LEGEND

AVERAGE DAILY TRAFFIC VOLUMES*

- 0–1500
- 1501–3000
- 3001–4500
- >4500

* Measured on State Highways

- OREGON ROUTE
- US. ROUTE
- INTERSTATE ROUTE
- NATIONAL HIGHWAY SYSTEM ROUTE
- COMMERCIAL – GENERAL AVIATION
- SAFETY REST AREA – WEIGH STATION
- BRIDGE – GRADE SEPARATION
- RIVER

SCALE

3 0 1.5 3 6

(MILES)

N

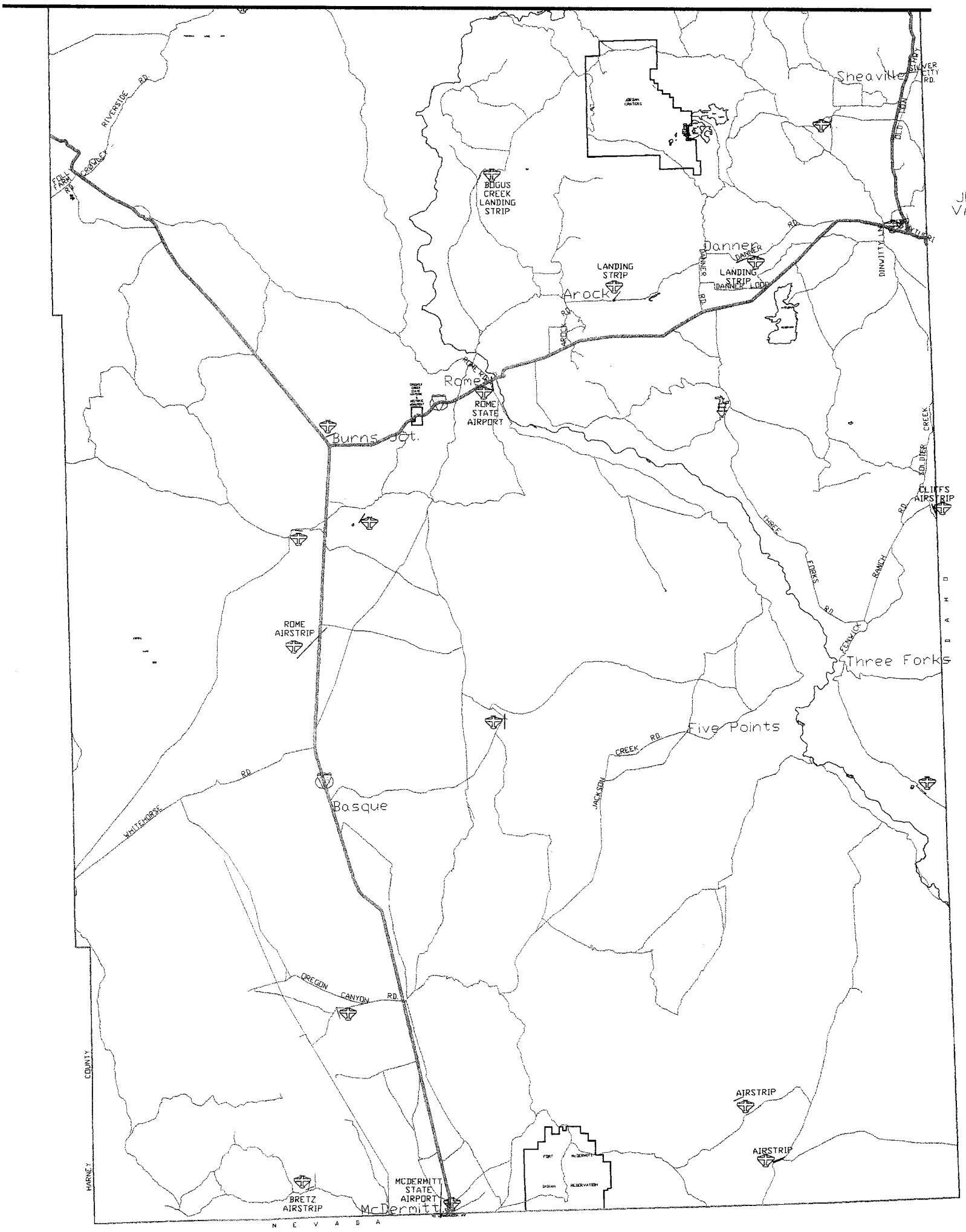
MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

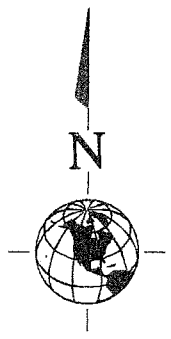
FIGURE 4-3.2

1996 Average Daily Traffic Volumes

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626–0455

MATCHLINE SEE FIGURE 4-3.1





SCALE

8 0 4 8 16

(MILES)

LEGEND

AVERAGE DAILY TRAFFIC VOLUMES*

- 0–1500
- 1501–3000
- 3001–4500
- >4500

* Measured on State Highways

- OREGON ROUTE
- US. ROUTE
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- RIVER

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 4-3.3

1996 Average Daily Traffic Volumes

W&H PACIFIC
8405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

Table 4-4
State Highways In Malheur County Roads With Paved Shoulders Six Feet Wide Or Greater, Extending At Least 0.5 Miles

Facility	Segment	Total Miles
Highway 20	Harper-Westfall Road to Vale-West Highway	16
Highway 201	West of the Olds Ferry Interchange	1
Highway 201	South of Chester Boulevard to Ontario	1
Total:		18

PUBLIC TRANSPORTATION

There are several local private and community-based transit providers within the county. Table 4-5 identifies those listed in ODOT's *Directory of Public Transportation (January 1996).*

Table 4-5
Malheur County Public Transportation Services, 1996

Service Area	Name	Services Provided	Funding Source
Malheur County	DHR Volunteer Program	Volunteer Driver Prgm	STF Title XIX
Malheur County	Malheur County Transportation Service	Dial-A-Ride, Scheduled Trips	16(B)(2) STF
Malheur County	Malheur Council on Aging	Dial-A-Ride, Volunteer Driver Program	STF
Nyssa	Nyssa Senior Center	Dial-A-Ride, Volunteer Driver Prgm, Fixed Route	16(B)(2) STF
Ontario	Courtesy Cab Company	Schedule Trips	Fares for profit
Ontario	Ontario Senior Center	Dial-A-Ride, Volunteer Driver Prgm	16(B)(2) STF
Ontario	Ontario, City of	Fixed Route	S18 STF
Vale	Vale Senior Center	Dial-A-Van, Volunteer Driver Prgm	STF 16(B)2

In addition to the services described in the table above, the Special Transportation Advisory Board is working with Acorn Pacific, Inc. to develop a referral service for carpooling. The focus of the program would be to inform the employees of the various companies and organizations in

Malheur County of the benefits of car pooling; to provide a centralized service for those employees who wish to join a car pool; and, to build a base for future van pool service for intercity transportation.

RAIL SERVICE

Two railroads serve Malheur County: the Union Pacific Railroad and the Oregon Eastern Railroad. The former rail line connects Ontario and Nyssa with Idaho, and has a spur leading south to loop around Adrian before heading east across the state line to terminate in Homedale, Idaho. Approximately 40 trains (80 to 100 cars, each) per day use the main railroad. Trains on this line carry primarily agricultural and mineral resources from area producers to regional and interstate market and distribution centers. The total volume carried by these trains per year ranges from approximately 32 to 38 million gross tons.

Running east-west, the Oregon Eastern Railroad operates a spur which connects Vale to the Union Pacific main railroad line just south of Ontario. This spur terminates at the Eagle Picher mineral processing plant west of Vale, from which it carries mineral products and local agricultural products picked up along the route to a more extensive transportation network. The spur carries less than one train (six to eight cars) per day.

AIR TRANSPORTATION

As shown on Figure 4-4, five public airports currently serve Malheur County, two of which lie in the urban areas of Ontario and Vale. The remaining three facilities support primarily recreational and other local flights, but do not support commercial air service. These include:

- McDermitt State Airport;
- Owyhee Reservoir State Airport; and
- Rome State Airport.

Each of these three airports has one runway and is unattended throughout the year. The runways at both McDermitt State Airport and Rome State Airport provide wide enough pavement to support emergency and other medical transport, fire fighting and search and rescue services. Owyhee Reservoir State Airport is a *warning* airport. (Warning airports need not conform to normal airport dimension standards.) Its primitive runway is subject to washouts, and the airport offers no ground access, rendering it a purely recreational facility, usable by small aircraft (i.e., weighing less than 12,500 lbs.).

Smaller, private airstrips are located throughout the County, and a small public airport facility, similar to the McDermitt and Rome airports, has been proposed for development near Jordan Valley.

For international commercial and passenger air service, travelers can drive approximately 40 miles east of Malheur County along Interstate 84 to the Boise Air Terminal.

WATERWAYS

At this time, there is no waterborne transportation in Malheur County. Ample recreational opportunities exist, however, throughout the region. The Owyhee River, a State Scenic Waterway, supports extensive recreational use and is maintained to preserve its natural, wild, and primitive conditions as unaltered as possible by the effects of humans. The Owyhee Reservoir and the Bully Creek Reservoir support boating and watersport activities as do several smaller reservoirs. The Malheur River and the Snake River likewise serve recreational uses.

PIPELINE

Several pipelines exist in Malheur County carrying both natural gas and oil. In the northeast area, Northwest Pipeline owns a facility which runs parallel to Interstate 84, carrying natural gas from Salt Lake City, Utah to points north. Cascade Natural Gas taps off of this main line to serve customers in nearby areas of the county, including part of Vale, on demand.

In addition to the natural gas pipelines, Chevron Oil owns an oil pipeline which also parallels Interstate 84.
Because water is scarce in portions of Malheur County, a network of pipelines also exist which disperse water to otherwise drier areas.

On lands that it owns, the Bureau of Land Management (BLM) has constructed a separate network of pipelines. These pipes carry water to holding tanks scattered throughout BLM lands, providing drinking water for livestock.

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CHAPTER 5:
IMPACTS OF GROWTH AND FUTURE NEEDS

Malheur County's future transportation facility needs presented in this Chapter are based on several factors: historic and projected population change, historic and projected economic change, and historic and projected traffic growth on the state highways.

LAND USE AND POPULATION

Land use and population change are key factors in projecting future facility needs. The amount and location of population change affects traffic and transportation facilities in study area. Assessing the relationship between historic population and traffic data provides a foundation for future projections. Table 5-1, below, shows the county's population from 1970 to 1996 and the average annual growth rate (compounded) based on the net change between 1990 and 1996.

According to the NOVA Housing Subcommittee *Draft Housing Report* (12/1/96), Malheur County, Oregon represents an area of 9,926 square miles or 6,352,640 acres and the U.S. Bureau of Land Management manages 4,500,000 acres, or approximately 71% of this area.[3] Land in farms accounted for approximately 21% of the total land in the county.[4] Sugar beets, onions, and potatoes are major crops in Malheur County, generating a farm gate income of $160 million for producers.[5] Population density is very low in Malheur County with only 2.7 residents per square mile in 1992.[6]

Table 5-1
Population 1970 -1996

Jurisdiction	1970[1]	1980[1]	1990[2]	1996[2]	Percent Change 1990-1996	Ave. Annual Growth Rate 1990-1996
Adrian	155	162	131	135	3.05%	0.50%
Jordan Valley	196	473	364	385	5.77%	0.94%
Nyssa	2,620	2,862	2,629	2,970	12.97%	2.05%
Ontario	6,523	8,814	9,394	10,290	9.54%	1.53%
Vale	1,448	1,558	1,491	1,510	1.27%	0.21%
Uninc.County	12,227	13,022	12,029	13,410	11.48%	1.83%
Co. Total	23,169	26,896	26,038	28,700	10.22%	1.64%

[1] *Malheur County Comprehensive Plan*, 1982.
[2] Center for Population Research and Census, Portland State University
[3] NOVA Housing Subcommittee *Draft Housing Report* (12/1/96).
[4] U.S. Bureau of the Census, USA Counties 1996 CD-ROM.
[5] Agricultural Experiment Station, Oregon State University.
[6] U.S. Bureau of the Census, USA Counties 1996 CD-ROM.

There are five incorporated cities in Malheur County. The 1995 population distribution is shown in Figure 5-1. The largest three (Ontario, Nyssa and Vale) are located at the eastern edge of the county, in an area known as the Treasure Valley. The two smaller cities (Adrian and Jordan Valley) are located to the south of the Treasure Valley area. Boise, Idaho, represents the closest major population center. Table 5-2, below identifies Malheur County's base year (1995) and 20 year forecast (2015) population by incorporated city. As this table shows, gradual growth is expected countywide through 2015 and for the purposes of this TSP, this trend is expected to continue through 2017.

Figure 5-1: 1995 Population Distribution

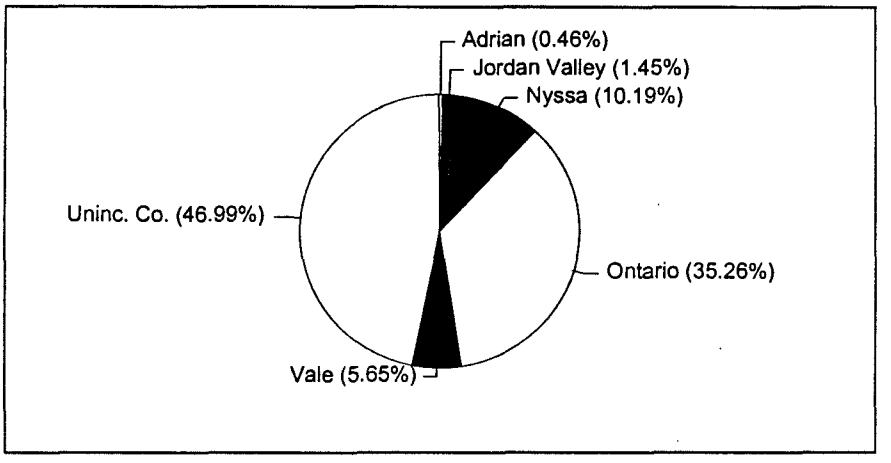


Table 5-2
Population Estimates, Forecasts and Average Annual Growth Rate by Incorporated City

Jurisdiction	Population					Average Annual Growth Rate (compounded)[10]
	1995[7]	2000[8]	2005[8]	2010[8]	2015[9]	
Adrian	130	133	136	140	143	0.48%
Jordan Valley	410	431	454	477	502	1.02%
Nyssa	2,885	3,006	3,132	3,263	3,400	0.82%
Ontario	9,980	10,931	11,973	13,114	14,364	1.84%
Vale	1,600	1,789	2,000	2,236	2,500	2.26%
Unincorporated County	13,300	13,832	14,384	14,959	15,557	0.79%
Co. Total	28,305	30,122	32,079	34,189	36,466	1.27%

[7] Center for Population Research and Census, Portland State University.
[8] Forecast based on estimated growth rate.
[9] 2015 forecast as agreed upon by Malheur County, City of Ontario and DLCD -- forecast countywide total originated with Department of Economic Analysis.
[10] Average annual growth rates based on 1995 present values, 2015 future values, and 20 year timeframe.

Employment forecasts and patterns can also affect future traffic volumes. The following economic data presented in Table 5-3 is summarized from the *Malheur County Strategic Plan (December, 1996).* It should be noted that, according to the Strategic Plan, inflation over that ten year period (1984-1994) was approximately 43%. Major economic developments, such as the siting of a new prison, can have significant impacts to local and regional growth trends.

Table 5-3
Malheur County Economic Indicators, 1984-1994[11]

Indicator	Percent Change 1984-1994
Total Personal Income	67%
Per Capita Income	74%
Wages, Salaries and Proprietors' Income	70%
State and Local Government Employment	107%
Farm Earnings	64%
Dividends, Interest, Rent	30%
Trade (wholesale and retail)	63%
Services	108%
Manufacturing	19%
Construction	103%

HISTORIC TRAFFIC VOLUMES

Projected traffic volumes are based on both the population and land use factors described above as well as the historic traffic volumes summarized below. Table 5-4 identifies the average daily traffic (AADT) for the last ten years at three key locations on major state highways in Malheur County. Generally, county road volumes have not been recorded. The average annual growth rate in Table 5-4 is a compounded rate based on the amount of change between the nine year period from 1987 to 1996.

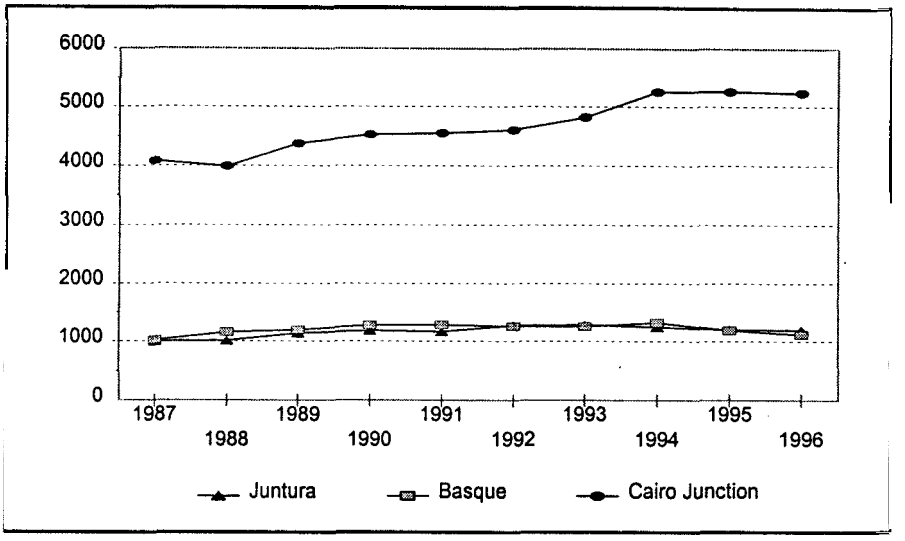
Table 5-4
1987-1996 Average Annual Daily Traffic (AADT) [12]

	US20/US26@ Cairo Junction AADT	US95@ Basque AADT	US20@ Juntura AADT
Location:	US 20/ US 26, 0.3 miles west of Cairo Junction	US 95 3.0 miles south of Blue Mountain Pass Summit	US 20, Central Oregon Highway at Juntura
1987	4,083	1,015	1,005
1988	3,992	1,157	1,013
1989	4,374	1,189	1,136
1990	4,532	1,274	1,182
1991	4,556	1,281	1,166
1992	4,609	1,255	1,272
1993	4,823	1,252	1,282
1994	5,250	1,314	1,243
1995	5,257	1,186	1,199
1996	5,232	1,117	1,194
Ave. Annual Growth Rate	2.79%	1.07%	1.93%

[11] *Malheur County Strategic Plan* (December, 1996).
[12] Oregon Department of Transportation, 1996 Malheur County ATR Stations data, 10/20/97.

Figure 5-2 presents the data from Table 5-4 in a graph. As the data show, AADT has increased most significantly on US20/ US 26 at Cairo Junction in the Treasure Valley, resulting in an average annual growth rate of 2.79% from 1987 to 1996. The other two rural locations (US95@ Basque and US20@ Juntura) had not only had smaller base year AADTs, but also experienced slower average annual growth rates over the ten year period.

Figure 5-2: AADT at Three Malheur County Locations, 1987-1996



TRAFFIC FORECASTS

The Automatic Traffic Recorder (ATR) locations discussed in the previous section are representative of three general regions within Malheur County: the Treasure Valley area, the South county area, and the West county area. For the purposes of forecasting future traffic volumes, the historic traffic growth rates at the three ATR locations discussed in the previous section can be used to project future traffic volumes for the three general regions within the county as described in Table 5-5. As there is no historic database of traffic volumes on county roads, traffic forecasts based on county roads volumes were not prepared. However, traffic volumes on county roads are forecast to increase in parallel with the regional projections below.

Table 5-5
Forecast Growth Rate by Region

Region	ATR Location	Average Annual Growth Rate in AADT (Compounded)	Description
Treasure Valley Area	US20/US26 @Cairo Junction	2.79%	Generally the area shown on Figure 5-3.2 (North of the Succor Creek cutoff and east of the Vale-West Highway).
South County Area	US95 @ Basque	1.07%	Generally the area shown on Figure 5-3.3 (South of Juntura).
West County Area	US20 @Juntura	1.93%	Generally the area shown on Figure 5-3.1 (West of Treasure Valley and North of Juntura).

Figure 5-3 shows the 2017 forecasted traffic volumes (in AADT) by road section based on the AADT forecasts. For more detail, see Appendix C which identifies both the 1996 AADT and the forecasted 2017 AADT by road section. The forecast AADTs are based upon a 21 year time-frame from 1996 to 2017 and the average annual growth rates for each region as presented in Table 5-5, above.

Seasonal Variations

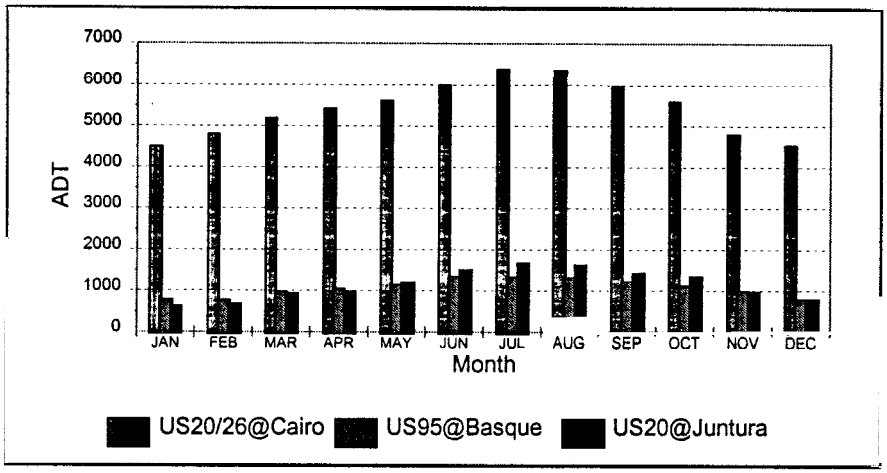
Time of year may affect the amount of traffic on a roadway system, for example tourism, harvest and closure due to snow or flooding are generally seasonal events. In order to assess seasonality, monthly ADT data for 1996 at the three ATR locations described above are presented in Table 5-6. County road data is unavailable. Also included is "Percent of 1996 AADT". This percentage describes the relationship between the Monthly ADT and the Annual ADT. For example, the December, 1996, ADT at Cairo Junction is 4,500 trips, which represents 86% of the 1996 Annual ADT of 5,232. The more extreme the highs and lows of the percentages the more seasonal the roadway usage.

Table 5-6
1996 Monthly Average Daily Traffic (ADT)

Month	US20/US26@ Cairo Junction (1996 AADT = 5232)		US95@ Basque (1996 AADT = 1117)		US20@ Juntura (1996 AADT 1194)	
	Monthly ADT	Percent of 1996 AADT	Monthly ADT	Percent of 1996 AADT	Monthly ADT	Percent of 1996 AADT
January	4,500	86%	784	70%	644	54%
February	4,800	92%	786	70%	695	58%
March	5,197	99%	978	88%	948	79%
April	5,429	104%	1,056	95%	989	83%
May	5,622	107%	1,165	104%	1,221	102%
June	6,008	115%	1,356	121%	1,521	127%
July	6,394	122%	1,353	121%	1,692	142%
August	6,372	122%	1,324	119%	1,637	137%
September	5,983	114%	1,232	110%	1,442	121%
October	5,600	107%	1,143	102%	1,358	114%
November	4,800	92%	1,000	90%	991	83%
December	4,540	87%	809	72%	814	68%

As the data show the peak traffic season is from June to August at all three ATR locations, with the most pronounced seasonal variations in terms of percentage of change occurring at the US 20@Juntura location where the average number of trips swings from 142% of the annual average in July to only 54% of the annual average in January. However, in terms of actual numbers, US 20/26@ Cairo Junction experienced the largest seasonal shift in ADT with a peak of 6,394 ADT in July, 1996 and 4,500 ADT in January, 1996, a difference of 1,894 trips. Figure 5-4 represents this data graphically.

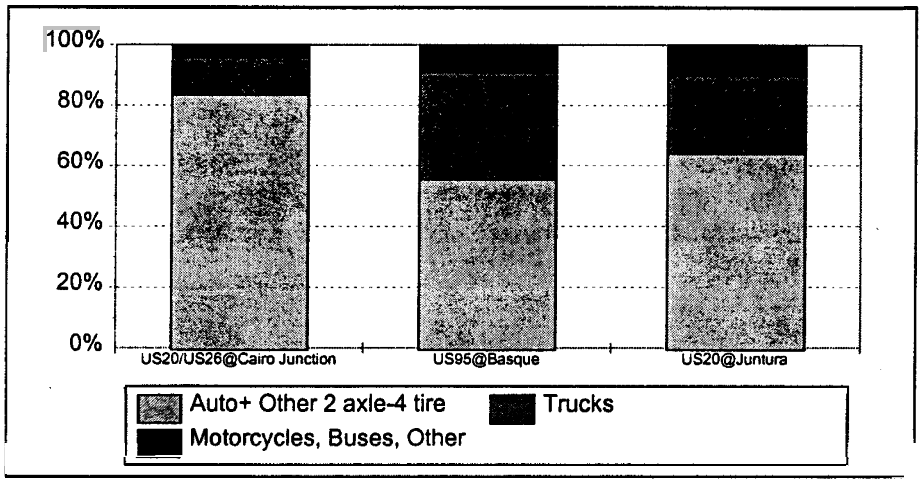
Figure 5-4: Monthly ADT at Three ATR Locations in Malheur County



Type of Vehicle

Malheur County roadways are not uniformly utilized by the same type of vehicles. The proportion of trucks, autos and other vehicles varies by location. Figure 5-5 illustrates how the percentage of 1996 AADT at the three ATR locations discussed above is shared amongst three generalized vehicle categories: (1) passenger cars and other 2 axle, 4 tire vehicles; (2). trucks (including trailers); and (3) other vehicles (including buses, motorcycles and scooters). As Figure 5-5 shows, in 1996 US 95 @ Basque had the greatest percentage of trucks trips (35.4%). The percentage of truck traffic may vary by site in any given month, particularly in the Treasure Valley area.

Figure 5-5 Distribution of AADT by Vehicle Type



Summary

As described above, factors including historic demographic indicators, future population growth projections, historic traffic volumes, future traffic growth projections, seasonal variations and

distribution of vehicle type have all been considered as part of the analysis. In the next section, this analysis is evaluated in light of available capacity in order to determine future traffic condition (i.e., projected levels of traffic congestion or "level of service" (LOS)).

FUTURE TRAFFIC CONDITIONS

Future traffic conditions are generally measured as "Level of Service" or LOS. Level of service criteria for arterial and collector roads are shown in Table 5-7. The *Oregon Highway Plan (1991)* establishes operating LOS standards for the state highway system. For example, highways of statewide importance should operate at LOS C or better (i.e., average speeds between 20 and 25 mph) in urban and urbanizing areas and at LOS B or better in rural areas (i.e., average speeds equal to or greater than 55 mph). Chapter 2 describes the ODOT's Level of Importance (LOI) and LOS policies and the LOI status of the various state highways which run through Malheur County.

Table 5-7
Level of Service Criteria for Two-Lane Highways

Service Level	Typical Traffic Flow Conditions
A	Motorists are able to drive at their desired speed which, without strict enforcement, would result in average speeds approaching 60 mph. Passing demand is well below passing capacity, and almost no platoons of three or more vehicles are observed.
B	Speeds of 55 mph or slightly higher are expected on level terrain. Passing demand needed to maintain desired speeds becomes significant and approximately equals the passing capacity.
C	Further increases in flow result in noticeable increases in platoon formation, platoon size, and frequency of passing impediment. Average speed still exceeds 52 mph on level terrain, even though unrestricted passing demand exceeds passing capacity. While traffic flow is stable, it is becoming susceptible to congestion due to turning traffic and slow-moving vehicles.
D	Unstable traffic flow as passing demand is very high. Average platoon sizes of 5 to 10 vehicles are common, although speeds of 50 mph can still be maintained under ideal conditions. This is the highest flow rate that can be maintained for any length of time over an extended section of level terrain without a high probability of breakdown.
E	Under ideal conditions, speeds will drop below 50 mph. Average travel speeds on highways with less than ideal conditions will be slower, as low as 25 mph on sustained upgrades. Passing is virtually impossible and platooning becomes intense when slower vehicles or other interruptions are encountered.
F	Heavily congested flow with traffic demand exceeding capacity.

As Figure 5-3 shows, significant increases in daily traffic are expected by the year 2017 on the following sections of roadway: US 20/US 26 from Vale to the Union Pacific Railroad crossing and on Highway 201 from Malheur River to Cairo Junction *(Note the analysis excludes the section of Highway 201 within Ontario city limits).* These volume increases will cause the LOS to decline on these sections of Highways 201 and Highway 20/26 from LOS C-D in 1996 to LOS

D-E in 2017 with the exception of that portion of Highway 201/Highway 20/26 between the eastern city limits of Ontario and Cairo Junction, which, due to its higher capacity (4 lanes), is not expected to exceed LOS B by the year 2017, even during peak traffic months. See Appendix D for more details regarding the level of service analysis. All other roadways in the study area are expected to maintain acceptable LOS throughout the twenty year planning period.

FUTURE FACILITY NEEDS

Based on the travel demand forecast, outstanding safety issues (as described in Chapter 4, Existing Transportation System), the special needs of the transportation-disadvantaged (e.g., the elderly and disabled), as well as public input, the following system needs have been identified:

Roadway/Bridges

- Improve farm-to-market access (East-West truck route);
- Improve North-South access around Ontario's northern city limits;
- Improve Nyssa to Vale access;
- Modify sharp, 90° turn on Highway 95 in Jordan Valley;
- Maintain "fair" or better pavement conditions;
- Improve safety in areas of known hazard;
- Maintain safe conditions on all public bridges;
- Ensure managed access on arterials and collectors;

Bus/Rail

- Re-establish intercity passenger bus and rail service;
- Work with providers to enhance rideshare opportunities for commuters;
- Better meet the local and regional transportation needs of the transportation-disadvantaged, including coordination with Idaho jurisdictions and agencies;

Bicycle/Pedestrian

- Extend and improve bicycle facilities within the Ontario-Nyssa-Vale triangle;

Airport

- Improve emergency airport access in the Jordan Valley area; and
- Extend the Miller Memorial Airport runway in Vale.

These transportation system needs summarized here are further evaluated in Chapter 6, Alternatives Analysis.

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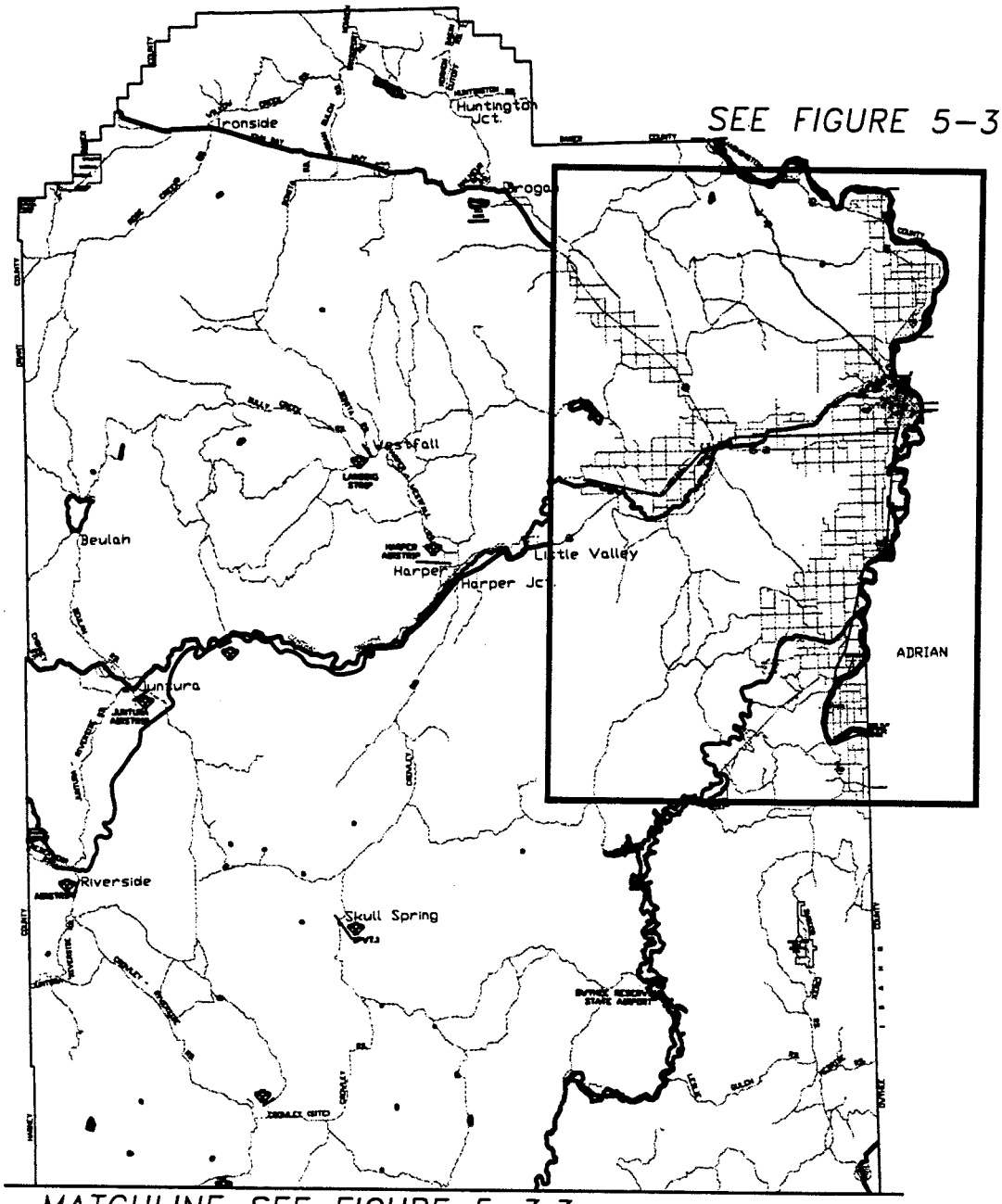
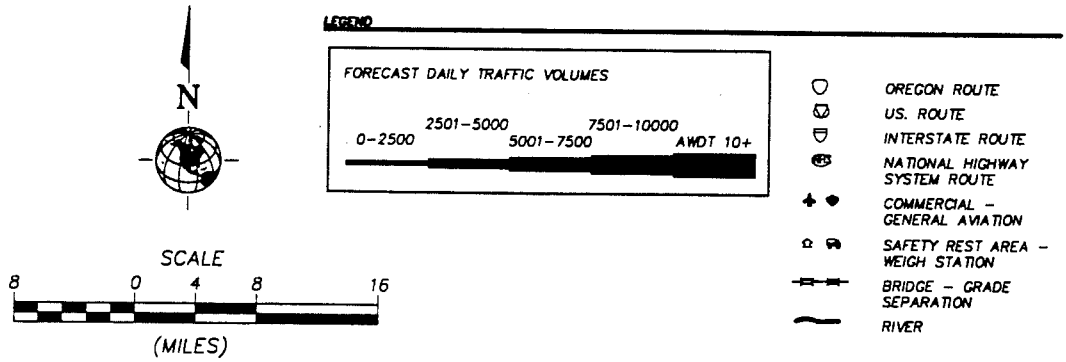




MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

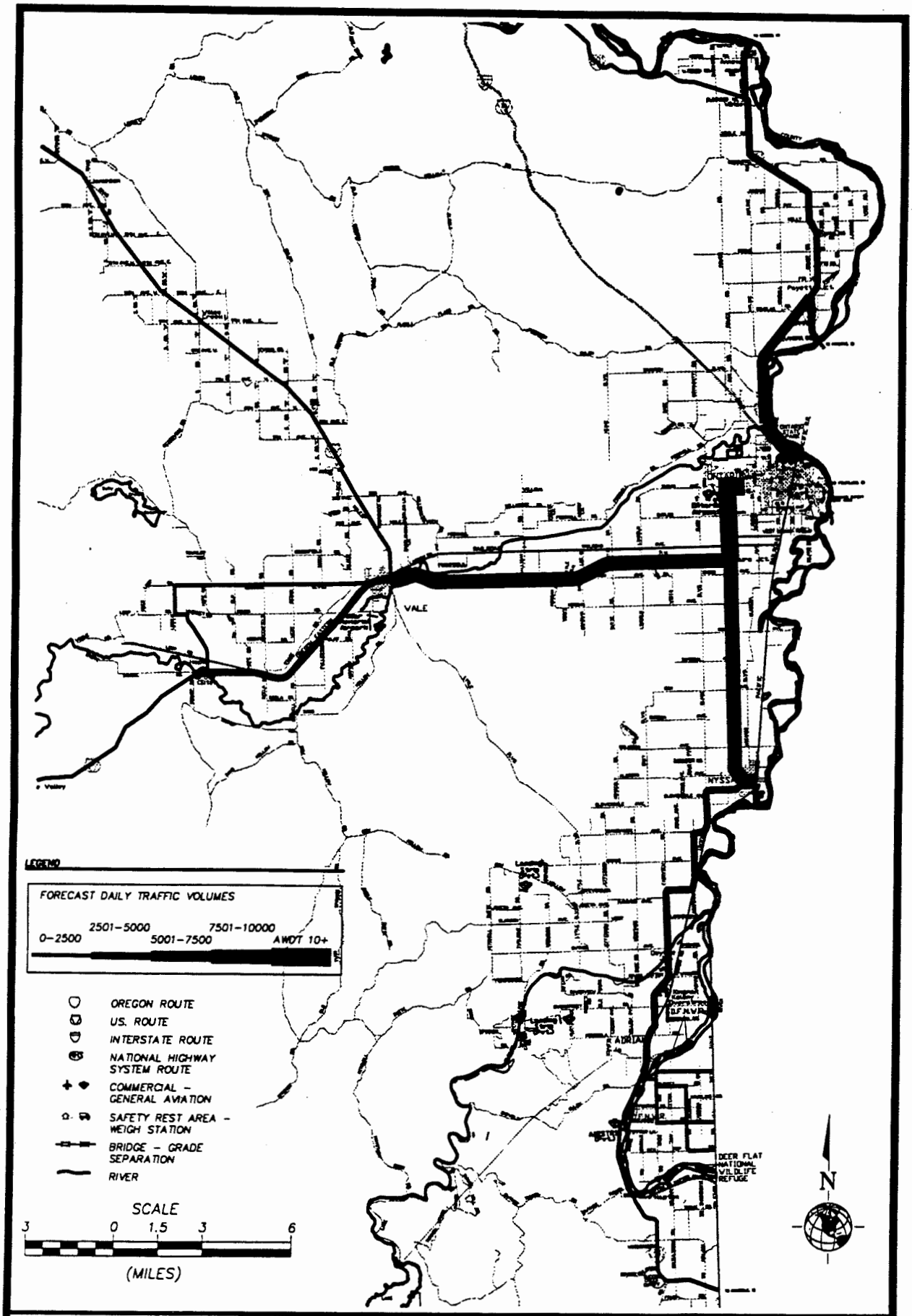
FIGURE 5-3.1

FORECAST TRAFFIC 2017 ADT

PACIFIC
3405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

4-3211-0101 PMALFT01. dwg

Revised 10/31/97 CAB



MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

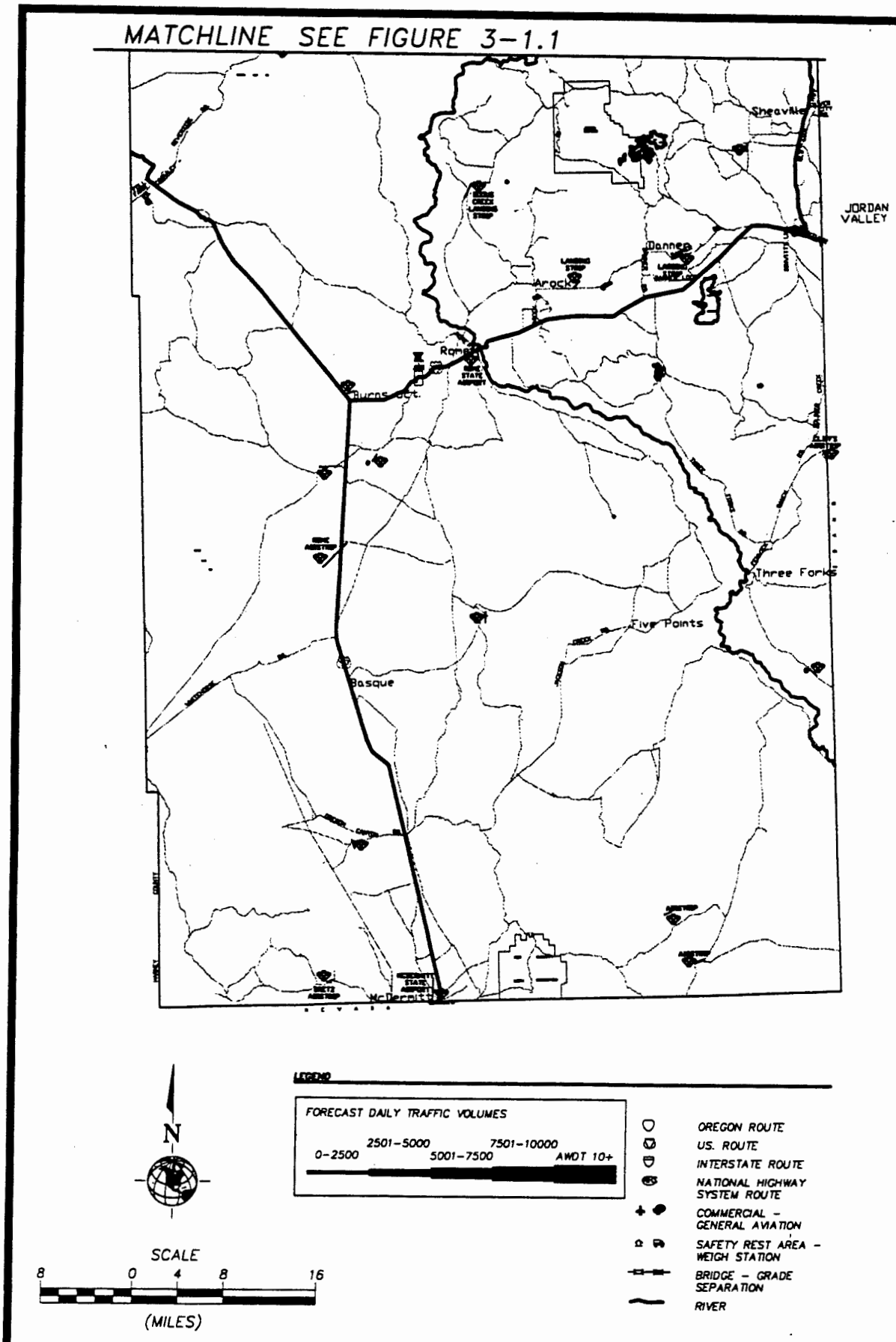
FIGURE 5-3.2

FORECAST TRAFFIC 2017 ADT

PACIFIC
9405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

4-3211-0101 PMALFT02. dwg

Revised 10/31/97 CAB



MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 5-3.3

FORECAST TRAFFIC 2017 ADT

PACIFIC
9405 SW NIMBUS AVE.
BEAVERTON, OR 97008
(503) 626-0455

4-3211-0101 PMALFT03. dwg

Revised 10/31/97 CAB

CHAPTER 6:
ALTERNATIVES ANALYSIS

The previous chapter (Chapter 5, the Impacts of Growth) concludes with a summary of future transportation system needs as identified through the planning process. Based on these needs, and pursuant to the Oregon Transportation Planning Rule (TPR), transportation alternatives were developed and assessed for the Malheur County Transportation System Plan. The three alternatives analyzed are: the "No-Action" alternative, the "Build" alternative and the Transportation Systems Management (TSM)/Transportation Demand Management (TDM) alternative. To meet the goals and objectives of the Malheur County TSP, a preferred alternative was developed including aspects of both the "Build" and TSM/TDM alternatives. The preferred alternative embodies the major projects and policies that constitute Malheur County's TSP (Chapter 7).

THE "NO-ACTION" ALTERNATIVE

This alternative assumes that no policy or facility changes would be made. Existing transportation facilities in Malheur County would remain in their current configuration with maintenance levels and expenditures continuing to follow their current trends. However, travel demand is expected continue to increase as described in Chapter 5, thus, travel times would increase, with traffic operations reaching unacceptable levels on some sections of Highway 20/26 and Highway 201. The number of accidents might also increase as the number of vehicles using the Malheur County roadway system increases; but no circulation, access management or wildlife crossing improvements are made. Those areas with "poor" pavement conditions would continue to deteriorate and increase in number. The use and availability of alternative modes would remain limited with no intercity passenger bus or rail service. Emergency air access in the Jordan Valley area would remain limited to helicopters.

THE "BUILD" ALTERNATIVE

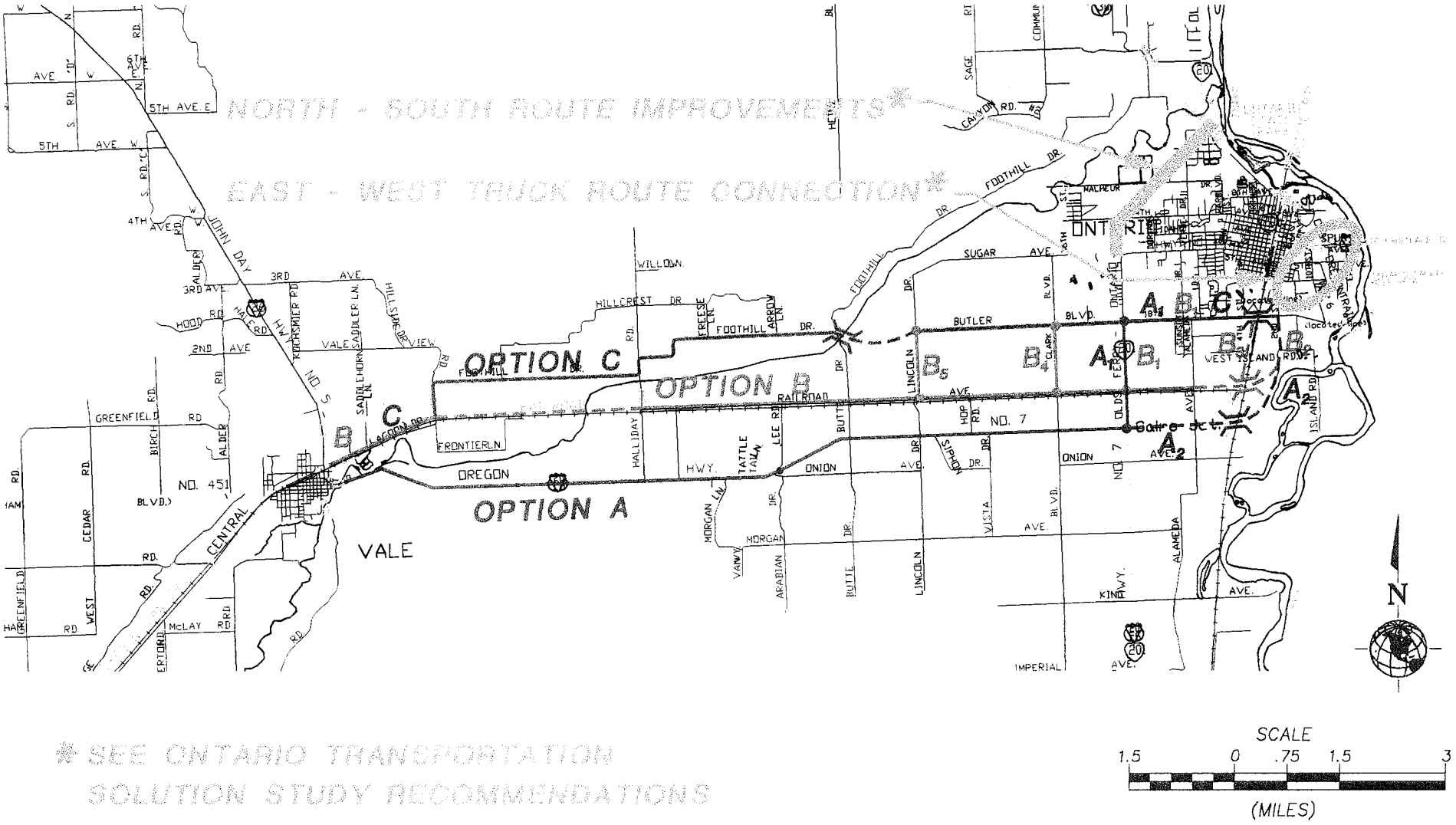
This alternative assumes that a series of new construction projects would be completed during the planning period which would improve the transportation system in Malheur County, thus addressing many of the needs identified in Chapter 5. The specific projects addressed as part of the "Build" alternative are included in Table 6-1, on the following page. As shown in Table 6-1, the "Build" alternative projects address two travel modes: roadway and air. The roadway projects address five key areas of need to: improve farm-to-market East-West truck access; improve North-South access around Ontario's northern city limits; improve Nyssa to Vale access; improve Highway 201 corridor routes and connections; and, modify the sharp 90° turn on US 95 in Jordan Valley. For each area of need, one or more project options are listed. Roadway improvements would include shoulder improvements for bikeways, where appropriate. A rough estimate of the project cost is also provided. These cost estimates are based on very broad assumptions about the projects and are provided only as a general guideline as to the relative cost of each option. For more detail about the cost estimates see the analysis summary provided in

Appendix E. Figure 6-1 identifies the general location and configuration of the Farm-to-Market / East-West Truck Route roadway options identified in Table 6-1.

Table 6-1
Project Options: "Build" Alternative

Roadway Circulation	**Improve Farm-to-Market/East-West Truck Route**		
	Option A:	Widen US 20/26.	
	Suboption 1)	• Improve and extend 18th Avenue and build a new RR overcrossing.	$28,490,313
	Suboption 2)	• Continue US 20/26 corridor and build a new RR overcrossing.	$30,144,617
	Option B	Railroad Ave extension.	
	Suboption 1)	• Improve and extend 18th Avenue and build a new RR overcrossing.	$13,327,891
	Suboption 2)	• Continue Railroad Ave and build new RR overcrossing corridor.	$15,931,073
	Suboption 3)	• Continue Railroad Ave. to UPRR, Improve 18th St. and build a new RR overcrossing.	$15,667,022
	Suboption 4)	• Improve Railroad Ave., Clark Blvd., Butler Blvd., 18th Avenue and build a new RR overcrossing.	$13,383,398
	Suboption 5)	• Improve Railroad Ave., Lincoln Dr., Butler Blvd., and 18th Avenue and build a new RR overcrossing	$13,516,741
	Option C	Improve Foothill/Extend Butler.	
	Suboption	Improve and extend 18th Avenue and build new RR overcrossing.	$16,191,498
	Build North-South Arterial		
	Option	Create a by-pass around Ontario's western and northern city limit *(project specifics pursuant to the Ontario Transportation Solutions project).*	TBD
	Improve Nyssa to Vale access		
	Option A	Extend Alberta Ave. to Lytle Blvd.	$2,747,945
	Option B	Extend Columbia Ave. to Lytle Blvd.	$2,649,293
	Modify sharp 90° turn on US 95 in Jordan Valley		
	Option	Minor intersection realignment *(see Jordan Valley TSP for details)*	Project underway
	Improve Highway 201 Corridor		
	Option A	Route re-alignment to UPRR spur ROW.	$2,705,950
	Option B	Stanton Blvd. extension.	$1,080,437
Airport[1]	**Improve emergency air access in the Jordan Valley area**		
	Option	Partner with ODOT and the City of Jordan Valley to build a new airport in the Jordan Valley area.	$250,000
	Improve air transportation opportunities in the Vale area		
	Option	Extend (approximately 500 feet) runway at Miller Memorial Airport in Vale.	$50,000

[1] Planning level project cost estimates for both airport improvement project options are based on a gravel surface approximately 65 feet wide at $1.00/square foot.



* SEE ONTARIO TRANSPORTATION SOLUTION STUDY RECOMMENDATIONS

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

EAST - WEST FARM-TO-MARKET TRUCK ROUTE IMPROVEMENT OPTIONS

FIGURE 6-1

W&H PACIFIC
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BEAVERTON, OR 97008
(503) 626-0455

THE TRANSPORTATION SYSTEM MANAGEMENT (TSM) / TRANSPORTATION DEMAND MANAGEMENT(TDM) ALTERNATIVE

TSM programs and projects are designed to improve the efficiency of existing transportation facilities (e.g., access management, and accident reduction and response). TDM programs and projects are intended to reduce the demand on existing facilities by, for example, encouraging the use of alternative travel modes like bicycles and public transportation. TSM and TDM programs and projects often overlap with and address other concerns such as safety and accessibility. The TSM/TDM alternative assumes that, while no new major roadway construction projects (excluding bridges) are initiated, a number of other improvements and management strategies are implemented as outlined in Table 6-2 which improve vehicular traffic flow and encourage the use of alternative modes of transportation.

Table 6-2
Project Options: "TSM/TDM" Alternative[2]

TSM	**Safety and Traffic Management Improvements**		**Costs**
	Option	Improve bridges identified by ODOT as "functionally obsolete". (7 bridges)	$7,003,080
	Option	Improve bridges identified by ODOT as "structurally-deficient" (14 bridges) and Malheur County as substandard (1 bridge)	$1,501,360
	Option	Improve pavement on those sections of road identified by ODOT as in "poor" condition (Highway 201 (Olds Ferry Rd., Owyhee Ave., and Parma Spur)[3].	$2,396,500
	Option	Adopt and implement access management standards to reduce conflicts and preserve traffic flow capacity in urbanizing areas.	Minimal
	Option	Evaluate and improve where possible traffic safety in areas of known hazard through a series of local road improvements including Arcadia/Alameda "S" curves and Highway 201 intersections.	$375,065
	Option	Work with Department of Wildlife to establish precautionary measures to reduce human/animal fatalities at key wildlife crossings.	TBD case-by-case
TDM	**Alternative Mode and Demand Management Improvements**		
	Option	Work with providers to enhance rideshare opportunities for commuters.	TBD
	Option	Work with providers to re-establish intercity passenger bus and/or rail service.	None[4]
	Option	Work with existing providers to better meet the local and regional transportation needs of the transportation-disadvantaged.	None[4]
	Option	Extend and improve bicycle facilities within the Ontario-Nyssa-Vale triangle by providing bikeways along designated arterials including Graham Blvd./Bully Creek Road Widening [5]	$1,723,055

[2] Some of the costs are indeterminate without detailed planning and engineering analysis.
[3] Projects not already programmed in the STIP.
[4] Coordination provided by ODOT's Community Transportation Program.
[5] Included in road improvement projects (see Build Alt.)

EVALUATING THE ALTERNATIVES

In Table 6-3, on the following pages, each of the three alternatives and the "Preferred" Alternative are evaluated in terms of its ability to meet the objectives identified in Chapter 3 (the "Preferred" Alternative is discussed in detail in the following section. Additionally, the alternatives are evaluated in a general way in light of those transportation goals, policies and objectives adopted at the federal and state levels which are pertinent to the Malheur County transportation system[6].

The Farm-to-Market East-West Truck Route Options

The "Build" Alternative includes major route options for addressing the need for improved farm-to-market truck access in the East-West US 20/26 corridor: (A) Widen US 20/26 to four lanes; (B) Extend Railroad Avenue; and, (C) Improve Foothill Drive and extend Butler Boulevard. Each of these project options has one or more suboptions to cross the Union Pacific railroad tracks. Appendix E provides planning level cost estimates for each of the options, including their suboptions. The planning level cost estimates are based on some broad assumptions about the projects and are subject to significant change. They are provided for general comparison purposes only.

All of the options terminate in Second Street east of the UPRR mainline and the Ontario UGB. Ontario city truck route options and I-84 connections are not defined as part of the Malheur County TSP, but deferred to the *Ontario Solutions* study. It should be noted that none of the options reflect the cost of a new I-84 interchange. Feasibility and cost of a new interchange will also be examined in the Ontario Solutions project.

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[6] At the federal and state levels, planning policy and guidance is provided by a number of documents including:

- Federal Intermodal Surface Transportation Efficiency Act (ISTEA) -- requires local plans that balance automobiles with other transportation mode, show cooperation among various units of government, and provide meaningful input.
- Oregon Transportation Plan (OTP) -- provides a general context for transportation planning in Oregon with a philosophy, vision and broad policies.
- Oregon Transportation Planning Rule (TPR) -- policies and guidelines that strengthen the ties between transportation and land use planning.
- State Agency Coordination Program (SAC) -- an agreement between ODOT and the Department of Land Conservation and Development defining how these agencies will coordinate their efforts.
- Modal Plans -- including the Oregon Highway Plan, Oregon Rail Freight Plan, Oregon Rail Passenger Policy and Plan, Transportation Safety Action Plan, Intermodal Facilities and Connections Plan, Oregon Bicycle/Pedestrian Plan, Oregon Public Transportation Plan (in progress), and the Oregon Aviation Systems Plan.
- Corridor Strategy Plans -- including US Highway 20 Corridor Strategy (Draft), OR Highway 126/US Highway 26 Corridor Strategy (Draft), and US Highway 95 Corridor Strategy (Draft).

Table 6-3

Transportation Goals and Objectives - Alternatives Evaluation

GOALS AND OBJECTIVES	ALTERNATIVES			
	NO-ACTION	BUILD	TSM/TDM	PREFERRED
Goal 1: Improve and enhance safety and traffic circulation on the local road systems				
• Develop an efficient road network	○	◗	◗	●
• Improve and maintain existing roadways	◗	◗	●	●
• Ensure planning coordination between local jurisdictions, the County and the State	◗	◗	●	●
• Identify truck routes to reduce truck traffic in urban areas	○	●	○	●
• Examine the need for speed reduction in specific areas	○	○	●	●
• Identify local problem spots and recommended solutions	○	◗	◗	●
Goal 2: Identify the 20-year roadway system needs to accommodate developing or undeveloped areas without undermining the rural nature of local communities.				
• Adopt policies and standards that address street connectivity, spacing and access management	○	○	●	●
• Integrate new arterial and collector routes into improved grid systems with an emphasis on taking the pressure off of traditionally heavy traffic collectors	○	●	○	●
• Improve access into and out of each jurisdiction for goods and services	○	●	◗	●
• Improve the access onto and off of arterial roadways to encourage growth	○	◗	◗	●
• Improve Farm-to-Market access in the US 20/26 corridor	○	●	○	●
Goal 3: Preserve the function, level of service and safety of the county roads and state highways.				
• Develop access management standards	○	○	●	●
• Develop alternative, parallel routes where applicable	○	●	○	●
• Promote railroad freight service to reduce truck-related traffic	○	○	○	○
• Promote alternative modes of transportation	◗	◗	◗	●
• Promote demand management (i.e., rideshare, park and ride)	○	○	●	●
• Promote transportation system management (i.e., signal synchronization, median barriers, etc.)	○	○	●	●
• Develop policies and procedures to minimize impacts to and protect transportation facilities, corridors or sites during the development review process	○	●	●	●
Goal 4: Increase the use of alternative modes of transportation (walking, bicycling, rideshare/carpooling, and transit) through improved access, safety and service.				
• Provide sidewalks and safe crossings on arterial and collector streets	○	◗	◗	●
• Provide shoulders on rural collector and arterial streets	○	●	◗	●
• Provide appropriate bikeways	○	◗	◗	●
• Promote alternative modes and rideshare/carpool programs through community awareness and education	○	○	●	●
• Plan for future expanded transit service by sustaining funding to local transit efforts and seeking consistent state support	○	○	●	●
• Improve emergency air access in Jordan Valley area	○	●	○	●
Federal Transportation Goals and Policies				
• Generally meets overall intent of current federal transportation policy	○	◗	◗	●
State Transportation Goals and Policies				
• Generally meets overall intent of current state transportation policy	○	◗	◗	●

LEGEND:

● = Fully addresses the objective; ◗ = Somewhat addresses the objective; ○ = Does not address the objective

As shown in Figure 6-1, Options A1 and A2 both include widening Highway 20/26 to four lanes to provide adequate future capacity in the corridor. However, they are the most expensive options considered, at more than $28 million, and are likely too expensive to implement. The slightly less expensive alternative of widening Highway 20/26 to only three lanes was also evaluated. However, it generally failed to resolve future capacity constraint issues and, while it may solve some safety problems by construction of passing lanes, may likely create others.

Options B1 through B5 (Railroad Avenue) are almost one-half the cost of Option A, and also provide adequate future capacity in the corridor. They are the least intrusive to existing, rural agricultural lands. These options are more proximate to Highway 20/26 than Option C and therefore likely to bring greater traffic relief to the highway. Option B5 includes extending Railroad Avenue west to the City of Vale, curve and mainline improvements to Lincoln Avenue (between Railroad Avenue and Butler Boulevard), improvements to Butler Boulevard and 18th Street, and a new railroad overcrossing with connections to 2nd Street in Ontario. At an estimated cost of $13.5 million, Option B5 has advantages over all other options including:

- can be constructed in phases over a long period of time in phasing (see Chapter 7), effectively utilizing existing alignments and right-of-way;
- least intrusive to existing farm lands;
- costs are sensibly shared by ODOT, City of Ontario and Malheur County;
- provides greatest relief to traffic congestion and operations on Highways 20/26 and 201.

For these reasons Option B5 represents the preliminary recommendation.

The Preferred Alternative

The Preferred Alternative combines the most effective project options from both the "Build" and the TSM/TDM alternatives in order to develop an alternative that most thoroughly accomplish the goals and objectives of the TSP as identified in Chapter 3 (see Table 6-3). Table 6-4, below, identifies the components of the Preferred Alternative.

Table 6-4: Preferred Alternative

Roadway	**Farm-to-Market East-West Truck Route**		
	Railroad Ave extension with improved Railroad Ave., Lincoln Dr., Butler Blvd., and 18th Ave., and new RR overcrossing (Option B5)		$13,516,741
	Build a North-South Arterial		
	Around Ontario's western and northern city limit *(project specifics pursuant to the Ontario Transportation Solutions project).*		TBD
	Improve Nyssa to Vale access		
	Extend Columbia Ave. to Lytle Blvd.		$2,649,293
	Modify sharp 90° turn on US 95 in Jordan Valley		
	Minor intersection realignment *(see Jordan Valley TSP for details)*	*ODOT*	Project Underway
	Improve Highway 201 Corridor		
	Route re-alignment to UPRR spur ROW and Stanton Blvd. extension.		$3,786,387
Airport	**Improve emergency air access in the Jordan Valley area**		
	Partner with ODOT, the City of Jordan Valley and others to build a new airport in the Jordan Valley area.		$250,000
	Improve air transportation opportunities in the Vale area		
	Extend runway at Miller Memorial Airport in Vale.		$50,000
TSM	**Accident Reduction and Traffic Flow**		
	Improve bridges identified by ODOT as "functionally obsolete". (7 bridges)		$7,003,080
	Improve bridges identified by ODOT as "structurally-deficient" or substandard. (14 bridges)		$1,501,360
	Improve pavement on those sections of road identified by ODOT as in "poor" condition (Highway 201 (Olds Ferry Rd., Owyhee Ave., and Parma Spur)[7].		$2,396,500
	Adopt and implement access management standards to reduce conflicts and improve traffic flow particularly in urbanizing areas.		Minimal
	Evaluate and improve where possible traffic safety in areas of known hazard through a series of local road improvements including Arcadia/Alameda "S" curves and Highway 201 intersections and miscellaneous safety improvements as follows:		$790,000
	• **Highway 201 – remove railroad overcrossing (mp 14.4) and improve at-grade crossing,**		$250,000
	• Clark Boulevard intersections,		TBD
	Boat Landing Road,		TBD
	Sage Rd./Canyon #2 Rd. intersection,		TBD
	Highway 20 RR bridge pier removal.		TBD
	Work with Department of Wildlife to establish precautionary measures to reduce human/animal fatalities at key wildlife crossings.		TBD case-by-case
TDM	**Alternative Modes**		
	Work with providers to enhance rideshare opportunities for commuters.		TBD
	Work with providers to re-establish intercity passenger bus and/or rail service.		None
	Work with existing providers to better meet the local and regional transportation needs of the transportation-disadvantaged.		None
	Extend and improve bicycle facilities within the Ontario-Nyssa-Vale triangle by providing bikeways along designated arterials including Graham Boulevard/Bully Creek road widening[8]		$1,723,055
	TOTAL ESTIMATED COST		**$33,916,416**

[7] Projects not already programmed in the STIP.

[8] Included in roadway improvement projects.

CHAPTER 7:
TRANSPORTATION SYSTEM PLAN

INTRODUCTION

The Malheur County TSP includes separate elements for each travel mode within the county: Roadway, Pedestrian, Bikeway, Public Transportation, Rail Service, Air Service, Pipeline Service and Waterway Transportation plans. The analysis and evaluation of the three major alternatives was summarized in Chapter 6. Based on the "Preferred" alternative that resulted from that analysis, a number of transportation/land use system plan and project improvements are identified and summarized as part of this chapter. Other components of the TSP include transportation policies and standards to effectively guide plan development. These include rural roadway design standards, functional classification and access management. These policies are also addressed in Chapter 9.

The combination of TSP projects and policies are consistent with the Malheur County Comprehensive Land Use Plan.

RECOMMENDED ROAD STANDARDS

Roadway Standards

Roadway standards link the design of a roadway to its function. Function is determined by operational characteristics (e.g., traffic volume, operating speed, safety, and capacity). Roadway design standards help guide the development of roadways which are both safe and consistent. Additionally, they simplify the administrative process associated with the planning and construction of a new roadway. The development of the Malheur County TSP provides the County with an opportunity to review and revise roadway design standards to more closely fit with the functional roadway classification and the goals and objectives of the TSP. Roadway design standards are based on experience, and policies and publications of the profession. In 1979 Malheur County developed and considered for adoption roadway standards. These standards were revised and are included in the TSP as Appendix F. Revised rural roadway standards are illustrated in Figure 7-1 and summarized in Table 7-1. These rural road standards would be applied only to those county roads outside the Urban Growth Boundaries (UGB). On state highways the ODOT highway design standards[1] should apply to all new projects.

[1] Oregon Department of Transportation. *Highway Design Manual* (1996).

W&H PACIFIC

Table 7-1
Recommended Rural Roadway Design Standards

Classification	Minimum Right-of-Way Width	Minimum Improvement Width
Rural Arterial Roadway	60-74 feet	40-54 feet
Rural Major/Minor Collector	60 feet	36 feet
Rural Minor Roadway	60 feet	34 feet
Rural Cul-de-Sac Roadway	50 feet	28 feet
Rural Public Roadway	60 feet	24 feet

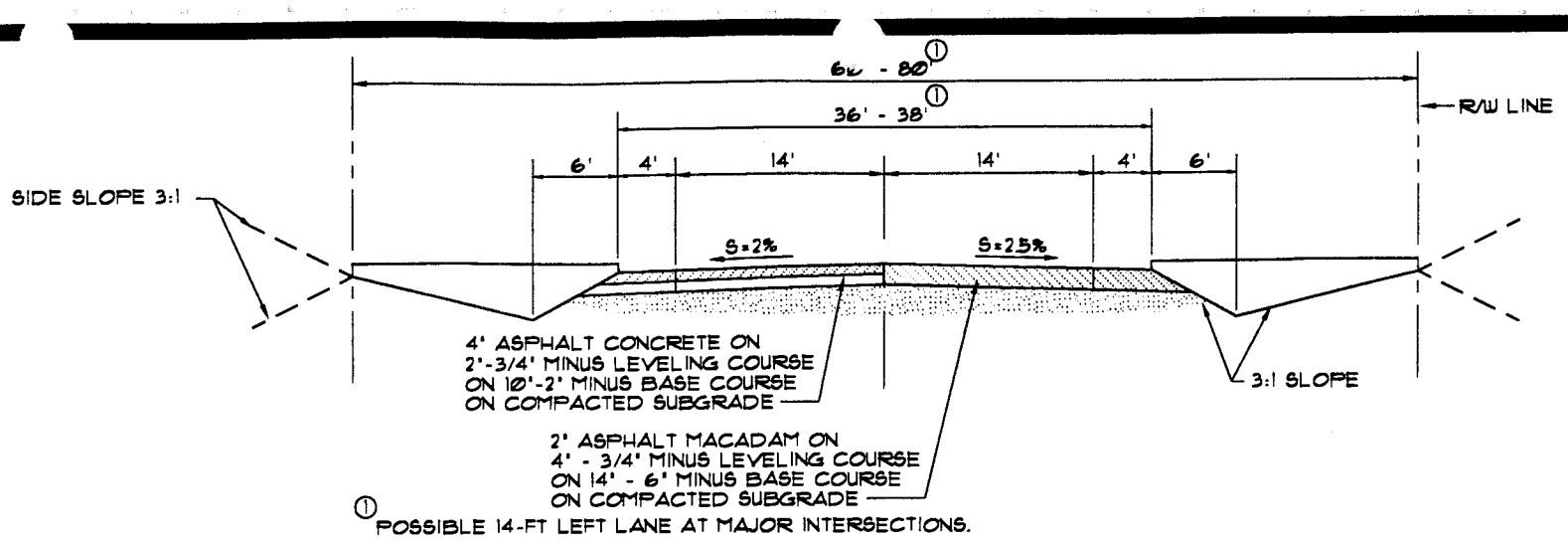
Functional Classification

Malheur County roads and highways should be classified according to their function, providing for consistency in construction, operation and maintenance. The functional hierarchy of roadways provides: grouping of roads and highways by the service they provide; facility definitions to handle different desired levels of access and mobility; an understanding of how a roadway is being used; and, guidelines on how roads are to be designed. The function of the road within the roadway system and the types and intensities of land use along their routes are other important factors in their appropriate designation. Figure 7-2 shows the recommended functional classification. Based on the anticipated use and function of the State and County roadway system in Malheur County, a number of functional classification changes will be necessary (for existing functional classifications see Figure 4-1) . These include the following:

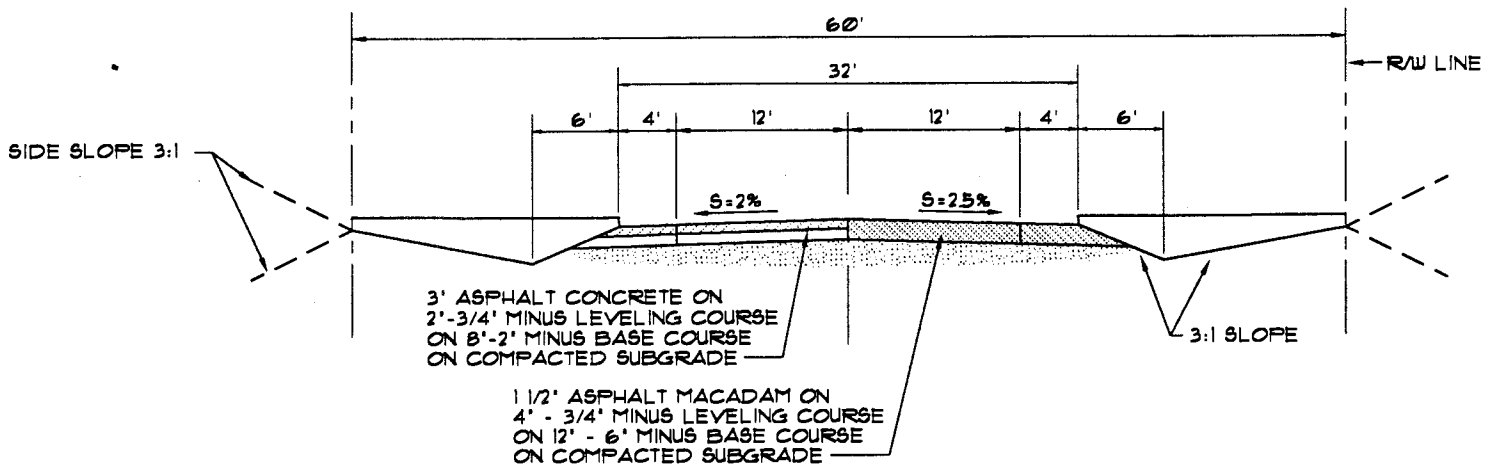
Route	Recommended Functional Class
Railroad Avenue	Rural Major Collector
Lincoln Avenue (between Railroad Ave. and Butler Blvd.)	Rural Major Collector
Boat Landing Road	Rural Major Collector
Columbia Avenue	Rural Major Collector
Stanton Boulevard (between I-84 and Highway 201)	Rural Major Collector
Highway 201 Re-alignment (via UPRR to Idaho State Line)	Minor Arterial

Rural Arterial Roadways provide linkage between population centers within the region and connection to state and national highways, serving primarily through traffic with limited access. Delays are generally associated with the inability to pass on two-lane highways as opposed to heavy volume. Rural Arterial Roadways can be classified as major or minor based on the level of demand they serve. As shown in Figure 7-2, the Functional Classification Map, within Malheur County these roadways include: Highways 20, 26, 78 95 and 201.

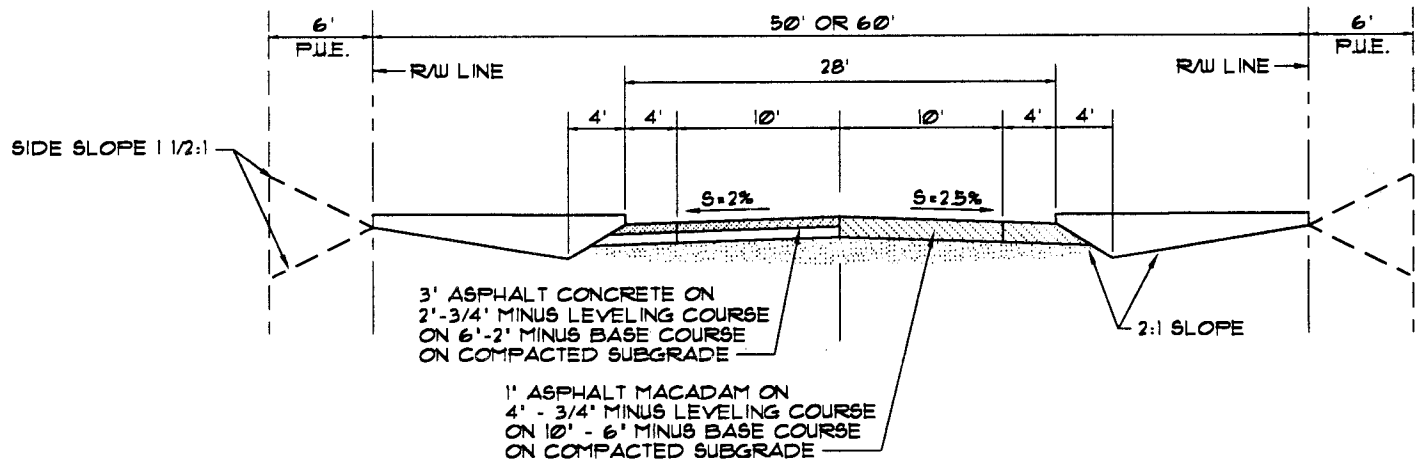
Generally, rural arterial roadways have been built to rural standards and do not include curb, gutter or sidewalks. The shoulder of the road generally serves both pedestrian and bicyclist needs, with a ditch for drainage as needed.



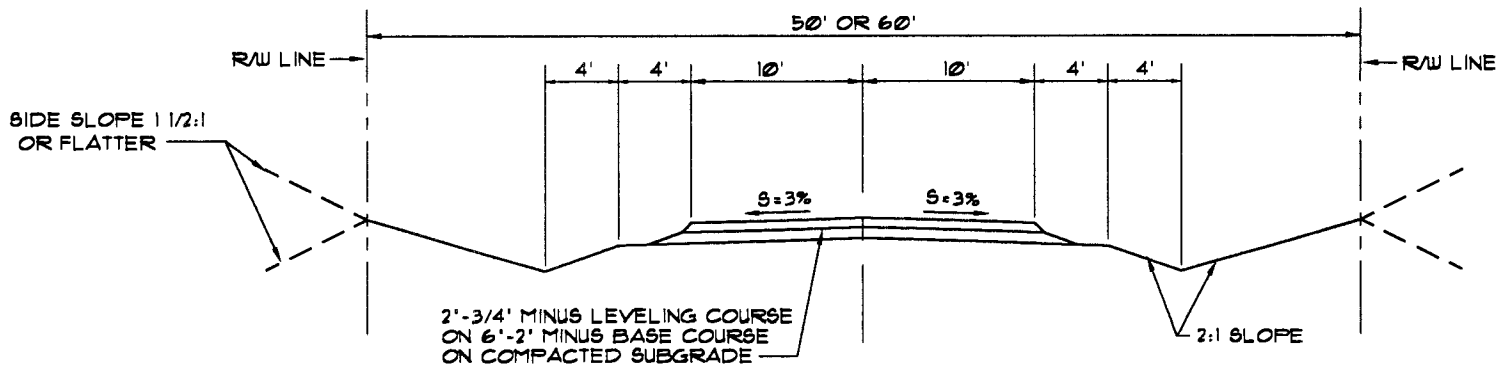
RURAL ARTERIAL ROADWAY



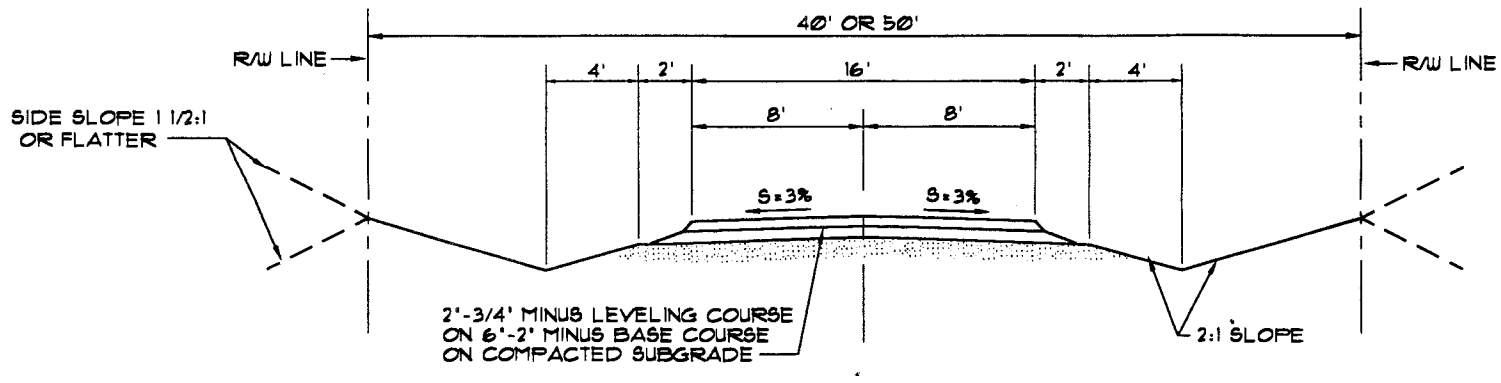
RURAL COLLECTOR ROADWAY



RURAL MINOR ROADWAY (PAVEMENT)



RURAL MINOR ROADWAY (GRAVEL)



NOTES:
ROADS BUILT TO THIS STANDARD MAY NOT BE ACCEPTED AS COUNTY ROADS FOR MAINTENANCE. THE MAINTENANCE WILL THEN BE THE RESPONSIBILITY OF THE ABUTTING PROPERTY OWNERS OR OTHER USERS.

RURAL PUBLIC ROADWAY

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 7-1

Recommended Rural Roadway Standards

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Rural Collector Roadways provide both local access and circulation within rural areas of the County, distributing trips from the arterials through the area to their ultimate destinations, often serving abutting uses directly. Unlike arterials, access control may not be required. Rural collector roadways are divided into two classes (major and minor) based on the level of demand they serve and the type of facility they provide. Many of the minor rural collector roadways in Malheur County are unpaved.

Rural Local Roadways have the primary function of providing access to immediately adjacent land and serve little or no through traffic. They are generally narrower than collector roadways. Most of the rural local roadways in Malheur County are unpaved.

Bike Lanes. For the most part, rural roadways do not require separate bikeway facilities. Bicyclists can generally be accommodated on the shared roadway or on a shoulder, depending on traffic volumes. In areas with higher bicycle use, striping the shoulder for a bicycle lane may be appropriate.

Sidewalks. Rural roadways generally do not require separate pedestrian facilities. Pedestrians can usually be accommodated on the shoulder of the roadway. In areas with high pedestrian activity, a separate pathway should be considered.

Access Management Plan

Access management is a key mechanism for maintaining a transportation system. Due to delays and safety hazards created by turning movements, too many access points can diminish the functionality of an arterial. Historically, the response to this situation is to add lanes to the roadway, but this can lead to increases in traffic and, in a cyclical fashion require increasingly expensive capital investments to continue to increase capacity. Cost savings is not the only reason to manage access. Additional driveways along arterial roadways increases the opportunity for vehicular conflict. Research has shown a direct correlation between the number of access points and collision rates.

As Malheur County continues to develop, the arterial/collector/local street system will become more heavily used and relied upon for a variety of travel needs. As such, it will become increasingly important to manage access on the existing and future arterial/collector roadway system as new development occurs. One of the objectives of the Malheur County TSP is to develop an access management plan that maintains and enhances the integrity (capacity, safety, and level-of-service) of the area's arterials and collectors. To accomplish this, an access management policy and implementation plan must be developed that will control access to and operation of these roadways.

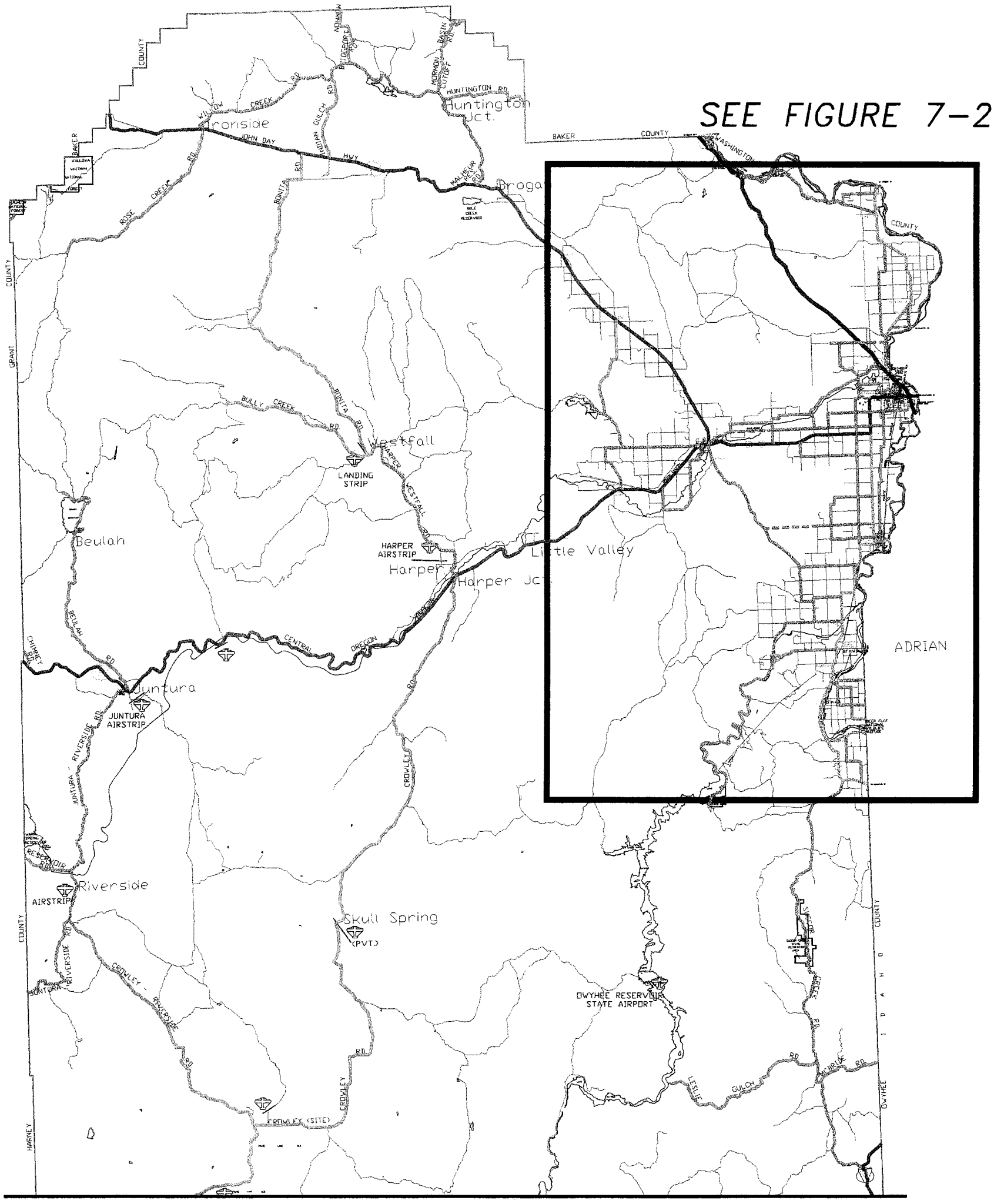
The Malheur County TSP will serve as the land use and transportation plan; access management strategies and review policies and procedures, which will guide future development and growth within the County, will complement the plan. The plan defines how the arterials and collectors will function in and maintain or improve the existing system over the next 20 years. The recommended access management plan is consistent with the current Oregon Highway Plan and National Highway System (NHS).

Table 7-2 provides general access management guidelines for each of the rural roadway classifications:

Table 7-2
Suggested Access Management Guidelines for Rural Roadways

Functional Classification	Intersection			
	Public Road		Private Drive	
	Intersection Type	Spacing	Intersection Type	Spacing
Malheur Co. Rds				
Rural Major Arterial	at-grade	1 mile	Left/Right Turns	1,200 feet
Rural Minor Arterial	at-grade	1/2 mile	Left/Right Turns	500 feet
Rural Collector (major/minor)	at-grade	1/4 mile	Left/Right Turns	300 feet
Rural Local	at-grade	200-400 feet	Left/Right Turns	Access to each lot.
State Highways				
Interstate				
I-84	Interchange	3 - 8 miles	None	NA
Statewide				
Highway 20	at-grade	1 - 3 miles	Right Turns	1,200 feet
Highway 26	at-grade	1 - 3 miles	Right Turns	1,200 feet
Highway 95	at-grade	1 mile	Left/Right Turns	1,200 feet
Regional				
Highway 78	at-grade	1/2 mile	Left/Right Turns	500 feet
Highway 201[2]	at-grade	1/2 mile	Left/Right Turns	500 feet
District				
Highway 201	at-grade	1/4 mile	Left/Right Turns	300 feet
Parma Spur	at-grade	1/4 mile	Left/Right Turns	300 feet
Homedale Spur	at-grade	1/4 mile	Left/Right Turns	300 feet
Weiser Spur	at-grade	1/4 mile	Left/Right Turns	300 feet
Payette Spur	at-grade	1/4 mile	Left/Right Turns	300 feet
Vale-West Hwy	at-grade	1/4 mile	Left/Right Turns	300 feet
Adrian Arena Hwy	at-grade	1/4 mile	Left/Right Turns	300 feet
Adrian-Caldwell Hwy	at-grade	1/4 mile	Left/Right Turns	300 feet
Olds Ferry-Ontario Hwy	at-grade	1/4 mile	Left/Right Turns	300 feet

[2] Between Cairo Junction and Nyssa.



N

SCALE

8 0 4 8 16

(MILES)

LEGEND

ROADS

Existing	Future	
		Interstate
		Principal Arterial
		Minor Arterial
		Urban Collector/ Rural Major Collector
		Minor Collector
		Local

- OREGON ROUTE
- US. ROUTE
- INTERSTATE ROUTE
- NATIONAL HIGHWAY SYSTEM ROUTE
- COMMERCIAL – GENERAL AVIATION
- SAFETY REST AREA – WEIGH STATION
- BRIDGE – GRADE SEPARATION
- RIVER

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 7-2.1

Recommended Functional Classification

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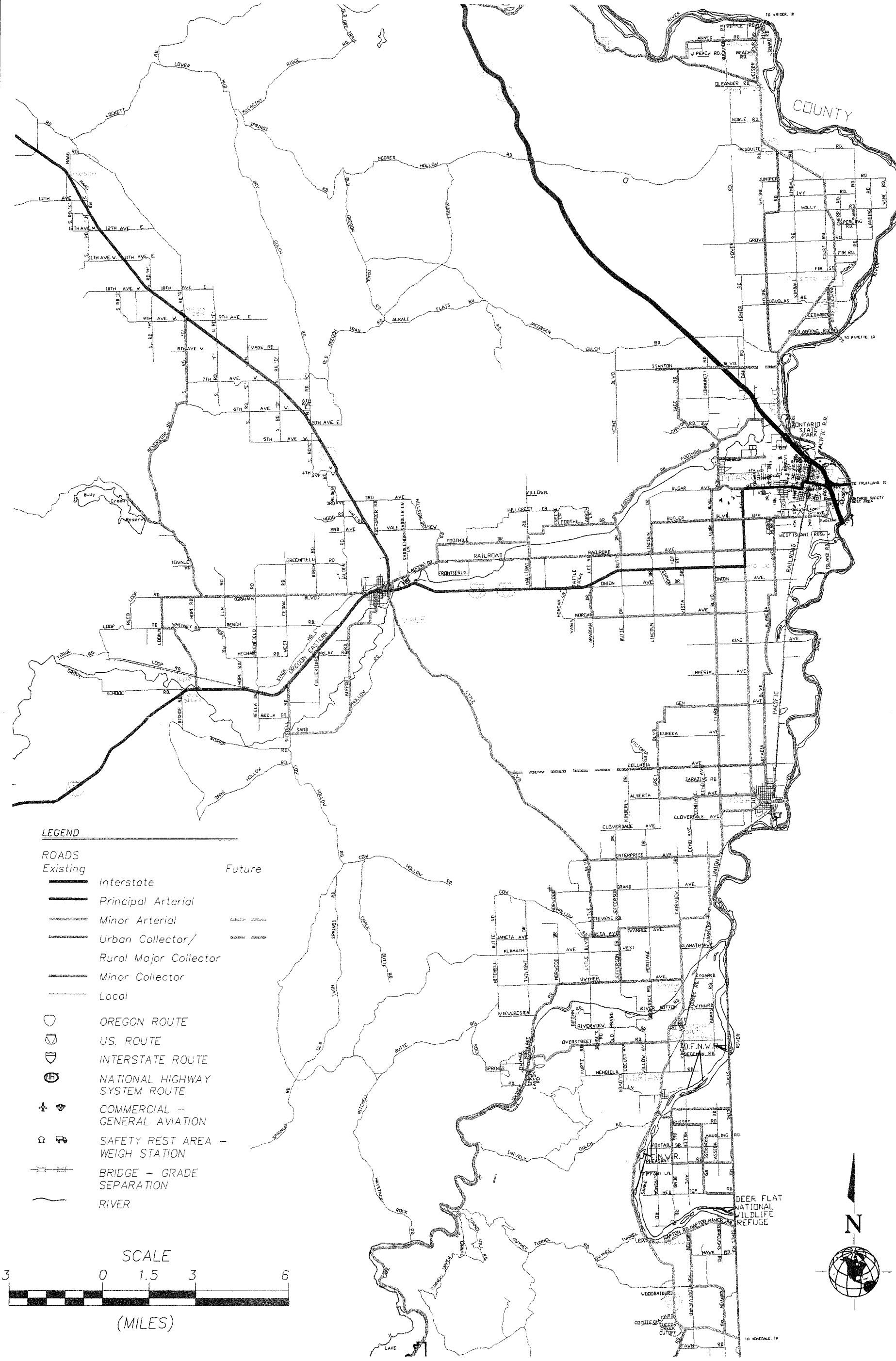

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 7-2.2

Recommended Functional Classification

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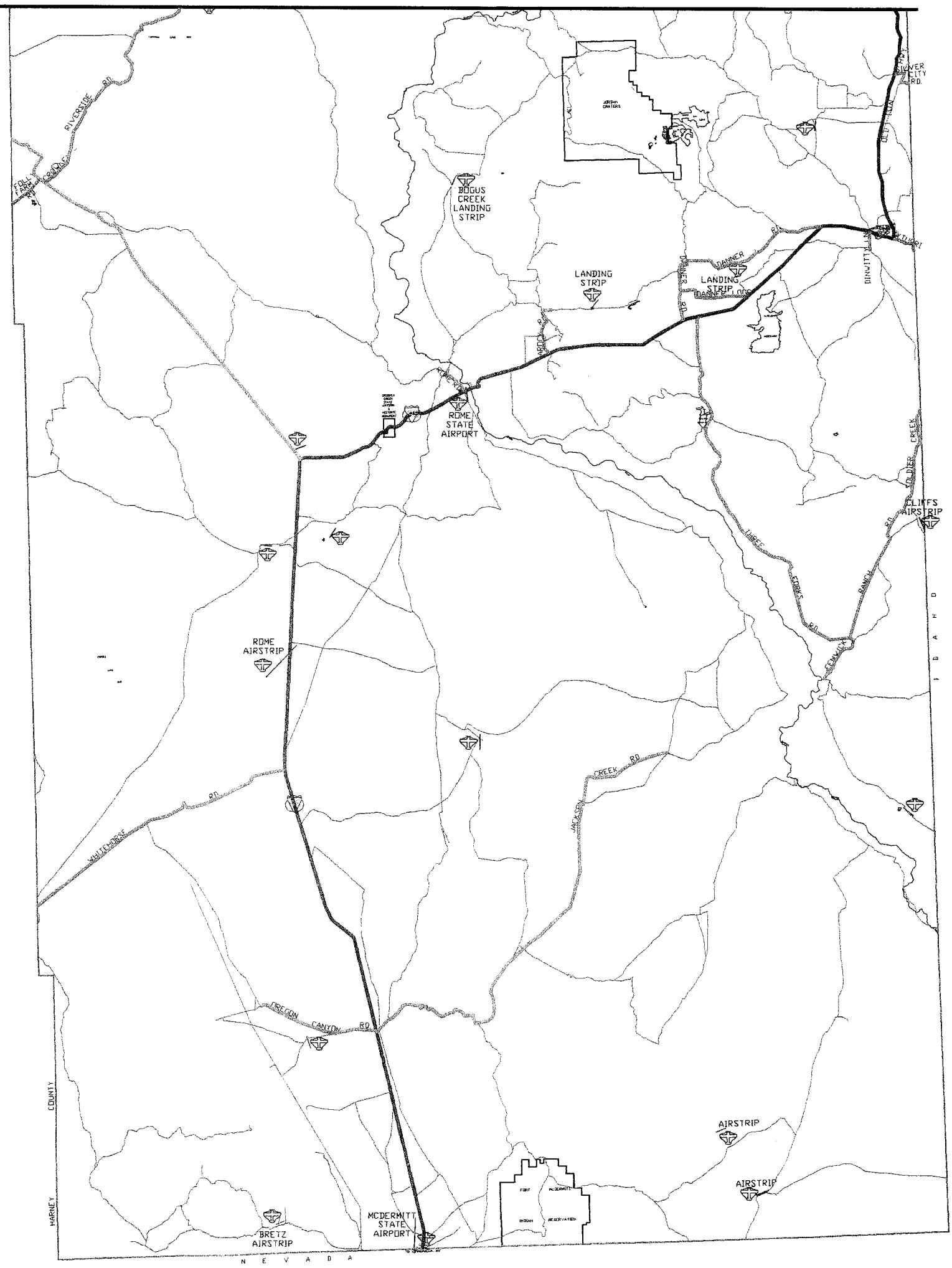
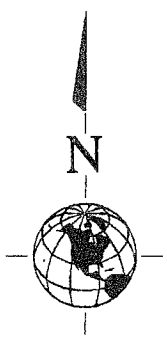
MATCHLINE SEE FIGURE 7-2.1





SCALE

8 0 4 8 16

(MILES)

LEGEND

ROADS

- Interstate
- Principal Arterial
- Minor Arterial
- Urban Collector/ Rural Major Collector
- Minor Collector
- Local

- OREGON ROUTE
- US. ROUTE
- INTERSTATE ROUTE
- NATIONAL HIGHWAY SYSTEM ROUTE
- COMMERCIAL – GENERAL AVIATION
- SAFETY REST AREA – WEIGH STATION
- BRIDGE – GRADE SEPARATION
- RIVER

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 7-2.3

Recommened Functional Classification

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3. Purchase right-of-way and improve SW18th Avenue between Butler Boulevard and 4th Street, and install new traffic signal at Highway 201/18th Avenue (ODOT/City project).
4. Build new UPRR overcrossing at 18th Street and extend 18th Street east to 2nd Street (ODOT/City of Ontario project, local Ontario street connection improvements to be identified as part of the Ontario Solutions and TSP studies).

2003-2007

5. Widen and re-pave Railroad Avenue between Butte Road and Lincoln Avenue (County project).
6. Widen and re-pave Lincoln Avenue between Railroad Avenue and Butler Boulevard (County project).
7. Widen and re-pave Butler Boulevard between Lincoln Avenue and Highway 201 (County project).

2008-2012

8. Extend Railroad Avenue from Lagoon Drive west to Highway 26 (project coordinated between Malheur County and City of Vale following Vale UGB/industrial land needs analysis). This project could be accelerated to the 2003-2007 time period as funding becomes available.

Project 2 (Capacity/ Circulation) Build Ontario North-South Arterial (see Figure 7-3). This project would directly link Highway 201 with Interstate 84 north of Ontario. The recommended route, necessary improvements, cost estimates and financing plan for this project are being developed as part of the Ontario Transportation Solutions project. This project will likely include shoulder improvements and striping for bike lanes.

Project 3 (Capacity/ Circulation) Extend Columbia Avenue to Lytle Boulevard (see Figure 7-3). This project is intended to provide improved access between Vale and Nyssa. It will likely include shoulder improvements and striping for bike lanes. Planning level costs are estimated to be $2.65 million.

MODAL PLANS

The Malheur County modal plans have been developed using information collected and analyzed through the goals and objectives (Chapter 3), the physical inventory (Chapter 4), forecasts (Chapter 5), the alternatives analysis (Chapter 6) and input from area residents. The plans address transportation system needs for Malheur County for the next 20 years. The specific timing of individual projects will be influenced by changes in the land use pattern and actual population growth in future years.

Roadway Plan

The TSP recommends a detailed program of collector and arterial road and bridge improvements as described below and shown in Figure 7-3. The TSP identifies those transportation projects and programs, which together with the existing transportation system, will serve the land uses as defined in the Malheur County Comprehensive Plan. Over the next 20 years these road projects will increase traffic safety and capacity and enhance connectivity and circulation throughout Malheur County.

Any new road construction or road widening project that expands the roadway system capacity is defined as a capacity improvement. Road upgrades and safety projects (i.e., all non-capacity work) generally include improvements to existing facilities such as roadway reconstruction or intersection upgrades, that increase the level of safety or efficiency.

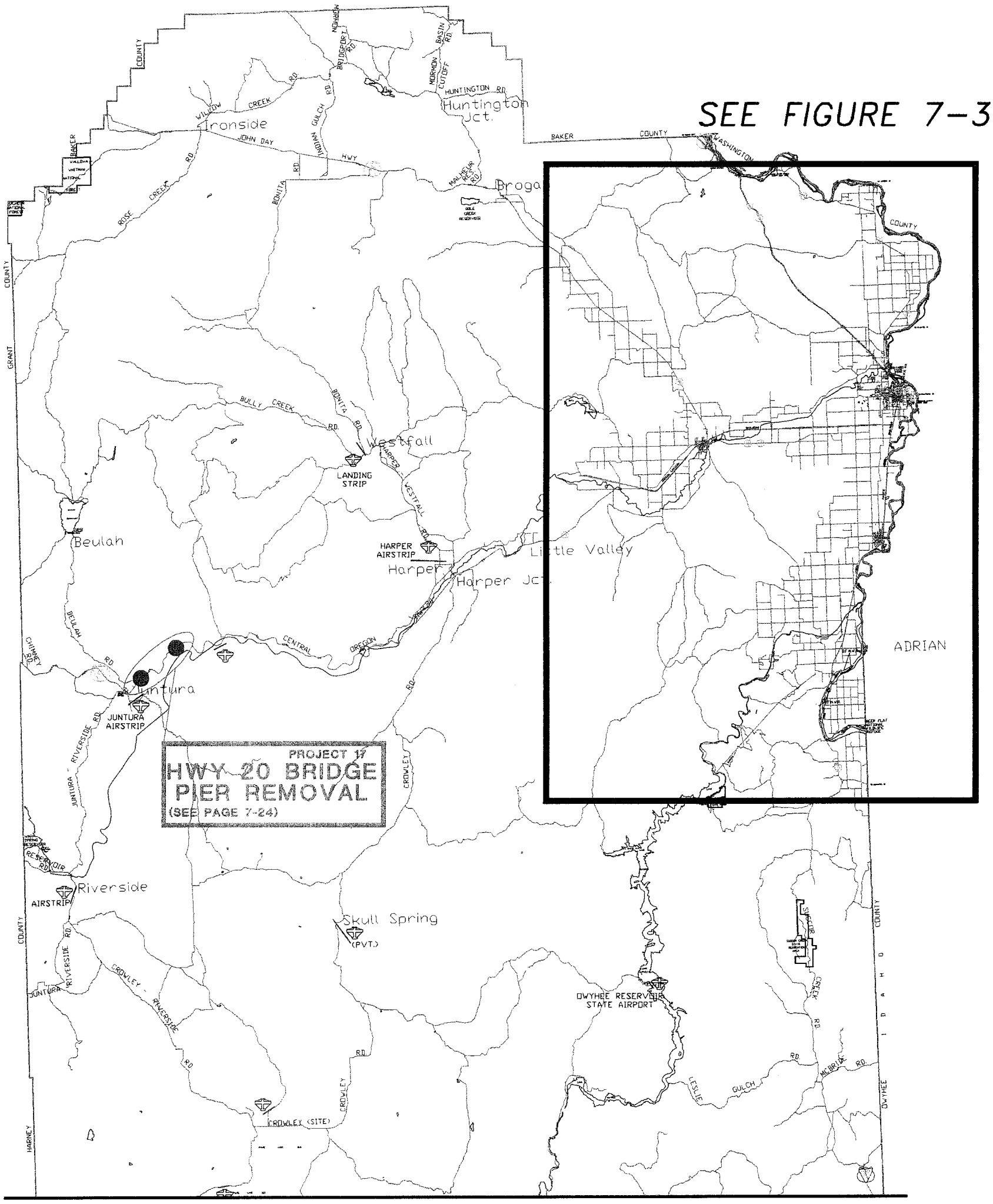
The following descriptions detail, by project number, the purpose and scope of each improvement at the planning level. Prior to project design and construction, specific environmental impacts, grading requirements, and roadway alignments should be analyzed as necessary.

Project 1 (Freight Mobility & Capacity) Extend Railroad Avenue and improve Lincoln Avenue, Butler Boulevard and SW 18th Avenue with a new railroad bridge (Option B5) as shown in Figure 7-3, this project improves east-west, farm-to-market truck access by providing an alternative to Highway 20/26. Planning level costs are estimated to be $13.5 million. As described in Chapter 6, Option B5 can be coordinated with ODOT and the City of Ontario, and can be constructed in phases over time, efficiently utilizing existing right-of-way and alignments. The recommended phasing plan is spread over three, five year periods as follows:

1998-2002

1. Purchase right-of-way and extend Railroad Avenue from Halliday Road to Lagoon Drive (Vale) (County project).
2. Purchase right-of-way (minor) and improve Lincoln Avenue corners at Railroad Avenue and Butler Boulevard (County project).

SEE FIGURE 7-3.2



MATCHLINE SEE FIGURE 7-3.3

N

SCALE

8 0 4 8 16

(MILES)

LEGEND

- OREGON ROUTE
- US. ROUTE
- INTERSTATE ROUTE
- NATIONAL HIGHWAY SYSTEM ROUTE
- COMMERCIAL – GENERAL AVIATION
- SAFETY REST AREA – WEIGH STATION
- BRIDGE – GRADE SEPARATION
- RIVER

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 7-3.1

Recommended Transportation System Improvements

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PROJECT 7
OLDS FERRY ROAD
(SEE PAGE 7-21)

PROJECT 14
BOAT LANDING ROAD
(SEE PAGE 7-15)

PROJECT 15
SAGE ROAD/ CANYON #2 RD.
(SEE PAGE 7-23)

PROJECT 16
STANTON BLVD. EXTENSION
(SEE PAGE 7-24)

PROJECT 2
NORTH-SOUTH ARTERIAL
(SEE PAGE 7-14)

PROJECT 1
RAILROAD AVE./ BUTLER BLVD./ 18TH ST.
(SEE PAGE 7-13)

PROJECT 18
GRAHAM BLVD./ BULLY CREEK RD.
(SEE PAGE 7-24)

PROJECT 12
ARCADIA BLVD./ ALAMEDA DR. CURVES
(SEE PAGE 7-23)

PROJECT 13
CLARK BLVD. INTERSECTIONS
(SEE PAGE 7-23)

PROJECT 3
COLUMBIA AVE. EXTENSION
(SEE PAGE 7-14)

PROJECT 8
HWY 201 INTERSECTIONS
(SEE PAGE 7-21)

PROJECT 7
OWYHEE AVENUE
(SEE PAGE 7-21)

PROJECT 10
HWY 201 RR CROSSING
(SEE PAGE 7-22)

PROJECT 7
PARMA SPUR
(SEE PAGE 7-21)

PROJECT 10
HWY 201 RR OVERCROSSING
(SEE PAGE 7-22)

PROJECT 11
HWY 201 RE-ALIGNMENT
(SEE PAGE 7-22)

N

LEGEND

ROAD

Local

OREGON ROUTE

US. ROUTE

INTERSTATE ROUTE

NATIONAL HIGHWAY SYSTEM ROUTE

COMMERCIAL – GENERAL AVIATION

SAFETY REST AREA – WEIGH STATION

BRIDGE – GRADE SEPARATION

RIVER

SCALE
3 0 1.5 3 6
(MILES)

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 7-3.2

Recommended Transportation System Improvements

W&H PACIFIC
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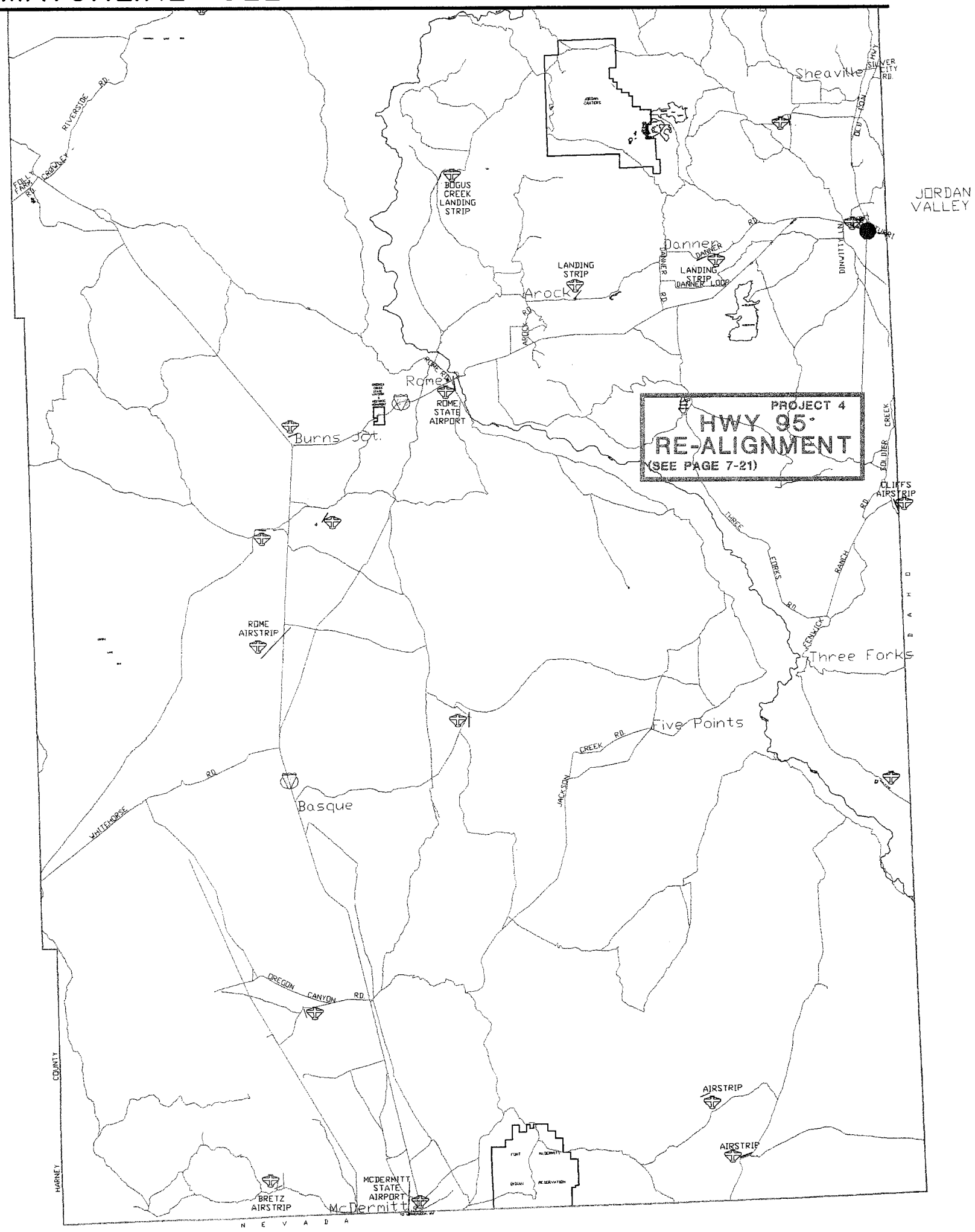
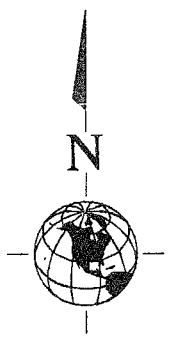
MATCHLINE SEE FIGURE 7-3.1





SCALE

8 0 4 8 16

(MILES)

LEGEND

- OREGON ROUTE
- US. ROUTE
- INTERSTATE ROUTE
- NATIONAL HIGHWAY SYSTEM ROUTE
- COMMERCIAL – GENERAL AVIATION
- SAFETY REST AREA – WEIGH STATION
- BRIDGE – GRADE SEPARATION
- RIVER

MALHEUR COUNTY TRANSPORTATION SYSTEM PLAN

FIGURE 7-3.3

Recommended Transportation System Improvements

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Project 4 (Safety) Minor intersection realignment of Highway 95 in Jordan Valley (see Figure 7-3). Highway 95 makes a sharp, 90° turn in downtown Jordan Valley, creating turning movement difficulties particularly for oversized vehicles. ODOT has indicated that they are currently working on this project. The need for passing lanes and safety improvements on Highway 95 at Rome Hill (mp 51-53) and Succor Creek Hill (mp 6-8) have been identified and discussed by ODOT staff. Project specific alternatives and costs have not been identified in the Malheur County TSP. ODOT should continue to monitor and study these sections of Highway 95 to ascertain the cost and schedule for appropriate improvements.

Project 5 (Safety) Improve bridges identified by ODOT as "functionally obsolete". There are seven bridges with this designation: Highway 20 over the Malheur River at Gwynn; Highway 20 over the Malheur River at Horseshoe Bend; Highway 201 over the Snake River at Wieser; Highway 201/20 over the Snake River (Nyssa Spur), Highway 20 over the North Fork of the Malheur River, and Highway 20 over the Malheur River at Speery; and Highway 201 over the Snake River at Payette. Planning level costs are estimated to be $7.00 million for all seven bridges. [3]

Project 6 (Safety) Improve bridges identified by ODOT as "structurally-deficient". There are fourteen bridges with this designation (See Chapter 4 for locations). One has been rehabilitated and another is under contract for replacement. Planning level costs are estimated to be $1.05 million for the remaining twelve bridges. Current County and Road District funding levels are expected to be adequate to cover this cost. Replace the NW 36th Street Bridge (owned by Malheur County) to improve floodwater control. Estimated cost of $374,000.

Project 7 (Safety) Improve pavement on those sections of road identified as in "poor" condition including Highway 201 (Olds Ferry Road), Owyhee Avenue and Parma Spur -- see Figure 7-3. These projects do not include those State highway improvements (and their costs) that are already included in ODOT's Statewide Transportation Improvement Program (STIP).

Project 8 (Safety) Improve Highway 201 Intersections (see Figure 7-3). At each of the 90 degree turns in Highway 201 south of Nyssa, there are multiple intersecting roads, resulting in unnecessary conflict points and poorer safety conditions. The State and Nyssa Road District should coordinate their maintenance programs to replace the multiple access roads with single intersecting approaches to Highway 201 at the following intersections:

[3] Assuming costs are evenly split (50/50) with Idaho to replace the three Snake River bridges.

- Fairview Drive
- Adams Road
- Enterprise Avenue (West and East)
- Clark Boulevard

Each of these safety improvement projects also include the installation of left-turn lanes on Highway 201. These improvements are estimated at a total of $601,500, and should be coordinated with regular State and Road District maintenance programs.

Project 9 (Safety) Work with Department of Wildlife to establish precautionary measures to reduce human/animal fatalities at key wildlife crossings. The issue of wildlife crossings was raised in the corridor plans prepared for Highways 20, 26 and 95. The County should work ODOT and the Department of Wildlife to develop site specific projects to reduce human/animal fatalities at identified wildlife crossings. Planning level costs will be determined on a case-by-case basis.

Project 10 (Safety) Remove Highway 201/UPRR Overcrossing (see Figure 7-3). The existing railroad overcrossing on Highway 201 at milepost 14.4 should be removed to improve vehicle safety. Assuming the Homedale Branch Line RR will be abandoned, this project should be completed in conjunction with the removal of the railroad tracks on the Union Pacific RR spur south of Adrian. This project should also be coupled with minor re-alignments to Highway 201 to improve sight lines and safety conditions. Costs associated with these improvements are estimated to range from $150,000 to $200,000. Detailed engineering analysis will be required to fully specify the project cost estimate.

The current at-grade railroad crossing on Highway 201 north of Adrian (milepost 10.7) should be replaced, and that section of highway be reconstructed to standard. This project, estimated at $250,000, should include full rail crossing signal, roadbed and pavement improvements, and minor re-alignment as necessary.

Project 11 (Circulation) Realign Highway 201 south of Adrian (see Figure 7-3). ODOT's long-range plans for Highway 201 south of Adrian should include coordination with the State of Idaho, Homedale (Idaho) Highway District and Owyhee County, Idaho to re-align Highway 201 (Oregon)/Highway 19 (Idaho) via the UPRR spur right-of-way (following rail line removal). This new route would provide a more direct and safe route between Oregon (Nyssa and Adrian) and Idaho (Homedale) with connections to Highway 95 and I-84. The ownership and maintenance responsibilities for the current alignment of Highway 201 between Napton Road and the Idaho state line would be transferred to Malheur County. Costs associated with new roadway improvements (3.1 miles) in Oregon are estimated at $2.7 million.

Project 12 (Safety) Re-align the Arcadia Boulevard/Alameda Drive "S" curves (see Figure 7-3). Both Arcadia Boulevard and Alameda Drive have sharp "S" curves. This route is a popular local commuter and farm-to-market alternative to Highway 201. As travel increases in the Nyssa-Ontario corridor, safety conditions will likely deteriorate on Arcadia Boulevard and Alameda Drive in these locations. Concurrent with the East-West railroad crossing improvements at 18th Street, these "S" curves will need to be replaced with new alignments (each project approximately 500 feet in length) constructed to adequate roadway standards. The cost for new right-of-way and roadway improvements is estimated at $186,000.

Project 13 (Safety) Improve Clark Boulevard intersections (see Figure 7-3). Clark Boulevard is also a popular north-south route for local travel as an alternative to Highway 201. Minor street intersection traffic control changes have been made in the past to improve intersection safety. Further study of these intersections should be conducted to determine the need for additional safety measures or traffic control changes. These measures could include pavement texturing ("rumble strips"), advanced cautionary signing, and all-way stop sign installation. These intersection safety improvements should be completed as part of the Nyssa and Ontario Road Districts' regular roadway maintenance program.

Project 14 (Safety Preservation) Improve Boat Landing Road (see Figure 7-3). The current alignment and condition of Boat Landing Road is insufficient to safely accommodate current travel between Ontario (via Highway 201) and Payette, Idaho. Minor roadway approach and turn lane improvements on Boat Landing Road will greatly improve safety conditions. The functional classification of Boat Landing Road should also be upgraded from minor to major collector, commensurate with existing travel patterns. The increase in traffic is causing a deterioration of the roadway surface. These minor roadway intersection approach improvements should easily be completed as part of the normal roadway maintenance program, coordinated between ODOT, Malheur County and the Ontario Road District. The resurfacing necessary to address the condition problem should be completed as part of Ontario Road Districts' regular maintenance program.

Project 15 (Safety) Improve Sage Road/Canyon #2 Road intersection (see Figure 7-3). Sight lines are currently substandard at the Sage Road/Canyon #2 Road intersection. Minor roadway re-alignment is necessary at the intersection to provide safety travel operations, particularly as traffic increases in the area due to the new Snake River Correctional Facility. These minor roadway improvements should easily be completed as part of the normal roadway maintenance program of the Ontario Road District.

Project 16 (Safety/ Circulation) Improve and extend Stanton Boulevard (see Figure 7-3). The Hyline Road/Jacobson Gulch Road connections between Highway 201, I-84 and the Snake River Correctional Facility are currently substandard. As traffic increases in the area, Stanton Boulevard should be improved east of I-84 (.75 miles) and extended to Highway 201 (approximately 1 mile). The cost for improving the existing Stanton Road Boulevard alignment should be completed as part of Ontario Road District's regular maintenance program. The cost for new right-of-way and roadway is estimated at $1.1 million.

Project 17 (Safety) Remove bridge piers on Highway 20 (see Figure 7-3). As part of ODOT'S regular maintenance program, the remnant railroad bridge piers along Highway 20 (approximate mileposts 195 and 202) should be removed to improve highway safety. These improvements should also include minor highway re-alignment to improve sight lines.

Project 18 (Safety) Improve Graham Boulevard/Bully Creek Road (see Figure 7-3). Due to the popularity of the Bully Creek Reservoir as a recreation destination, Graham Boulevard (ODOT Highway # 451 - Vale West Highway) and Bully Creek Road are both suitable for bike route designations. Both roads require shoulder widening to safely separate vehicular and bicycle traffic. The cost of widening both roads between Vale and Bully Creek Reservoir to 6-foot shoulders, including roadbed base and pavement improvements, is estimated at $1.7 million.

Pedestrian Plan

Walking is our most basic transportation mode and a popular form of recreation. In rural areas it is typical to accommodate pedestrians on roadway shoulders. Given the size of Malheur County, the extremely low population density and the generally low traffic volumes, pedestrian-only facilities improvements such as sidewalks would likely be of little benefit in creating a modal shift toward walking in Malheur County. However, providing wide shoulders on all new or widened roadways will increase pedestrian safety as well as providing enhanced opportunities for bicyclists and equestrians. Shoulder improvement projects are described in the Roadway Plan above.

Bikeway Plan

Currently, bicyclists in Malheur County share the roadway with motorists on most of the county roads. Given the size of the county, the extremely low population density and the generally low traffic volumes, bicycle-only facilities, such as dedicated bicycle lanes, would likely be of little benefit in creating a modal shift toward bicycling in Malheur County. However, providing wide shoulders on all new or widened roadways will increase bicycle safety as well as providing enhanced opportunities for pedestrian and equestrians. Shoulder improvement projects are described in the Roadway Plan above. For example, the Graham Boulevard/Bully Creek Road

project specifies shoulder widening to accommodate bicycle lanes to serve recreational cyclists traveling to Bully Creek Reservoir.

Highway 95 and Highway 20 (between Bend and Vale) are designated as Statewide Bicycle Routes in the *Oregon Bicycle/Pedestrian Plan.* As such, they should be preserved and improved to safely accommodate bicycle travel.

Transportation Demand Management

The goal of transportation demand management (TDM), is to reduce or redistribute peak travel demands in order to more efficiently use the transportation system, rather that building new or wide roadways. There is a wide range of techniques which have been successful in other communities and which could be initiated to help alleviate some traffic congestion (e.g., carpooling and vanpooling, alternative work schedules, bicycle and pedestrian facilities). However, the effectiveness of many of these TDM measures is dependent upon sufficient population densities. Three TDM measures with specific application in Malheur County can be quite successfully included: 1) shoulder improvements to accommodate bicycle travel; 2) rideshare program enhancements; and, 3) flex time and stagger-shift programs at large employment centers.

In Malheur County, where traffic volumes are generally low and the population and employment bases are relatively small, implementing TDM strategies is not effective in most cases. However, implementing roadway shoulder improvements for bicyclists and pedestrians when making other road improvements, can encourage the use of alternative modes and thus is considered a TDM strategy.

Because intercity commuting is a factor in Malheur County, particularly in the Treasure Valley area, residents who live in one city and work in another should be encouraged to carpool with a co-worker, if possible Malheur County's Special Transportation Advisory Board is working with Acorn Pacific, Inc. to develop a referral service for carpooling. The focus of the program would be to inform the employees of the various companies and organizations in Malheur County of the benefits of car pooling; to provide a centralized service for those employees who wish to join a car pool; and, to build a base for future van pool service for intercity transportation.

The rideshare program, which is proposed to be initiated in January, 1998, would establish a phone line with a computer database link for county residents to call and indicate interest in participating in a carpool. Once a month a list of interested participants would be mailed to those in the same location. Employer contacts and public service announcements would be used to help increase the number of participants. Twice a year participants would be contacted to determine the actual number of carpools and estimated number of rides shared. Additionally, the future need for intercity van pools would be evaluated.

Flex time and staggered shifts at larger employers can not only increase opportunities for successfully ridesharing but can decrease peak hour demand and thus reduce peak hour congestion.

No costs have been estimated for the TDM plan Grants may be available to set up programs; other aspects of Transportation Demand Management can be encouraged through ordinance and policy (see Chapter 9).

Public Transportation Plan

As described in Chapter 4, Malheur County currently provides limited Dial-a-Ride service for the elderly and disabled. Some limited public transportation service is also provided the City of Ontario, the Department of Human Resources, Malheur Council on Aging, Nyssa Senior Center, Ontario Senior Center, and Vale Senior Center. In order to increase available service the county should work with ODOT and public transportation providers to reinstate intercity passenger rail/bus, increase mobility for the transportation-disadvantaged and improve commuter ridesharing opportunities. Opportunities may exist through enhanced interstate coordination to provide improved service in conjunction with nearby Idaho jurisdictions.

The county has no local fixed-route transit service at this time. Fixed-route transit generally requires relatively high population densities in order to be effective. In Malheur County low population densities and low traffic volumes on the highways indicate that mass transit is not necessary of economically feasible at this time. The TPR exempts areas of less than 25,000 from including mass transit facilities in their development regulations.

Rail Service Plan

Freight Service. Chapter 3 contains several objectives for promoting the use of rail freight. The strategy for integrating the railroad transportation mode into the Malheur County TSP includes identifying the interests of the community, shipper/receivers and the railroad(s). The confluence of these interests can determine the direction the county might consider taking.

As far as transportation is concerned, rail shippers and receivers are typically interested in the following: low cost, timely delivery with access to markets, multiple modes of transport, access to the most appropriate mode for particular raw materials and/or product, access to a single mode of transportation to final destinations, and within a given mode, access to more than one provider. Railroads in the region are generally interested in the following: main line hauls as opposed to terminal/switching operations, unit trains of bulk commodities and/or containers, long hauls, large annual volumes on the line, use of existing physical plant as opposed to new investment, carriers prefer to use their own yards unless traffic is low enough that the cost of maintaining a separate yard is prohibitive, and currently, railroads are trying to arrange train schedules, where they can, so that crews can travel to a transfer point and either catch a train on

its way back home or switch crews with an inbound train, all within an 8 hour time frame (the 8 hour rule).

As rail service is provided by the private sector, there are only limited opportunities for Malheur County to participate in the planning and development of service improvements. However, the County can continue to support rail freight as an alternative freight mobility option by reducing land use and transportation conflicts where possible, by providing adequate ingress/egress options to loading areas and adequate land available for loading areas, and by protecting current rail lines (Union Pacific and Oregon Eastern railroads) and opportunities.

Passenger Service. Malheur County should work with the State of Oregon and national rail program to re-instate intercity passenger rail service (i.e., the old Pioneer line between Portland, Boise and points east).

Air Service Plan

The county should continue to work with the incorporated cities and ODOT to support the five existing public airports within Malheur County: Miller Memorial Airport in Vale, Ontario Municipal Airport, McDermitt State Airport, Owyhee Reservoir State Airport, and Rome State Airport. Additionally, the county should participate in efforts to accomplish the following airport projects:

Airport Project 1: Improve emergency air access in Jordan Valley area by partnering with ODOT and the City of Jordan Valley to build a new airport.

Historically Jordan Valley had an airstrip; however, that facility has been closed for some time. This area has been acknowledged locally and by ODOT Aeronautics as needing a new facility. A new site has been preliminarily identified in the Jordan Valley area. Development of this site as a new State Airport would require a land exchange with the Bureau of Land Management (BLM) as well as some additional land acquisition. Drainage improvements would also have to be made. ODOT Aeronautics has suggested that local enthusiasm and initiative are necessary to move this project forward. Planning level project costs are estimated at approximately $250,000. How these costs might be shared among the partners will be determined at a later date.

Airport Project 2: Extend (approximately 500 feet) the runway at Miller Memorial Airport in Vale.

Due to incompatible land uses near the north end of the runway, modifications to this facility are recommended. This project would extend and essentially move the runway 500 feet to the south. Planning level project costs are estimated at approximately $50,000. How these costs might be shared among potential partners will be determined at a later date.

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Pipeline Service Plan

Currently, pipeline transportation in and throughout the Malheur County includes transmission lines for electricity, cable television and telephone (including fiber-optic) services, as well as pipeline transport of water, sanitary sewer, and transmission lines for natural gas and petroleum products.

The next century promises to be one in which information access will help define continued success and economic vitality. Such access is not only important to the continued economic vitality of the region, but it can also have a significant effect on transportation, air quality, and infrastructure investment decisions that will need to be made by the county. Malheur County should enhance its capabilities to develop and operate an infrastructure that provides links for electronic communication via telecommuting and satellite communications utilizing and building upon existing facilities including:

1. World Com trunk line through Nyssa to Pendleton;
2. ATT service in the Ontario and Malheur County area;
3. Fiber Optic;
   a) Harper to Westfall; and
   b) Big Bend to McDermit via Jordan Valley.

These opportunities will affect the overall quality of life that can be provided, the potential for an improved and more diversified economic base, and enhanced health and education-related benefits of the region.

Waterways Transportation Plan

Although the Snake, Malheur, Owyhee and other rivers flow through the county, they are generally too shallow to allow for effective water transportation. Water transportation is limited to recreational use of rivers, Lake Owyhee and other smaller lakes and reservoirs. These assets, however, should be recognized as an integral part of the region's land use/transportation system and form.

Utilities Coordination Plan

The cost to move private utilities is an expense to the tax payer/rate payer, and should be minimized at every opportunity. Utility improvements will be coordinated with roadway improvements to the extent possible. Where this is not possible, utilities should be responsible for the full cost of returning the transportation facility to its original condition. Emphasis should be placed on two-way communication and a partnership between the jurisdictions and the private utilities to minimize costs for all transportation improvements.

TRANSPORTATION SYSTEMS PLAN IMPLEMENTATION PROGRAM

Implementation of the Malheur County TSP will require changes to the County's comprehensive plan, zoning code and capital improvement plan. These actions will enable Malheur County to address both existing and future transportation issues throughout the county in a timely and cost effective manner. Table 7-3, on the following page provides an outline for TSP implementation. It is intended to provide the county with guidance in terms of the projected timeframes and partnerships available for the various projects outlined above. Specific financing issues are addressed in Chapter 8 and specific comprehensive plan and code amendment language is addressed in Chapter 9.

Long-Range Capital Improvement Plan

The implementation plan is summarized by a long-range capital improvement plan (CIP) for Malheur County. The purpose of the CIP is to guide growth and the timing by which needed transportation improvement projects are funded and scheduled. The Malheur County CIP should be coordinated and integrated with regular updates of ODOT's STIP, and CIP's for cities in Malheur County, particularly Ontario, Vale and Jordan Valley. Coordinated capital improvement plans are essential since many of the recommended projects in the CIP include multiple jurisdiction investment.

As illustrated in Table 7-4, the Malheur County CIP is categorized in 5-year quarters over the 20-year TSP time frame. Project prioritization is based on current needs, and needed improvements to serve expected growth. The prioritization and schedule of projects generally reflects the planned availability of state and local revenues (see Chapter 8). Planning costs listed in Table 7-4 are shown in 1997 dollars by jurisdiction. These costs include estimates for right-of-way, design, construction and contingencies.

Table 7-3
Malheur County TSP
Implementation Plan

PROJECT DESCRIPTION	PROJECT / PROGRAM SCHEDULE					BENEFIT				COST	PARTNERSHIP			
	YEARS													
	0-5	6-10	11-15	16-20	20+	Safety	Operations /Capacity/ Circulation	Alternate Modes	Freight Mobility	(millions)	State	County	City	Private
Roadway System Plan														
1 Railroad Avenue Extension	■	■	■			✓	✓	✓	✓	$13.50	✓	✓	✓	✓
2 Ontario North-South Arterial	■	■	■	■		✓	✓	✓	✓	*TBD*	✓	*TBD*	✓	*TBD*
3 Columbia Avenue Extension			■	■			✓	✓	✓	$2.60		✓		
4 US 95 Re-Alignment (Jordan Valley TSP)	■					✓	✓	✓	✓	TBD	✓			
5 Replace Functionally Obsolete Bridges [2]	■	■				✓	✓		✓	$7.00	✓			
6 Replace Structurally Deficient Bridges [2]	■	■	■	■	■	✓	✓		✓	$1.05	✓	✓		
7 Special Roadway Reconstruction Projects [1]	■	■				✓				$2.40	✓	✓		
8 Highway 201 Intersections		■				✓	✓	✓	✓	$0.60	✓			
9 Improve Wildlife Safety Conditions	■	■	■	■	■	✓				*TBD*	✓	✓		
10 Highway 201 RR Crossings Removal		■				✓	✓		✓	$0.45	✓			
11 Highway 201 Re-Alignment			■			✓	✓	✓	✓	$2.70	✓			
12 Arcadia Ave/Alameda Dr. "S" Curves		■				✓	✓		✓	$0.19		✓		
13 Clark Boulevard Intersections	■	■				✓				*TBD*		✓		
14 Boat Landing Road		■				✓	✓		✓	TBD	✓			
15 Sage Road/Canyon #2 Road Intersection	■					✓	✓			TBD		✓		
16 Stanton Boulevard Extension			■	■		✓	✓	✓	✓	$1.08		✓		
18 Highway 20 Bridge Pier Removal	■	■				✓	✓		✓	TBD	✓			
Bicycle System Plan	■	■	■	■	■	✓		✓		*TBD*	✓	✓	✓	✓
(see Roadway Projects 1-4 & 7)														
17 Graham Boulevard/Bully Creek Road Bike Lanes			■	■		✓	✓	✓	✓	$1.72	✓	✓		
Public Transportation System Plan (including Transportation Demand Management programs)	■	■	■	■	■			✓		*TBD*	✓	✓	✓	✓
Rail System Plan	■	■	■	■	■	✓	✓	✓	✓	*TBD*	✓			✓
Air System Plan	■	■	■	■	■	✓	✓	✓	✓	*TBD*	✓			✓
Jordan Valley Airport Construction			■			✓	✓	✓		$0.25	✓	✓		✓
Vale Airport Extension			■			✓	✓	✓		$0.05	✓	✓	✓	
Pipeline / Waterway / Utilities Plan	■	■	■	■	■		✓			*TBD*	✓	✓	✓	✓

NOTES:

[1] Roadway projects not included in current ODOT STIP or within regular ODOT and County maintenance programs: Hwy 201 (Olds Ferry Rd), Parma Spur and Owyhee Ave.
[2] ODOT bridge improvement programs are based on significant Federal funding sources.

Table 7-4
Malheur County
Prioritized Capital Improvement Program
(1997 Dollars)

Timing	Project #	Description	COST SHARING (millions) Malheur County	ODOT	Cities	Private	TOTAL
1998-2002							
	1	Railroad Avenue Extension	$0.99	$3.38	$0.99	$0.27	$5.63
	1.1	*Extend Railroad Ave from Halliday to Lagoon*					
	1.2-3	*Improve Lincoln Ave. corners, and improve 18th Ave.*					
	1.4	*Build New UPRR Overcrossing*					
	5	Replace Functionally Obsolete Bridges (ongoing)		$3.50			$3.50
	6	Replace Structurally Deficient Bridges (ongoing)	$0.03	$0.22			$0.25
	7	Begin reconstructing Olds Ferry Rd., Owyhee Ave. and Parma Spur	$0.34	$0.86			$1.20
	13	Clark Boulevard Intersection Safety Improvements (ongoing)	TBD [1]				
	15	Sage Rd./Canyon #2 Rd. Intersection Safety Improvements	TBD [1]				
	17	Hwy 20 Bridge Pier Removal (ongoing)		TBD [1]			
2003-2007							
	1	Railroad Avenue Extension	$0.99	$3.38	$0.99	$0.27	$5.63
	1.5	*Improve Railroad Ave from Butte Rd. to Lincoln Ave.*					
	1.6	*Improve Lincoln Ave. from Railroad Ave. to Butler Blvd.*					
	1.7	*Improve Butler Blvd. from Lincoln Ave. to Hwy 201*					
	5	Replace Functionally Obsolete Bridges		$3.50			$3.50
	6	Replace Structurally Deficient/Substandard Bridges	$0.40	$0.22			$0.62
	7	Complete reconstructing Olds Ferry Rd., Owyhee Ave. and Parma Spur	$0.34	$0.86			$1.20
	8	Improve Hwy 201 intersections		$0.60			$0.60
	10	Improve UPRR crossings on Hwy 201		$0.25			$0.25
	12	Improve Arcadia Ave./Alameda Dr. "S" Curves	$0.19				$0.19
	13	Clark Boulevard Intersection Safety Improvements	TBD [1]				
	14	Improve Boat Landing Road		TBD [1]			
	17	Hwy 20 Bridge Pier Removal		TBD [1]			
2008-2012							
	1.8	Extend Railroad Ave. from Lagoon to Hwy 26	$0.99	0	$0.99	$0.27	$2.25
	3	Begin Columbia Ave. Extension	$0.65				.65
	6	Replace Structurally Deficient Bridges (ongoing)	$0.03	$0.22			.25
	11	Re-align Hwy 201		$2.70			$2.70
	16	Begin Stanton Boulevard Extension	$0.27				$0.27
	18	Begin Graham Blvd./Bully Creek Rd. Improvements	$0.43				$0.43
		Construct Jordan Valley Airport	$0.13	$0.06	0	$0.06	$0.25
		Extend Vale Airport Runway	$0.01	$0.01	$0.01	$0.01	$0.04
2013-2017							
	3	Complete Columbia Ave. Extension	$1.95				$1.95
	6	Replace Structurally Deficient Bridges (ongoing)	$0.03	$0.27			$0.30
	16	Complete Stanton Boulevard Extension	$0.81				$0.81
	18	Complete Graham Blvd./Bully Creek Rd. Improvements	$0.43	$0.86			$1.29
TOTAL			**$9.01**	**$22.89**	**$2.98**	**$0.88**	**$33.76**

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[1] To be determined - Project costs to be included in regular maintenance program.

CHAPTER 8:
FINANCIAL PLAN

INTRODUCTION

The Malheur County TSP financial plan includes a transportation financing program that includes:

- a list of planned transportation facilities and major improvements;
- a general estimate of the timing for planned transportation facilities and major improvements;
- determination of planning level cost estimates for the transportation facilities and major investments identified in the TSP (intended to provide an estimate of the fiscal requirements to support the land uses in the acknowledged comprehensive plan(s) and allow jurisdictions to assess the adequacy of existing and possible alternative funding mechanisms); and,
- a discussion of existing and potential financing sources to fund the development of each transportation facility and major improvement (which can be described in terms of general guidelines or local policies).

The timing and financing provisions in the transportation financing program are not considered a land use decision as defined by the TPR and ORS 197.712(2)(e) and, therefore, cannot be the basis of appeal under State law. In addition, the transportation financing program is to implement the comprehensive plan policies which provide for phasing of major improvements to encourage infill and redevelopment of urban lands prior to facilities which would cause premature development of urbanizable areas or conversion of rural lands to urban uses.

This chapter summarizes the financing program defined for the Malheur County TSP as required by the TPR. It summarizes the transportation improvement projects, identifies general timing and rough cost estimates of transportation system improvements, and summarizes the existing and potential future financial resources to pay for these improvements, as a general policy guideline.

TRANSPORTATION SYSTEM IMPROVEMENTS - COST AND TIMING

The total cost of all transportation system improvements in Malheur County is expected to exceed $33 million. Malheur County's portion of these costs is estimated at approximately $9 million. These improvements include roadway, bicycle and airport facility improvements on the State and County transportation system over the next 20 years (as identified in Chapter 7 - TSP).

Appendix E summarizes the individual projects along with their planning-level cost estimates. All costs are estimated in constant 1997 dollars. Table 8-1 provides an estimate of the schedule (five-year increments) and jurisdiction (State, County, city and private) responsible for making

major roadway improvements. Descriptions of the types of projects and their associated costs follow.

Roadways

Fourteen roadway improvement projects will be needed to upgrade the roadway and highway system within Malheur County over the next 20 years. Approximately $31 million of the total transportation system improvements are attributed to these roadway projects. Target dates for project construction have been tentatively identified by five-year increment, as illustrated in Table 8-1.

Bicycle Facilities

New bicycle facilities (along collector/arterial roads) in the Malheur County transportation system will increase by approximately 32 miles, most of which are included in roadway improvement projects. The Graham Boulevard/Bully Creek Road shoulder widening project, estimated at $1.7 million provides a significant system improvement linking Bully Creek Reservoir to the major state highway system of bicycle facilities.

Pedestrian Facilities

New pedestrian facilities (along collector/arterial roads) in the Malheur County transportation system will also increase by approximately 32 miles, all of which are included in roadway improvement projects.

Airport Facilities

The estimated cost for the siting and development of a new airstrip in the Jordan Valley area is $250,000. The Malheur County's share of that amount is estimated to be $ 125,000, planned for completion in the 11-15 year time frame.

Timing

Project priorities have been grouped into five-year categories. Table 8-1 summarizes the improvements that will occur within those time frames. Malheur County expenditures to extend and improve Railroad Avenue are the greatest in the first 10 years, averaging about $290,000 per year. Other major expenditures for transportation improvements are expected in the last 10 years for an estimated $5 million to widen Bully Creek Road and extend Stanton Boulevard and Columbia Avenue. The County will be expected to make investments to improve transportation facilities for existing development and to improve major collectors and arterials that serve the entire area.

Table 8-1
Malheur County TSP
Financial Plan

PROJECT DESCRIPTION	PROJECT / PROGRAM SCHEDULE (YEARS)					COST	PARTNERSHIP				CAPITAL OUTLAY (millions)								PROPOSED LOCAL REVENUE SOURCE		
											ODOT YEARS				Malheur County YEARS						
	0-5	6-10	11-15	16-20	20+	(millions)	State	County	City	Private	0-5	6-10	11-15	16-20	0-5	6-10	11-15	16-20	Local Gas Tax	Local Vehicle Registration Fee	Road Bond
Roadway System Plan																					
1 Railroad Avenue Extension						$13.50	50%	22%	22%	6%	$ 3.38	$ 3.38			$ 0.99	$ 0.99	$ 0.99		$ 0.99	$ 0.99	$ 0.99
2 Ontario North-South Arterial						*TBD*	✓	*TBD*	✓	*TBD*											
3 Columbia Avenue Extension						$2.60		100%									$ 0.65	$ 1.95	$ 0.78	$ 0.78	$ 1.04
4 US 95 Re-Alignment (Jordan Valley TSP)						TBD	✓														
5 Replace Functionally Obsolete Bridges [2]						$7.00	100%				$ 3.50	$ 3.50									
6 Replace Structurally Deficient Bridges [2]						$1.50	90%	10%			$ 0.25	$ 0.25	$ 0.25	$ 0.25	$ 0.03	$ 0.40	$ 0.03	$ 0.03	$ 0.08	$ 0.08	
7 Special Roadway Reconstruction Projects [1]						$2.40	72%	28%			$ 0.86	$ 0.86			$ 0.34	$ 0.34			$ 0.34	$ 0.34	
8 Highway 201 Intersections						$0.60	100%														
9 Improve Wildlife Safety Conditions						*TBD*	✓	✓													
10 Highway 201 RR Crossings Removal						$0.45	100%					$ 0.45									
11 Highway 201 Re-Alignment						$2.70	100%						$ 2.70								
12 Arcadia Ave/Alameda Dr. "S" Curves						$0.19		100%								$ 0.19			$ 0.10	$ 0.10	
13 Clark Boulevard Intersections						*TBD*		✓													
14 Boat Landing Road						TBD	✓														
15 Sage Road/Canyon #2 Road Intersection						TBD		✓													
16 Stanton Boulevard Extension						$1.08		100%									$ 0.27	$ 0.81	$ 0.27	$ 0.32	$ 0.49
18 Highway 20 Bridge Pier Removal						TBD	✓														
Bicycle System Plan						*TBD*	✓	✓	✓	✓											
(see Roadway Projects 1-4 & 7)																					
17 Graham Boulevard/Bully Creek Road Bike Lanes						$1.72	50%	50%						$ 0.86			$ 0.43	$ 0.43		$ 0.86	
Public Transportation System Plan (including Transportation Demand Management programs)						*TBD*	✓	✓	✓	✓											
Rail System Plan						*TBD*	✓			✓											
Air System Plan						*TBD*	✓			✓											
Jordan Valley Airport Construction						$0.25	25%	50%		25%			$ 0.06				$ 0.13			$ 0.13	
Vale Airport Extension						$0.05	25%	25%	25%	25%			$ 0.01				$ 0.01			$ 0.01	
Pipeline / Waterway / Utilities Plan						*TBD*	✓	✓	✓	✓											
COST PER 5-YEAR INCREMENT:											$ 7.99	$ 8.44	$ 3.03	$ 1.11	$ 1.35	$ 1.91	$ 2.51	$ 3.22			
TOTAL REVENUE NEEDS BY SOURCE:																			$ 2.55	$ 3.60	$ 2.52

NOTES:

[1] Roadway projects not included in current ODOT STIP or within regular ODOT and County maintenance programs: Hwy 201 (Olds Ferry Rd), Parma Spur and Owyhee Ave..
[2] ODOT bridge improvement programs are based on significant Federal funding sources.

EXISTING AND HISTORIC FINANCING SOURCES

Road-Related Funding

In 1992, Oregon received $704 million, or 67 percent of its highway revenues, from the collection of user taxes and fees. The second largest category is almost entirely comprised of the sale of timber logged from National Forests. In 1992, these timber receipts raised roughly $115 million. The remaining revenue sources - road and crossing tolls, general fund appropriations, property taxes, miscellaneous receipts and bond receipts - accounted for $223.5 million or roughly 21 percent of total transportation revenues.

The most significant portion of Oregon's highway user taxes and fees come from federal fuel and vehicle taxes, state taxes, and general motor vehicle fees. These categories account for 32 percent, 34 percent, and 25 percent, respectively, of all highway user taxes and fees collected in the state. During the 1980's, Oregon's transportation budget was bolstered by a series of two-cent annual gas tax increases. At the same time, the Federal Government was increasing investment in highways and public transportation. The situation is different today. The last two Legislatures failed to increase the gas tax and federal budget cuts are reducing transportation funding available to Oregon. The State Highway Fund is further losing buying power because the gas tax is not indexed to inflation, and increased fuel efficiency of vehicles reduces overall consumption.

Oregon Highway Trust Fund revenues are distributed among state (60.22 percent), County (24.38 percent) and City (15.40 percent) governments to fund their priority road needs. In 1995-96, the state estimated it would collect $575 million in state highway funds. Counties and cities would then receive about $140 and $90 million, respectively.

Oregon law allows local government, in addition to receiving state highway trust fund revenues, to levy local fuel taxes for roadway related improvements. Multnomah and Washington Counties, and some small cities (Tillamook, The Dalles, Woodburn) have used this authorization. Several attempts have been made by other jurisdictions but have not been supported by the electorate. As few local governments have implemented this option, non-user road revenues tend to be relied upon, to supplement the funds received from state and federal user revenues. Other local funding sources have included property tax levies, local improvement district assessments, bonds, traffic impact fees, road user taxes, general fund transfers, receipts from other local governments, and other miscellaneous sources.

Oregon's basic vehicle registration fee is $15 per year regardless of the vehicle being registered. Oregon law permits local governments (counties) and governmental entities to impose local option vehicle registration fees. To date, no county has implemented this tax.

Cities have relied more than counties on transfers from their general funds to support roadway improvements. Ballot Measure 5, however, approved by the voters in 1990, reduced the range of funding and financing options available to both cities and counties. Measure 5 limited the

property tax rate for purposes other than for payment of certain general obligation indebtedness to $15 per $1000 of assessed value. The measure further divided the $15 per $1000 property tax authority into two components: $5 per thousand dedicated to the public schools; the remaining $10 dedicated to other local government units, including cities, counties, special service districts, and other non-school entities. The tax rate limitation for cities and counties went into effect in 1992. The school portion of the measure is being phased in over a five-year period beginning in FY 1992. In 1996, voters again approved a property tax limitation measure, Ballot Measure 47/50, which will further impact the ability of cities and counties to pay for needed infrastructure through historic or traditional means.

At the same time that increased growth and increased transportation demands are occurring, cities and counties have lost another traditional source of revenue for infrastructure construction and upgrade - timber harvest receipts. Under a 1993 negotiated mitigation plan, federal forest receipts to support county roads are decreasing 3 percent per year. In 1996, counties will receive 74 percent of their 1986-90 average receipts, and by 2003 they will receive 55 percent of the late 1980s revenues.

Given this funding environment, current funding levels and sources are not adequate to meet the transportation needs of the State, cities and counties for the next 20 years. In response to this gap between needs and funding, Governor Kitzhaber organized the Oregon Transportation Initiative to look at statewide transportation needs and to develop a program to address how these needs will be met. Through a public process led by business and civic leaders across the state, findings and recommendations on the state of transportation needs and methods to address those needs was submitted to the Governor in July 1996. A result of these recommendations was appointment of a committee to develop a legislative proposal to the 1997 Legislature regarding transportation funding. Part of that proposal identified a "base" transportation system, with a priority of maintenance, preservation and operation of a system of transportation facilities and services that ensures every Oregonian a basic level of mobility within and between communities. It is expected that other components will include efficiencies resulting from better intergovernmental cooperation (shared resources and equipment, better communication on project needs and definition), and elimination of legislative barriers to more efficient and cost-effective methods of providing transportation services. However, the 1997 Legislature failed to pass either the Governor's measures or their own.

A part of transportation funding will be identification of relationships and responsibilities relative to delivery of projects and services. In Oregon, the primary state role has been to construct and maintain the state highway system and to assist local government with funding of other modes. The state also has a role in intercity passenger services and airports. This has historically been minor, but would grow significantly if serious efforts were put into intercity rail improvements. Local governments, in addition to providing local road and bridge construction, maintenance and preservation, provide local transit and airport support. The Federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) began moving decision-making for federal programs to states and this program and other state policies incorporated in the Oregon

Transportation Plan (OTP) encourage reassessment of responsibilities and obligations for funding.

These changing relationships have resulted in two significant issues for state and local governments. First, there is no clear definition of state responsibility. At one time, the state operated on an informal consensus that it should provide one-half the match on federally funded local and other projects that served statewide needs. No similar consensus seems to exist today. The state's responsibility for transit, airports and other local transportation infrastructure and services is not clear. The question of regional equity is raised in considering especially high-cost project needs, such as the Bend Parkway or the Portland area light rail program. Regional equity will probably require consideration of all modes together, because different regions may have different modal needs and financial arrangements.

Given this dynamic transportation funding environment, it is clear that local governments need to reassess traditional methods of funding projects and look creatively at ways to meet public expectations of high quality transportation services.

Transit Funding

Transit service in Oregon has evolved from private development and reliance on user fees for operating revenue to public ownership with public subsidy for operations. No clear philosophy of the state role in providing transit services is evident and the state is continuing its discussion on how the state should raise revenue in support of transit. The state has used general funds, lottery funds, stripper well funds, cigarette tax revenue and other funds at various times to support transit service. These efforts have largely been targeted towards supplying half the required match to federal capital improvement grants. Other than the elderly and disabled program, the state has provided no operating funds for transit. The state role has been one of granting authority to local governments to raise locally-generated operating revenue.

Federal Transit Administration (FTA) grants account for 69 percent of Oregon's funding for transit capital construction, which includes purchase of buses and other equipment. Federal funding for transit was increased through the flexibility provided by ISTEA. This federal legislation expired September 30, 1997 and, while new legislation is still pending, there is strong indication that current flexibility will be retained, although it will be dependent on Congressional approval to continue current programs. The largest source of transit operating revenues, $87 million, are local funds, which provide 64 percent of revenues needed for transit operations. Passenger fares cover 22 percent of Oregon's transit system operating costs. Transportation for the elderly and disabled is funded through dedication of two cents of the state cigarette tax and through federal programs.

W&H PACIFIC

Airport Funding

Federal grants from the Federal Aviation Administration (FAA) Airport Improvement Program (AIP) are used to support general airport infrastructure improvements, with 90 percent Federal funding and a 10 percent local match. Given the ability to adjust user charges to address inflation, revenues will likely remain stable for operation and maintenance of the airport, particularly in relation to funding issues faced by other transportation modes. and advertising space in the terminal, and a variety of user fees - fuel flowage fees, aircraft landing fees, terminal rent fees for airlines, rental cars and the restaurant.

MALHEUR COUNTY TRANSPORTATION FUNDING

Revenues for roadway purposes for fiscal years 1991-1996 for Malheur County are summarized in Table 8-2. The majority of funds have been received from state gas tax revenues. The other sources of income have been on interest on reserves, and moneys from the State Highway fund. State Highway Fund moneys have historically been dedicated to operation and maintenance of the road-related system. There are minimal local sources of funding applied to transportation improvements within Malheur County.

In review and summary, it appears that Malheur County is continuing to keep pace with roadway maintenance needs. The County also has some reserve funds to improve a limited number of bridges in the future. However, Malheur County currently has no significant revenue programs to match needed capital improvements over the next 20 years like the Railroad and Alberta Avenue extension projects.

Table 8-2
Malheur County Revenues For Roadway Purposes

Fiscal Year:	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97
REVENUE						
Federal (ISTEA, other)	202,221	92,132	62,930	113,079	430,780	369,708
State (gas tax, veh.reg.)	1,319,260	1,556,577	1,955,171	1,551,321	1,982,676	1,510,398
Local (property tax *)	560,657	543,803	560,196	657,500	669,481	N/A
Other (interest, sales, etc.)	89,786	104,524	117,033	147,886	139,619	N/A
SUBTOTAL	2,171,924	2,297,036	2,695,330	2,469,786	3,222,556	NA
EXPENSE						
Cash Carryovers	892,759	1,013,018	1,150,098	1,646,687	1,468,765	N/A
Dedicated Reserves (equipment, bridges, projects)	498,178	591,520	714,695	625,845	649,580	N/A
TOTAL AVAILABLE	3,562,861	3,901,574	4,560,123	4,742,318	5,340,901	N/A

* only road assessment districts
N/A = not available

POTENTIAL FUTURE TRANSPORTATION FUNDING SOURCES

There are a variety of methods to generate revenue for transportation projects. Funding for transportation improvement projects are derived from three sources: federal, state and local governments. Appendix G provides a summary of federal, state and local highway, bridge, sidewalk, bicycle and transit funding programs that have typically been used in the past. Although property tax is listed as a possible revenue source, the impacts of Ballot Measure 47/50 are likely significant, but still vague.

Recommendations for Receiving Federal and State Sources

Most Federal funding is passed through ODOT to the local jurisdictions. *A good working relationship with ODOT Region 5 planners and the Region Manager is important to have major transportation improvements included as part of the STIP when it is updated every two years.* ODOT maintains interstate and state highways - in Malheur County this includes I-84 and Highways 20, 26, 78, 95 and 201. State and federal funds administered through ODOT are the primary sources of funding for improvements to this facility. Projects that involve ODOT bridges and highways account for approximately $16 million in the next ten years and $5 million in the remaining 10 year period.

As shown in Figure 8-1, ODOT's contribution towards transportation improvements in unincorporated Malheur County is needed within the next 10 years. The two significant projects include partnering with Malheur County and the City of Ontario to extend Railroad Avenue and improve and extend 18th Street across the UPRR; and replacing obsolete bridges along state highways, particularly across the Snake River. ODOT currently has approximately $12 million in the current STIP for the "Ontario Transportation Solution Package." A portion of this funding package could be dedicated to the Railroad Avenue/18th Street Extension (approximately $6.5 million) and the remaining could be dedicated towards the North-South Arterial (ODOT, City of Ontario and Malheur County project to be determined as part of the Ontario TSP).

ODOT should update the STIP to prioritize needed bridge improvements. Current federal and state revenue programs will likely fall short of needs in Malheur County. Hence, *Malheur County and ODOT should take an active role in representing their priorities to the Oregon State Legislature, Governor and members of the US Congress and Senate to enhance state and federal investment in Malheur County bridge infrastructure.*

As noted earlier, the 1997 Oregon Legislature failed to pass enhancements to transportation infrastructure investment. In lieu of statewide funding enhancements, Malheur County must look to local measures to fund future capacity projects.

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Recommendations for Developing Local Funding Sources

The 1997 Oregon Legislature failed to adopt statewide funding program enhancements. An increase in Oregon gas tax, associated weight-mile tax, vehicle registration fees and dedicated transit funding would have helped Malheur County (significantly) meet the needs for new transportation system improvements. Without those measures, Malheur County will have to rely on enhanced local funding measures, at least until statewide funding measures are secured. T*he County should consider developing local financing to support funding the higher priority projects, to be more attractive for state and federal allocations by providing a larger local match.* Malheur County could consider any one or combination of the following financing measures:

- Local improvement district (LID)
- System development charges/traffic impact fees (SDC/TIF)
- Local/regional gasoline taxes and vehicle registration fees
- Roadway improvement levies or bonds
- Roadway maintenance/utility fees

Potential funding sources are typically judged based on a number of criteria, including:

- legal authority;
- financial capacity;
- stability;
- administrative feasibility;
- equity; and
- political acceptability.

In general recognition of these criteria, new LID's, SDC's/TIF's and roadway maintenance fees were considered but dropped as viable, local funding measures for new transportation improvement projects in the Malheur County rural areas for the following reasons:

- roadway maintenance is already funded through current road programs (statewide gas tax/vehicle registration fees and weight-mile taxes), new maintenance/utility fees could be interpreted as over- or double-taxing;
- rural development is not likely to occur at significant levels, yielding low impact fee revenues - or impact fees would need to be extremely high in order to yield significant revenue, quite possibly resulting in discouraging even the smallest of developments (as planned); and,
- LID's would be difficult to form around large county projects, placing the financial burden disproportionately in select areas instead of across the county (to all those who benefit by the projects).

Hence, the Malheur County TSP includes a more focused evaluation of local gasoline taxes, vehicle registration fees and road improvement bonds as new and viable measures to fund the Malheur County share of needed transportation system improvements. A range of funding options were investigated to ascertain the level of revenue generated based on county-wide application for each funding measure. As described separately below, each county-wide funding measure is also summarized by reporting the revenue generated for each of the County jurisdictions (assuming a revenue distribution to local jurisdictions based on future, year 2017 population).

Local Vehicle Registration Fee

Statewide vehicle registration fees are lowest in Oregon ($15/year) when compared to neighboring states, as shown in Table 8-3. Only counties can implement local vehicle registration fees in Oregon. A summary of annual and 20-year revenues from a local vehicle registration fee in Malheur County is provided in Table 8-4. Local revenues are listed by jurisdiction, with options for both a $10 and $20 local fee in addition to the current $15/year statewide fee. County-wide (including incorporated cities) revenues from a $10-$20 local vehicle registration fee ranges from $8.4 to $16.8 million over 20 years. Revenues allocated to unincorporated Malheur County are estimated at $3.6 million over 20 years based on a $10 per year local vehicle registration fee. Regardless of the option chosen, a local vehicle registration fee would require local voter approval.

Table 8-3
Comparison of Automobile-Related Taxes
(as of March 1997)

Tax	Oregon	Washington	California	Idaho	Nevada
Gas Tax	$.24/gal*	$.23/gal	$.25/gal*	$.25/gal	$.28/gal*
Registration Fee	$15/year	$36/year	$29/year	$28/year	$33/year
Ad Valorem Tax	$0	$172/year	$148/year	$0	$78/year
Auto Sales Tax**	$0	$191/year	$191/year	$123/year	$172/year

Source: ODOT, Policy Section.
* California includes sales tax, Oregon and Nevada include local option tax.
** Prorated over eight years.

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Table 8-4
Local Vehicle Registration Fee Option

Jurisdiction	Future (2017) Population	Distribution	1998 ANNUAL REVENUE Local Vehicle Registration Fee Options $10/yr	$20/yr	20-YEAR REVENUE 1998-2017 Local Vehicle Registration Fee Options $10/yr	$20/yr
Adrian	143	0.4%	$1,500	$2,900	$32,900	$65,700
Jordan Valley	502	1.4%	$5,100	$10,200	$115,400	$230,800
Nyssa	3,400	9.3%	$34,500	$69,100	$781,500	$1,563,000
Ontario	14,364	39.4%	$145,900	$291,800	$3,301,700	$6,603,400
Vale	2,500	6.9%	$25,400	$50,800	$574,600	$1,149,300
Unincorporated Co.	15,557	42.7%	$158,000	$316,000	$3,575,900	$7,151,800
TOTAL	**36,466**	**100.0%**	**$370,400**	**$740,800**	**$8,382,000**	**$16,764,000**

Local Gasoline Tax

Oregon's state-wide gasoline tax, as summarized in Table 8-3, is quite similar to neighboring states, and is $.01 (per gallon) lower than Idaho. Raising a Malheur County gasoline tax may introduce impacts to the Oregon/Idaho economy of gasoline sales and the revenues they generate locally. By assuming no change in the gasoline sales/revenue economy, the estimated annual and 20-year revenues from a county-wide local gasoline tax can yield significant revenues for transportation system improvements. As shown in Table 8-5, county-wide revenues over a 20-year period range from approximately $6.0 to $12.0 million based on a $.01-$.02 local gas tax (per gallon). Revenues allocated to unincorporated Malheur County range from $2.5 to $5.1 million over the next 20 years based on the same local gas tax options.

Table 8-5
Local Option Gas Tax

Jurisdiction	1996 Gallons	Future (2017) Population	Distribution	LOCAL OPTION GAS TAX Annual Revenue $0.01/Gal	$0.02/Gal	20-Year Revenue 1998-2017 $0.01/Gal	$0.02/Gal
Adrian		143	0.4%	$1,200	$2,300	$23,400	$46,900
Jordan Valley		502	1.4%	$4,100	$8,200	$82,300	$164,600
Nyssa		3,400	9.3%	$27,900	$55,700	$557,500	$1,115,000
Ontario		14,364	39.4%	$117,800	$235,500	$2,355,200	$4,710,400
Vale		2,500	6.9%	$20,500	$41,000	$409,900	$819,800
Unincorporated Co.		15,557	42.7%	$127,500	$255,100	$2,550,800	$5,101,700
TOTAL	**29,896,036**	**36,466**	**100.0%**	**$298,960**	**$597,921**	**$5,979,207**	**$11,958,414**

Road Bond Measure

Local property taxes could be used to fund transportation improvements. Roadway capital improvements are typically funded by a serial levy that implements property taxes for a set period of time, often for a specific set or list of projects. Voter approval is required for serial levies. Since passage of Measures 5 and 47/50, property tax levies are primarily used to support General Obligation bonds that finance transportation improvements, because levies for bonded indebtedness are exempt from property tax limitations.

Table 8-6 summarizes a range of road bond options based on the rate of added bond indebtedness ranging from $.25 to $.60 per $1,000 assessed property value. The estimated 20-year revenues from county-wide bond measure options ranges from $5.5 to $13.1 million. Revenues allocated to unincorporated Malheur County range from $2.3 to $5.6.

Summary

A summary of the estimated revenues generated by the county-wide funding sources described above is provided in Table 8-7. Annual, five-year and 20-year revenues are listed in the table, and were used in the process of matching the scope and timing of transportation system needs in Malheur County, with the appropriate type and mix of new funding sources. Table 8-8 summarizes the recommended funding sources (and their implementation period) which include the following:

- $.01 per Gallon, County-wide Local Gas Tax over the next 20 years[1];
- $10 per year, County-wide Vehicle Registration Fee over the next 20 years; and,
- $0.55 per $1,000 assessed value, Road Bond over the last 10 year period.

The county-wide local gas tax and vehicle registration fee rates, coupled with the current statewide rates, appear to be minimal when compared to other states and jurisdictions. Each measure generates significant revenue, both for the County and cities, and should be relatively stable over the 20-year lifetime of the TSP.

Currently, many of the cities and unincorporated areas of Malheur County have a number of local and county-wide programs funded through property taxes. The introduction of a new county-wide road bond might receive significant opposition within the next few years, but could be well received towards later years in the TSP time frame. To generate the remaining revenue needs within the 20-year TSP, a county-wide road bond levied at $0.55 per $1,000 assessed value over the last 10 years is needed.

[1] A more detailed economic cost and policy analysis should be conducted before Malheur County adopts even a modest, local, gasoline tax.

Table 8-6
Road Bond Options

Jurisdiction	Future Population	Distribution	ROAD BOND OPTIONS 20-Year Revenues* Rate per $1,000 Assessed Value $0.25	$0.30	$0.35	$0.40	$0.45	$0.50	$0.55	$0.60
Adrian	143	0.4%	$21,400	$25,700	$29,900	$34,200	$38,500	$42,800	$47,000	$51,300
Jordan Valley	502	1.4%	$75,100	$90,100	$105,100	$120,100	$135,100	$150,100	$165,200	$180,200
Nyssa	3,400	9.3%	$508,500	$610,200	$711,900	$813,500	$915,200	$1,016,900	$1,118,600	$1,220,300
Ontario	14,364	39.4%	$2,148,100	$2,577,700	$3,007,400	$3,437,000	$3,866,600	$4,296,200	$4,725,800	$5,155,500
Vale	2,500	6.9%	$373,900	$448,600	$523,400	$598,200	$673,000	$747,700	$822,500	$897,300
Uninc. Co.	15,557	42.7%	$2,326,500	$2,791,800	$3,257,100	$3,722,400	$4,187,700	$4,653,000	$5,118,400	$5,583,700
TOTAL	**36,466**	**100.0%**	**$5,453,433**	**$6,544,120**	**$7,634,806**	**$8,725,493**	**$9,816,179**	**$10,906,866**	**$11,997,553**	**$13,088,239**

*** Based on a 1996/1997 Total Assessed Valuation of $1,090,686,597.**

Table 8-7
Estimated Revenue from Additional Funding Sources

Funding Source and Rate	ADDITIONAL REVENUE Annual	5-Year [2]	20-Year
County-Wide Local Gas Tax [1]			
$0.01 *per gallon*	$298,960	$1,494,802	$5,979,207
$0.02 *per gallon*	$597,921	$2,989,604	$11,958,414
County-Wide Vehicle Registration Fee [1]			
$10 *per year*	$370,400	$1,903,174	$8,382,000
$20 *per year*	$740,800	$3,806,349	$16,764,000
County-Wide Road Bond			
$0.25 *per $1,000 assessed value*	$272,672	$1,363,358	$5,453,433
$0.30 *per $1,000 assessed value*	$327,206	$1,636,030	$6,544,120
$0.35 *per $1,000 assessed value*	$381,740	$1,908,702	$7,634,806
$0.40 *per $1,000 assessed value*	$436,275	$2,181,373	$8,725,493

[1] Based on 20-year growth in registered vehicles, commensurate with forecasted population growth.
[2] Revenue projections for 1998-2002.

Table 8-8
Recommended Funding Sources

Funding Source/ Rate	ADDITIONAL REVENUE Adrian	Jordan Valley	Nyssa	Ontario	Vale	Uninc. Malheur County
County-Wide Local Gas Tax - 20 Years *[1]*						
$0.01 *per gallon*	$23,400	$82,300	$557,500	$2,355,200	$409,900	$2,550,800
County-Wide Vehicle Registration Fee - 20 Years *[1]*						
$10 *per year*	$32,900	$115,400	$781,500	$3,301,700	$574,600	$3,575,900
County-Wide Road Bond - 10 Years (2008-2017)						
$0.55 *per $1,000 assessed value*	$23,500	$82,600	$559,300	$2,362,900	$411,250	$2,559,200
Total Revenue	**$79,800**	**$280,300**	**$1,898,300**	**$8,019,800**	**$1,395,750**	**$8,685,900**
Malheur County Transportation System Needs (unincorporated area)						*$8,620,000*

[1] Based on 20-year growth in registered vehicles, commensurate with forecasted population growth.

The Malheur County TSP Financial Plan, summarized previously in Table 8-1, includes the proposed local revenue sources utilizing the recommended local gas tax, vehicle registration fee and road bond funding measures. As only one scenario among many, these financing measures together provide the level of local funding to pay for needed transportation system improvements

in rural Malheur County. They also raise significant revenues for transportation system improvements within each of the municipalities.

The diversification of residential, commercial/industrial and agricultural activities in Malheur County makes it difficult to translate the real, added cost of new transportation funding measures. The valuation of homes and industry vary greatly across the County, as do the current property tax levels. For the purposes of illustrating the impact of these new funding measures a simplified summary is provided based on a typical[1] household (dwelling) in Malheur Country. Table 8-9 summarizes the added expenses for a "typical" dwelling to pay for needed transportation system improvements in the unincorporated areas of Malheur County through these measures. Beginning in 1998, each typical dwelling would pay $42.22 per year in added local gas tax and vehicle registration fees. Beginning in 2008, the 10-year Road Bond would add $66.00 in local property tax to the local gas tax and vehicle registration fees, totaling $108.22 in annual expense to the typical dwelling.

Table 8-9
Added Cost of New Transportation Funding Measures

New, County-Wide Transportation Revenue Measures	Added Annual Expense (1997 Dollars) for typical Dwelling in 1998	in 2008
20-Year Local Gas Tax ($.01/gal)	$22.22	22.22
20-Year Local Vehicle Registration Fee ($10/year)	$20.00	$22.00
10-Year[2] Road Bond ($.55 per $1,000 assessed value)		$66.00
TOTAL	$42.22	$108.22

Additional evaluation of the economic impact of any new tax and bonding measures, particularly a local gasoline tax should be completed before a public vote and eventual implementation (assuming voter approval). Furthermore, the introduction of new local funding measures will require significant public support. Those measures adopted by the County will require definition of local programs to administer the fee and/or tax collection programs.

Malheur County should continue to explore state and federal funding opportunities to meet its long-term transportation needs. State funding is available for funding bike lane modifications, with a state requirement that one percent of the State Highway Fund be spent for the development of pedestrian and bikeways. Federal ISTEA programs include the Surface Transportation Program that provides funds for any road not classified as a local or rural minor collector. The Transportation Enhancement Program provides funds for enhancing pedestrian and

[1] Single-family dwelling assessed at $120,000, with 2 automobiles accumulating 20,000 miles per year at 18 miles per gallon.
[2] 2008-2017.

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[1] Single-family dwelling assessed at $120,000, with 2 automobiles accumulating 20,000 miles per year at 18 miles per gallon.
[2] 2008-2017.

bicycle facilities, landscaping and other scenic beautification, and improvements to scenic or historic sites. This program may be a source of funds for projects that include adding bicycle lanes, sidewalks and off-road pathways. The Highway Enhancement Program provides funds for safety improvement projects on public roads. All of these programs are coordinated through the ODOT Region 5 staff and must be included in the STIP.

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CHAPTER 9:
RECOMMENDED POLICY CHANGES

The Transportation Planning Rule (TPR) requires local jurisdictions to adopt ordinances and regulations to protect transportation facilities. This chapter includes Table 9-1 that provides a "checklist" of TPR requirements and shows how this Transportation System Plan addresses each requirement. This chapter also provides general recommended policy amendments to the County's Comprehensive Plan and Development ordinances to comply with the TPR. Specific analysis and recommended changes for the Malheur County Comprehensive Plan and Development Code are included in Appendix H. These changes are grouped by general topic, including the following:

1. **TPR Compliance Table**
2. **Policies for Approval Processes**
3. **Standards for Transportation Improvements**
4. **Policies that Protect Transportation Facilities**
5. **Bicycle and Pedestrian Issues**
6. **Roadway Design Standards**
7. **Access Management Plan**

Appendix H **Transportation System Plan Analysis and Recommendations for Comprehensive and Development Code Amendments**

1. TRANSPORTATION PLANNING RULE REQUIRES AMENDMENTS TO LOCAL POLICIES

Table 9-1, on the following page, groups the TPR requirements into six categories: I. TSP Elements, II. TSP Preparation, III. Protection of Transportation Facilities/Improvements on Rural Roads, IV. Coordination of Land Use Reviews and Decisions/Plan and Land Use Amendments, V. Determination of Transportation Needs, and IV. Evaluation and Selection of Transportation System Alternatives. For each requirement there is identification of whether the current code is in compliance, a summary of the current code, and a summary of the recommended policy changes.

2. RECOMMENDED POLICIES FOR APPROVAL PROCESS

Policies should clarify the approval process for different types of projects. The following policies are recommended to be adopted in the Transportation System Plan:

The Transportation System Plan is an element of the Malheur County Comprehensive Plan. It identifies the general location of transportation improvements. Changes in the specific alignment of proposed public road and highway projects shall be permitted without plan amendment if the new alignment falls within a transportation corridor identified in the Transportation System Plan.

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Table 9-1
MALHEUR COUNTY TRANSPORTATION PLANNING RULE COMPLIANCE

I. TSP Elements

TPR Requirements	Current Code Compliance (Yes/NO)	Summary of Current Policies	Summary of Recommended Policy Change
OAR 660-12-020 (2) (b) TSP shall include a Road plan including a functional classification consistent with state and regional TSPs. Road standards for local streets to : 1) address extensions of existing streets, 2) Connections to existing /planned arterials and collectors, and 3) Connections to neighborhood destinations.	1) Yes 2) No 3) No	Functional classification. Road standard ordinance currently incomplete. Road districts have separate standards. Some policies incomplete at use of city standards inside UGB.	Implement agreements with road districts at city standards inside UGB. Update county functional classification. Standardize road district and county road standards
OAR 660-12-020 (2) (c) TSP shall include a description of public transportation services for the disadvantaged including: 1) identification of inadequacies, and 2) description of intercity bus and passenger rail system.	1) Yes 2) Yes	Encourage establishment of commuter bus system between Vale, Nyssa and Ontario. Encourages flexibility for county employees. Directs planning department to apply for grants to fund.	Recognize existing ride share program. Acknowledge, encourage support of commuter system to prison from Vale.
OAR 660-12-020 (2) (d) The TSP shall include a bicycle and pedestrian plan.	No	Pedestrian, bicycle and equestrian traffic to be considered in transportation improvements.	**Adopt bicycle** and **pedestrian/equestrian** plan with designated routes - coordinate with recreational trail system.
OAR 660-12-045(6) Bicycle and pedestrian plans must include improvements that connect neighborhood activity centers (schools, shopping).	No	· No policies about connectivity.	· Add definitions and standards to subdivision ordinance. Add policy about why connectivity is important.
OAR 660-12-020 (2) (e) The TSP shall include air, rail, water and pipeline transportation plans.	No	· Not covered in existing comprehensive plan.	Adopt plans as part of TSP. Amend airport overlay zone if necessary.

Table 9-1
MALHEUR COUNTY TRANSPORTATION PLANNING RULE COMPLIANCE

II. TSP Preparation			
TPR Requirements	**Current Code Compliance (Yes/NO)**	**Summary of Current Policies**	**Summary of Recommended Policy Change**
OAR 660-12-015 (4) The TSP prepared by the County must be adopted as part of the Comprehensive Plan.	N/A	None	Adopt TSP.
OAR 660-12-015 (5) Preparation of the TSP will be coordinated with state and federal agencies and other jurisdictions.	Yes	TSP is being coordinated with ODOT, road districts, local governments and stakeholders.	None
OAR 660-12-015 (6) Transportation airport and port districts must participate in preparation of the TSP and adopt plans for the transportation facilities they maintain consistent with the TSP.	Yes	Road districts are participating in TAG.	None

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Table 9-1
MALHEUR COUNTY TRANSPORTATION PLANNING RULE COMPLIANCE

III. Protection of Transportation Facilities/Improvements on Rural Roads

TPR Requirements	Current Code Compliance (Yes/NO)	Summary of Current Policies	Summary of Recommended Policy Change
OAR 660-12-045(2) Local governments shall adopt regulations/policies to protect transportation facilities for the following topics:) access management standards,) future operation of roads and transit corridors,) control of land use around airports,) coordinated review of transportation facility projects, including notice to ODOT of certain actions, and) land use, density should be consistent with road classifications in TSP.	1) No 2) No 3) Yes 4) No 5) Yes	1) None. 2) Some policies exist in comprehensive plan. (Road Advisory Committee and prioritization of projects). 3) Malheur County has an Airport Overlay . 4) There are no policies or procedures to ensure coordinated review. 5) Land uses and density in the county are consistent with the road classifications.	1) Adopt access management standards into development ordinances. 2) Add policies and standards that coordinate county, road district and city standards. Add policies that protect transportation facilities. 3) Review airport overlay for adequacy. 4) Add policies to mandate notice to ODOT for specific actions in Malheur County Subdivision and land use ordinances. 5) No recommended land use changes.
OAR 660-12-045(3) Local governments must amend subdivision regulations in accordance with the following directions: 1) provide bike parking in multi-family developments 4 units or more, 2) provision of pedestrian connections from new subdivisions/multi-family development to neighborhood activity centers, and 3) off-site road improvements must accommodate bicycle and pedestrian facilities on arterials and major collectors.	1) No 2) No 3) Yes	1) No reference to bicycle parking. 2) Subdivisions and MF development standards do not meet pedestrian connections. 3) Current comprehensive plan mentions bike/ped improvements.	1&2) Amend subdivision ordinance to include definitions and development requirements to provide pedestrian improvements where necessary. 3) Strengthen policy and ordinance language.
OAR 660-12-045 (7) Local governments shall provide street standards that minimize right-of-way widths and pavement width.	No	Local street and road standards vary depending on the Road District or county.	Adopt uniform street standards that provide for a range of pavement and right-of-way widths to be determined on a case by case basis.

Table 9-1
MALHEUR COUNTY TRANSPORTATION PLANNING RULE COMPLIANCE

IV. Coordination of Land Use Reviews and Decisions/Plan and Land Use Amendments

TPR Requirements	Current Code Compliance (Yes/NO)	Summary of Current Policies	Summary of Recommended Policy Change
OAR 660-12-045(2)(f) Local government must notify ODOT of following land use actions: 1) Land use actions requiring a public hearing , 2) Subdivisions and partitions, 3) Applications that affect private access to roads, 4) Applications within airport overlay districts.	1) No 2) No 3) No 4) Yes	1,2 & 3) No coordination required with ODOT 4) AO zone requires statement from ODOT Aeronautics Division.	Require coordination with ODOT in the following: 1) Zoning ordinance. 2) Subdivision/land partition ordinance. 3) Private access to state facilities. 4) Airport overlay areas. (Chapter 9 has suggested policy changes)
OAR 660-12-060 Amendments to comprehensive plans that significantly affect a transportation facility shall assure that allowed land uses are consistent with identified function, capacity and level of service on that road.	No	Current policies apply to development in general.	Add policies that require review of transportation impacts for all comprehensive plan amendments.
OAR 660-12-025 Findings of compliance with applicable statewide planning goals and acknowledged comprehensive plan policies shall be developed with the adoption of the TSP.	N/A	N/A	Create appropriate findings when adopting TSP.

Table 9-1
MALHEUR COUNTY TRANSPORTATION PLANNING RULE COMPLIANCE

V. Determination of Transportation Need

TPR Requirements	Current Code Compliance (Yes/NO)	Summary of Current Policies	Summary of Recommended Policy Change
OAR 660-12-030(1) The TSP should identify the following transportation needs: 1) state, regional and local 2) needs of the transportation disadvantaged 3) freight movement for industrial and commercial uses	1) Yes (out of date) 2) No 3) No	Current policies reflect out of date state information and needs.	1) Update state, regional and local needs. 2 & 3) Determine needs of transportation disadvantaged, and frequent movement for industrial and commercial users. (Chapters 4&5)
OAR 660-12-030(2) and (3) County TSPs shall use the state TSP for information on state needs. Within UGBs, local transportation needs are based on population and employment forecasts for 20 years	No	Current policies reflect out of date state information and needs.	Update county policies to reflect new state information and policies (such as access management, e.g.)

C. Projects specifically identified in the Transportation System Plan as not requiring further land use regulation.

D. Landscaping as part of a transportation facility.

E. Emergency measures necessary for the safety and protection of property.

F. Acquisition of right-of-way for public roads, highway, and other transportation improvements designated in the Transportation System Plan except for those that are located in exclusive farm use or forest zones.

G. Construction of a street or road as part of an approved subdivision or land partition approved consistent with the applicable land division ordinance.

Conditional Uses Permitted

A. Construction, reconstruction or widening of highways, roads, bridges or other transportation projects that are: (1) not improvements designated in the Transportation System Plan or (2) not designed and constructed as part of a subdivision or planned development subject to the site plan and/or conditional use review. These projects shall comply with the Transportation System Plan and applicable standards, and shall address the following criteria. For State projects that require an Environmental Impact Statement (EIS) or EA (Environmental Assessment), the draft EIS or EA shall be reviewed and used as the basis for findings to comply with the following criteria:

   1. The project is designed to be compatible with existing land use and social patterns, including noise generation, safety, and zoning.

   2. The project is designed to minimize avoidable environmental impacts to identified wetlands, wildlife habitat, air and water quality, cultural resources, and scenic qualities.

   3. The project preserves or improves the safety and function of the facility through access management, traffic calming, or other design features.

   4. Project includes provision for bicycle and pedestrian circulation as consistent with the comprehensive plan and other requirements of this ordinance.

B. Construction of rest areas, weigh stations, temporary storage, and processing sites.

C. If review under this section indicates that the use or activity is inconsistent with the Transportation System Plan, the procedure for a plan amendment shall be undertaken prior to or in conjunction with the conditional permit review.

Time Limitation on Transportation-Related Conditional Use Permits

A. Authorization of a conditional use shall be void after a period specified by the applicant as reasonable and necessary based on season, right-of-way acquisition, and other pertinent factors. This period shall not exceed three years.

4. RECOMMENDED POLICIES FOR PROTECTION OF TRANSPORTATION FACILITIES

- *The County shall protect the function of existing and planned roadways as identified in the Transportation System Plan.*

- *The County shall include a consideration of their impact on existing or planned transportation facilities in all land use decisions.*

- *The County shall protect the function of existing or planned roadways or roadway corridors through the application of appropriate land use regulations.*

- *The County shall consider the potential to establish or maintain access ways, paths, or trails prior to the vacation of any public easement or right-of-way.*

- *The County shall preserve right-of-way for planned transportation facilities through exactions, voluntary dedication, setbacks.*

- *The function of existing general use airports shall be protected through the application of appropriate land use designations to assure future land uses are compatible with continued operation of the airport. Airports identified in this plan for future development should also be protected.*

Recommended policies to Protect Public Use airports

- *To avoid danger to the public safety from potential aircraft accidents, commercial and residential uses resulting in concentrations of people shall not be permitted in the airport runway protection zone.*

- *Land uses around airports shall be required to provide an environment that will not be adversely affected by noise and safety problems and will be compatible with airports and their operations.*

- *Airports are recognized as an important transportation facility. Their operation, free from conflicting land uses, is in the best interests of the citizens of the County; therefore, incompatible land uses will be prohibited on the lands adjacent to airports.*

- *The County shall encourage cooperation between the County, and the Oregon Aeronautics Section when reviewing any land use development near an airport.*

- *The County will cooperate and coordinate with the County and the Oregon Aeronautics Section in the protection of airports and future expansion areas from potential adverse effects posed by incompatible land uses.*

- *The County shall create local airport Advisory Committees for each airport. This committee shall be responsible for advising the sponsors during the development of airport Master plans, implementing ordinances or in individual land use actions.*

- *The land use element of the airport Master Plan shall be protected from development that could conflict with aircraft approach safety, or threaten surrounding development.*

- *Development in highly hazardous areas, such as land within a floodway or under the Airport Runway Approach Zone will be restricted or prohibited.*

- *Because of potential bird hazards to airborne aircraft, land uses beneath designated airport approach surfaces within 500 feet off the approach end of runway(s) accommodating piston engine aircraft, and within 10,000 feet of the approach end of runway(s) accommodating jet aircraft shall not create water impoundments, sanitary landfills, or sewer treatment plants.*

- *The County shall adopt and implement an Airport Overlay Zone supporting land use compatibility around the airport.*

- *The County supports:*

  - *Land Use Zoning with respect to airport land use plans and noise contours;*

  - *A comprehensive capital-improvements program for land acquisition for airport expansion and safety; and*

  - *Frequent updating of the Airport Master Plan and related land use plans to keep the Planning program current with changes in community goals.*

Other Policies protecting Transportation Facilities

- *The County shall coordinate with the Department of Transportation to implement the highway improvements listed in the Statewide Transportation Improvement Program (STIP) that are consistent with the Transportation System Plan and comprehensive plan.*

- *The County shall consider the findings of ODOT's draft Environmental Impact Statements and Environmental Assessments as integral parts of the land use decision-making procedures. Other actions required, such as a goal exception or plan amendment, will be combined with review of the draft EA or EIS and land use approval process.*

- *The proposed use shall impose an undue burden on the public transportation system. For developments that are likely to generate more than 400 average daily motor vehicle trips (ADTs), the applicant shall provide adequate information, such as a traffic impact study or traffic counts, to demonstrate the level of impact to the surrounding street system. The developer shall be required to mitigate impacts attributable to the project.*

- *The determination of impact or effect and the scope of the impact study should be coordinated with the provider of the affected transportation facility.*

- *Dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or access ways shall be required where the existing transportation system will be impacted by or is inadequate to handle the additional burden caused by the proposed use.*

- *Improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, access ways, paths, or streets that serve the proposed use where the existing transportation system may be burdened by the proposed use.*

Coordination of Land Use Reviews

Review of land use actions is typically initiated by a Notice. This process is usually defined by a Procedures Ordinance or Noticing Policy. This Ordinance or Policy should be amended to provide for Notice to ODOT regarding any land use action on or adjacent to a State facility. Similarly, all actions by a city or county potentially affecting another jurisdiction's road should require notice to that jurisdiction's public work department. In addition, the policy should be to notice providers of public transit and special interest transportation groups such as truckers, railroad, bicyclists, pedestrians, and the disabled on any roadway or other transportation project.

Information that should be conveyed to reviewers includes:

- *Project location.*
- *Proposed land use action.*
- *Location of project access point(s).*

Additional information that could be supplied to the review upon request (provided the information is available) includes a site plan showing the following:

- *Distances to neighboring constructed access points, median openings, traffic signals, intersections, and other transportation features on both sides of the property;*
- *Number and direction of lanes to be constructed on the driveway, plus striping plans;*
- *All planned transportation features (lanes, signals, bikeways, sidewalks, crosswalks, etc.);*
- *Trip generation data or appropriate traffic studies;*
- *Parking (motor vehicle and bicycle) and internal circulation plans for vehicles and pedestrians;*
- *Plat map showing property lines, right-of-way, and ownership of abutting properties; and*
- *A detailed description of any requested variance.*

Recommended Regulations to Assure that Amendments are Consistent with the Transportation System Plan

Section 660-12-045(2)(g) of the Transportation Planning Rule requires that jurisdictions develop regulations to assure that all development proposals, plan amendments, or zone changes conform with the Transportation System Plan. This requirement can be addressed by adding a policy to the Comprehensive Plan, as follows:

- *All development proposals, plan amendments, or zone changes shall conform with the adopted Transportation System Plan.*

The following statements should be added to the local ordinance and policy language governing zone changes and plan amendments:

- *A plan or land use regulation amendment significantly affects a transportation facility if it:*

  a. *Changes the functional classification of an existing or planned transportation facility;*

  b. *Changes standards implementing a functional classification system;*

  c. *Allows types or levels of land use that would result in levels of travel or access what are inconsistent with the functional classification of a transportation facility; or*

d. Would reduce the level of service of the facility below the minimum acceptable level identified in the Transportation System Plan.

- *Amendments to the comprehensive plan and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:*

  a. Limiting allowed land uses to be consistent with the planned function of the transportation facility;

  b. Amending the Transportation System Plan to ensure that existing, improved or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,

  c. Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes.

5. RECOMMENDED POLICIES FOR PEDESTRIAN AND BICYCLE CIRCULATION

To comply with objectives of the Transportation System Plan and the Transportation Planning Rule, it is recommended that the small jurisdiction amend its Comprehensive Plans with policies such as the following to protect, support, and encourage bicycle and pedestrian travel.

- *It is the policy of the County to plan and develop 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.*

- *The County shall require streets and access ways where appropriate to provide direct and convenient access to major activity centers, including downtown, schools, shopping areas, and community centers.*

- *In areas of new development the County shall investigate the existing and future opportunities for bicycle and pedestrian access ways. Many existing access ways such as user trails established by school children distinguish areas of need and should be incorporated into the transportation system.*

- *Bikeways shall be included on all new arterial and collectors within the Urban Growth Boundary except on limited access freeways.*

- *Priority shall be given to developing access ways to major activity centers within the Urban Growth Boundary, such as the downtown commercial center, schools, and community centers.*

- *Bikeways and pedestrian access way shall connect to regional travel routes.*

- *Bikeways and pedestrian access ways shall be designed and constructed to minimize potential conflicts between transportation modes. Design and construction of such facilities shall follow the guidelines established by the Oregon Bicycle and Pedestrian Plan.*

- *Maintain and repair of existing bikeways and pedestrian access ways (including sidewalks) shall be given equal priority to the maintenance and repair of motor vehicle facilities.*

Recommended Ordinances for Bicycle Parking

To comply with the objectives of the Transportation Planning Rule, it is recommended that policy language regarding bicycle parking requirements be added to the Development Code.

- *A minimum of 2 bicycle parking spaces per use (one sheltered and one unsheltered) shall be required.*

- *The following Special Minimum Standards shall be considered as supplemental requirements for the number of required bicycle parking spaces.*

  Multi-Family Residences. Every residential use of four (4) or more dwelling units shall provide at least one sheltered bicycle parking space for each unit. Sheltered bicycle parking spaces may be located within a garage, storage shed, basement, utility room or similar area. In those instances in which the residential complex has no garage or other easily accessible storage unit, the required bicycle parking spaces shall be sheltered under an eave, overhang, an independent structure, or similar cover.

  Parking Lots. All public and commercial parking lots and parking structures shall provide a minimum of one bicycle parking space for every 10 motor vehicle parking spaces.

  Schools. Elementary and middle schools, both private and public, shall provide one bicycle parking space for every 10 students and employees. High schools shall provide one bicycle parking space for every 5 students and employees. All spaces shall be sheltered under an eave, overhang, independent structure or similar cover.

Colleges. Colleges, Universities, and trade schools shall provide one bicycle parking space for every 10 motor vehicle spaces plus one space for every dormitory unit. Fifty percent of the bicycle parking spaces shall be sheltered under an eave, overhang, independent structure, or similar cover.

Downtown Areas. In downtown areas with on-street parking, bicycle parking for customers shall be provided along the street at a rate of at least one space per use. Spaces may be clustered to serve up to six (6) bicycles; at least one cluster per block shall be provided. Bicycle parking spaces shall be located in front of the stores along the street, either on the sidewalks in specially constructed areas such as pedestrian curb extensions. Inverted "U" style racks recommended. Bicycle parking shall not interfere with pedestrian passage, leaving a clear area of at least 5 feet. Customer spaces are not required to be sheltered. Sheltered parking (within a building, or under an eave, overhang, or similar structure) shall be provided at a rate of one space per 10 employees, with a minimum of one space per store.

Rural Schools, Service Centers, and Industrial Parks. Where a school, service center, or industrial park is located 5 or more miles from the closet urban area or rural residential subdivision with a density of more than one dwelling unit per 20 acres, a minimum of two bicycle parking spaces per use shall be required.

The following formulas for Calculating the Number of Required Bicycle Parking Spaces are recommended.

- *Fractional numbers of spaces shall be rounded up to the next whole space.*

- *For facilities with multiple uses (such as commercial center), the bicycle parking requirements shall be calculated by using the total number of motor vehicle parking spaces for the entire development.*

Recommended Definitions for Bicycle and Pedestrian Facilities

The Transportation Planning Rule specifies that, at a minimum, sidewalks and bikeways be provided along arterials and collectors in urban areas. Separate bicycle and pedestrian facilities should be provided where these would safely minimize trips distances by providing a "short cut." Small cities should enhance existing ordinances by including the following recommended language, additions and recommendations. The recommendations should be placed within the appropriate section of the zoning or subdivision ordinance:

Definitions:

1. *Access way. A walkway that provides pedestrian and bicycle passage either between streets or from a street to a building or other destination such as school, park, or transit stop.*

Access ways generally include a walkway and additional land on either side of the walkway and additional land on either side of the walkway, often in the form of an easement or right-of-way, to provide clearance and separation between the walkway and adjacent uses. Access ways through parking lots are generally physically separated from adjacent vehicle parking or parallel vehicle traffic by curbs or similar devices and include landscaping, trees, and lighting. Where access ways cross driveways, they are generally raised, paved, or marked in manner that provides convenient access for pedestrians.

2. *Bicycle. A vehicle designed to operate on the ground on wheels, propelled solely by human power, upon which any person or persons may ride, and with two tandem wheels at least 14 inches in diameter. An adult tricycle is considered a bicycle.*

3. *Bicycle Facilities. A general term denoting improvements and provisions made to accommodate or encourage bicycling, including parking facilities and all bikeways.*

4. *Bikeway. Any road, path, or way that is some manner specifically open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are shared with other transportation modes. The five types of bikeways are:*

    a. *Multi-use Path. A paved 10 to 12 foot wide way that is physically separated from motorized vehicular traffic; typically shared with pedestrians, skaters, and other non-motorized users.*

    b. *Bike Lane. A 4 to 6-foot wide portion of the roadway that has been designated by permanent striping and pavement markings for the exclusive use of bicycles.*

    c. *Shoulder Bikeway. The paved shoulder of a roadway that is 4 feet or wider; typically shared with pedestrians in rural areas.*

    d. *Shared Roadway. A travel lane that is shared by bicyclists and motor vehicles.*

    e. *Multi-use Trail. An unpaved path that accommodates all-terrain bicycles; typically shared with pedestrians.*

5. *Pedestrian Facilities. A general term denoting improvements and provisions made to accommodate or encourage walking, including sidewalks, access ways, crosswalks, ramps, paths and trails.*

6. *Neighborhood Activity Center. An attractor or destination for residents of surrounding residential areas. Includes, but is not limited to existing or planned schools, parks shopping areas, transit stops, employment areas.*

7. *Reasonably direct. A route that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for likely users.*

8. *Safe and convenient. Bicycle and pedestrian routes that are:*

    a. *Reasonably free from hazards, and*

    b. *Provides a reasonably direct route of travel between destination, considering that the optimum travel distance is one-half mile for pedestrians and three miles for bicyclists.*

9. *Walkway. A hard-surfaced area intended and suitable for pedestrians, including sidewalks and the surfaced portions of access ways.*

Site Plan Requirements

Amend the Development Code to include the following requirements.
Site Plans shall show the following details:

1. *Bicycle Parking. The development shall include the number and type of bicycle parking facilities required in the Off-Street Parking and Loading section of this Title. The location and design of bicycle parking facilities shall be indicated on the site plan.*

2. *Pedestrian Access and Circulation.*

    a. *Internal pedestrian circulation shall be provided in new commercial, office, and multi-family residential developments through the clustering of buildings, construction of hard surface walkways, landscaping, access ways, or similar techniques.*

3. *Commercial Development Standards.*

    a. *New commercial buildings, particularly retail shopping and offices, shall be oriented to the street, near or at the setback line. A main entrance shall be oriented to the street. For lots with more than two front yards, the building(s) shall be oriented to the two busiest streets.*

    b. *Off street plans (industrial and commercial) shall be located at the side or behind the building(s).*

4. *All site plans (industrial and commercial) shall clearly show how the site's internal pedestrian and bicycle facilities connect with external or planned facilities or systems.*

Approval of Subdivision Tentative Plans and Final Plats

Information required shall include the location and design of all proposed pedestrian and bicycle facilities, including access ways.

1. *Pedestrian and Bicycle Circulation.*

   a. *On-site facilities shall be provided that accommodate safe and convenient pedestrian and bicycle access within new subdivisions, multi-family developments, planned development, shopping centers, and commercial districts, and connecting to adjacent residential areas and neighborhood activity centers within one-half mile of the development. Residential developments shall include streets with sidewalks and access ways. Pedestrian circulation through parking lots shall be provided in the form of access ways.*

   b. *Bikeways shall be required along arterial and collectors with ADT's greater than 3,000. Sidewalks shall be required along arterial, collectors , and most local streets, except that sidewalks are not required along controlled access roadways (freeways).*

2. *Cul-de-Sacs and Access ways.*

   a. *Cul-de-sacs or permanent dead-end streets may be used as part of a development plan; however, through streets are encouraged except where topographical, environmental, or existing adjacent land use constraints make connecting streets infeasible. Where cul-de-sacs are planned, access ways shall be provided connecting the ends of cul-de-sacs are planned, access ways shall be provided connecting the ends of cul-de-sacs to each other, to other streets, or to neighborhood activity centers.*

   b. *Access ways for pedestrians and bicyclists shall be 10 feet wide and located within 20-foot-wide right-of-way or easement. If the streets within the subdivision are lighted, the access ways shall also be lighted. Stairs or switchback paths may be used where grades are steep.*

   c. *Access ways for pedestrians and bicyclists shall be provided at mid-block where the block is longer than 600 feet.*

   d. *The Hearings Body or Planning Director may determine, based upon evidence in the record, that an access way is impracticable. Such evidence may include but is not limited to:*

      i) Physical or topographic conditions make an access way connection impractical. Such conditions include but are not limited to freeways, railroads, extremely steep slopes, wetlands, or other bodies of water where a connection cannot reasonably be provided.

ii) Buildings or other existing development on adjacent lands physically preclude a connection now or in the future, considering potential for redevelopment.

iii) Where access ways would violate provisions of leases, easements, covenants, restrictions, or other agreements existing as of [adoption date] that preclude a required access way connection.

6. RECOMMENDED DESIGN STANDARDS

Functional Classification and Roadway Standards

The recommended functional classification and roadway standards for Malheur County roadways are included in Chapter 7.

7. ACCESS MANAGEMENT PLAN

The recommended access management policy for Malheur County roadways is included in Chapter 7.

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CHAPTER 10:
ODOT REGIONAL AND DISTRICT HIGHWAYS
MALHEUR COUNTY TSP SUMMARY

This Chapter summarizes those portions of the Malheur County TSP related to the state highway system in Malheur County with focused reference to those TSP chapters and maps which identify projects and policies affecting *district* and *regional* highways.

FUNCTIONAL CLASSIFICATION AND ACCESS MANAGEMENT GUIDELINES

The recommended functional classification designations (see Figure 7-2, page 7-5) identified for state highways in Malheur County TSP are consistent with the Level of Importance designations and Access Management guidelines identified in the *Oregon Highway Plan.* The suggested access management guidelines for rural roadways, which appear in Table 10-1 below, are also shown in Chapter 7, Table 7-2 (page 7-11).

HIGHWAY 20

Largely a U.S. route of *statewide* importance, Highway 20 enters Malheur County from Burns (in Harney County), passes through Juntura, and connects Vale and Nyssa with Boise, Idaho. East of Cairo Junction, the route is classified at a *regional* level of importance. It has a Malheur County TSP recommended functional classification of *Rural Major Arterial* and *Rural Minor Arterial* (see Figure 7-2, page 7-5). East of Vale, Highway 20 joins with Highway 26, and intersects Highway 201 at Cairo Junction, with connection to Nyssa and Ontario. The three legs of this intersection lead to Vale, Nyssa and Ontario. ODOT's draft *U.S. Highway 20 Corridor Strategy, Bend - Vale (June 1996)* was reviewed as part of the TSP (see Chapter 2, page 2-16).

Current Conditions - The following conditions have been noted on Highway 20 (see Chapter 4 for additional details). Near- or above-average accident rates have been recorded on Highway 20 between Juntura and Dry Wash Crossing (mp 189.90 to mp 193.07) and between Dry Wash Crossing and Big Swamp Creek (mp 193.07 to mp 202.90). Accident rates on the remaining sections of Highway 20 within rural Malheur County are below the statewide average. Poor pavement conditions have been noted on Highway 20 between Vale-West Highway and Cairo Junction (19 miles). A project is identified in the current STIP to repair this section. The remaining sections of Highway 20 within rural Malheur County are in fair or better condition.

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Table 10-1
Suggested Access Management Guidelines for Rural Roadways

Functional Classification	Intersection			
	Public Road		Private Drive	
	Intersection Type	Spacing	Intersection Type	Spacing
Malheur Co. Rds				
Rural Major Arterial	at-grade	1 mile	Left/Right Turns	1,200 feet
Rural Minor Arterial	at-grade	1/2 mile	Left/Right Turns	500 feet
Rural Collector (major/minor)	at-grade	1/4 mile	Left/Right Turns	300 feet
Rural Local	at-grade	200-400 feet	Left/Right Turns	Access to each lot.
State Highways[1]				
Interstate				
I-84	Interchange	3 - 8 miles	None	NA
Statewide				
Highway 20	at-grade	1 - 3 miles	Right Turns	1,200 feet
Highway 26	at-grade	1 - 3 miles	Right Turns	1,200 feet
Highway 95	at-grade	1 mile	Left/Right Turns	1,200 feet
Regional				
Highway 78	at-grade	1/2 mile	Left/Right Turns	500 feet
Highway 201[2]	at-grade	1/2 mile	Left/Right Turns	500 feet
District				
Highway 201	at-grade	1/4 mile	Left/Right Turns	300 feet
Parma Spur	at-grade	1/4 mile	Left/Right Turns	300 feet
Homedale Spur	at-grade	1/4 mile	Left/Right Turns	300 feet
Weiser Spur	at-grade	1/4 mile	Left/Right Turns	300 feet
Payette Spur	at-grade	1/4 mile	Left/Right Turns	300 feet
Vale-West Hwy	at-grade	1/4 mile	Left/Right Turns	300 feet
Adrian Arena Hwy	at-grade	1/4 mile	Left/Right Turns	300 feet
Adrian-Caldwell Hwy	at-grade	1/4 mile	Left/Right Turns	300 feet
Olds Ferry-Ontario Hwy	at-grade	1/4 mile	Left/Right Turns	300 feet

Bridges - The following bridges have been identified by ODOT as "functionally obsolete" (see page 4-14):

- Highway 20 over the North Fork of the Malheur River (mp 190.84);
- Highway 20 over the Malheur River at Horseshoe Bend (mp 191.97);
- Highway 20 over the Malheur River at the Gwynn Bridge (mp 195.13);
- Highway 20 over the Malheur River at the Speery Bridge (mp 205.58); and
- Highway 20/26 over the Snake River at Nyssa (mp 266.81).

Bicycle Facilities - Highway 20 is a designated Statewide Bicycle Route and there are paved shoulders at least six feet wide or greater on Highway 20 between Harper-Westfall Road and Vale-West Highway (16 miles).

Proposed Projects - Projects proposed in the Malheur County TSP which directly affect Highway 20 include:

[1] Designations for highways may vary throughout their route, for more details see written descriptions on the following pages.
[2] Between Cairo Junction and Nyssa.

Project 5 (Safety) - Replace bridges identified by ODOT as "functionally obsolete". There are seven bridges with this designation, four of which are on Highway 20: over the Malheur River at Gwynn; over the Malheur River at Horseshoe Bend; over the North Fork of the Malheur River, and over the Malheur River at Speery (see page 7-20).

Project 9 (Safety) - Work with Department of Wildlife to establish precautionary measures to reduce human/animal fatalities at key wildlife crossings (see page 7-21). The issue of wildlife crossings was raised in the draft Highway 20 Corridor Strategy.

Project 18 (Safety) - Remove bridge piers on Highway 20 (see Figure 7-3, page 7-13). As part of ODOT'S regular maintenance program, the remnant railroad bridge piers along Highway 20 (approximate mileposts 195 and 202) should be removed to improve highway safety. These improvements should also include minor highway re-alignment to improve sight lines (see page 7-15).

HIGHWAY 26

Highway 26 is a U.S. route of *statewide* importance west of Cairo Junction, and a route of *regional* importance between Cairo Junction and Nyssa. It has a Malheur County TSP recommended functional classification of *Rural Major Arterial* and *Rural Minor Arterial* (see Figure 7-2, page 7-5). The route enters Malheur County from the northwest, passing through Ironside, Brogan, Jamieson and Willow Creek, as well as the larger communities of Vale and Nyssa, before heading east to Boise, Idaho. Highway 26 is also the only Access Oregon Highway (AOH) in the county, according to the *1991 Oregon Highway Plan.* AOH status ensures that Highway 26 will receive top priority for funding improvements in the statewide Level of Importance system. ODOT's draft *Interim Corridor Strategy for the Sisters to Ontario Corridor (OR Highway 126/US Highway 26) (September 1997)* was reviewed as part of the TSP (Chapter 2, page 2-14).

Current Conditions - Accident rates on those sections of Highway 26 within rural Malheur County are below the statewide average. Pavement conditions on all sections of Highway 26 within rural Malheur County are in fair or better condition (see Table B-1, Appendix B).

Proposed Projects - Projects proposed in the Malheur County TSP which directly affect Highway 26 include:

Project 9 (Safety) - Work with Department of Wildlife to establish precautionary measures to reduce human/animal fatalities at key wildlife crossings (see page 7-21). The issue of wildlife crossings was raised in the draft Highway 26 Corridor Strategy.

HIGHWAY 78

Classified as a highway of *regional* importance, Highway 78 links Highway 20 in Burns (in Harney County) with Highway 95 at Burns Junction. It has a Malheur County TSP recommended functional classification of *Rural Minor Arterial* (see Figure 7-2, page 7-5).

Current Conditions - Accident rates on those sections of Highway 78 within rural Malheur County are below the statewide average. Pavement conditions on all sections of Highway 78 within rural Malheur County are in good or better condition (see Table B-1, Appendix B).

Proposed Projects - There are no projects identified in the Malheur County TSP which directly impact Highway 78.

HIGHWAY 95

Highway 95 is a facility of *statewide* importance. It has a Malheur County TSP recommended functional classification of *Rural Major Arterial* (see Figure 7-2, page 7-5). Highway 95 passes through Malheur County, connecting Idaho and Nevada. This facility operates primarily as an intercity traffic route; little commercial or industrial development exists along this corridor with the exception of Jordan Valley and Rome. ODOT's draft *U.S. Highway 95 Corridor Plan (June 1996)* was reviewed as part of the TSP (Chapter 2, page 2-14).

Current Conditions - . The accident rate on Highway 95 between Jordan Valley and Sheep Creek (MP 21.64 to MP 25.90) has been identified as near- or above-average. Accident rates on the remaining sections of Highway 95 within rural Malheur County are below the statewide average. Pavement conditions on all sections of Highway 95 within rural Malheur County are in fair or better condition (see Table B-1, Appendix B).

Bicycle Facilities - Highway 95 is a designated Statewide Bicycle Route.

Proposed Projects - Projects proposed in the Malheur County TSP which directly affect Highway 95 include:

Project 4 (Safety) - Minor intersection realignment of US Highway 95 in Jordan Valley (see Figure 7-3, page 7-13). US Highway 95 makes a sharp, 90° turn in downtown Jordan Valley, creating turning movement difficulties particularly for oversized vehicles. ODOT has indicated that they are currently working on this project (see page 7-19). The need for passing lanes and safety improvements on Highway 95 at Rome Hill (mp 51-53) and Succor Creek Hill (mp 6-8) have been identified and discussed by ODOT staff. Project specific alternatives and costs have not been identified in the Malheur County TSP. ODOT should continue to monitor and study these sections of Highway 95 to ascertain the cost and schedule for appropriate improvements.

Project 9 (Safety) - Work with Department of Wildlife to establish precautionary measures to reduce human/animal fatalities at key wildlife crossings (see page 7-21). The issue of wildlife crossings was raised in the draft Highway 95 Corridor Plan.

HIGHWAY 201

North of Ontario, Highway 201, also known as the Olds Ferry Ontario Highway, forms a loop off of Interstate 84, passing through residential and farmland areas. This segment of Highway 201, classified at a *district* level of importance, operates as a two-lane facility with a posted speed limit of 55 mph. Between Interstate 84 and Cairo Junction, Highway 201 operates as a 4-5 lane facility of *statewide* importance. Between Cairo Junction and Nyssa, Highway 201 shares route designation with Highway 20/26 and is classified as a roadway of *regional* importance. Between Nyssa and the Idaho border (south of Adrian), Highway 201 is classified as a roadway of *district* importance. It has a Malheur County TSP recommended functional classification of *Rural Major Arterial* and *Rural Minor Arterial* (see Figure 7-2, page 7-5).

Current Conditions - The following conditions have been noted on Highway 201 (see Chapter 4 for additional details). Near- or above-average accident rates have been recorded on the Highway 201 between Interstate 84 to Annex Road (MP 0.00 to MP 9.03). Accident rates on the remaining sections of Highway 201 within rural Malheur County are below the statewide average. Poor pavement conditions have been noted on Highway 201 between the Olds Ferry interchange and Annex Road (9 miles) and on the Parma Spur (2 miles). Pavement conditions on the remaining sections of Highway 201 within rural Malheur County are in fair or better condition (see Table B-1, Appendix B).

Bridges - The following bridges have been identified by ODOT as "functionally obsolete" (see page 4-14):

- Highway 201 spur over the Snake River at Weiser (mp 13.66);
- Highway 201 spur over the Snake River at Payette (mp 21.30); and

Bicycle Facilities - Highway 201 has paved shoulders at least six feet wide or greater west of the Olds Ferry Interchange (1 mile) and South of Chester Boulevard to Ontario (1 mile).

Proposed Projects - Projects proposed in the Malheur County TSP which directly affect Highway 201 include:

Project 2 (Capacity/Circulation) - Build Ontario North-South Arterial (see Figure 7-3, page 7-13). This project would directly link Highway 201 with Interstate 84 north of Ontario. The recommended route, necessary improvements, cost estimates and financing plan for this project are being developed as part of the Ontario Transportation Solutions project. This project will likely include shoulder improvements and striping for bike lanes (see page 7-19).

Project 5 (Safety) - Improve bridges identified by ODOT as "functionally obsolete". There are seven bridges with this designation, three of which are on Highway 201: over the Snake River at Weiser; over the Snake River (Nyssa Spur); and over the Snake River at Payette. Planning level costs are estimated to be $7.64 million for all seven bridges (see page 7-20).

Project 7 (Safety) - Improve pavement on those sections of road identified as in "poor" condition including Highway 201 (Olds Ferry Road), Owyhee Avenue and Parma Spur -- see Figure 7-3. These projects do not include those State highway improvements (and their costs) that are already included in ODOT's Statewide Transportation Improvement Program (STIP) (see page 7-20).

Project 8 (Safety) - Improve Highway 201 Intersections (see Figure 7-3, page 7-13). At each of the 90 degree turns in Highway 201 south of Nyssa, there are multiple intersecting roads, resulting in unnecessary conflict points and poorer safety conditions. The State, County and Nyssa Road District should coordinate their maintenance programs to replace the multiple access roads with single intersecting approaches to Highway 201 at the following intersections:

- Fairview Drive
- Adams Road
- Enterprise Avenue (West and East)
- Clark Boulevard

Each of these safety improvement projects also include the installation of left-turn lanes on Highway 201. These improvements are estimated at a total of $601,500, and should be coordinated with regular State and Road District maintenance programs (see page 7-20).

Project 10 (Safety) - Remove Highway 201/UPRR Overcrossing (see Figure 7-3, page 7-13). The existing railroad overcrossing on Highway 201 at milepost 14.4 should be removed to improve vehicle safety. Assuming the Homedale Branch Line RR will be abandoned, this project should be completed in conjunction with the removal of the railroad tracks on the Union Pacific RR spur south of Adrian. This project should also be coupled with minor re-alignments to Highway 201 to improve sight lines and safety conditions. Costs associated with these improvements are estimated to range from $150,000 to $200,000. Detailed engineering analysis will be required to fully specify the project cost estimate.

The current at-grade railroad crossing on Highway 201 north of Adrian (milepost 10.7) should be replaced, and that section of highway be reconstructed to standard. This project, estimated at $250,000, should include full rail crossing signal, roadbed and pavement improvements, and minor re-alignment as necessary (see page 7-21).

Project 11 (Circulation) - Realign Highway 201 south of Adrian (see Figure 7-3, page 7-13). ODOT's long-range plans for Highway 201 south of Adrian should include coordination with the State of Idaho, Homedale (Idaho) Highway District and Owyhee County, Idaho to re-align Highway 201 (Oregon)/Highway 19 (Idaho) via the UPRR spur right-of-way (following rail line removal). This new route would provide a more direct and safe route between Oregon (Nyssa

Table 9-1
MALHEUR COUNTY TRANSPORTATION PLANNING RULE COMPLIANCE

VI. Evaluation and Selection of Transportation System Alternatives

TPR Requirements	Current Code Compliance (Yes/NO)	Summary of Current Policies	Summary of Recommended Policy Change
OAR 660-12-035(1) The following alternatives shall be analyzed in the TSP: 1) improvements to existing facilities 2) new facilities 3) System management 4) demand management measures 5) no build alternative	No	Current policies are based on improvements to existing facilities and no alternatives analysis was documented.	Conduct TSP process to analyze these alternatives (Chapter 6 of the TSP evaluates improvements to existing facilities and new facilities in the "Build" alternative, TSM/TDM projects and programs in the "TSM/TDM" alternative, and no build in the "No-Action alternative)
OAR 660-12-035(3)Standards for evaluation include: 1) Transportation system shall support urban and rural development by providing transportation system that will serve the land uses identified in the comprehensive plan; 2) transportation system shall be consistent with state and federal protection of air, land and water quality measures; 3) transportation system shall minimize adverse economic, social, environmental and energy consequences; 4) the transportation system shall minimize conflicts between modes; 5) the transportation system shall avoid reliance on one mode of travel and reduce reliance on the automobile.	N/A	N/A	TSP currently being adopted will evaluate these standards. (Chapter 6)
OAR 660-12-035(8) Where existing and committed transportation facilities can adequately serve land uses in the acknowledged comprehensive plan, local governments are not required to evaluate alternatives (above)	N/A	N/A	N/A

- *Operation, maintenance, repair, and preservation of existing transportation facilities shall be allowed without land use review, except where specifically regulated.*

- *Dedication of right-of-way, authorization of construction and the construction of facilities and improvements shall be allowed without land use review for those improvements that are either specifically designated in the Transportation System Plan or that are consistent with the classification of the roadway and approved road standards of the Transportation System Plan.*

- *Changes in the frequency of transit, rail and airport services that are consistent with the Transportation System Plan shall be allowed without land use review.*

- *For State projects that require an Environmental Impact Study (EIS) or Environmental Assessment (EA), if local review is required the draft EIS or EA shall serve as the documentation for local land use review, as follows:*

  (1) Where the project is consistent with the Transportation System Plan, formal review of the draft EIS or EA and concurrent or subsequent compliance with applicable development standards or conditions;

  (2) Where the project is not consistent with the Transportation System Plan, formal review of the draft EIS or EA and concurrent completion of necessary goal exceptions or plan amendments.

- *Uses permitted outright under ORS 215.213(1)(m) through (p) and ORS 215.283 (k) through (n), consistent with the Transportation System Plan, the classification of the roadway, and approved road standards, shall be allowed without land use review.*

3. RECOMMENDED STANDARDS FOR TRANSPORTATION IMPROVEMENTS

The following changes are recommended to be inserted into the Malheur County Development Ordinances to address the lack of detailed standards for proposed transportation improvements.

Uses Permitted Outright. Except where otherwise specifically regulated by this ordinance, the following improvements are permitted outright:

A. Normal operation, maintenance, repair, and preservation activities of existing transportation facilities.

B. Installation of culverts, pathways, medians, fencing, guardrails, lighting, and similar types of improvements within the existing right-of-way.

and Adrian) and Idaho (Homedale) with connections to Highway 95 and I-84. The ownership and maintenance responsibilities for the current alignment of Highway 201 between Napton Road and the Idaho state line would be transferred to Malheur. Costs associated with new roadway improvements (3.1 miles) in Oregon are estimated at $2.7 million (see page 7-21).

Project 14 (Safety) - Improve Boat Landing Road (see Figure 7-3, page 7-13). The current alignment and condition of Boat Landing Road is insufficient to safely accommodate current travel between Ontario (via Highway 201) and Payette, Idaho. The increase in traffic is causing a deterioration of roadway surface. These minor roadway intersection approach improvements should easily be completed as part of the normal roadway maintenance program, coordinated between ODOT, Malheur County and the Ontario Road District (see page 7-22).

Highway 201 Spurs

Parma Spur - This 2.75 mile long spur, which connects Highway 201 with the Idaho border near Parma, Idaho, is designated as having a *district* level of importance. It has a Malheur County TSP recommended functional classification of *Rural Collector* (see Figure 7-2, page 7-5). The TSP recommends access management guidelines as noted in Table 10-1. The pavement on the Parma Spur has been identified as being in "poor" condition. Project 7 addresses pavement improvements to the Parma Spur as well as other roadways (see page 7-20).

Homedale Spur - This 2.31 mile long spur, which connects Highway 201 with the Idaho border near Homedale, Idaho, is designated as having a *district* level of importance. It has a Malheur County TSP recommended functional classification of *Rural Collector* (see Figure 7-2, page 7-5). The TSP recommends access management guidelines as noted in Table 10-1.

Weiser Spur - This 2.01 mile long spur, which connects Highway 201 with the Idaho border near Weiser, Idaho, is designated as having a *district* level of importance. It has a Malheur County TSP recommended functional classification of *Minor Arterial* (see Figure 7-2, page 7-5). The TSP recommends access management guidelines as noted in Table 10-1.

Payette Spur - This 1.65 mile long spur, which connects Highway 201 with the Idaho border near Payette, Idaho, is designated as having a *district* level of importance. It has a Malheur County TSP recommended functional classification of *Rural Collector* (see Figure 7-2, page 7-5). The TSP recommends access management guidelines as noted in Table 10-1.

VALE-WEST HIGHWAY (HIGHWAY 451)

Also known as Graham Boulevard within Vale city limits, Highway 451 is a facility of *district* importance. It has a Malheur County TSP recommended functional classification of *Rural Collector* (see Figure 7-2, page 7-5). This two-lane roadway, with a posted 55 mph speed limit, almost exclusively serves local traffic and agricultural business between Vale and Highway 20.

This facility carries truck traffic and serves, to a lesser extent, recreational traffic traveling from Highway 20 and Vale to the Bully Creek Reservoir.

Current Conditions - Accident rates on those sections of Highway 451 within rural Malheur County are below the statewide average. Pavement conditions on all sections of Highway 451 within rural Malheur County are in fair or better condition (see Table B-1, Appendix B).

Proposed Projects - Projects proposed in the Malheur County TSP which directly affect Highway 451 include:

Project 18 (Safety) - Improve Graham Boulevard/Bully Creek Road (see Figure 7-3, page 7-13). Due to the popularity of the Bully Creek Reservoir as a recreation destination, Graham Boulevard (ODOT Highway # 451 - Vale West Highway) and Bully Creek Road are both suitable for bike route designations. Both roads require shoulder widening to safely separate vehicular and bicycle traffic. The cost of widening both roads between Vale and Bully Creek Reservoir to 6-foot shoulders, including roadbed base and pavement improvements, is estimated at $1.7 million (see page 7-23).

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APPENDIX A

MEETING AND WORKSHOP AGENDAS

Malheur County
Transportation System Plan (TSP)
Staff Meeting # 1

Agenda

Date: June 26, 1997
Time: 11:30 AM
Location: **Malheur County Courthouse**

Attendance:

( )	Jim Kimberling, Malheur County	( )	Stephaine Williams, Malheur County
( )	Jon Beal, Malheur County	( )	Nancy Moore, Malheur County
( )	Maureen Rossi, City of Vale	( )	Andy Mortensen, W&H Pacific
( )	Adele Dokter, City of Adrian	( )	Chris Eaton, W&H Pacific
( )	Ila Harner, City of Jordan Valley	( )	John Preston, ODOT Pacific

Agenda:

1. Introductions
2. Contract / Work Scope / Schedule
3. Available Reports / Data / Policies (see below)
4. Committee Structure / Membership (with addresses, phone/fax numbers and e-mail)
5. Media and Newsletters (target organizations, groups and citizen, available mailing lists for distribution)
6. Mapping (program and format)
7. Report Documentation (program and format)
8. Committee and Public Meeting County/City Staff (consultant role and responsibilities)

Malheur County
Transportation System Plan (TSP)
Staff Meeting #2

Agenda

Date: Wednesday, 9/3/97 **Location:** Malheur County Court House **Time:** 1:00 - 3:00 pm

Attendance:

( ) Jim Kimberling, Malheur County
( ) John Beal, Malheur County
( ) Dick Klein, City of Vale
( ) Adele Dokter, City of Adrian
( ) Ila Harner, City of Jordan Valley
( ) John Preston, ODOT
( ) Bob Graham, ODOT
( ) Stephanie Williams, Malheur County
( ) Nancy Moore, Malheur County
( ) Andy Mortensen, W&H Pacific
( ) Chris Eaton, W&H Pacific
( ) Robin Katz, W&H Pacific

Agenda:

1. Review Project Schedule

2. Discuss Meeting Schedule for 9/3 and 9/4 (Attachment)

3. Review Draft TSP Chapters (Attachment)

4. Next Meeting

Malheur County
Transportation System Plan (TSP)
Staff Meeting # 3

Agenda

Date: Wednesday, October 15, 1997
Time: 1:00 PM
Location: Administration Building, Room 14
Treasure Valley Community College, Ontario

Attendance:

( )	Jim Kimberling, Malheur County	( )	Ric Young, ODOT
( )	Jon Beal, Malheur County	( )	Nancy Moore, Malheur County
( )	Dick Kline, City of Vale	( )	Bob Graham, ODOT
( )	Adele Dokter, City of Adrian	( )	Chris Eaton, W&H Pacific
( )	Ila Harner, City of Jordan Valley	( )	Robin Katz, W&H Pacific
( )	John Preston, ODOT	( )	Andy Mortensen, W&H Pacific

Agenda:

1.	TSP Goals and Objectives	Review
2.	Comp Plans/Ordinances Changes for TPR Compliance	Attachment Draft #9
3.	Roadway Standards	Attachment Draft Cross-section
4.	County-wide and City Population and Employment Growth	Discussion
5.	Coordination Issues with Ontario, Nyssa, and State of Idaho	Discussion
6.	Next Meeting Date	Discussion

Malheur County
Transportation System Plan (TSP)
Staff Meeting # 4

Agenda

Date: Wednesday, December 17, 1997
Time: **1:00 to 4:00 PM *** note extended length of meeting**
Location: City of Vale Library

Attendance:

( )	Jim Kimberling, Malheur County	( )	Ric Young, ODOT
( )	Jon Beal, Malheur County	( )	Bob Graham, ODOT
( )	Dick Kline, City of Vale	( )	Bill Jacobsen, ODOT
( )	Adele Dokter, City of Adrian	( )	Chris Eaton, W&H Pacific
( )	Ila Harner, City of Jordan Valley	( )	Robin Katz, W&H Pacific
( )	John Preston, ODOT	( )	Andy Mortensen, W&H Pacific

Agenda:

1.	Roadway and Street Standards	Review prior attachment
2.	Impacts of Growth and Future Needs	Attachment (Chapter 5)
3.	Alternatives Analysis *Ontario Transportation Solutions*	Attachment (Chapter 6) *Discussion*
4.	Draft TSP Chapter	Attachment (Chapter 7)
5.	Financing Mechanisms	Attachment (Chapter 8)
6.	Amendments to Malheur County Plans and Codes	Attachment (Appendix)
7.	TAG Meeting	Discussion
8.	Public Outreach, Hearings and Plan Adoption Schedule	Discussion

Malheur County
Transportation System Plan (TSP)
Staff Meeting # 5

Agenda

Date: Monday, January 26, 1998
Time: 10:30 AM to 12:30 PM
Location: Ontario City Council Chambers

Attendance:

( )	Jim Kimberling, Malheur County	( )	Ric Young, ODOT
( )	Jon Beal, Malheur County	( )	Bob Graham, ODOT
( )	Dick Kline, City of Vale	( )	Bill Jacobsen, ODOT
( )	Adele Dokter, City of Adrian	( )	Chris Eaton, W&H Pacific
( )	Ila Harner, City of Jordan Valley	( )	Robin Katz, W&H Pacific
( )	John Preston, ODOT	( )	Andy Mortensen, W&H Pacific

Agenda:

1.	Draft TSP Document	Attachment
2.	TAG Meeting	Discussion
3.	Public Outreach	Discussion

Malheur County
Transportation System Plan (TSP)
Transportation Advisory Group
TAG Meeting # 2

Agenda

Date: Thursday October 16, 1997
Time: 10:00 AM- 12:00 PM
Location: Administration Building, Room 14
Treasure Valley Community College, Ontario

Attendance:

( ) Jim Kimberling, Malheur County
( ) Gordon Zimmerman, City of Nyssa
( ) Jon Beal, Malheur County
( ) John Preston, ODOT
( ) Bob Graham, ODOT
( ) Bob Haney, Nyssa Road District #2
( ) Monty McCoy, Ironside Road District #4
( ) Lynn Jensen, Malheur County Onion Growers Assoc.
( ) Tom White, Juntura Road District #4
( ) Dorothy Bivins/Sherry Massongill,
Mal. Council on Aging/Mal. Cnty. Trans. System
( ) Tom Phillips
Malheur County Planning Commissioner
( ) Dave Jensen/Kit Kamo
Malheur County Economic Development
( ) Jim Mercer, Superintendent
Malheur County Educational Service District
( ) Ron Pressley,
Malheur Potato Growers Association

( ) Ed Singleton, Malheur Resource Area, LM
( ) Tom Davis, City of Ontario
( ) Jay Rucker, City of Vale Planning Commissioner
( ) City of Adrian Planning Commissioner
( ) City of Jordan Valley Planning Commissioner
( ) Bernard Ingle, Malheur County Farm Bureau
( ) Jerry Ready, NW Agricultural Coop Association
( ) Tim Hensley, ORE-IDA Foods, Inc.
( ) Gilbert Wells, Amalgamated Sugar Co.
( ) Rich Turner, Sugar Beet Growers
( ) Alfalfaseed
( ) Larry Link, Onion Shippers
( ) Jerry Taylor, Jordan Resource Area, BLM
( ) Tim McMenamin, Malheur Cnty. Emergency Svs.
( ) Jeff Wise, Ontario Road District #3
( ) Andy Bentz, Malheur County Sheriff
( ) Andy Mortensen, W&H Pacific
( ) Chris Eaton, W&H Pacific
( ) Robin Katz, W&H Pacific

Agenda:

1.	TSP Goals and Objectives	Review
2.	Comp Plans/Ordinances Changes for TPR Compliance	Attachment Draft #9
3.	Roadway Standards	Attachment Draft Cross-section
4.	County-wide and City Population and Employment Growth	Discussion
5.	Coordination Issues with Ontario, Nyssa, and State of Idaho	Discussion
6.	Next Meeting Date	Discussion

Malheur County
Transportation System Plan (TSP)
Transportation Advisory Group
TAG Meeting # 3
Agenda

Date: Thursday December 18, 1997

Time: 10:00 AM- 1:00 PM **NOTE EXTENDED TIME**
BOX LUNCH WILL BE SERVED
PLEASE RSVP ON ATTACHED SHEET

Location: Administration Building
Treasure Valley Community College, Ontario
Room #:_____

Attendance:

( ) Jim Kimberling, Malheur County
( ) Wanda King, City of Nyssa
( ) Jon Beal, Malheur County
( ) John Preston, ODOT
( ) Bob Graham, ODOT
( ) Bob Haney, Nyssa Road District #2
( ) Monty McCoy, Ironside Road District #5
( ) Lynn Jensen, Malheur County Onion Growers Assoc.
( ) Tom White, Juntura Road District #4
( ) Dorothy Bivins/Sherry Massongill,
Mal. Council on Aging/Mal. Cnty. Trans. System
( ) Tom Phillips
Malheur County Planning Commissioner
( ) Dave Jensen/Kit Kamo
Malheur County Economic Development
( ) Jim Mercer, Superintendent
Malheur County Educational Service District
( ) Ron Pressley,
Malheur Potato Growers Association
( ) Hal Schilling, City of Ontario

( ) Ed Singleton, Malheur Resource Area, BLM
( ) Tom Davis, City of Ontario
( ) Jay Rucker, City of Vale Planning Commissioner
( ) City of Adrian Planning Commissioner
( ) City of Jordan Valley Planning Commissioner
( ) Bernard Ingle, Malheur County Farm Bureau
( ) Jerry Ready, NW Agricultural Coop Association
( ) Tim Hensley, ORE-IDA Foods, Inc.
( ) Gilbert Wells, Amalgamated Sugar Co.
( ) Rich Turner, Sugar Beet Growers
( ) Alfalfaseed
( ) Larry Link, Onion Shippers
( ) Jerry Taylor, Jordan Resource Area, BLM
( ) Tim McMenamin, Malheur Cnty. Emergency Svs.
( ) Jeff Wise, Ontario Road District #3
( ) Andy Bentz, Malheur County Sheriff
( ) Andy Mortensen, W&H Pacific
( ) Chris Eaton, W&H Pacific
( ) Robin Katz, W&H Pacific
( ) Carl Malone, City of Ontario

Agenda:

1.	Roadway and Street Standards	Review prior attachment
2.	Impacts of Growth and Future Needs	Attachment (Chapter 5)
3.	Alternatives Analysis *Ontario Transportation Solutions*	Attachment (Chapter 6) *Discussion*
4.	Draft TSP Chapter	Attachment (Chapter 7)
5.	Financing Mechanisms	Attachment (Chapter 8)
6.	Public Outreach, Hearings and Plan Adoption Schedule	Discussion
7.	Next Meeting Date	Discussion

Malheur County
Transportation System Plan (TSP)
Transportation Advisory Group
TAG Meeting # 4

Agenda

Date: Monday, January 26, 1998
Time: 3:00 PM- 5:00 PM
Location: Ontario Holiday Inn, 1249 Tapadera Avenue, (541) 889-8621

Attendance:

( ) Jim Kimberling, Malheur County
( ) Harry Staven, City of Nyssa
( ) Jon Beal, Malheur County
( ) John Preston, ODOT
( ) Bob Graham, ODOT
( ) Bob Haney, Nyssa Road District #2
( ) Bill Molthan, Ironside Road District #5
( ) Lynn Jensen, Malheur County Onion Growers Assoc.
( ) Tom White, Juntura Road District #4
( ) Dorothy Bivins/Sherry Massongill,
Mal. Council on Aging/Mal. Cnty. Trans. System
( ) Tom Phillips
Malheur County Planning Commissioner
( ) Dave Jensen/Kit Kamo
Malheur County Economic Development
( ) Jim Mercer, Superintendent
Malheur County Educational Service District
( ) Ron Pressley,
Malheur Potato Growers Association
( ) Hal Schilling, City of Ontario
( ) Ed Singleton, Malheur Resource Area, BLM
( ) Tom Davis, City of Ontario
( ) Jay Rucker, City of Vale Planning Commissioner
( ) City of Adrian Planning Commissioner
( ) City of Jordan Valley Planning Commissioner
( ) Bernard Ingle, Malheur County Farm Bureau
( ) Jerry Ready, NW Agricultural Coop Association
( ) Tim Hensley, ORE-IDA Foods, Inc.
( ) Gilbert Wells, Amalgamated Sugar Co.
( ) Rich Turner, Sugar Beet Growers
( ) Alfalfaseed
( ) Larry Link, Onion Shippers
( ) Jerry Taylor, Jordan Resource Area, BLM
( ) Tim McMenamin, Malheur Cnty. Emergency Svs.
( ) Jeff Wise, Ontario Road District #3
( ) Andy Bentz, Malheur County Sheriff
( ) Andy Mortensen, W&H Pacific
( ) Chris Eaton, W&H Pacific
( ) Robin Katz, W&H Pacific
( ) Carl Malone, City of Ontario

Agenda:

1.	Draft TSP Report	Attachment
2.	Public Outreach	Attachment
3.	Ontario Transportation Solutions	Discussion
4.	Thank you's	

Note: If you cannot attend this meeting, please see the attached meeting schedule for other opportunities to participate. Open House will follow this meeting in same location.

W&H PACIFIC

Malheur County
Planning Commission Worksession
Agenda

Date: Wednesday, 9/3/97 **Time:** 7:00 pm - 9:00 pm **Location:** Vale City Council Chambers

Agenda:

1. **Introduction.**
2. **What Is a TSP?**
3. **Project Schedule and Rules.**
4. **What Concerns Do You Have?**
5. **Questions and Answers.**

Malheur County
Planning Commission Meeting # 2

Agenda

Date: Wednesday, October 15, 1997

Time: 7:00 - 9:00 PM

Location: Vale City Council Chambers

Agenda:

1.	TSP Goals and Objectives	Review
2.	Comp Plans/Ordinances Changes for TPR Compliance	Attachment Draft #9
3.	Roadway Standards	Attachment Draft Cross-section
4.	County-wide and City Population and Employment Growth	Discussion
5.	Coordination Issues with Ontario, Nyssa, and State of Idaho	Discussion
6.	Next Meeting Date	Discussion

W&H PACIFIC

Malheur County
Planning Commission Meeting # 3

Agenda

Date: Wednesday, December 17, 1997

Time: 7:00 - 9:00 PM

Location: Vale City Council Chambers

Agenda:

1.	Impacts of Growth	Attachments
2.	Alternatives Analysis *Ontario Transportation Solutions*	Attachments *Discussion*
3.	Draft TSP	Discussion
4.	Financing Mechanisms	Discussion
5.	Amendments to Malheur County Plans and Codes	Attachment
6.	Public Outreach, Hearings and Adoption Schedule	Discussion
7.	Next Meeting Date	Discussion

W&H PACIFIC

Malheur County
Planning Commission Meeting # 4

Agenda

Date: Tuesday, January 27, 1998

Time: 7:00 - 9:00 PM * Special TSP Worksession

Location: Vale City Council Chambers

Agenda:

1.	Draft TSP Report	Discussion
2.	Ontario Transportation Solutions	Discussion
3.	Public Outreach and Adoption	Discussion
4.	Next Meeting Date	Discussion

Note: If you cannot attend this meeting, please see the attached meeting schedule for other opportunities to participate.

W&H PACIFIC

APPENDIX B

STATE AND COUNTY ROADWAY AND BRIDGE INVENTORY DATA

TAF B-1
STATE AND MALHEUR COUN. .URAL ROADWAY INVENTORY

Inventory Dates: August 31 - September 1, 1997

Road	From	To	Pavement Type and Condition										Travel Lanes and Width										Paved Shoulder Width (ft)	No Passing Zone Length (mi) (1)	Volume				Farm equip?	Terrain			Comments
			Concr.	Asph.	Ch. Seal	Grav.	Dirt	Very good	Good	Fair	Poor	Very Poor	2	3-M	3-P	Other	<8	8	9	10	11	12	>12			0-100 (0)	101-500 (1-2)	501-1000 (10)	>1000 (>20)		Level (0-2%)	Moderate (3-4%)	Hilly (>5%)	
Hwy 78	Harney County	Folly Farm Rd	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☒	☐	2	3.4W 2.3E	☐	☒	☐	☐	☐	☐	☒	☐	
	Folly Farm Rd	Hwy 95	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☒	☒	2-3	7.4W 7.0E	☐	☒	☐	☐	☐	☐	☐	☒	
Folly Farm Rd	Hwy 78	end	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☒	-		☒	☐	☐	☒	☐	☐	☒	☐	
Hwy 95	Nevada	Oregon Canyon Rd	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	9.5S 3.9N	☐	☐	☐	☒	☐	☒	☐	☐	
	Oregon Canyon Rd	Basque	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	3.9S 4.4N	☐	☐	☐	☒	☐	☒	☐	☐	
	Basque	Burns Jct	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	3.3S 4.0N	☐	☐	☒	☐	☐	☐	☒	☐	
	Burns Jct	Rome	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	3	5.3E 5.3W	☐	☐	☒	☐	☐	☐	☒	☐	
	Rome	Arock Rd	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	3-4	2.8E 2.8W	☐	☐	☒	☐	☐	☐	☐	☒	
Arock Rd	Hwy 95	Arock	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☒	☐	☐	☐	☒	-	1.5W 1.9E	☒	☐	☐	☐	☒	☐	☒	☐	
Hwy 95	Arock Rd	Three Forks Rd	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	10.7W 4.6E	☐	☐	☐	☒	☐	☐	☒	☐	
	Three Forks Rd	Danner Loop Rd (w)	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	1.0W 1.2E	☐	☐	☐	☒	☐	☐	☒	☐	
	Danner Loop Rd (w)	Danner Loop Rd (e)	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	1.7W 1.4E	☐	☐	☐	☒	☐	☐	☐	☒	
	Danner Loop Rd (e)	Jordan Valley	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	0.2W	☐	☐	☐	☒	☐	☒	☐	☐	
Yturri Rd	Jordan Valley	Idaho	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☒	☐	-	0.5W 0.8E	☐	☐	☒	☐	☒	☒	☐	☐	
Hwy 95	Jordan Valley	Thomas Creek Rd	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	3.1W 2.9E	☐	☐	☐	☒	☒	☐	☒	☐	
	Thomas Creek Rd	Succor Creek Rd	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	3.8W 3.6E	☐	☐	☐	☒	☒	☐	☐	☒	
	Succor Creek Rd	Idaho	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	1.4W 1.3E	☐	☐	☐	☒	☒	☐	☐	☒	
Succor Creek Rd	Hwy 95	Hwy 201	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☐			☒	☐	☐	☐	☐	☐	☐	☒	8'-16' wide rough road
Hwy 201	Idaho	Succor Creek Rd	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☒	☐	1-2	0.8S 0.9N	☐	☐	☒	☐	☒	☒	☐	☐	
	Succor Creek Rd	Napton Rd	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☒	☐	3	1.2S 0.9N	☐	☒	☐	☐	☒	☐	☒	☐	
Napton Rd	Hwy 201 (n)	Hwy 201 (s)	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☐	-	2.4W 2.9E	☐	☒	☐	☐	☒	☒	☐	☐	
Hwy 201	Napton Rd	Parma Spur	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☒	☐	0-3	1.5S 1.3N	☐	☒	☐	☐	☒	☒	☐	☐	
Parma Spur	Hwy 201	Idaho	☐	☒	☐	☐	☐	☐	☐	☐	☒	☐	☒	☐	☐		☐	☐	☐	☐	☐	☐	0-1	1.3W 1.0E	☐	☐	☐	☐	☒	☒	☐	☐	travel lane width varies between 10' and 12'

TABLE B-1
STATE AND MALHEUR COUNTY RURAL ROADWAY INVENTORY

Inventory Dates: August 31 - September 1, 1997

Road	From	To	Pavement Type and Condition										Travel Lanes and Width										Paved Shoulder Width (ft)	No Passing Zone Length (mi) (1)	Volume				Farm equip?	Terrain			Comments
			Concr.	Asph.	Ch. Seal	Grav.	Dirt	Very good	Good	Fair	Poor	Very Poor	2	3-M	3-P	Other	<8	8	9	10	11	12	>12			0-100 (0)	101-500 (1-2)	501-1000 (10)	>1000 (>20)		Level (0-2%)	Moderate (3-4%)	Hilly (>5%)	
Adrian-Caldwell Rd	Parma Spur	Idaho	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☐	1-2	1.9W 0.9E	☐	☒	☐	☐	☒	☒	☐	☐	travel lane width varies between 9' and 11'
Hwy 201	Parma Spur	Adrian	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☒	☐	-	0.1S 0.1N	☐	☐	☐	☒	☒	☒	☐	☐	
Hwy 201	Adrian	Owyhee Jct	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☐	13	2.8S 2.5N	☐	☐	☐	☒	☒	☒	☐	☐	
	Owyhee Jct	Nyssa	☐	☒	☐	☐	☐	☐	☐	☐	☒	☐	☒	☐	☐		☐	☐	☐	☐	☒	☐	2	1.3S 1.3N	☐	☐	☐	☒	☒	☒	☐	☐	
Overstreet Rd	Hwy 201	Owyhee Lake Rd	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☐	-	1.5W 1.4E	☒	☐	☐	☐	☒	☐	☒	☐	travel lane width varies between 8' and 10'
Owyhee Lake Rd / Owyhee Ave	Owyhee Reservoir	Overstreet Rd	☐	☒	☒	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☐	-	1.3S 1.3N	☐	☒	☐	☐	☐	☐	☒	☐	travel lane width varies between 7.5' and 10'
	Overstreet Rd	Hwy 201	☐	☒	☐	☐	☐	☐	☐	☐	☒	☐	☒	☐	☐		☐	☐	☐	☒	☐	☐	-	2.2W 1.3E	☐	☒	☐	☐	☒	☒	☐	☐	
Ivanhoe Ave	Hwy 201	Jefferson Ave	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☐	-	0.4W 0.3E	☒	☐	☐	☐	☒	☐	☒	☐	
Jefferson Ave	Ivanhoe Ave	Owhyee Ave	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☐	-	0.2W 0.2E	☐	☒	☐	☐	☒	☒	☐	☐	
Janeta Ave / Lytle Blvd	Jefferson Ave	Enterprise Ave	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☒	☐	☐	-	0.7S 0.5N	☐	☒	☐	☐	☒	☒	☐	☐	
Enterprise Ave	Lytle Blvd	Hwy 201	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☒	☐	☐	-	0.9W 0.7E	☒	☐	☐	☐	☒	☒	☐	☐	
Hwy 20/26/201	Nyssa	Cairo Jct	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	0.8S 0.6N	☐	☐	☐	☒	☒	☒	☐	☐	4-12' travel lanes and 2-8' shoulders between Cairo Jct and 0.3 miles south
Hwy 201	Cairo Jct	Railroad Ave	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐		☐	☐	☐	☐	☐	☒	4		☐	☐	☐	☒	☒	☒	☐	☐	1-10' median
	Railroad Ave	Ontario	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4		☐	☐	☐	☒	☒	☒	☐	☐	
18th Ave	Hwy 201	Ontario	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☒	☐	-		☐	☐	☐	☒	☒	☒	☐	☐	
Alameda Ave / Arcadia Blvd	18th Ave	Nyssa	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☒	☐	☐	-	1.4S 1.3N	☐	☐	☒	☐	☒	☒	☐	☐	
Park Ave	Nyssa	Grey Blvd	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☐	-	0.9W 0.8E	☐	☒	☐	☐	☒	☒	☐	☐	
Grey Blvd / Gem Ave	Park Ave	Hwy 201	☐	☒	☒	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☒	☒	☐	☐	-	2.6SW 2.0 NE	☐	☒	☐	☐	☒	☐	☐	☒	
Clark Blvd	Hwy 201	Ontario	☐	☒	☒	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☒	☐	☐	-	1.7S 1.5N	☐	☐	☒	☐	☒	☒	☐	☐	
Butler Blvd / Lincoln Dr	Hwy 201	Railroad Ave	☐	☒	☒	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☒	☐	☐	-		☐	☒	☐	☐	☒	☒	☐	☐	lane width varies between 8' and 10'
Arabian Dr / Morgan Ave	Hwy 20/26	Hwy 201	☐	☒	☒	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☐	-	0.5W 0.3E	☒	☐	☐	☐	☒	☐	☐	☒	lane width varies between 6' and 9'
Hwy 201	Interstate 84	Weiser Spur	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	3-4	2.3S 1.9N	☐	☐	☐	☒	☒	☒	☐	☐	

TAB B-1

STATE AND MALHEUR COUNTY RURAL ROADWAY INVENTORY

Inventory Dates: August 31 - September 1, 1997

Road	From	To	Pavement Type and Condition										Travel Lanes and Width										Paved Shoulder Width (ft)	No Passing Zone Length (mil) (1)	Volume				Farm equip?	Terrain			Comments
			Concr.	Asph.	Ch. Seal	Grav.	Dirt	Very good	Good	Fair	Poor	Very Poor	2	3-M	3-P	Other	<8	8	9	10	11	12	>12			0-100 (0)	101-500 (1-2)	501-1000 (10)	>1000 (>20)		Level (0-2%)	Moderate (3-4%)	Hilly (>5%)	
Hyline Rd	Hwy 201 (s)	Hwy 201 (n)	☐	☒	☒	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☒	☐	☐	-		☐	☒	☐	☐	☒	☐	☒	☐	
Payette Spur	Hwy 201	Idaho	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☒	☐	☐	4	0.6S 0.4N	☐	☐	☐	☒	☒	☒	☐	☐	
Boat Landing Rd	Hwy 201	Payette Spur	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☒	☐	☐	-		☐	☐	☒	☐	☒	☒	☐	☐	
Annex Rd	Weiser Spur	Hwy 201	☐	☒	☐	☒	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☒	☐	☐	☐	☐	-		☒	☐	☒	☐	☒	☒	☐	☐	
Hwy 201	Weiser Spur	Interstate 84	☐	☒	☐	☐	☐	☐	☐	☒	☒	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	0-4	6.9W 6.3E	☐	☐	☐	☒	☒	☒	☐	☐	
Hwy 30	Interstate 84	Baker County	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☐	0-6	0.1S	☐	☐	☒	☐	☐	☒	☐	☐	lane width varies between 12', 18' and 24'
Weiser Spur	Hwy 201	Idaho	☐	☒	☐	☐	☐	☐	☐	☒	☒	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	3-6		☐	☐	☐	☒	☒	☒	☐	☐	
Sage Rd	Stanton Blvd	Canyon Rd #2	☐	☐	☒	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☐	-	0.5S 0.4N	☒	☐	☐	☐	☐	☐	☐	☒	
Stanton Blvd	Interstate 84	west of Sage Rd	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	-	1.1W 1.0E	☐	☒	☐	☐	☐	☒	☐	☐	
Foothill Dr	Butte Dr	Canyon Rd #2	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☐	-	1.2SW 1.1NE	☐	☒	☐	☐	☒	☐	☐	☒	
Butte Dr	Foothills Dr	Railroad Ave	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☐	-	0.1S 0.2N	☒	☐	☐	☐	☒	☒	☐	☐	
Foothill Dr	Butte Dr	Vale	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☐	-	1.1W 1.2E	☐	☐	☒	☐	☒	☒	☐	☐	
Halliday Dr	Foothills Dr	Hwy 20/26	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☐	-	0.1S 0.1N	☒	☐	☐	☐	☒	☒	☐	☐	
Railroad Ave	Halliday Dr	Alameda Ave	☐	☒	☒	☐	☐	☒	☒	☒	☐	☐	☒	☐	☐		☐	☐	☒	☒	☐	☐	-		☐	☐	☒	☐	☒	☒	☐	☐	
Highway 20/26	Cairo Jct	Vale	☐	☒	☐	☐	☐	☐	☐	☐	☒	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	2.2W 3.1E	☐	☐	☐	☒	☒	☒	☐	☐	
Hwy 26	Vale	Willow Creek	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	4	2.1S 2.1N	☐	☐	☐	☒	☒	☒	☐	☐	
S Rd G	Hwy 26	Bully Creek Rd	☐	☒	☐	☒	☒	☐	☐	☒	☐	☐	☒	☐	☐		☐	☒	☐	☐	☐	☐	-		☒	☐	☐	☐	☒	☐	☒	☐	
Bully Creek Rd	end	Vale-West Hwy	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☒	☐	-	2.3W 2.2E	☐	☒	☐	☐	☐	☒	☐	☐	
Vale-West Hwy	Hwy 20	Vale	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☒	☐	-	5.0W 3.9E	☐	☐	☒	☐	☒	☐	☒	☐	
Russell Rd / Sand Hollow Rd / Airport Rd	Hwy 20	Vale	☐	☒	☒	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☒	☐	☐	☐	☐	-		☐	☒	☐	☐	☒	☒	☐	☐	
Lytle Blvd	Vale	Enterprise Ave	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☒	☐	☐	☐	-	3.3S 2.6N	☐	☐	☒	☐	☒	☐	☒	☐	
Hwy 20	Vale	Vale-West Hwy	☐	☒	☐	☐	☐	☐	☐	☐	☒	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	3-4	0.8W	☐	☐	☐	☒	☒	☒	☐	☐	
	Vale-West Hwy	Harper-Westfall Rd	☐	☒	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒	8	4.8W 5.0E	☐	☐	☐	☒	☒	☐	☒	☐	
Harper-Westfall Rd	Hwy 20	Westfall	☐	☒	☒	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐		☐	☐	☐	☒	☒	☒	-	5.6S 5.8N	☒	☐	☐	☐	☒	☐	☒	☐	

TABLE B-1
STATE AND MALHEUR COUNTY RURAL ROADWAY INVENTORY

Inventory Dates: August 31 - September 1, 1997

Road	From	To	Pavement Type and Condition										Travel Lanes and Width										Paved Shoulder Width (ft)	No Passing Zone Length (mi) (1)	Volume				Farm equip?	Terrain			Comments
			Concr.	Asph.	Ch. Seal	Grav.	Dirt	Very good	Good	Fair	Poor	Very Poor	2	3-M	3-P	Other	<8	8	9	10	11	12	>12			0-100 (0)	101-500 (1-2)	501-1000 (10)	>1000 (>20)		Level (0-2%)	Moderate (3-4%)	Hilly (>5%)	
Hwy 20	Harper-Westfall Rd	Juntura	☐	☒	☐	☐	☐	☒	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒		2-8	21.3S 21.1N	☐	☐	☐	☒	☒	☐	☒	☐	
	Juntura	Harney County	☐	☒	☐	☐	☐	☒	☐	☒	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒		4	4.7W 5.2E	☐	☐	☐	☒	☐	☐	☒	☐	
BLM Road	Hwy 20	Idaho	☐	☐	☒	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☒	☐	☐		-		☒	☐	☐	☐	☐	☐	☐	☒	
Hwy 26	Willow Creek	Brogan	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒		-	2	☐	☐	☐	☒	☒	☐	☐	☐	
	Brogan	Baker County	☐	☒	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐	☐		☐	☐	☐	☐	☐	☒		-	4	☐	☐	☐	☒	☒	☐	☐	☐	

E = Eastbound
W = Westbound
N = Northbound
S = Southbound

TABLE B-2
COUNTY BRIDGE INVENTORY AND RATINGS

Bridge No.	County Rd. No.	Mile-post	Features Intersected	Facility Carried	Location	Year Built	Length (ft)	Roadway Width (ft)	Sufficiency Rating	Status	No. Lanes	ADT	Rating Operating	Rating Inventory	Routine Inspection Date (Mo/YR)	Year of Reconstruction	NBI Length (?)
15521A	805	11.39	DRAIN DITCH	HARPER-WESTFALL RD	001 M N HARPER SCHOOL	1978	33	22.30	516	STR*DEF	2	154	236	236	1296	0	Y
45C114	1111	0.39	WILLOW CREEK	NORTHMAAR C-1111	0039 MI N INTER HWY 26	1976	45	22.00	710	STR*DEF	2	50	236	236	1196	0	Y
45C119	512	2.70	VALE MAIN CANAL	RESERVOIR RD C-512	028 MI S WILLOW CR SCHOOL	1936	25	15.60	419	STR*DEF	1	20	231	223	295	0	Y
45C122	657	4.41	SAND HOLLOW CR	BISHOP C-657	2.6 MI SW OF JCT HWY 20	1957	34	17.50	315	STR*DEF	2	20	215	211	1296	0	Y
45C135	864	0.05	ALKALI CR	WOODBRIDGE C-864	0.03 MI E JCT ST HWY 201	1961	64	12.00	317	STR*DEF	1	110	229	221	1196	0	Y
45C139	1059	0.94	SUCCOR CR (LOWER)	DESERT GLEN C-1059	01 MI NW INTER STATELINE	1962	104	12.50	312	STR*DEF	1	25	214	211	1196	0	Y
45C201	843	0.39	OWYHEE CANAL	JEFFERSON C-843	004 S INTER WITH FAS B485	1960	27	24.50	610	STR*DEF	2	55	236	236	1196	0	Y
45C211	853	0.10	COW HOLLOW DRAIN	LYTLE BLVD C-853	008 S SUNSET MKT(STRICKL)	1932	26	30.30	619	STR*DEF	2	300	236	236	1196	1978	Y
45C215	662	3.52	OWYHEE CANAL	ENTERPRISE B488	004 W INTER SUCCOR CR HY	1964	25	28.00	618	STR*DEF	2	500	236	236	1196	0	Y
45C218	980	0.44	OWYHEE CANAL	CLOVERDALE C-980	005 W INTER CLARK BLVD	1971	25	24.80	619	STR*DEF	2	260	236	236	1196	0	Y
45C220	857	4.22	OWYHEE CANAL	CLARK BLVD - C-857	010 N INTER COLUMBIA AVE	1974	34	27.00	217	STR*DEF	2	800	220	211	1196	0	Y
45C405	589	2.74	MALHEUR RIVER	WARM SPRING RES RD	012 W FASB484 (C-589)	1942	125	14.90	218	STR*DEF	1	40	213	209	1296	1973	Y
45C501	551	12.20	CLOVER CR	BONITA RD C551	1220 S JCT HWY 26	1961	65	16.70	218	STR*DEF	1	15	226	219	1196	0	Y
45C609	793	9.96	COW CREEK	DANNER C-793	3 MI W CHARBONNEAU GRAVE	1924	80	12.50	211	STR*DEF	1	40	220	215	595	0	Y
00943A	51	17.10	N FORK MALHEUR RIVER	BEULAH ROAD C510	01 M N INTER HWY 20	1986	58	22.40	804	NOT*DEF	2	77	260	236	1296	1994	Y
01091A	870	1.81	SNAKE RIVER	FALK ISLAND C-870	013 E UPRR MAINLINE	1987	422	25.00	905	NOT*DEF	2	132	260	236	1296	0	Y
13563	1009	2.90	BULLY CREEK	GREENFIELD C-1009	2 MI N HWY 20 (ELFRING)	1972	122	28.00	909	NOT*DEF	2	200	267	240	1296	0	Y
01444B	698	6.20	MALHEUR RIVER	LITTLE VLLY RDC698	0175 MI NW JCT HY 20	1984	241	27.10	908	NOT*DEF	2	143	250	236	1296	0	Y
15478	570	16.96	OWYHEE CANAL	OWYHEE AVE. C-570	009MI WINTER SUCCOR CR HY	1938	58	26.50	901	NOT*DEF	2	440	236	236	1196	0	Y
16515	502	8.67	WILLOW CR (TWINBRIDGES)	WILLOW CREEK ROAD	8.67 NE HWY 26	1982	68	23.50	909	NOT*DEF	2	33	250	236	1196	0	Y
16516	502	9.56	WILLOW CREEK	WILLOW CR RD C502	0956 NE JCT HWY 26	1982	49	23.50	909	NOT*DEF	2	33	250	236	1196	0	Y
16517	502	12.19	WILLOW CREEK (BRONSON)	WILLOW CREEK RD	1219 NE JCT HWY 26	1982	58	23.50	909	NOT*DEF	2	29	250	236	1196	0	Y
16518	502	22.45	WILLOW CREEK (BROGAN CYN	MALHEUR RES. RD	2245 NE JCT HWY 26	1982	28	23.50	909	NOT*DEF	2	33	250	236	1196	0	Y
16809	1131	0.12	BULLY CREEK	DAHLE RD C-1131	040 E INTER HARPER WST H	1986	141	23.30	900	NOT*DEF	2	20	250	236	1296	0	Y
16901	707	0.62	MALHEUR RIVER	AIRPORT RD C-707	0075 SO OF JUNTURA	1989	125	25.30	905	NOT*DEF	2	55	265	246	1296	0	Y
045R16	537	1.05	MALHEUR RIVER	NW 36TH STREET	0.05 MI N MALHEUR AVE	1968	80	22.00	709	NOT*DEF	2	330	250	236	1296	0	Y
8754	805	8.32	VALE CANAL	HARPER-WESTFALC805	033 M NW HARPER SCHOOL	1960	93	26.50	701	NOT*DEF	2	110	242	226	1296	0	Y
09227A	587	16.92	MALHEUR RIVER (RED BRIDG	WARM SPRINGS RESRD	17 M SO INTER HWY 20	1986	121	28.30	904	NOT*DEF	2	66	275	245	1296	0	Y
9996	729	0.50	JORDAN CREEK	AROCK C-729	1.8 M N HWY 95	1970	150	24.20	900	NOT*DEF	2	125	258	235	297	0	Y
15472A	768	1.14	OWYHE CANAL	ALBERTA B489	003 W INTER CLARK BLVD	1969	28	29.00	808	NOT*DEF	2	660	236	236	1196	0	Y
15474A	570	14.18	MITCHELL CANEL (JENETA)	FASB487 CO#570	006 E SUNSET MARKET	1974	24	27.00	904	NOT*DEF	2	440	236	236	1196	0	Y
15477A	1036	0.73	OWYHEE CANAL	OWYHEE/LYTLE BLVD	028 MI W OWYHEE JCT	1950	23	31.00	909	NOT*DEF	2	220	250	236	1196	1965	Y
15482A	805	12.21	MALHEUR RIVER	HARPER-WESTFALC805	0.3 M N HWY 20	1969	244	28.20	808	NOT*DEF	2	275	252	231	1296	0	Y
15526A	805	0.80	BULLY CREEK	HARPER-WESTFALC805	01 M S WESTFALL POST OFF	1967	129	28.30	802	NOT*DEF	2	187	247	228	1296	0	Y
15558	880	0.59	WILLOW CREEK	FOOTHILL DR B494	1 W VALE CITY LAGOONS	1974	43	29.00	907	NOT*DEF	2	473	236	236	1296	0	Y
15566A	885	0.31	MALHEUR RIVER (BUTTE)	BUTTE RD B493	014 M N INTER HWY 20, 26	1974	141	28.50	909	NOT*DEF	2	198	267	240	1296	0	Y
15568A	880	5.57	MALHEUR RIVER	HALLIDAY B-493	015 N INTER HWY 2026	1967	218	28.00	905	NOT*DEF	2	418	248	229	1296	0	Y
15627A	675	1.46	MALHEUR RIVER	C-675	015 M S INTER HWY 20, 26	1973	144	27.50	909	NOT*DEF	2	120	271	242	1296	0	Y
15667B	605	0.42	WILLOW CREEK	LOGAN ROAD C-605	005 MI N INTER HWY 26	1985	61	23.50	900	NOT*DEF	2	66	275	245	1196	0	Y
15690A	742	1.58	WILLOW CR	NE 9TH AVE. C-742	016MI EAST OF JOHNDAY HWY	1986	59	24.00	908	NOT*DEF	2	28	275	245	1196	0	Y
15694A	631	0.92	WILLOW CR	6TH AVE. C-631	0045 NE JCT HWY 26	1987	63	23.60	900	NOT*DEF	2	66	260	236	1196	0	Y
15701A	612	17.16	VALE CANAL SIPHON	BULLY CRK RD C-612	9 M N GRAHAM BLVD	1968	44	27.50	804	NOT*DEF	2	209	236	236	1296	0	Y
15746A	687	8.15	SPRING CR	FASB483-ROCKVILLE	8.2 MI N US HWY 95	1988	31	23.50	908	NOT*DEF	2	94	260	236	1296	0	Y
15747A	687	8.45	CARTER CR	SUCCOR B483GREELEY	083 N JCT US HWY 95	1988	37	23.00	903	NOT*DEF	2	88	260	236	1296	0	Y
15760A	816	1.55	SUCCOR CR	SUCCOR C-816TIFFEN	065 W US HWY 95	1988	71	23.50	900	NOT*DEF	2	33	260	236	1296	0	Y
15779A	510	0.40	BENDIRE CREEK	BEULAH RD C-510	2.6 MI S BEULAH DAM	1986	95	23.50	907	NOT*DEF	2	44	282	236	1296	0	Y
16110	839	0.33	OWYHEE RIVER	OVERSTREET B486	062 M W INTER SUCCOR CRHY	1973	240	33.70	908	NOT*DEF	2	250	262	237	1196	0	Y
16341	1100	0.40	BULLY CREEK	WEST MAIN ST(VALE)	005 M S INTER A ST WEST	1979	101	28.50	907	NOT*DEF	2	110	259	235	1296	0	Y

TABLE B-2
COUNTY BRIDGE INVENTORY AND RATINGS

Bridge	County	Mile-	Features	Facility		Year	Length	Roadway	Sufficiency		No.		Rating		Routine Inspection	Year of	NBI
No.	Rd. No.	post	Intersected	Carried	Location	Built	(ft)	Width (ft)	Rating	Status	Lanes	ADT	Operating	Inventory	Date (Mo/YR)	Reconstruction	Length (?)
16375	1100	3.52	MALHEUR RIVER	AIRPORT RD-JOHNSON	011 M S INTER SANDHOLLOW	1979	141	27.80	901	NOT*DEF	2	154	256	234	1296	0	Y
16398	995	3.15	JORDON CR	DANNER C-995	032 M N INTER HWY 95	1980	88	28.00	908	NOT*DEF	2	100	236	236	595	0	Y
16745	615	2.17	MALHEUR RIVER	COPELAND C-615	008 MI NW INTER HWY 20	1986	137	23.50	907	NOT*DEF	2	120	258	258	1296	0	Y
45C101	509	1.51	WILLOW CREEK	KOCHSMEIER C-509	002 MI N INTS HWY 26	1981	33	22.50	706	NOT*DEF	2	193	236	222	1196	0	Y
45C102	1076	0.30	WILLOW CREEK	3RD AVE. E C-1076	003 MI EAST OF INT HWY 26	1986	39	28.20	900	NOT*DEF	2	120	236	236	1196	0	Y
45C103	826	0.19	WILLOW CREEK	4TH AVE E C-826	002 MI EAST HWY 26	1977	30	22.00	900	NOT*DEF	2	25	236	236	1196	0	Y
45C104	579	0.67	WILLOW CR	5TH AVE. C-579	007 MI E INTER HWY 26	1961	38	22.00	808	NOT*DEF	2	28	250	236	1196	1990	Y
45C106	1109	1.05	WILLOW CR (GUERRICAGOTIA	CR# 1109 NORTH 'D'	004 MI N INTER HWY26	1976	30	22.00	900	NOT*DEF	2	55	236	236	1196	0	Y
45C107	1090	0.72	WILLOW CR	EVANS C-1090	008MI N E INTER HWY26	1983	32	22.00	708	NOT*DEF	2	77	230	218	1196	0	Y
45C109	1093	0.69	WILLOW CR	N. F ST. C-1093	013 MI N INTER HWY 26	1948	30	22.50	909	NOT*DEF	2	11	250	236	1196	1996	Y
45C111	613	0.41	WILLOW CR	N. G ST. C-613	015MI N INTER HWY 26	1976	42	22.00	809	NOT*DEF	2	187	236	236	1196	0	Y
45C112	736	0.95	WILLOW CR	N. 12TH C-736	010 MI E INTER HWY 26	1977	33	22.00	809	NOT*DEF	2	165	236	236	1196	0	Y
45C115	727	0.43	WILLOW CR	N. N ST. C-727	005 MI N INTER HWY 26	1977	31	22.00	900	NOT*DEF	2	50	236	236	1196	0	Y
45C116	1101	0.05	WILLOW CR	BIT C-1101	0005 MI E INTER HWY 26	1981	25	22.10	900	NOT*DEF	2	83	299	267	1196	0	Y
45C117	681	0.29	WILLOW CREEK	WATERS LANE C-681	003 MI E INTER HWY 26	1961	27	22.00	504	NOT*DEF	2	40	232	224	1196	1992	Y
45C120	570	0.24	MALHEUR RIVER	GLENN ST (VALE)	0.24 M S JCT HWY 20	1961	305	22.50	709	NOT*DEF	2	610	236	236	1296	0	Y
45C121	612	15.21	BULLY CR CANAL	BULLY CREEK RDC612	004 M E BULLY CR DAM	1961	25	32.00	600	NOT*DEF	2	190	225	217	1296	1967	Y
45C130	981	0.53	RIVERSIDE CANAL	STATELINE C-981	006 MI S INT PARMA SPUR	1994	22	23.00	900	NOT*DEF	2	55	250	236	1196	0	Y
45C131	953	0.79	RIVERSIDE CANAL	CASSIA C-953	CASSIA & RUSSET ROADS	1978	28	23.00	805	NOT*DEF	2	165	236	236	1196	0	Y
45C132	833	1.10	RIVERSIDE CANAL	MILLER RD. C-833	003 MI S INTER SPUR 453	1978	31	23.00	900	NOT*DEF	2	88	236	236	1196	0	Y
45C133	836	0.80	RIVERSIDE CANAL	FOXTAIL C-836	1 MI E OF STATE 454	1983	23	23.00	900	NOT*DEF	2	44	250	236	1196	0	Y
45C134	1052	0.67	ALKALI CR	NAPTON C-1052	0.7 MI E JCT ST HWY 201	1965	24	23.00	704	NOT*DEF	2	120	236	236	1196	0	Y
45C136	1057	3.90	SO OWYHEE CANAL	NAPTON C-1057	0.1 MI N ST HWY 201	1993	22	27.00	900	NOT*DEF	2	165	250	236	1196	0	Y
45C137	1053	2.15	SO OWYHEE CANAL	RIDGEVIEW C-1053	0.3 MI N ST HWY 201	1996	32	27.00	900	NOT*DEF	2	71	250	236	1196	0	Y
45C138	687	0.38	OWYHEE CANAL	SUCCOR CR RD B483	0.4 MI S ST HWY 201	1983	23	22.50	802	NOT*DEF	2	220	250	236	1196	0	Y
45C142	698	4.77	VALE MAIN CANAL	LITTLE VLLY RDC698	048 MI E HARPER SCHOOL	1976	43	22.30	900	NOT*DEF	2	40	236	236	1296	0	Y
45C143	698	3.72	VALE MAIN CANAL	LITTLE VLY RD C6	037 MI E INTER FAS B497	1978	50	22.00	809	NOT*DEF	2	80	236	236	1296	0	Y
45C148	538	30.76	BULLY CREEK	INDIAN CRK RD C538	01 M W WESTFALL POST OFF	1977	47	22.00	806	NOT*DEF	2	50	236	236	1296	0	Y
45C149	538	29.03	INDIAN CREEK	INDIAN CRK RD C538	023 M W WESTFALL POST OFF	1977	31	22.00	807	NOT*DEF	2	40	236	236	1296	0	Y
45C202	839	0.25	OWYHEE CANAL	OVERSTREET B486	002 E INTER OWYHEELAKE RD	1974	29	30.00	908	NOT*DEF	2	275	236	236	1196	0	Y
45C203	1044	0.12	MITCHELL CANAL	VIEWCREST C-1044	001 W INTER FAS B485	1960	32	29.00	900	NOT*DEF	2	83	248	236	1196	1990	Y
45C204	1105	0.79	MITCHELL CANAL	CR1105 TWILIGHT DR	001 MI SO JCT FAS B487	1984	25	30.00	900	NOT*DEF	2	94	250	236	1196	0	Y
45C205	1036	1.45	MITCHELL CANAL	OWYHEE C-1036	047 W OWYHEE JCT	1952	26	28.00	900	NOT*DEF	2	110	250	236	1196	1996	Y
45C206	775	1.93	MITCHELL CANAL	NORWOOD C-775	006 MI N JCT (OWYHEE AVE)	1968	28	24.00	900	NOT*DEF	2	100	236	236	1196	0	Y
45C207	774	3.25	MITCHELL CANAL	KLAMATH RD. C-774	013MI W JCT(JEFFERSON DR)	1968	29	25.00	800	NOT*DEF	2	80	248	236	1196	0	Y
45C208	1036	3.64	OWYHEE CANAL	OWYHEE B485	3.8 MI W OWYHEE JCT	1971	45	28.50	900	NOT*DEF	2	194	236	236	1196	0	Y
45C209	554	5.57	MITCHELL CANAL	JEFFERSON C-554	001 MI N JCT IVANHOE AVE	1974	25	24.50	900	NOT*DEF	2	33	236	236	1196	0	Y
45C210	774	3.93	COW HOLLOW DRAIN	KLAMATH RD C-774	006MI WEST INTER FASB487	1938	26	24.00	704	NOT*DEF	2	25	234	224	1196	0	Y
45C214	562	5.53	OWYHEE CANAL	GRAND C-562	002MI W JCT SUCCOR CR HWY	1961	26	31.00	601	NOT*DEF	2	300	222	215	1196	1990	Y
45C216	956	0.28	LOCKETT GULCH	CLOVERDALE C-956	010 N INTER FAS B488	1973	40	29.00	900	NOT*DEF	2	143	236	236	1196	0	Y
45C217	554	1.15	LOCKETT GULCH IDAHO	KIMBERLY LN C-554	002MI S INT FAS B489	1975	31	31.00	900	NOT*DEF	2	39	299	275	1196	0	Y
45C226	846	9.07	OWYHEE RIVER	OWYHEE RD. B485	083 M NE OWYHEE DAM	1974	219	24.00	709	NOT*DEF	2	250	267	240	1196	0	Y
45C308	917	0.70	DEAD OX CANAL	PIONEER RD	060 NORTH OF SHOP	1940	82	27.50	900	NOT*DEF	2	154	273	244	1296	1983	Y
45C404	587	20.25	GRANITE CR	WARM SPRINGS RESRD	022 S RIVERSIDE	1983	21	22.80	904	NOT*DEF	2	55	236	236	1296	0	Y
45C602	808	0.55	JORDAN CR	JACA RD C-808	006 S INTER HWY 95	1978	89	27.50	809	NOT*DEF	2	65	236	236	595	0	Y
45C603	808	0.85	ANTELOPE CANAL	JACA RD C-808	012 S INTER HWY 95	1980	37	22.50	906	NOT*DEF	2	65	258	235	595	0	Y
45C606	800	2.93	COW CREEK (SCOTT)	C-800	079 W INTER HWY 95	1977	31	23.00	808	NOT*DEF	2	33	236	236	1296	0	Y
45C607	1121	1.15	COW CR (SILVER CITY)	SILVER CITY C-1121	011 MI E JCT HWY 95	1996	62	28.00	1000	NOT*DEF	2	72	250	236	1296	0	Y

TABLE B-2
COUNTY BRIDGE INVENTORY AND RATINGS

Bridge	County	Mile-	Features	Facility		Year	Length	Roadway	Sufficiency		No.		Rating		Routine Inspection	Year of	NBI
No.	Rd. No.	post	Intersected	Carried	Location	Built	(ft)	Width (ft)	Rating	Status	Lanes	ADT	Operating	Inventory	Date (Mo/YR)	Reconstruction	Length (?)
45R10	967	0.00	LOW LIFT CANAL	FIR RD	060 NORTH OF SHOP	1966	27	23.50	800	NOT*DEF	2	66	250	236	1296	0	Y
45R21	976	0.50	OWYHEE CANAL	MORGAN RD	100 SOUTH OF SHOP	1960	26	32.30	800	NOT*DEF	2	110	250	236	1196	1990	Y

TABLE B-3
STATE BRIDGE INVENTORY AND RATING

Bridge No.	State Hwy No.	Signed Route No.	Mile-post	Features Intersected	Facility Carried	Location	Year Built	Length (ft)	Roadway Width (ft)	Sufficiency Rating	Status	No. Lanes	ADT	Rating Operating	Rating Inventory	Operational Status	Routine Inspection Date (Mo/YR)	Year Reconstruction
04307A	5	26	228.21	HWY005/MIDDLE FK WILLOW	US26 FAP88 HWY005	053MI E BAKER COUNTY LINE	1986	28	31.4	908	NOT*DEF	2	440	275	245	A	597	0
04311A	5	26	231.01	S FK WILLOW CR (ROSE CR)	US 26 FAP-88 (5)	8.1 MI E. BAKER. CO. LINE	1993	46	31.4	900	NOT*DEF	2	440	291	254	A	597	0
00589A	5	26	251.88	CANYON CREEK	US 26 FAP-88 (5)	29.0 MI SE BAKER CO LINE	1979	69	35.6	907	NOT*DEF	2	580	250	236	A	597	0
00546A	5	26	252.97	POLE CREEK	US 26 FAP-88 (5)	30.1 MI SE BAKER CO LN	1979	59	35.4	907	NOT*DEF	2	580	248	236	A	597	0
9120	6	84	353.04	BENSON CR INT "WB"	FAI-84 (6)	010 MI S BAKER CO LINE	1967	177	39.2	900	NOT*DEF	2	3400	261	236	A	397	0
09120A	6	84	353.04	BENSON CR INT "EB"	FAI-84 (6)	010 MI S BAKER CO LINE	1967	177	39.1	900	NOT*DEF	2	3400	261	236	A	397	0
8364	6	84	354.23	BIRCH CREEK	I-84	02.2 MI S BAKER CO LINE	1958	36	0	*0600	NOT*DEF	4	7400	250	236	A	397	0
08083A	6	84	356.17	OLDS FERRY INTERCHANGE	FAI-84/US 30 (6)	042 MI SE BAKER CO LINE	1973	220	93.3	900	NOT*DEF	5	7100	250	236	A	397	0
9838	6	84	362.15	MOORES HOLLOW INT "WB"	FAI-84/US 30 (6)	102 MI SE BAKER CO LINE	1972	138	41.9	900	NOT*DEF	2	3600	250	236	A	397	0
09838A	6	84	362.15	MOORES HOLLOW INT "EB"	FIA-84/US 30 (6)	102 MI SE BAKER CO LINE	1973	137	42	900	NOT*DEF	2	3600	250	236	A	397	0
07979A	6	84	369.99	S FK JACOBSEN GULCH RD	FAI-84/US 30 (6)	080 MI NW IDAHO STATE LN	1973	114	42	820	FUNC*OBS	2	3600	250	236	A	397	0
07979B	6	84	369.99	S FK JACOBSEN GULCH "WB"	FAI-84/US 30 (6)	080 MI NW IDAHO STATE LN	1972	114	42	820	FUNC*OBS	2	3600	250	236	A	397	0
07936A	6	80	370.48	OWYHEE CANAL	FAI-80N/US 30/HWY6	07.5 MI NW IDAHO STATE LN	1955	21	0	*0800	NOT*DEF	4	6800	240	236	A	496	1972
7971	6	84	372.18	OXING DOMAN ROAD "EB"	FAI-84/US 30 (6)	058 MI NW IDAHO STATE LN	1956	115	47.1	726	FUNC*OBS	2	3900	238	223	A	397	0
07971A	6	84	372.18	OXING DOMAN ROAD "WB"	FAI-84/US 30 (6)	058 MI NW IDAHO STATE LN	1972	144	42.1	907	NOT*DEF	2	3900	250	236	A	397	0
7956	6	84	373.08	UXING CHESTER BLVD	CO. RD. OVER HWY 6	049 MI NW IDAHO ST LINE	1956	194	25.3	726	FUNC*OBS	2	1000	249	229	A	397	0
07935A	6	84	374.07	MALHEUR R(FREEWAY) "EB"	FAI-84/US 30 (6)	039 MI NW IDAHO STATE LN	1973	413	42	907	NOT*DEF	2	3900	250	236	A	397	0
07935B	6	84	374.08	MALHEUR R(FREEWAY) "WB"	FAI-84/US 30 (6)	039 MI NW IDAHO STATE LN	1973	346	42	907	NOT*DEF	2	3900	250	236	A	397	0
08397E	6	84	375.8	OXING UPRR(ORE-IDA) "EB"	FAI-84/US 30 (6)	022 MI NW IDAHO STATE LN	1960	179	44.4	900	NOT*DEF	2	4500	250	236	A	397	1996
8397W	6	84	375.8	OXING UPRR(ORE-IDA) "WB"	FAI-84/US 30 (6)	022 MI NW IDAHO STATE LN	1960	179	44.2	900	NOT*DEF	2	4500	250	236	A	397	1996
08398E	6	84	376	OXING GRIGG ROAD "EB"	FAI 84 US-30 (6)	020 MI NW IDAHO STATE LN	1960	121	41.6	929	FUNC*OBS	2	4500	261	236	A	397	0
8398W	6	84	376	OXING GRIGG ROAD "WB"	FAI 84 US-30 (6)	020 MI NW IDAHO STATE LN	1960	121	41.6	900	NOT*DEF	2	4500	261	236	A	397	0
8400	6	84	376.98	UXING RIVER R(SE 5TH AV)	SE 5TH AV(OVR HY6)	010 MI N IDAHO STATE LINE	1960	261	26.2	707	NOT*DEF	2	1500	237	222	A	397	0
08107E	6	84	377.92	SNAKE R(FREEWAY BR) "EB"	FAI-84 (6)	ORE-IDAHO STATE LINE	1960	972	30	325	FUNC*OBS	2	7000	231	219	A	397	0
8107W	6	84	377.92	SNAKE R(FREEWAY BR) "WB"	FAI-84 (6)	ORE-IDAHO STATE LINE	1960	972	30	423	FUNC*OBS	2	7000	231	219	A	397	0
01851A	7	20	182.75	CHIMNEY CREEK(6TH XING)	US 20 FAP-21 (7)	2.6 MI. E. HARNEY CO LINE	1966	48	39.5	709	NOT*DEF	2	1100	247	228	A	696	0
01852A	7	20	183.05	CHIMNEY CREEK(7TH XING)	US 20 FAP 21 (7)	2.9 MI. E HARNEY CO LINE	1966	48	38.3	808	NOT*DEF	2	1100	250	236	A	696	0
02180A	7	20	185.62	CHIMNEY CREEK(9TH XING)	US 20 FAP-21 (7)	055 MI E HARNEY CO LINE	1936	22	33	803	NOT*DEF	2	1100	253	232	A	697	1964
02179A	7	20	185.81	CHIMNEY CREEK(10TH XING)	US 20 FAP-21 (7)	057 MI E HARNEY CO LINE	1936	78	36.5	504	NOT*DEF	2	1100	229	217	A	697	1964
1550	7	20	190.84	NORTH FORK MALHEUR RIVER	US 20 FAP-21 (7)	107 MI E HARNEY CO LINE	1932	201	24.6	400	NOT*DEF	2	1400	238	223	A	697	0
8409	7	20	191.97	MALHEUR R(HORSESHOE BEND	US 20 FAP-21 (7)	119 MI E HARNEY CO LINE	1960	374	30.2	721	FUNC*OBS	2	1400	250	236	A	697	0
1549	7	20	195.13	MALHEUR RIVER (GWYNN)	US 20 FAP-21 (7)	15.0 MI. E HARNEY CO LINE	1932	171	23.9	420	FUNC*OBS	2	1300	228	217	A	696	0
01717A	7	20	196.71	CALF CREEK	US 20 FAP-21 (7)	166 MI E HARNEY CO LINE	1949	21	0	*0806	NOT*DEF	2	1400	250	236	A	697	0
01719A	7	20	199.32	POLE CREEK	US 20 FAP-21 (7)	192 MI E HARNEY CO LINE	1949	21	0	*0701	NOT*DEF	2	1400	250	236	A	697	0
04347A	7	20	203.28	BLACK CANYON CREEK	US 20 FAP-21 (7)	231 MI E HARNEY CO LINE	1959	71	30.2	708	NOT*DEF	2	1300	250	236	A	697	0
1551	7	20	205.58	MALHEUR RIVER(SPEERY)	US 20 FAP-21 (7)	254 MI E HARNEY CO LINE	1931	201	24	407	NOT*DEF	2	1300	240	224	A	697	0
04350A	7	20	205.83	SPERRY CREEK	US 20 FAP-21 (7)	257 MI E HARNEY CO LINE	1959	57	30.2	404	NOT*DEF	2	1300	230	218	A	697	0
04354A	7	20	208.42	GOLD CREEK	US 20 FAP-21 (7)	282 MI E HARNEY CO LINE	1959	57	30.2	503	NOT*DEF	2	1300	232	219	A	697	0
8260	7	20	213.42	MALHEUR RIVER(DIVERSION)	US 20 FAP-21 (7)	330 MI W JCT US RTE 26	1959	183	30.2	705	NOT*DEF	2	1400	246	228	A	697	0
8259	7	20	214.46	MALHEUR RIVER(NAMORF)	US 20 FAP-21 (7)	319 MI W JCT US RTE 26	1959	141	30.2	600	NOT*DEF	2	1400	241	225	A	697	0
04359A	7	20	216.78	SQUAW CREEK	US 20 FAP-21 (7)	293 MI W JCT US 26 @ VALE	1949	61	26	408	NOT*DEF	2	1400	229	218	A	697	0
17944	7	20	225.53	COTTONWOOD CREEK	US 20 FAP-21 (7)	21 MI W JCT US 26 @ VALE	1996	76	39.6	809	NOT*DEF	2	1500	275	245	A	697	0
04373A	7	20	227.74	BUCKAROO CABIN CREEK	US 20 FAP-21 (7)	183 MI W JCT US 26 @ VALE	1962	81	40	805	NOT*DEF	2	1500	259	235	A	697	0
04374A	7	20	228.4	LITTLE SANDY CREEK	US 20 FAP-21 (7)	176 MI W JCT US 26 @ VALE	1962	51	40	802	NOT*DEF	2	1500	256	233	A	697	0
01407A	7	20	238.66	MALHEUR RIVER (HOPE BR)	US 20 FAP-21 (7)	077 MI W JCT US RTE 26	1966	254	41.1	708	NOT*DEF	2	1800	250	236	A	697	0
00630A	7	20	244.29	BULLY CREEK	US 20 FAP-21 (7)	017 MI W JCT US 26 @ VALE	1956	134	30	702	NOT*DEF	2	2400	246	227	A	697	0
00599B	7	20	246.55	MALHEUR RIVER (VALE) EB	US 20/26 FAP 21(7)	0.2 MI E JCT RTE 26	1988	300	35.8	908	NOT*DEF	2	2400	275	245	A	697	0
7754	7	20	246.61	MALHEUR RIVER(VALE)	US 20/26 FAP-21(7)	002 MI E JCT US RTE 26	1955	289	30	704	NOT*DEF	2	2600	237	222	A	697	0

TABLE B-3
STATE BRIDGE INVENTORY AND RATING

Bridge No.	State Hwy No.	Signed Route No.	Mile-post	Features Intersected	Facility Carried	Location	Year Built	Length (ft)	Roadway Width (ft)	Sufficiency Rating	Status	No. Lanes	ADT	Rating Operating	Rating Inventory	Operational Status	Routine Inspection Date (Mo/YR)	Year Reconstruction
01463A	7	20	266.81	SNAKE RIVER(NYSSA)	US20/26 FAP-Y21(7)	OREGON-IDAHO STATE LN	1957	679	30	607	NOT*DEF	2	4900	250	236	A	697	0
01648A	449	30	10.03	BENSON CREEK	US 30 FAS-177(449)	1.1 MI. N. JCT. I-84	1957	85	26	803	NOT*DEF	2	610	251	231	A	1095	0
04393A	450	201	5.26	OWYHEE IRRIGATION DITCH	OR 201 FAS172(450)	5.3 MI. S. JCT. US 20/26	1967	41	39.5	903	NOT*DEF	2	1500	250	236	A	1095	0
04394A	450	201	6.53	OWYHEE IRRIGATION DITCH	OR 201 FAS172(450)	6.5 MI. S. JCT. 20/26	1967	41	39.3	904	NOT*DEF	2	1500	250	236	A	1095	0
01747B	450	201	8.73	OWYHEE RIVER	OR201 FAS172 (450)	8.7 MI. S. JCT. US 20/26	1985	338	33.5	909	NOT*DEF	2	1500	275	245	A	1095	0
01624A	451	451	4.68	BULLY CREEK	STATE 451 FAS-174	4.7 MI. N. JCT. US 20	1969	50	31.6	909	NOT*DEF	2	210	250	236	A	1095	0
4413	453	453	1.59	RIVERSIDE CANAL	STATE 453 O.S.	1.6 MI. E. HWY. 454	1960	21	25	807	NOT*DEF	2	260	254	234	A	1095	0
04420A	454	454	1.78	RIVERSIDE CANAL	STATE 454 NON-FA	2.3 MI. SE. JCT. ORE 201	1931	24	27.6	808	NOT*DEF	2	70	234	225	D	T 1096	1976
00731B	455	201	24.6	MALHEUR RIVER	OR 201 FAP-71(455)	0.5 MI N JCT I-84N	1976	385	40.1	902	NOT*DEF	2	4100	260	236	A	1096	0
8635	455	201	25.2	NORTH ONTARIO INTERCHANG	OR 201 FAP-71(455)	0.3 MI N ONTARIO NW C LMT	1959	273	30	700	NOT*DEF	2	5700	250	236	A	1096	0
01000B	455	30	28.39	SNAKE RIVER(ONTARIO SPUR	US 30 FAP-21(455)	0.7 MI E JCT FIA-84	1985	887	68	801	NOT*DEF	4	18000	250	236	A	1096	0
02118A	456	95	2.16	SUCCOR CREEK	US 95 FAP-87(456)	2.2 MI. SW IDAHO ST. LINE	1975	150	35.5	803	NOT*DEF	2	1300	260	236	A	1095	0
05225A	456	95	10.98	COW CREEK	US 95 FAP-87(456)	11.0 MI. SW IDAHO ST LINE	1944	86	32.7	508	NOT*DEF	2	1300	231	218	A	1095	1975
01948A	456	95	25.77	JORDAN CREEK	US 95 FAP-87(456)	25.77 MI. SW IDAHO ST. LN	1985	140	36	801	NOT*DEF	2	1200	275	245	A	1095	0
01947A	456	95	27.91	ANTELOPE CANAL (1ST XING	US 95 FAP-87 (456)	27.9 MI. SW IDAHO ST LINE	1985	51	36	801	NOT*DEF	2	1200	275	245	A	1095	0
01946A	456	95	29.92	ANTELOPE CANAL (2ND XING	US 95 FAP-87 (456)	29.9 MI. SW IDAHO ST LINE	1985	47	36	801	NOT*DEF	2	1200	275	245	A	1095	0
01945A	456	95	52.97	OWYHEE RIVER (ROME)	US 95 FAP-87 (456)	13.21 MI. NE JCT. OR 78	1936	334	31.2	808	NOT*DEF	2	890	250	236	A	1095	1985
04412A	450Y	201	12.72	SNAKE RIVER (ADRIAN)	HWY450 SPUR FAS173	2.5 W. ORE-IDA STATE LINE	1973	742	40	908	NOT*DEF	2	490	250	236	A	1095	0
7071	450Y	201	20.48	IRRIGATION CANAL	OR 201 FAS-172/450	018 MI W ORE IDAHO LN	1947	21	0	*0905	NOT*DEF	2	340	250	236	A	1096	0
04330A	455Y	201	13.66	SNAKE RIVER AT WEISER	201 HWY 455	IDAHO ST. LINE AT WEISER	1953	910	26	223	FUNC*OBS	2	4000	236	214	A	696	0
04335A	455Y	201	21.3	SNAKE RIVER AT PAYETTE	HWY 455Y	IDAHO ST. LINE AT PAYETTE	1953	689	26	627	FUNC*OBS	2	3000	235	225	A	994	0
8399	455Y	30	27.73	IDAHO AVENUE INTERCHANGE	US30 FAP-71 (455)	1.7 MI. W. ORE-IDA LINE	1959	322	59	320	FUNC*OBS	4	22300	202	201	A	1096	0

January 1998
Source: ODOT, Compiled by: W&H Pacific
Bridges.xls

APPENDIX C

STATE HIGHWAY FUTURE TRAFFIC PROJECTIONS

APPENDIX C
STATE HIGHWAY FUTURE TRAFFIC PROJECTIONS

Highway	Section	Begin MP	End MP	Length (mi)	1996 ADT	2017 ADT
US 26	MALHEUR CO. LINE-IRONSIDE	222.91	231.22	8.31	365	545
US 26	IRONSIDE-BROGAN HILL	231.23	246.30	15.07	340	508
US 26	BROGAN HILL-BROGAN	246.30	254.17	7.87	560	837
US 26	BROGAN-WILLOW CREEK	254.60	268.00	13.40	680	1016
US 26	WILLOW CREEK-VALE	268.00	277.71	9.71	1200	2139
US 20	DRINKWATER PASS-CHIMNEY CR	180.15	183.15	3.00	1100	1643
US 20	CHIMNEY CR-JUNTURA	183.15	189.90	6.75	1350	2017
US 20	JUNTURA-BONEY BASIN	189.90	193.07	3.17	1300	1942
US 20	BONEY BASIN - BLACK CANYON	193.21	202.90	9.69	1300	1942
US 20	BLACK CANYON-HARPER	202.90	223.16	20.26	1400	2092
US 20	HARPER-MALHEUR RIVER	223.16	238.70	15.54	1400	2092
US 20	MALHEUR RIVER-VALE	238.70	245.49	6.79	1900	3386
US 20/26	VALE-CAIRO JUNCTION	246.55	258.20	11.65	5050	9000
US 20/26	CAIRO JCT.-FIRST ST (NYSSA)	258.20	266.31	8.11	4700	8377
US 20/26	FIRST ST-NYSSA UPRR	266.31	266.82	0.51	5200	9268
US 20/26	VALE-MALHEUR RIVER	245.71	246.82	1.11		0
Hwy 78	MALHEUR CO LINE TO BURNS JCT	60.88	91.60	30.72	180	225
US 30	MALHEUR CO LINE-BENSON CREEK INTCH	9.98	11.04	1.06	700	1046
Hwy 201	NYSSA-OWYHEE JCT	0.40	8.00	7.60	2000	3564
Hwy 201	OWYHEE JCT-SCL ADRIAN	8.00	12.51	4.51	1500	2673
Hwy 201	SCL ADRIAN-SUCCOR CREEK RD	12.51	20.11	7.60	380	677
Hwy 201	PARMA SPUR	12.51	15.26	2.75	480	855
Hwy 201	HOMEDALE SPUR	20.11	22.24	2.13	530	945
Hwy 451	MALHEUR RIVER-VALE	0.00	10.15	10.15	650	1158
Hwy 453	JCT HWY 454-PRIMROSE RD	0.00	3.19	3.19	230	410
Hwy 454	JCT PARMA SPUR-IDAHO ST LINE	0.00	5.09	5.09	280	499
Hwy 201	OLDS FERRY INTCH-ANNEX ROAD	0.00	9.03	9.03	510	762
Hwy 201	ANNEX RD-WEISER SPUR	9.03	11.65	2.62	520	927
Hwy 201	WEISER SPUR-PAYETTE SPUR	11.65	19.65	8.00	2400	4277
Hwy 201	PAYETTE SPUR-MALHEUR RIVER	19.65	24.58	4.93	4000	7129
Hwy 201	MALHEUR RIVER-OREGON ST (ONTARIO)	24.58	25.51	0.93	5500	9802
Hwy 201/20/26	WCL ONTARIO-CAIRO JCT	29.56	31.81	2.25	9000	16040
Hwy 201	WEISER SPUR	11.65	13.66	2.01	2800	4990
Hwy 201	PAYETTE SPUR	19.65	21.30	1.65	1800	3208
US 95	IDAHO STATE LINE-COW CREEK	0.00	11.00	11.00	1200	1501
US 95	COW CREEK- JORDAN VALLEY	11.00	19.44	8.44	1200	1501
US 95	JORDAN VALLEY-SHEEP CREEK	21.64	25.90	4.26	1000	1250
US 95	SHEEP CREEK-ROCK CREEK RD	25.90	40.00	14.10	1000	1250
US 95	ROCK CREEK RD-ROME	40.00	53.00	13.00	1050	1313
US 95	ROME-BURNS JCT.	53.00	64.60	11.60	950	1188
US 95	BURNS JCT-CROOKED CREEK	64.60	75.80	11.20	940	1175
US 95	CROOKED CREEK-WHITE HORSE RANCH	75.80	85.60	9.80	940	1175
US 95	WHITE HORSE RANCH-BASQUE	85.60	94.30	8.70	940	1175
US 95	BASQUE-BLUE MTN SUMMIT	94.30	98.65	4.35	940	1175
US 95	BLUE MTN SUMMIT-OREGON CANYON	98.65	105.30	6.65	980	1225
US 95	OREGON CANYON-FISH CREEK ROAD	105.30	110.80	5.50	1100	1375
US 95	FISHCREEK ROAD-MCDERMITT	110.80	121.36	10.56	1250	1563
			Totals =	366.32	74795	122861

1) Treasure Valley area (TV) 2.79% average annual growth rate (compounded)
South county area (SC)1.07% average annual growth rate (compounded)
West county area (WC)1.93% average annual growth rate (compounded)

APPENDIX D

STATE HIGHWAY LOS ANALYSIS

Appendix D
State Highway LOS Analysis

(NOTE: These LOS standards are only intended to provide a general idea of the forecast LOS relative to the current LOS. Observed conditions on actual roadways within the study area may not be identical to the parameters assumed in the Highway Capacity Manual.)

Highway	Section To / From	1996				2017			
		AADT	LOS	Peak Month ADT	Peak Month LOS	AADT	LOS	Peak Month ADT	Peak Month LOS
US 20/26	Vale-Malheur River (Cairo Jct) (MP 246.55-258.20)*	5,050	C	6,161	D	9,000	D	10,980	E
US 20/26	Cairo Jct.- First Street (MP 258.20-266.31)*	4,700	C	5,734	D	8,377	D	10,219	E
US 20/26	First Street – UPRR (MP 266.31-266.82)*	5,200	C	6,344	D	9,268	D	11,307	E
Hwy 201	Malheur River – Oregon St. (MP 24.58 – 25.51)*	5,500	C	6,710	D	9,802	D	11,959	E
Hwy 201	ECL Ontario – Cairo Jct. (MP 29.56-31.81)**	9,000	A	10980	A	16,040	B	19,569	B

Source: *Highway Capacity Manual*, Special Report 209, 3rd edition, Transportation Research Board.

* LOS standards for two-lane rural highways based on the following assumed conditions: level terrain, K-factor of 0.14, 60 / 40 directional split, 14% trucks, 4 percent RV's, no buses, and PHF values from Table 8-3 (HCM), and 20 percent no passing zones. Maximum AADT: A=1,700, B=3,400, C=5,700, D=9,600, E=16,300, F=above 16,300. Peak month multiplier equals 122% of AADT (peak months are July and August).

** LOS standards for four-lane highway based on the following assumed conditions speed limit of 55 mph, level terrain, Suburban/rural facility environment (K=0.125, D=0.625), all heavy vehicles are trucks, lane widths = 12 ft., shoulder widths $\geq$ ft., PHF = 0.90, access points = 20 per mile, each side, divided highway. Peak month multiplier equals 122% of AADT (peak months are July and August). Peak month multiplier equals 122% of AADT (peak months are July and August).

APPENDIX E

PLANNING LEVEL PROJECT COSTS

APPENDIX E
PLANNING LEVEL PROJECT COSTS

The following cost estimates are based on some broad assumptions about the projects and are subject to significant change upon preliminary engineering and design. They are provided for general comparison purposes only. Further, it should be noted that none of the options reflect the cost of a new I-84 interchange. Feasibility and cost of new interchange will be examined in the Ontario Transportation Solutions project. Included herein are planning level cost estimates as follows:

- East-West Farm-to-Market Truck Route Options
  - Option A: Highway 20/26
  - Option B: Railroad Avenue
  - Option C: Foothills/Butler/18th
- Improved Nyssa to Vale Access
- State and County Bridge Replacement

Planning Level Cost Estimates

Option A: Highway 20/26

	Widen Highway 20/26		UPRR Crossing Suboptions	
	to 3 lanes	to 4 lanes	A1 - 18th Street	A2- 20/26 Extension
Existing Conditions				
Roadway Width	34	34		
R-O-W	60	60		
Roadway Improvement Needs				
Length (mi.)	11.60	11.60		3.40
$ / ft.	$70.00	$105.00		$105.00
Cost	**$4,287,360**	**$6,431,040**		**$1,884,960**
R-O-W Needs				
Length (ft)	61,248	61,248		17,952
Width (ft)	74	90		74
Sq. Ft.	857,472	1,837,440		1,328,448
$ / Sq. Ft.	$1.00	$1.00		$1.00
Cost	**$857,472**	**$1,837,440**		**$1,328,448**
Miscellaneous				
Bridge				
Length (ft)	100	100		
Width (ft)	54	68		
Sq. Ft.	5,400	6,800		
$ / Sq. Ft.	$125.00	$125.00		
Cost	**$675,000**	**$850,000**		**$2,600,000**
Irrigation Ditch Replacement				
Length (ft)	61,248	61,248		
$ / Ft.	$42.00	$84.00		
Cost	**$2,572,416**	**$5,144,832**		
Intersection Approach Improvements				
Number	8	8		1
$ /Approach	$10,000	$10,000		$10,000
Cost	**$80,000**	**$80,000**		**$10,000**
Subtotal	**$8,472,248**	**$14,343,312**		**$3,223,408**
Mobilization 7%	$593,057	$1,004,032		$225,639
TP&DT 5%	$423,612	$717,166		$161,170
Subtotal	**$9,488,918**	**$16,064,509**		**$3,610,217**
E&C 40%	$3,795,567	$6,425,804		$1,444,087
TOTAL	**$13,284,485**	**$22,490,313**	**$6,000,000** (ODOT estimate)	**$7,654,304**

Total Project Costs	
Option A1 (Widen Highway 20/26 to 4 lanes and Improve 18th Street)	***$28,490,313***
Option A2 (Widen Highway 20/26 to 4 lanes and Extend with New Roadway and RR Bridge)	***$30,144,617***

Planning Level Cost Estimates

Option B: Railroad Avenue

	Improve / Extend Railroad Ave.		UPRR Crossing Suboptions							
			B1 - 18th Street	B2 - Railroad Ave. Extension		B3 - Railroad Ext to 18th St		B4 - Railroad/Butler/ 18th	B5 Railroad/Lincoln/Butler/18th	
	New Roadway	Widen Railroad Ave.		Widen Railroad Ave.	New Roadway	Widen Railroad Ave.	New Roadway	Widen Clark/Butler	Widen Lincoln/Clark/ Butler	Widen Railroad Ave.
Existing Conditions										
Roadway Width		28	28	28		28		28	28	28
R-O-W		50	50	50	30	50	30	50	50	50
Roadway Improvement Needs										
Length (mi.)	4.50	3.00	1.00	2.00	2.00	2.00	1.60	2.00	4.00	1.00
$ / ft.	$80.00	$35.00	$35.00	$35.00	$80.00	$35.00	$80.00	$35.00	$35.00	$35.00
Cost	**$1,900,800**	**$554,400**	**$184,800**	**$369,600**	**$844,800**	**$369,600**	**$675,840**	**$369,600**	**$739,200**	**$184,800**
R-O-W Needs										
Length (ft)	23,760	15,840		10,560	10,560	10,560	8,448	10,560	21,120	5,280
Width (ft)	60	60		60	60	60	60	60	60	60
Sq. Ft.	1,425,600	158,400		105,600	316,800	105,600	253,440	105,600	211,200	52,800
$ / Sq. Ft.	$0.10	$0.10		$0.10	$0.50	$0.50	$0.50	$1.00	$1.00	$0.10
Cost	**$142,560**	**$15,840**		**$10,560**	**$158,400**	**$52,800**	**$126,720**	**$105,600**	**$211,200**	**$5,280**
Miscellaneous										
Bridge										
Length (ft)	300									
Width (ft)	36									
Sq. Ft.	10,800									
$ / Sq. Ft.	$125.00									
Cost	**$1,350,000**				**$2,600,000**		**$2,600,000**			
At-Grade RR Crossing										
Cost			**$275,000**	**$275,000**		**$275,000**				
Weigh-In-Motion Station										
Cost	**$200,000**									
Irrigation Ditch Replacement										
Length (ft)										
$ / Ft.										
Cost										
Intersection Approach Improvements										
Number	2	3		2	1	1	1	2	2	2
$ /Approach	$10,000	$10,000		$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Cost	**$20,000**	**$30,000**		**$20,000**	**$10,000**	**$10,000**	**$10,000**	**$20,000**	**$20,000**	**$20,000**
Subtotal	**$3,613,360**	**$600,240**	**$459,800**	**$675,160**	**$3,613,200**	**$707,400**	**$3,412,560**	**$495,200**	**$970,400**	**$210,080**
Mobilization 7%	$252,935	$42,017	$32,186	$47,261	$252,924	$49,518	$238,879	$34,664	$67,928	$14,706
TP&DT 5%	$180,668	$30,012	$22,990	$33,758	$180,660	$35,370	$170,628	$24,760	$48,520	$10,504
Subtotal	**$4,046,963**	**$672,269**	**$514,976**	**$756,179**	**$4,046,784**	**$792,288**	**$3,822,067**	**$554,624**	**$1,086,848**	**$235,290**
E&C 40%	$1,618,785	$268,908	$205,990	$302,472	$1,618,714	$316,915	$1,528,827	$221,850	$434,739	$94,116
18th St/Bridge Improvements (ODOT Estimate)			**$6,000,000**							
TOTAL	**$5,665,748**	**$941,176**	**$6,720,966**	**$1,058,651**	**$8,265,498**	**$1,109,203**	**$7,950,894**	**$776,474**	**$1,521,587**	**$329,405**

Total Project Costs	
Option B1 (Railroad Avenue Extension with Improved 18th Street)	***$13,327,891***
Option B2 (Railroad Avenue Extension with widened Railroad Ave., New Roadway and RR Bridge)	***$15,931,073***
Option B3 (Railroad Avenue Extension with widened Railroad Ave; New Roadway (west of UPRR)	***$15,667,022***
Option B4 (Railroad Avenue Extension with widened Railroad Ave. and Improved Clark/Butler/18th Street)	***$13,383,398***
Option B5 (Railroad Avenue Extension with widened Railroad Ave. and Improved Lincoln/Clark/Butler/18th Street)	***$13,516,741***

Planning Level Cost Estimates

Option C: Foothills/Butler/18th

	Improve Foothills/Butler/18th			UPRR Crossing Suboptions
	New Roadway	Widen/Realign Foothills	Widen Butler	18th Street
Existing Conditions				
Roadway Width		28	28	
R-O-W		50	50	
Roadway Improvement Needs				
Length (mi.)	2.65	6.80	3.00	
$ / ft.	$80.00	$35.00	$35.00	
Cost	**$1,119,360**	**$1,256,640**	**$554,400**	
R-O-W Needs				
Length (ft)	6,864	35,904	15,840	
Width (ft)	60	60	60	
Sq. Ft.	411,840	359,040	158,400	
$ / Sq. Ft.	$1.00	$1.00	$1.00	
Cost	**$411,840**	**$359,040**	**$158,400**	
Miscellaneous				
Bridge				
Length (ft)	300			
Width (ft)	36			
Sq. Ft.	10,800			
$ / Sq. Ft.	$125.00			
Cost	**$1,350,000**			
At-Grade RR Crossing				
Cost				
Weigh-In-Motion				
Cost	**$200,000**			
Siphon Replacement				
Length (ft)				
$ / Ft.				
Cost	**$1,000,000**			
Intersection Approach Improvements				
Number	2	5	2	
$ /Approach	$10,000	$10,000	$10,000	
Cost	**$20,000**	**$50,000**	**$20,000**	
Subtotal	**$4,101,200**	**$1,665,680**	**$732,800**	
Mobilization 7%	$287,084	$116,598	$51,296	
TP&DT 5%	$205,060	$83,284	$36,640	
Subtotal	**$4,593,344**	**$1,865,562**	**$820,736**	
E&C 40%	$1,837,338	$746,225	$328,294	
TOTAL	**$6,430,682**	**$2,611,786**	**$1,149,030**	**$6,000,000** (ODOT estimate)

Total Project Costs	
Option C (Improve Foothills/Butler and 18th)	***$16,191,498***

Planning Level Cost Estimates

Improve Nyssa - Vale Access

	Extend Alberta Ave.		Extend Columbia Ave	
		New Roadway		New Roadway
Existing Conditions				
Roadway Width				
R-O-W				
Roadway Improvement Needs				
Length (mi.)		3.40		4.00
$ / ft.		$80.00		$80.00
Cost		**$1,436,160**		**$1,689,600**
R-O-W Needs				
Length (ft)		17,952		21,120
Width (ft)		60		0
Sq. Ft.		1,077,120		0
$ / Sq. Ft.		$0.05		$0.05
Cost		**$53,856**		**$0**
Miscellaneous				
Bridge				
Length (ft)		75		
Width (ft)		28		
Sq. Ft.		2,100		
$ / Sq. Ft.		$125.00		
Cost		**$262,500**		
At-Grade RR Crossing				
Cost				
Irrigation Ditch Replacement				
Length (ft)				
$ / Ft.				
Cost				
Intersection Approach Improv				
Number				
$ /Approach		$10,000		$10,000
Cost		**$0**		**$0**
Subtotal		**$1,752,516**		**$1,689,600**
Mobilization 7%		$122,676		$118,272
TP&DT 5%		$87,626		$84,480
Subtotal		**$1,962,818**		**$1,892,352**
E&C 40%		$785,127		$756,941
TOTAL		**$2,747,945**		**$2,649,293**

Total Project Costs	
Project Option (Extend Alberta Avenue)	***$2,747,945***
Project Option (Extend Columbia Avenue)	***$2,649,293***

Planning Level Cost Estimates

Airport Improvements

	New Airstrip in Jordan Valley Area	Extend Runway at Millar Memorial (Vale) Airport (Runway 17/35)
Existing Conditions		
Runway Width (ft.)		65
Runway Length (ft.)		3,872
Runway Improvement Needs		
Length (ft.)	3,800	500
Width (ft.)	65	65
$ / ft.	$1.00	$1.00
Cost	**$247,000**	**$32,500**

Total Project Costs	
Project Option (New Jordan Valley Area Airport)	***$250,000***
Project Option (Improved Millar Memorial Airport)	***$50,000***

Malheur County Transportation System Plan
Miscellaneus Project Costs

FACILITY	DIMENSIONS							UNITS				UNIT COST (1997)				COST PER LINEAL FOOT						COST
	Existing Pavement	Length (ft)	Width (ft)	Depth (ft)	Pave Depth (in)	Agg Depth (ft)	Slope	Pavement *tons*	Agg Base *tons*	Embankment *cu yd*	Erosion Control *acres*	Pavement *tons*	Agg Base *tons*	Embankment *cu yd*	Erosion Control *acres*	New Pavement	Agg Base	Embankment	Erosion Control	Pavement Overlay	TOTAL	
A. Unit Cost Estimates for Project Costing																						
Widen to 4-Lane Arterial	34	1	68	2	4	1	4	0.864	2.519	3.111	0.001	$40	$15	$5	$2,000	$35	$38	$16	$2	$17	$107	
Widen to 3-Lane Arterial	34	1	54	2	4	1	4	0.508	1.481	2.074	0.001	$40	$15	$5	$2,000	$20	$22	$10	$2	$17	$72	
New Arterial		1	40	2	4	1	4	1.016	2.963	3.556	0.001	$40	$15	$5	$2,000	$41	$44	$18	$3		$105	
Reconstruct Collector	28	1	36	2	3	0.833333	5	0.152	0.494	1.333	0.001	$40	$15	$5	$2,000	$6	$7	$7	$1	$14	$35	
New Collector		1	36	2	3	0.833333	5	0.686	2.222	3.407	0.001	$40	$15	$5	$2,000	$27	$33	$17	$3		$80	
Overlay	36	1	36		2			0.457				$40				$18					$18	
New Airstrip		1	65			0.833333			4.012				$15				$60				$60	
Lineal Foot Costs For 2" Overlay																						
2" Overlay	0	1	14	0	2			0.178	0.000	0.000	0.000	$40	$15	$5	$2,000	$7	$0	$0	$1	$17	$25	
2" Overlay	0	1	18	0	2			0.229	0.000	0.000	0.000	$40	$15	$5	$2,000	$9	$0	$0	$1	$17	$27	
2" Overlay	0	1	20	0	2			0.254	0.000	0.000	0.000	$40	$15	$5	$2,000	$10	$0	$0	$1	$17	$28	
2" Overlay	0	1	24	0	2			0.305	0.000	0.000	0.001	$40	$15	$5	$2,000	$12	$0	$0	$1	$17	$30	
B. Project Cost Estimates																						
1. Highway 201 Intersections																						
New Highway 201 Local Approach		100	36	2	3	0.833333	5	68.580	222.222	340.741	0.129	$40	$15	$5	$2,000	$2,743	$3,333	$1,704	$257		$8,037	
Highway 201 Left-Turn Lane		800	50	2	3	0.833333	5	762.000	2469.136	3555.556	1.286	$40	$15	$5	$2,000	$30,480	$37,037	$17,778	$2,571		$87,866	
																			No. Intersections:		4	
																					$383,613	
																			Mobilization (7%)		$26,853	
																			TP&DT (5%)		$19,181	
																			Subtotal		$429,647	
																			E&C (40%)		$171,859	
																			TOTAL		**$601,506**	
2. Arcadia/Alameda "S" Curves		1000	36	2	3	0.833333	5	685.800	2222.222	3407.407	1.286	$40	$15	$5	$2,000	$27,432	$33,333	$17,037	$2,571		$80,374	
		Length	Width					Land Cost Per Sq. Ft.											**Mobilization (7%)**		$5,626	
	ROW	1000	60					$1											**TP&DT (5%)**		$4,019	
																			Subtotal		$90,018	
																			E&C (40%)		$36,007	
																			ROW		$60,000	
																			TOTAL		**$186,026**	
3. New Highway 201 Alignment		16368	40	2	4	1	4	16629.888	48497.778	58197.333	21.042	$40	$15	$5	$2,000	$665,196	$727,467	$290,987	$42,085		$1,725,734	
																			Mobilization (7%)		$120,801	
																			TP&DT (5%)		$86,287	
																			Subtotal		$1,932,822	
																			E&C (40%)		$773,129	
																			TOTAL		$2,705,950	
4. Stanton Boulevard Extension		5808	36	2	3	0.833333	5	3983.126	12906.666	19790.222	7.467	$40	$15	$5	$2,000	$159,325	$193,600	$98,951	$14,933		$466,809	
		Length	Width					Land Cost Per Sq. Ft.											**Mobilization (7%)**		$32,677	
	ROW	5808	60					1											**TP&DT (5%)**		$23,340	
																			Subtotal		$522,827	
																			E&C (40%)		$209,131	
																			ROW		$348,480	
																			TOTAL		$1,080,437	
5. Graham Blvd. /Bully Creek Bike Lanes		51216	8	2	3	0.833333	5	7805.318	25291.851	68288.000	32.921	$40	$15	$5	$2,000	$312,213	$379,378	$341,440	$65,842	$14	$1,098,887	
																			Mobilization (7%)		$76,922	
																			TP&DT (5%)		$54,944	
																			Subtotal		$1,230,753	
																			E&C (40%)		$492,301	
																			TOTAL		$1,723,055	

APPENDIX F

DRAFT MALHEUR COUNTY ROADWAY ORDINANCE (APRIL 16, 1979) AND COMMENTS AND SUGGESTIONS

APPENDIX F
DRAFT ROADWAY ORDINANCE (APRIL 16, 1979) AND COMMENTS AND SUGGESTION

Background

In 1979 Malheur County considered the adoption of a county -wide ordinance for roadway standards. The following is the "Draft of an Ordinance of Design, Construction and Improvement Standards for County Roads" dated April 16, 1979. It includes a full description of proposed ordinance policies and drawings defining roadway standards. One element of the Malheur County TSP is the development of consistent roadway standards with regards to growth management requirements of the TPR. Rather than re-make much of the good work already completed (but not yet adopted), Table D-1 identifies appropriate changes to the Draft Ordinance by section and subsection.

TABLE F-1

Comments and Suggested Revisions to the Draft Ordinance

(Page and Section references apply to the "Draft Ordinance of Design, Construction and Improvement Standards for County Roads (4/16/79))

Page	Section	Description	Subsection	Comments / *Suggestions* / **Suggested Revisions**
4	1.030	Other Street and Roadway Requirements	(D)	• *Minimum spacing of 400' on arterials seems low. Should be* **500' - 600'** • *Collectors should be:* **Major - 500'** **Minor - 275'** • *An access management policy table should be prepared.*
		Half Street	(F)	• *Half streets should have a minimum roadway width of 20' - 24' and should have a limited use ~ 10-25 units.*
5	1.100	Design Standards	(A) 1.	• **The angle of intersection of streets shall be between 75 ° and 105 °.** • *Intersections should meet intersection spacing requirements.*
6	1.100	Design Standards	(A) 1.	• Recommended r-o-w returns: *Minimum* - **20'** *Arterial* - ***30'*** • Recommended curb returns: *Minimum* - **30'** *with arterial* - **35' (unless major trucks - 55')** • **Cul-de-sac curb radius:** **40' – 45'** *instead of 36'* • *Consider eliminating required curb for less than 150' (length).*
7	1.100	Design Standards	Table A	• *Update to current AASHTO standards.*

Page	Section	Description	Subsection	Comments / *Suggestions* / **Suggested Revisions**
			(A) 1.	• *Consider allowing a range in centerline radius and grade for flat, rolling and mountainous.* • *Consider adding a design speed column.* • *Stopping sight distance should be based on speed not classification.* • *"Cul-de-sac" is defined as less than 400' in length in text. Table A should reflect it.*
8	1.100	Design Standards	(A) 2.	• Minor collector ADT seems high **2000** *is more appropriate.* • *Truck weights seem low for today's vehicles. 105,000 is not uncommon. 80,000 is standard.*
9	1.100	Design Standards - Traffic Sight Obstructions	(C)	• *Intersection sight distance seems very low check with current AASHTO* *i.e. 30 mph 35 40 45 55* *430' 490' 555' 620'* • I think current AASHTO measures eye height and object different now. • Is 45 mph the maximum speed on county roads?
9	1.100	Design Standards - Special Specification & Creation Criteria for Rural Roads	(E) 2.	• Does the county want "new" gravel roads to be developed?
11	1.100	Design Standards - Bridges	(H) 1.	• Years seems short for structures. • *Load limits should be specified* (i.e., HS-25, not at the Roadmasters whim).
			(H) 2	• If a bridge will carry "legal" loads, why should it be posted?
12	1.200	Construction	(B)	• *Suggest*

Page	Section	Description	Subsection	Comments / *Suggestions* / Suggested Revisions
		Driveways		*One day lead time for all inspections except:* *3 days for paving or structures,* *5 days for final inspection.* • *Culverts suggest:* *Minimum 15" or sized like similar pipes within 500',* *Use concrete or corrugated metal (CMP).*
17	1.300	Arterial Roadway Typical Section	Drawing S-1	• 11/2:1 is steep in urban setting. • 5' Sidewalk is narrow next to an urban arterial. • 68' seems wide for four lanes plus bike lanes and narrow for five lanes (turn lane). *Add Rural Arterial Typical Section.*
21	1.300	Cul-de-sac Typical Section	Drawing S-5	• 28'- 32' seems wide for cul-de-sac. • These should be low speed local access.
23	1.300	Rural Minor Collector Typical Section	Drawing S-7	• Rural MAJOR collector? • Are there instances where a four-lane rural major collector might be appropriate? • Is paved shoulder at 3:1 too steep? *Should be 5%.* • Broken back at paved shoulder/ditch hard to construct. • 4:1 ditch slopes meet clear zone requirements better. • Note not clear.
26	1.300	Rural Public Roadway Typical Section	Drawing S-10	• What conditions make this a county road? • The shoulder slope detail is poor.

Page	Section	Description	Subsection	Comments / *Suggestions* / Suggested Revisions
27	1.300	Residential Drive-way	Drawing D-1	• 11/2" lip seems excessive - *1" will do.* • 5' to 7 1/2' taper smoother than 3'.
29	1.300	Rural Driveway or Rural Public Road Connection	Drawing D-3	• *Consider requiring pavement to K/W at least on arterials and collectors.* • *Pipe should be beveled 4:1 to match fill slope.*
31	1.300	Sidewalk Typical Section	Drawing C-2	• Thickness 4" or 4" nominal (use 2 x 4 as form)?
33	1.300	Street Barricade	Drawing B-1	• *Should be MUTCD Type 3 barricade.* • *Slant stripes away from centerline.* • *Three rails for Type 3.* • *Painted orange/white not black/white.*

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Example: The first structure number to be assigned will be #45C001 to

(I) Street Barricades
All streets stubbed off with no turn-around provided to be extended in the future shall have a street barricade constructed at the end of the said street as shown on the Standard Drawing No. B-1 (Street Barricade).

1.200 CONSTRUCTION SPECIFICATIONS

The following construction specifications shall apply to the design, construction and improvement of all county roads.

(A) Roadbed
Construction specifications submitted with the final subdivision plan as required by the Subdivision Resolution, shall be reviewed and approved by the Roadmaster prior to the construction of the roadways. The construction or improvement of all county roads shall be supervised and inspected by the Roadmaster or his designee. The subgrade, base and surface layers of roads improved or under construction will each be inspected and approved by the Roadmaster or his designee to assure compliance with the requirements for material quality, compaction, standard widths and layer thicknesses. At least one (1) working day notice shall be allowed for inspection. A report of the acceptance of each layer and the subgrade shall be made by the Roadmaster and included in the Road File maintained in the office of the County Court. There will be no fee for inspection by the Roadmaster or his designee.

why the difference?

(B) Driveways
1. Materials
   a. Portland Cement Concrete. All Portland Cement Concrete shall be 3000 p.s.i., six (6) sacks per cubic yard.
   b. Asphaltic Concrete . Asphaltic concrete shall conform to the requirements [redacted] recommended by the Roadmaster.
   c. Culverts. on roads where driveway culverts are necessary the minimum size shall be 10" concrete tongue and groove culvert pipe. A field investigation of the site should be requested prior to constructing said driveway or culvert, at that time the proper size of culvert to be installed shall be determined by the Roadmaster or his designee.
   d. Forms. Forms shall be either wood or metal sufficient in strength to support the concrete without distortion or movement.

what about reinforced metal culverts?

2. Construction Details
The details for construction shall comply with those shown on the Standard Drawing No. D-1 (Residential Driveway) for Portland Cement Concrete or on Standard Drawing No. D-3 (Rural Driveway) for asphalt concrete and this section.

The existing curb shall be removed in its entirety to the nearest expansion joint on each side or the existing curb shall be saw cut on each side to make a smooth vertical surface.

The area in which the driveway apron and wings are to be placed shall excavated to the proper subgrade and compacted to form a firm stable

subgrade, where concrete is to be used, a two (2) inch layer of 3/4" crushed rock shall be placed, shaped and compacted to form a foundation. Where asphalt concrete is to be used a six (6) inch layer of 3/4" crushed rock shall first be placed, shaped and compacted to form a foundation.

After the curb has been removed, the foundation prepared and forms are in place, as above specified, and before a concrete or asphaltic concrete is placed, the Roadmaster shall be notified of its readiness for inspection. At least one (1) working day's notice shall be allowed for inspection. After inspection and approval, materials may be placed. There will be no fee for inspection by the Roadmaster or his designee.

Concrete shall be finished with a light broom finish, edges rounded with a trowel made for that purpose, and joints (both dummy and expansion) placed as shown on standard drawings. Asphaltic concrete shall be rolled with an appropriate roller until the entire mass has been compacted into a dense solid layer. Areas inaccessible to the roller shall be compacted by hand tamping with an iron tamper weighing not less than forty (40) pounds.

During the 72 hour period following the placing of concrete, the work shall be protected against premature drying by covering with cotton or burlap mats and be frequently sprinkled with water, or by other curing methods, such as a wax compound made for this purpose. Forms made are to be removed after the concrete has taken its initial set (about 8 hours) and any defects shall be repaired by filling in with cement mortar and wiping smooth.

3. Other Requirements

The property owner performing or contracting the work shall be responsible for any and all personal or property damage resulting from construction, reconstruction or repair of facilities covered in these specifications and shall save the County harmless from any and all legal action arising out of said work.

The property owner performing or contracting the work covered by these specifications shall be responsible for erecting and maintaining adequate safeguards in the form of barricade pedestrian walk , night lighting and/or such other safety measures as the County Inspector may direct. The street or walk area shall not be unnecessarily or unduly obstructed and all material and debris shall be removed from the public right-of-way within a reasonable time.

Driveways which have been abandoned shall be removed. In such cases the curb section from top of transition section shall be removed and replaced with a new curb section consistent with adjacent curb sections and the area in back of the curb filled with suitable material and in a manner consistent with the adjacent area.

Prior to construction of the driveway in the public right-of-way a permit shall be obtained from the County Planning Director in accordance with the Resolution and Order or Ordinance in effect concerning permits. At the time of obtaining a permit, a bond shall be posted for each driveway to be constructed.

(C) Utilities

1. Permit

Prior to any work being done in the right-of-way a permit shall be obtained as set forth in the resolution and order or ordinance in effect pertaining to permits.

At least two (2) working day's prior to the desired commencing date of of the project, the applicant shall deliver to the Director of Planning, the following:

a. Two (2) sets of construction plans showing all pertinent construction details.
b. The name, address and telephone number of the contractor and foreman or other person responsible for the work if different than the contractor
c. The proposed starting and completion date.
d. The bond or cash deposit as required by the resolution and order or ordinance in effect pertaining to permits.
e. A plan for traffic control; in the case of road closure, a proposed detour and/or other method of controlling traffic.

One set of the above described documents, when approved or approved as corrected, shall be so stamped, signed by the Director of Planning and returned to the applicant together with any necessary supplemental instructions. The approved documents and supplemental instructions shall become a part of the permit and be binding on the applicant. Unless emergency approval is given by the Roadmaster no work shall commence on any project covered by this permit until said documents have been submitted approved and signed as described above.

2. Construction Details

Unless prior approval is granted by the Roadmaster, the minimum cover between the top of a buried utility and road or ground surface shall be thirty(30) inches. Appurtenances may be an exception to this requirement; both their location and depth shall have prior approval of the Roadmaster. Where practicable, underground utilities shall be jacked, pushed, bored or washed under roads when crossing same. Depth of utilities which are jacked, pushed, bored or washed shall be the same as described above.

All excavations for utilities and appurtenances lying within the traveled portions, improved shoulders, driveways, and other areas used for vehicular travel, shall be backfilled with sand or as specified on the approved plans. Where utilities are constructed in areas used for vehicular travel as described above, the top two (2) inches of the backfill (exclusive of pavement to be replaced) shall be 3/4" crushed rock. All trenches and excavations lying outside of vehicular traveled areas and not in the drainage ditches may be backfilled with the excavated material. The backfill shall be compacted as required by the Roadmaster. The backfilling of all trenches, appurtenances, excavations and tunnels shall be accomplished immediately after the utility lines and appurtenances have been placed.

All drainage ditches, culverts, mailboxes, signs and other roadside improvements shall be replaced to a condition equal to or better than preconstruction.

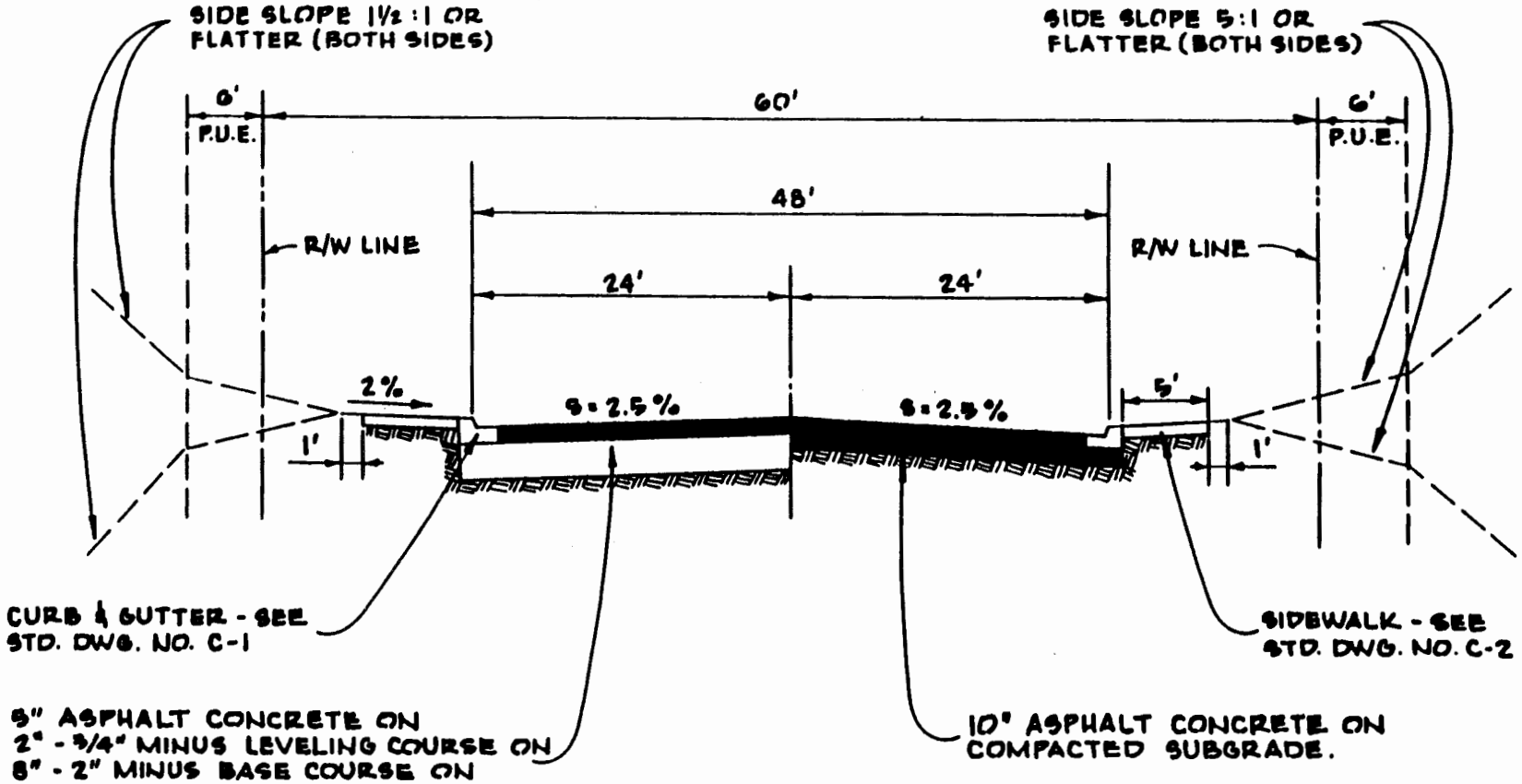
When cutting the pavement is necessary, said pavement shall be restored by placing hot asphaltic concrete. With a compacted thickness equal to that of the pavement which was removed, but in no case less than two inches (2") or other suitable material as approved by the Roadmaster. The abutting edges of the old pavement shall be trimmed with a saw cut to a minimum depth of two inches (2") to present a smooth and neat edge and shall be cleaned and treated with hot liquid asphalt or bitumuls to insure a bond between the existing pavement and the replacement material. The restored pavement shall be restored to a smooth riding surface and to the grade of the surrounding undisturbed pavement. Unless otherwise permitted by the Roadmaster, pavement replacement shall commence not more than seven (7) calendar days after backfilling.

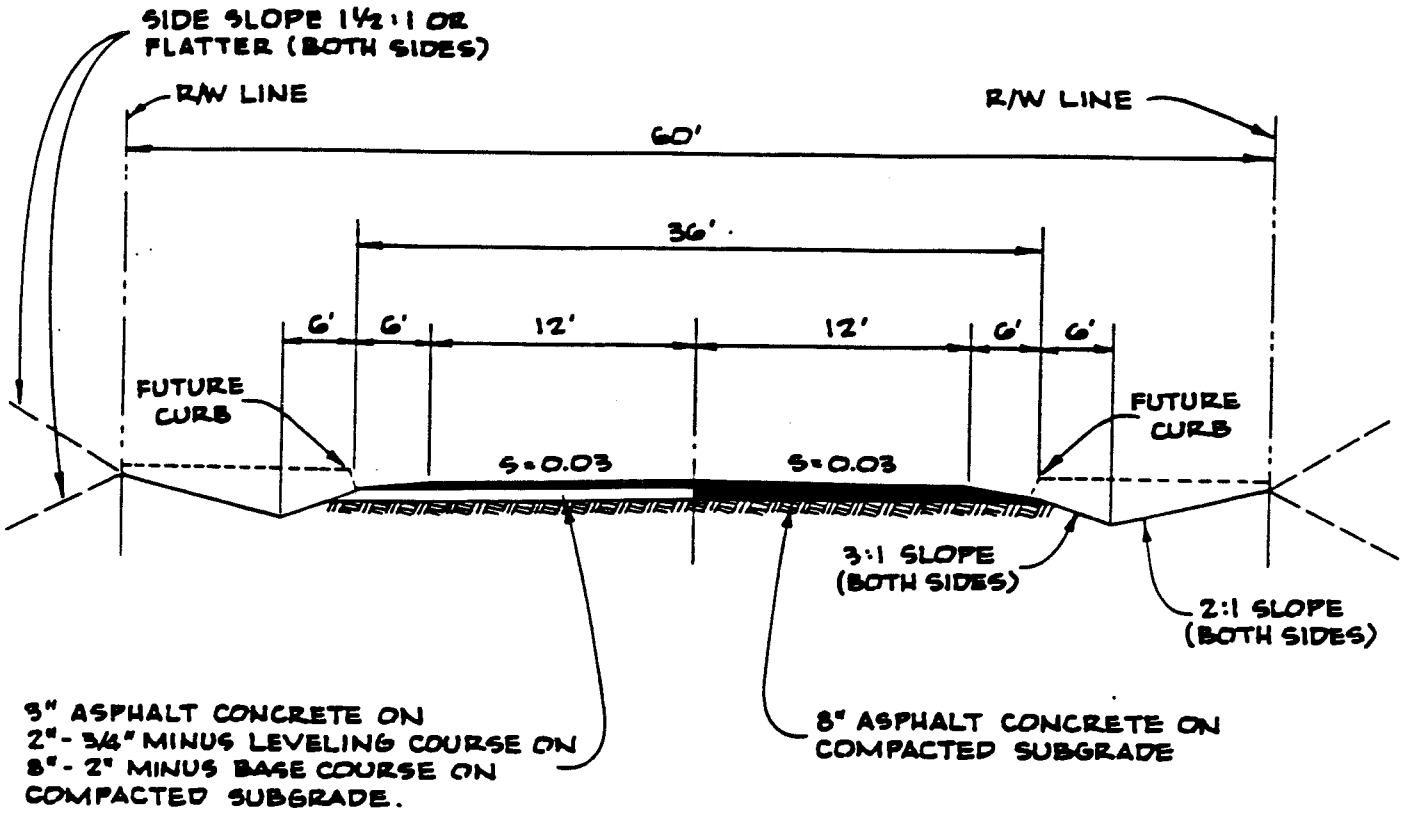
Upon completion of the work covered under the permit, the contractor shall clean up the right-of-way and all properties on which he operated in the construction of the project. He shall do all things necessary to put the whole of the right-of-way in a neat, clean and presentable condition.

APPROVED BY: _____ DATE: _____

COMMERCIAL - INDUSTRIAL ROADWAY TYPICAL SECTION

STD. DWG. S-6





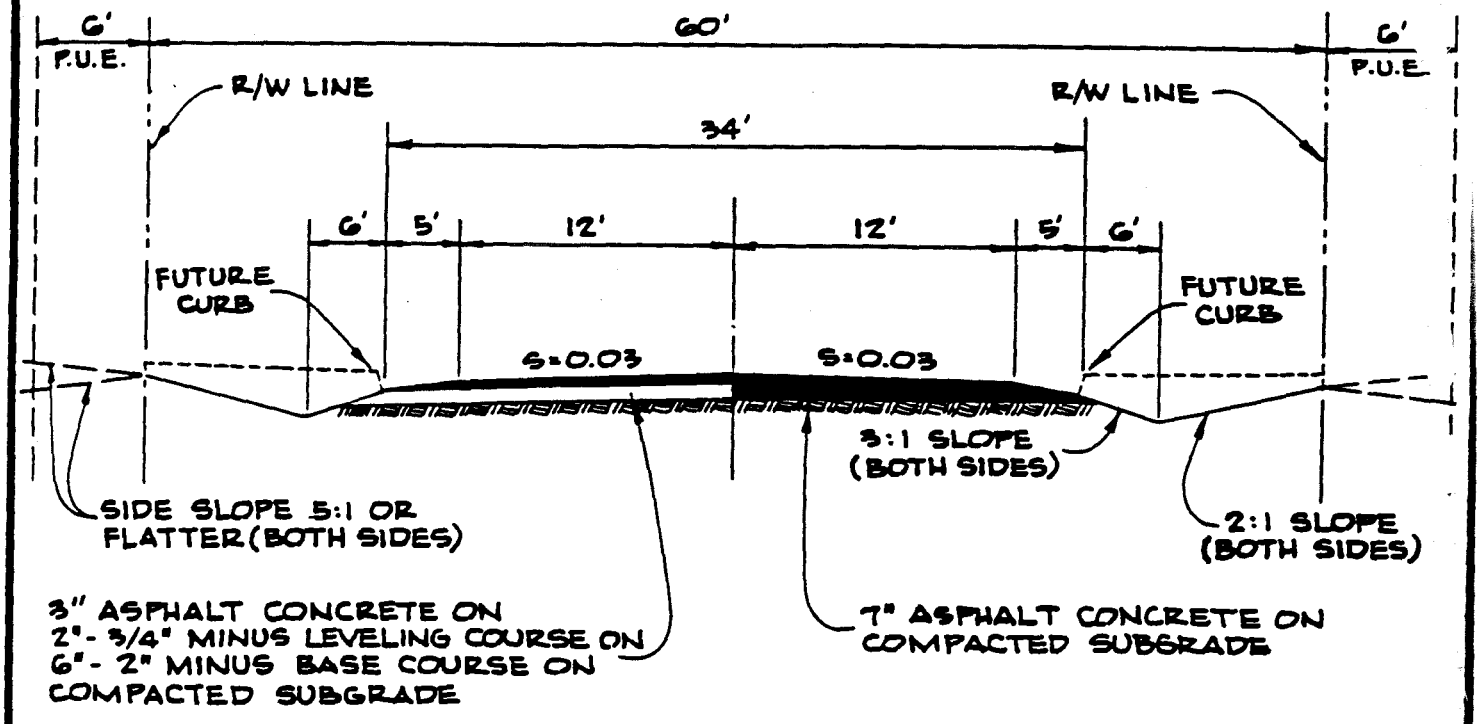
NOTE:

DEVELOPMENT RESTRICTED TO THAT WHICH WOULD FIT FUTURE CURB. DESIGN TO INCLUDE FUTURE CURB GRADES.

APPROVED BY: _____ DATE: _____

RURAL MINOR COLLECTOR TYPICAL SECTION

STD. DWG. S-7



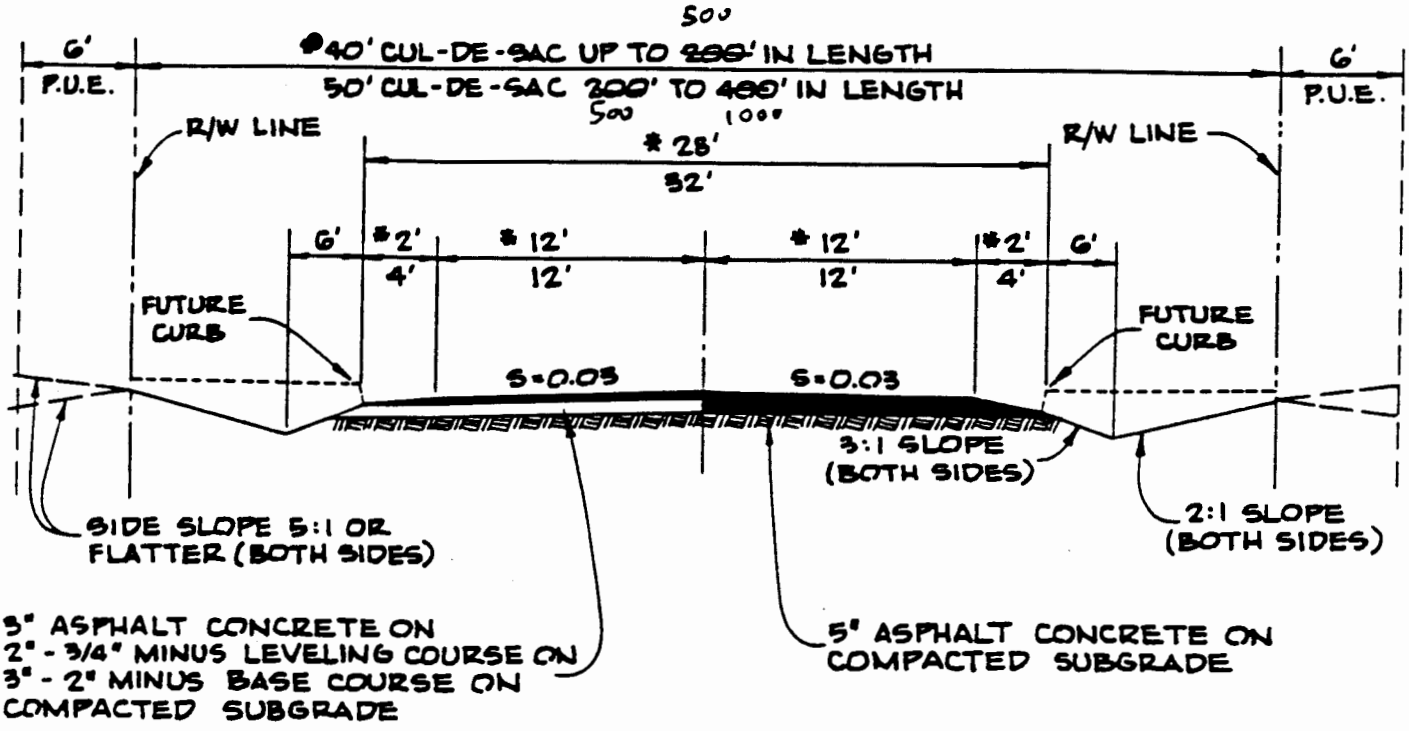
NOTE:

DEVELOPMENT RESTRICTED TO THAT WHICH WOULD FIT FUTURE CURB. DESIGN TO INCLUDE FUTURE CURB GRADES.

APPROVED BY: DATE:

RURAL MINOR ROADWAY TYPICAL SECTION

STD. DWG. S-9



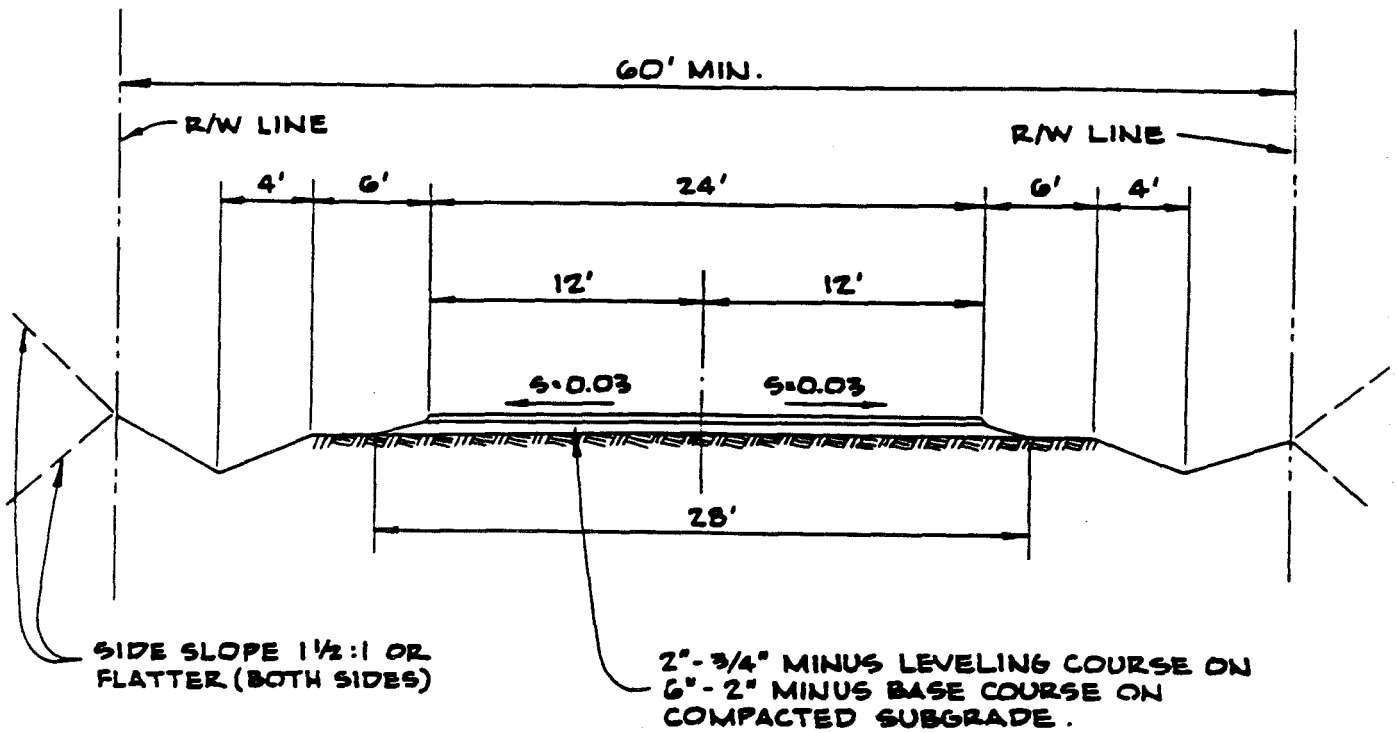
NOTE:

DEVELOPMENT RESTRICTED TO THAT WHICH WOULD FIT FUTURE CURB. DESIGN TO INCLUDE FUTURE CURB GRADES.

APPROVED BY: _____ DATE: _____

RURAL CUL-DE-SAC TYPICAL SECTION

STD. DWG. S-9



NOTE:

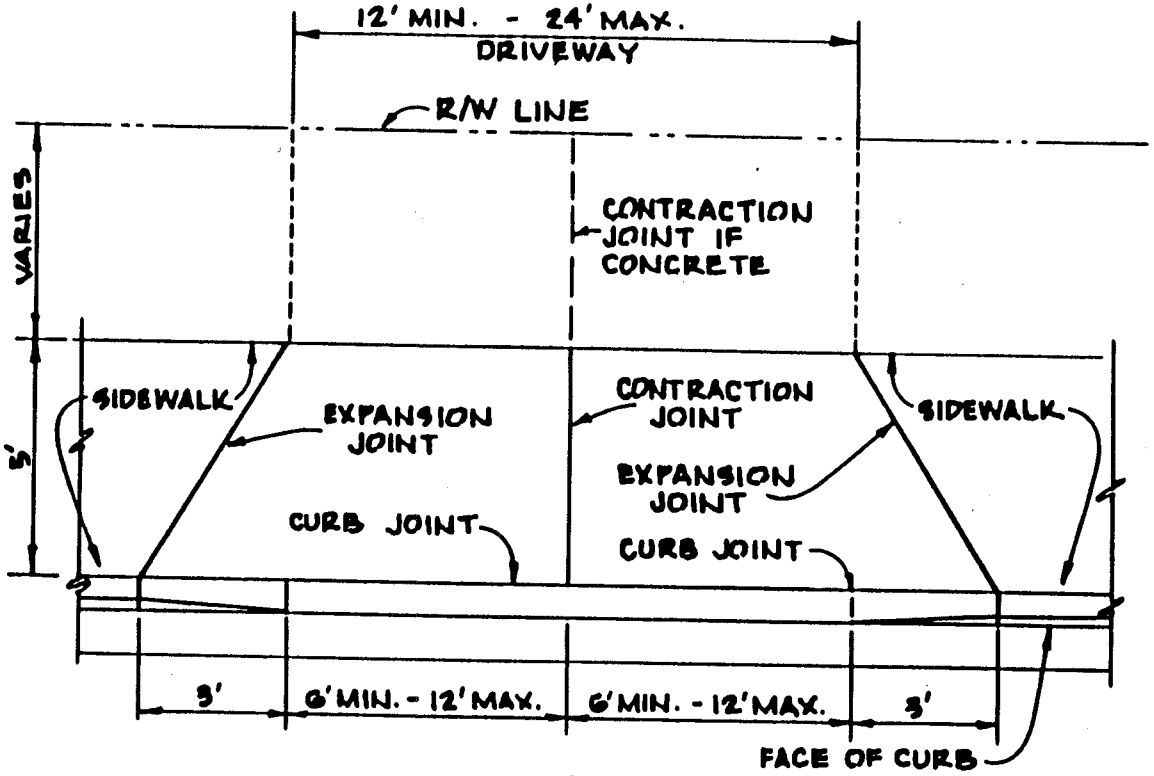
ROADS BUILT TO THIS STANDARD WILL NOT BE ACCEPTED AS A COUNTY ROAD FOR MAINTENANCE. THE MAINTENANCE WILL BE THE RESPONSIBILITY OF THE ABUTTING PROPERTY OWNERS.

	APPROVED BY: DATE:	RURAL PUBLIC ROADWAY TYPICAL SECTION	STD. DWG. S-10

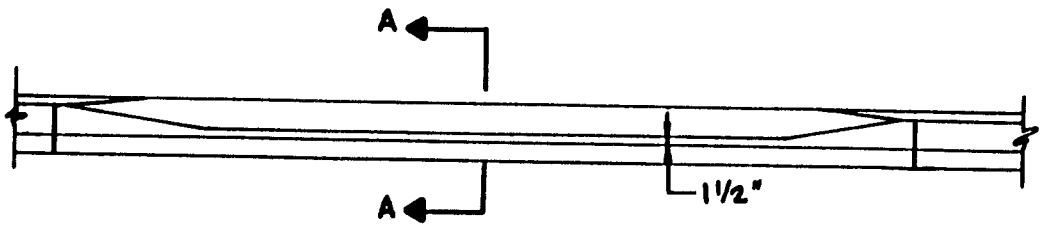
APPROVED BY: _____ DATE: _____

RESIDENTIAL DRIVEWAY

STD. DWG. D-1



PLAN



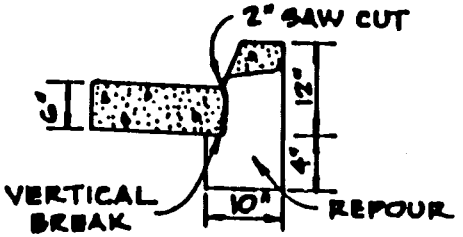
ELEVATION

EXPANSION JOINTS - SHALL BE ½" PREMOLDED ASPHALT IMPREGNATED MATERIAL OR EQUAL AND WILL EXTEND FROM SUB-GRADE TO FINISH GRADE.

CONCRETE - SHALL HAVE A MINIMUM BREAKING STRENGTH OF 3000 PSI AFTER 28 DAYS, 6 SACK MIX.

CURB AND GUTTER - SEE STANDARD DRAWING NO. C-1.

CURB JOINTS - EXPANSION JOINT IF POURED AT THE SAME TIME OR COLD JOINT IF JOINING EXISTING CURB.



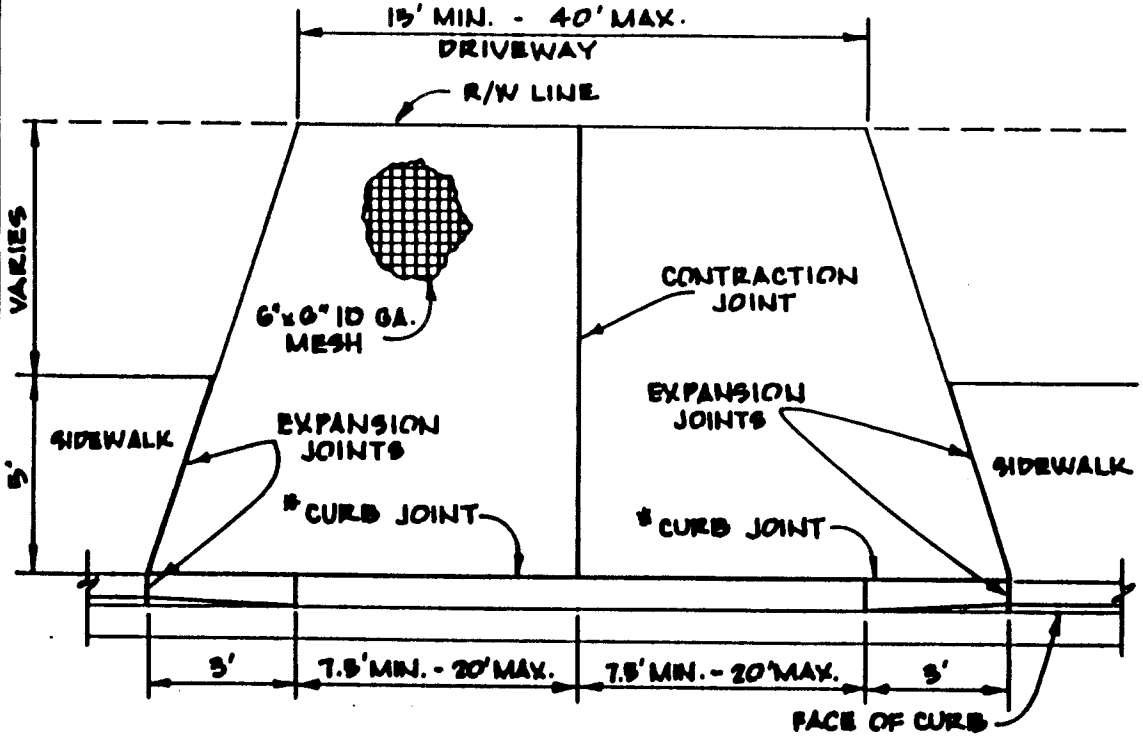
CURB CUT

SECTION AA

APPROVED BY: _____ DATE: _____

COMMERCIAL DRIVEWAY

STD. DWG. D-2



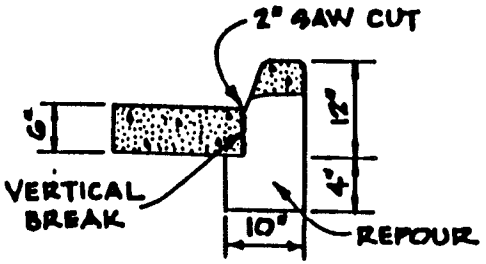
PLAN

EXPANSION JOINTS - SHALL BE 1/2" PREMOLDED ASPHALT IMPREGNATED MATERIAL OR EQUAL AND WILL EXTEND FROM SUB-GRADE TO FINISH GRADE.

CONCRETE - SHALL HAVE A MINIMUM BREAKING STRENGTH OF 3000 PSI AFTER 28 DAYS, 6 SACK MIX.

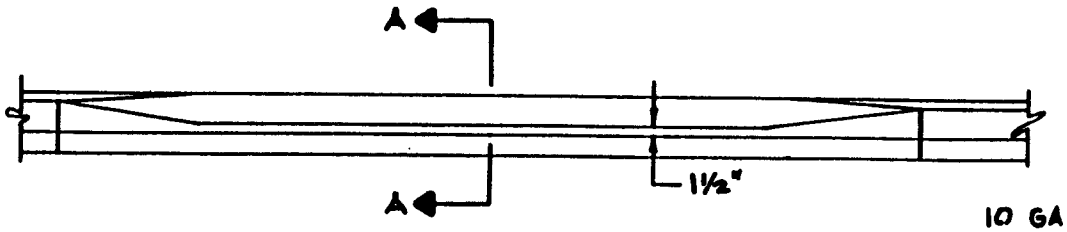
CURB AND GUTTER - SEE STANDARD DRAWING NO. C-1.

D/W APRONS - COMMERCIAL AND INDUSTRIAL 6" CONC. PLUG 6"x6" 10 GAGE MESH.

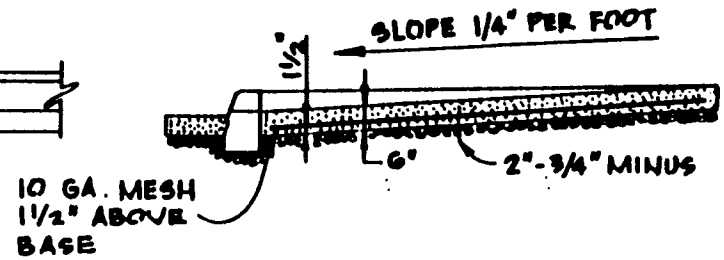


CURB CUT

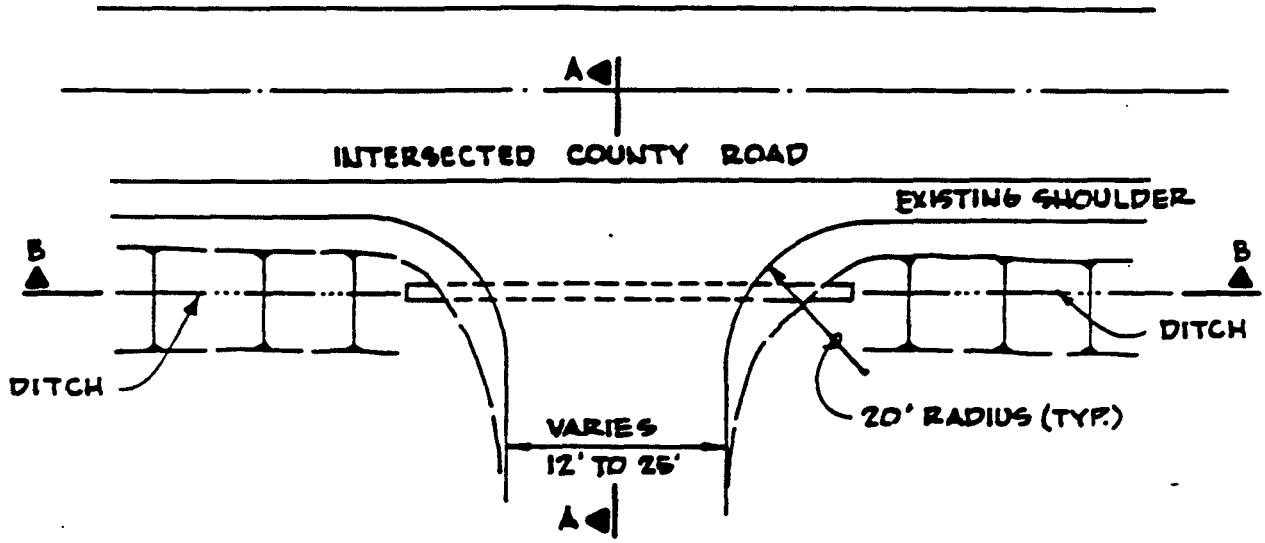
*NOTE: CURB JOINTS SHALL BE EXPANSION JOINT IF POURED AT SAME TIME OR COLD JOINT IF JOINING EXISTING CURB.



ELEVATION

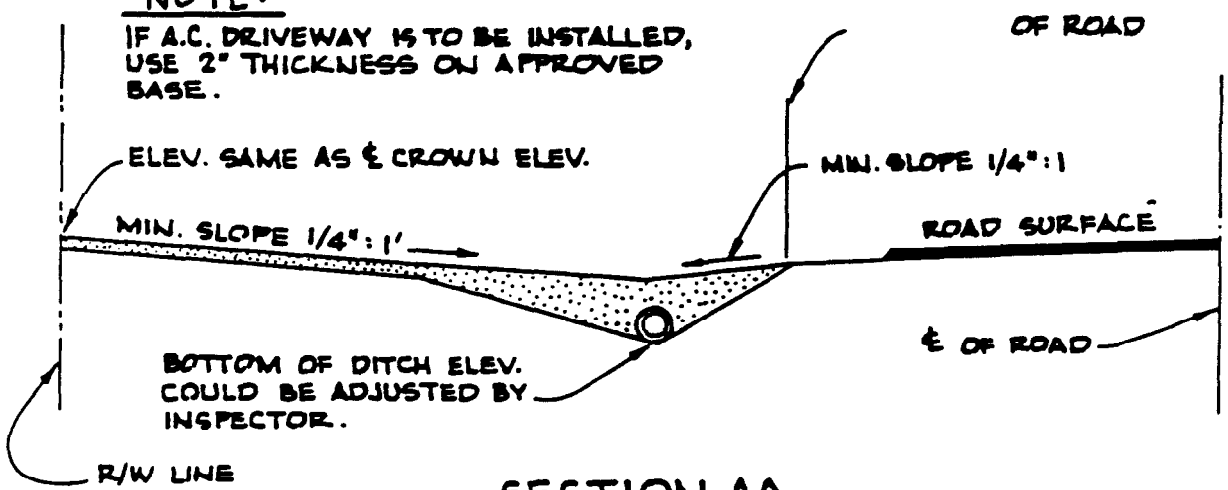


SECTION AA

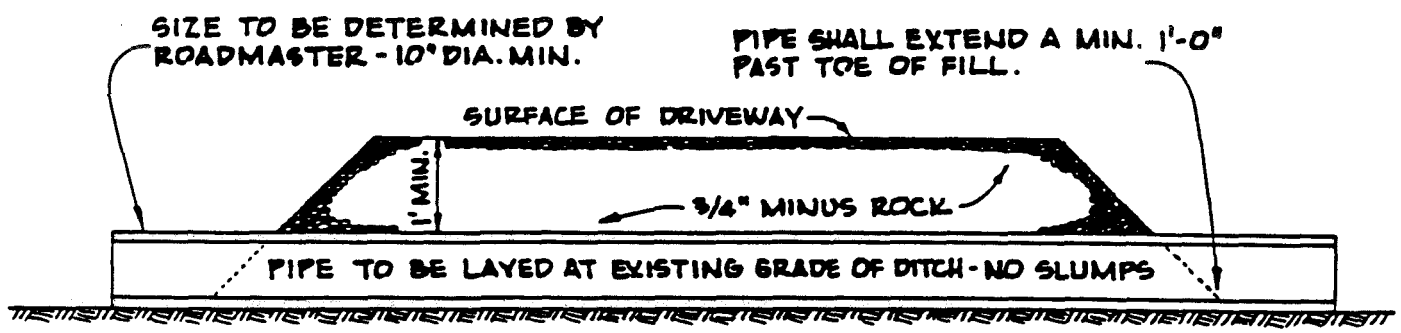


PLAN

NOTE:
IF A.C. DRIVEWAY IS TO BE INSTALLED, USE 2" THICKNESS ON APPROVED BASE.

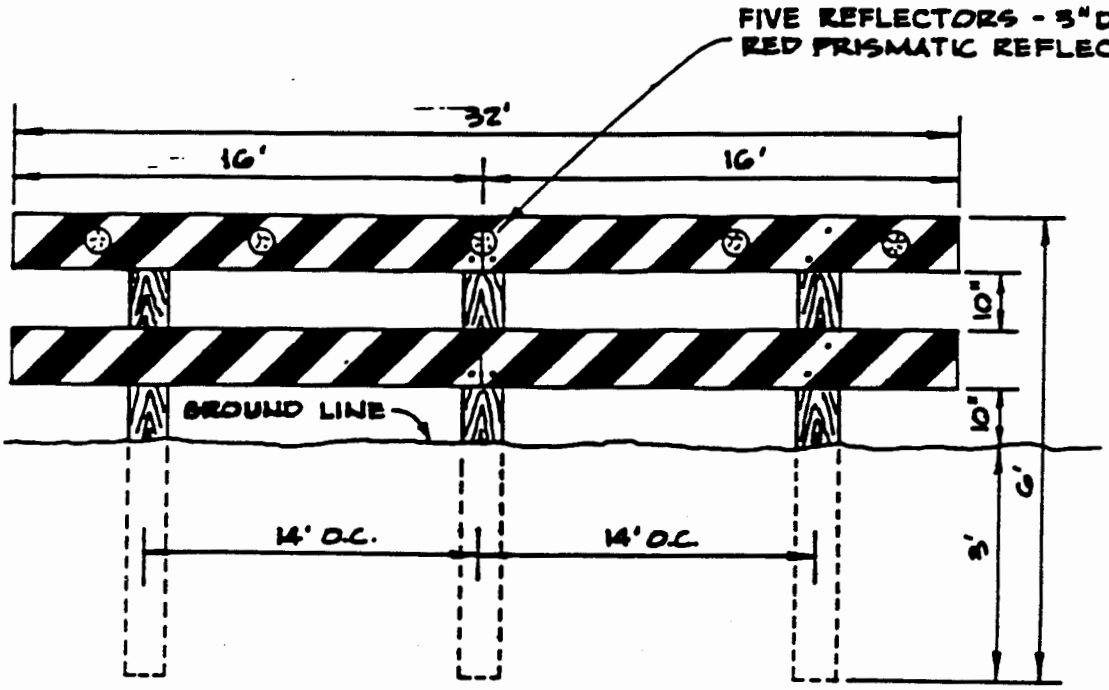


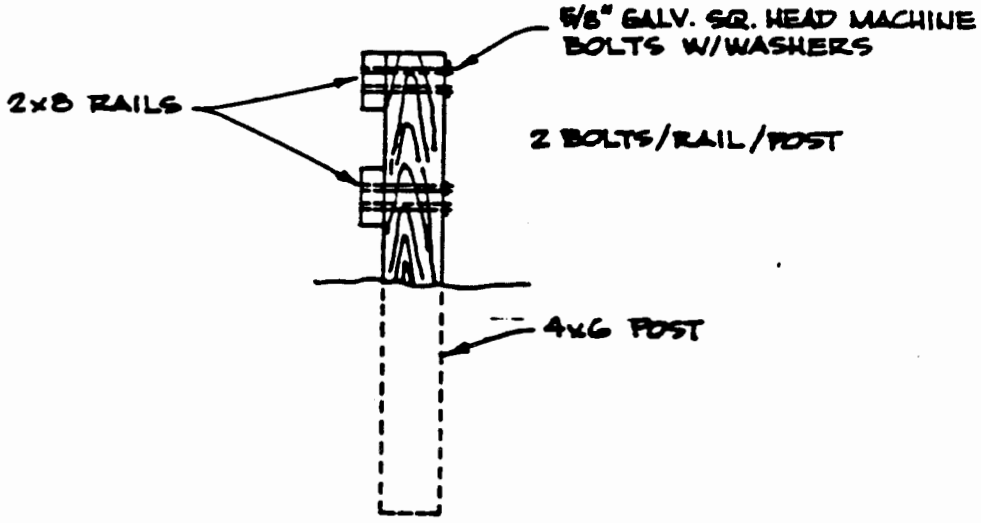
SECTION AA



SECTION BB

	APPROVED BY: DATE:	RURAL DRIVEWAY OR RURAL PUBLIC ROAD CONNECTION	STD. DWG. D-3





NOTE:

RAILS TO BE PAINTED BLACK WITH WHITE STRIPES-
POSTS PAINTED WHITE - PORTION IN GROUND TREATED.

		MALHEUR COUNTY
	APPROVED BY: DATE:	STREET BARRICADE
		STD. DWG. B-1

APPENDIX G

TRANSPORTATION SYSTEMS FUNDING SOURCES

APPENDIX G
TRANSPORTATION SYSTEMS FUNDING SOURCES

Table 1
Transportation Systems Plan
Summary of Road-Related Transportation Funding Programs: Federal Sources

Program Name	Description
Intermodal Surface Transportation Efficiency Act (ISTEA)	ISTEA is designed to provide flexibility in federal funding of transportation projects. ISTEA established several funding programs including the 1) National Highway System; 2) Interstate Program; 3) Surface Transportation Program; 4) Congestion Management and Air Quality Improvements Program; and 5) National Scenic Byways Program.
Surface Transportation Program (STP) (Bridge Program)	The Surface Transportation Program was authorized by Title I of the ISTEA. The STP funds are allocated to the State and suballocated to cities and counties on a formula basis by the Oregon Transportation Commission. STP funds may be used for any road that is not functionally classified as a local or rural minor collector and must be included in the Transportation Improvement Program to receive STP funds.
Transportation Enhancement Program (Part of STP)	The ISTEA includes provisions that require the State to set aside a portion of its Surface Transportation Program (STP) funds for projects that will enhance the cultural and environmental value of the State's transportation system. Eligible transportation enhancement projects must be directly related to the intermodal transportation system. This program funds enhancements including pedestrian and bicycle facilities; preservation of abandoned railway corridors; landscaping and other scenic beautification; control and removal of outdoor advertising; acquisition of scenic easements and scenic or historic sites; scenic or historic highway programs; historic preservation; rehabilitation and operation of historic transportation buildings, structures or facilities; archaeological planning and research; and mitigation of water pollution due to highway runoff.
Highway Enhancement System (HES)	The FHWA Highway Enhancement System Program provides funding for safety improvement projects on public roads. Safety improvement projects may occur on any public road and must be sponsored by a county or city. To be eligible for Federal aid, a project should be part of either the annual element of a Regional Transportation Plan or the annual listing of rural projects by ODOT, although they do not have to be part of the approved State Highway Improvement Program to receive HES funding.
Timber Receipts (USFS)	The United States Forest Service shares 25 percent of national forest receipts with counties. By Oregon law (ORS 294.060), the County then allocates 75 percent of the national forest receipts to the road fund and 25 percent to local school districts.
Community Development Block Grants (CDBG)	Community Development Block Grants (CDBG) are administered by the Department of Housing and Urban Development (HUD) and could potentially be used for transportation improvements in eligible areas.
Forest Highway Program	Support all public lands (including BLM), not just forest

Table 2
Transportation Systems Plan
Summary of Road-Related Transportation Funding Programs: State Level

Program Name	Description
State Highway Fund	The State Highway Fund composed of gas taxes, vehicle registration fees, and weight-mile taxes assessed on freight carrier. In 1994, the state gas tax was $0.24 per gallon. Vehicle registration fees were $15 annually. Revenues are divided as follows: 15.57 percent to cities, 24.38 percent to counties, and 60.05 percent to ODOT. The County share of the State Highway Fund is allocated based on population and vehicle registration. ORS 366.514 requires at least one percent of the State Highway Fund received by ODOT, counties and cities be expended for the development of footpaths and bikeways. ODOT administers the bicycle funds, handles bikeway planning, design, engineering and construction, and provides technical assistance and advice to local governments concerning bikeways.
Special Public Works Fund (SPWF)	The State of Oregon allocates a portion of revenues from the state lottery for economic development. The Oregon Economic Development Department provides grants and loans through the SPWF program to construct, improve and repair infrastructure to support local economic development and create new jobs. The SPWF provides a maximum grant of $500,000 for projects that will help create a minimum of 50 jobs.
Transportation Access Charges	The most familiar form of a transportation access charge is a bridge or highway toll. Transportation access charges are most appropriate for high-speed, limited access corridors; service in high-demand corridors; and bypass facilities to avoid congested areas. Congestion pricing, where drivers are charged electronically for the trips they make based on location and time of day, is the most efficient policy for dealing with urban congestion. It not only generates revenue for maintenance and improvements; but also decreases congestion and the need for capital improvements by increasing the cost of trips during peak periods. The Oregon Revised Statutes allow ODOT to construct toll bridges to connect state highways and improve safety and capacity. The Statues also allow private development of toll bridges. Recent actions by the Oregon legislature provide authority for developing toll roads. State authority for congestion pricing does not exist; new legislation would be required.
Immediate Opportunity Fund (IOF)	Financed at a level of $5 million per year to a maximum of $40 million through FY96. The fund is to support specific economic developments in Oregon through the construction and improvement of roads and is restricted for use in situations that require a quick response and commitment of funds. It is anticipated that the maximum amount available for a single project is $500,000 or 10 percent of the annual program level. This fund may be used only when other sources of financial support are unavailable or insufficient and are not a replacement or substitute for other funding sources.

OR Transportation Infrastructure Bank	As a pilot program for the USDOT, the Oregon Transportation Commission has made $10 million available from projects that will not be contracted in FY 1996. The OTIB will make loans for transportation projects and will offer a variety of credit enhancements. Initial loans must be for improvements on federal aid highways, repayments go into an account that will be made available for any mode. Ability to repay will be a key factor in all loans.
Traffic Control Projects	The State maintains a policy of sharing installation, maintenance, and operational costs for traffic signals and luminaire units at intersections between State highway and city streets (or county roads). Intersections involving a State highway and a city street (or county road) which are included on the state-wide priority list are eligible to participate in the cost sharing policy. ODOT establishes a statewide priority list for traffic signal installations on the State Highway System. The priority system is based on warrants outlined in the Manual for Uniform Traffic Control Devices. Local agencies are responsible for coordinating the statewide signal priority list with local road requirements.

Table 3
Transportation Systems Plan
Summary of Road-Related Transportation Funding Programs: Local Sources

Program Name	Description
Special Assessments/Local Improvements Districts	Special assessments are charges levied on property owners for neighborhood public facilities and services, with each property assessed a portion of total project cost. They are commonly used for such public works projects as street paving, drainage, parking facilities and sewer lines. The justification for such levies is that many of these public works activities provide services to or directly enhance the value of nearby land, thereby providing direct and/or financial benefit to its owners. Local Improvement Districts (LIDs) are legal entities established by the City to levy special assessments designed to fund improvements that have local benefits. Through a local improvement district (LID), streets or other transportation improvements are constructed and a fee is assessed to adjacent property owners.
Systems Development Charges (Impact Fees)	Systems Development Charges (SDCs) are fees paid by land developers intended to reflect the increased capital costs incurred by a municipality or utility as a result of a development. Development charges are calculated to include the costs of impacts on adjacent areas or services, such as increased school enrollment, parks and recreation use, or traffic congestion. Numerous Oregon cities and counties presently use SDCs to fund transportation capacity improvements. SDCs are authorized and limited by ORS 223.297 - 223.314.
Local Gas Tax	A local gas tax is assessed at the pump and added to existing state and federal taxes. Tillamook, The Dalles and Woodburn are Oregon cities that have a local gas tax. Multnomah and Washington Counties also have gas taxes.
Local Parking Fees	Parking fees are a common means of generating revenue for public parking maintenance and development. Most cities have some public parking and many charge nominal fees for use of public parking. Cities also generate revenues from parking citations. These fees are generally used for parking-related maintenance and improvements.

Program Name	Description
Street Utility Fee	Most city residents pay water and sewer utility fees. Street user fees apply the same concept to city streets. A fee would be assessed to all businesses and households in the city for use of streets based on the amount of use typically generated by a particular use. For example, a single-family residence might, on average, generate 10 vehicle trips per day compared to 130 trips per 1,000 square feet of floor area for retail uses. Therefore, the retail use would be assessed a higher fee based on higher use. Street services fees differ from water and sewer fees because usage cannot be easily monitored. Street user fees are typically used to pay for maintenance more than for capital projects.
Vehicle Registration Fees	Counties can implement a local vehicle registration fee. The fee would operate similar to the state vehicle registration fee. A portion of the County fee would be allocated to the City.
Property Taxes	Local property taxes could be used to fund transportation, although this is limited by Ballot Measure 5 and 47.
Revenue Bonds	Revenue Bonds are bonds whose debt service is financed by user charges, such as service charges, tolls, admissions fees, and rents. If revenues from user charges are not sufficient to meet the debt service payments, the issuer generally is not legally obligated to levy taxes to avoid default, unless they are also based by the full faith and credit of the insuring governmental unit. In that case, they are called indirect general obligation bonds. Revenue bonds could be secured by a local gas tax, street utility fee, or other transportation-related stable revenue stream.

Table 4
Currently Used Revenue Sources For Counties (millions of 1995 dollars)

Facility	Revenue Source	Importance (not 100%)	3-Year Trend	Dedication	Rate
Streets/Bridges/ Sidewalks/ Bike Lanes	Oregon Highway Trust Fund	46% of total or $139.	Growing about 1.75% per year.	Constitutionally Limited	24¢/gal. + wt. mile; $30/registration fee.
	Federal Forest	29% or $90	For 2/3 of Counties that get these funds, declining especially rapidly for Eastern Oregon	Funds are split 25/75 between schools and roads in Oregon.	Varies w/National Forest.
	General Fund Transfers	<1% or $1.	Varies but assume growth @ 3%/yr. but not used by all counties.	May be used for any purpose.	Varies widely.
	Special Property Tax Levies	4% or $15.	Increasing, but currently limited in use.	May be used for purpose described in election.	Varies widely.
	Improvement District Assessments	0.7% or $2.	Increases when local development increases.	Must be used for adjacent streets and sidewalks.	Varies with construction cost & local ordinances.
	Systems Development Charges/Traffic Impact Fees	1% or $3.	Varies but increases when local development increases, only used by about 8 counties.	May be used for construction of new streets.	Varies with construction cost & local ordinances. Rates generally higher in Portland Metro area.
	Interest Earnings	6% or $18.	Varies w/current interest rates.	Have some Constitutional limits as Highway Fund.	Used as general street revenue.
	Local Gas Tax	3% or $7.8	Little changed.	Have some Constitutional limits as Highway Fund.	Used by Multnomah (3¢) and Washington (1¢) Counties.
	Private Contributions	<1% or $0.6	Varies widely.	Contributions related to specific development.	Negotiated individually.

	Misc. - fees, fines, sale of property.	2% or $7.	Gradual growth.	General revenues used for streets.	Varies widely by County.
	Federal - FHWA+Misc.	9% or $30.	Some programs stable but others vary each year.	Used mainly for new construction w/some rehab.	Based on federal allocation to Oregon.
	Misc. State Revenues	1% or $3.	Varies, no trend.	Used mainly for economic development.	Specific grants to individual counties.
Off-street Bike Paths	Misc. general funds & ISTEA	??	Varies from year to year.	ISTEA & General Funds used for construction, General Funds used for maintenance & repair.	Varies from year to year.

Table 5
Currently Used Revenue Sources For Cities (millions of 1995 dollars)

Facility	Revenue Source	Importance (not 100%)	3-Year Trend	Dedication	Rate
Streets/Bridges/ Sidewalks/ Bike Lanes	Oregon Highway Trust Fund	51% of total road or $89.	Growing about 1.75% per year.	Constitutionally limited to funding activities that benefit autos & trucks.	24¢/gal. for gas; $30/biennium registration fee.
	General Fund Transfers	9% or $15.	Varies but assume growth @ 3%/yr. But not used by all cities.	May be used for any purpose.	Varies widely.
	Special Property Tax Levies	5% or $7.	Increasing, only used by about 18 cities.	May be used for purpose described in election.	Varies widely.
	Improvement District Assessments	7% or $12.5.	Varies but increases when local development increases.	May be used for construction of adjacent streets-sidewalks.	Varies with construction cost & local ordinances.
	Systems Development Charges/Traffic Impact Fees	4% or $7.	Varies but increases when local development increases, only used by about 2 dozen cities.	May be used for construction of new streets.	Varies with construction cost & local ordinances. Rates generally higher in Portland Metro area.
	Utility Franchise Fees	3% or $4.	Grows roughly w/population and inflation.	Is a general revenue used by some cities for streets.	Statutory limit of 5% of utility gross receipts.
	Interest Earnings	4% or $6.	Varies w/current interest rates.	Have same Constitutional limits as Highway Fund.	Used as general street revenue.
	Local Gas Tax	0.44% or $0.7	Unchanged.	Have same Constitutional limits as Highway Fund.	Used by Tillamook, The Dalles, and Woodburn.
	Private Contributions	3% or $4.3	Varies widely.	Usually contributions are related to specific development street impacts.	Negotiated individually.
	Misc. - permit fees, finds, fines, parking, Motel Tax, other	8% or $14.5.	Gradual growth.	General revenues used for streets.	Varies widely by City.
	Federal - FHWA+HUD	3% or $5.6.	Relatively stable	Used mainly for new construction w/some rehab.	Based on federal allocation to Oregon.
	Misc. State Revenues - mainly Lottery funds.	2% or $3.	Varies, no trend.	Used mainly for economic development capital improvements.	Specific grants to individual cities each year.
Off-street Bike Paths	Misc. general funds & ISTEA	??	Varies from year to year.	ISTEA & General Funds used for construction, General Funds used for maintenance & repair.	Varies from year to year.

Table 6
Transportation System Plan
Summary of Transit Funding Programs

Program Name	Description
FEDERAL SOURCES	All funds from the Federal Transit Administration (FTA) pay 80 percent of capital costs and require a 20 percent local match.
FTA Section 18	Section 18 is a federally sponsored program for small urban and rural areas (under 50,000 population) to support both capital and operating needs. These funds are dispersed through ODOT and distributed on a population basis.
FTA Section 16	These funds are distributed through ODOT to support the capital needs of nonprofit social service transportation providers. Funding of paratransit vehicles for public agencies is done through FTA Section 16.
FTA Section 9	If an urban area reaches a population of 50,000, it will no longer be eligible for Section 18 funds but will be eligible for Section 9 funds for urban populations greater than 50,000. Operating assistance is available to a predetermined regional cap based on the size and productivity of the operation. Capital assistance is available with a limit of 80 percent of a capital project. FTA funds are allocated to transit agencies based on a complex formula which includes population, population density, and the number of revenue service hours operated within a year.
FTA Section 3	FTA Section 3 funds are limited to capital purchases and fall into three categories: 1) bus/bus facilities, 2) new rail starts, and 3) rail upgrade. As with other FTA grants, the Section 3 Discretionary funds provide 80 percent funding with a 20 percent required local match.
Congestion Management/Air Quality Program (CMAQ)	This program was included in ISTEA for non-attainment areas as defined in the Federal Clean Air Act. ISTEA funds are administered by ODOT and are generally focused on air quality improvements.
STATE SOURCES	
Oregon Public Transit Assistance (In-Lieu Payroll Tax)	This fund source is a local payroll tax disbursed by the state to support transit services. To be eligible for these funds, a transit district must be formed and it must be generating local revenues (i.e., property tax). The amount is determined based on the number of State and Federal employees within the Transit District and is the reimbursement of payroll taxes collected from those employees. There is a restriction on the funds specifying that the amount of money received cannot exceed the amount of funding generated locally through the property tax. These funds can be used to support operations or as local match for federal capital grants.

Developer Impact Fees	An impact fee is a charge imposed on new development to compensate for its impact on the local transportation infrastructure. A fee is typically assessed on square footage of planned development. Impact fees can be implemented by local ordinance with specific criteria for establishing an impact fee and can be imposed in downtown urban areas or in outlying growth areas. An impact fee is a controversial measure and, like other developer fees, must show a connection between the development and the service provided.
Parking Taxes and Fees	A parking tax or fee could be levied by a city and all or a portion of it dedicated to transit uses. Many downtown areas levy parking fees and as the city grows, the levy can be used as a strategy to encourage transit use for trips to the downtown area.

Table 7
Transportation System Plan
Currently Used Transit Revenue Sources in Oregon

Transit Service Type/Function	Funding Source	Status
Urban Public Transportation (Portland & Eugene) (operating & capital)	1. Local Payroll Tax - operating 2. Federal grants - capital 3. Federal grants - operating 4. Fares & advertising	1. Major Source - $100 million/yr. Growing - Sensitive to Economic Conditions 2. Major source - $10 million/yr - Stable 3. Minor source - $5 million/yr - Declining 4. Minor source - Growing w/ridership
Urban Public Transportation (Salem, Corvallis, Medford, K-Falls)	1. Property tax (typically a taxbase or stand-alone levy w/in $10 cap for local gov't services) 2. Federal grants - capital 3. Federal grant - operating 4. Fares & advertising	1. Major Source - Growing Slowly 2. Major Source - $2 million/yr. - Stable 3. Major Source - $2 million/yr. - Declining 4. Minor Source - Growing w/ridership
Small City & Rural (Astoria, Union County, etc.) (operating & capital)	1. Federal grants - capital & operating 2. Local Property Tax (typically w/in city or county operating levy) 3. Fares, donations & advertising	1. Major Source - Declining 2. Major Source - Stable 3. Minor Source - Stable
Mobility for Seniors & People with Disabilities - (operating & capital)	1. Special Transportation Fund (2¢ state cigarette tax) - operating & capital 2. Social Service Agency grants / contracts - operating 3. Local Property Tax (typically w/in city or county operating levy) 4. Federal grants - capital & operating 5. Fares, donations advertising	1. Major Source - $5 million/yr. - Declining 2. Major Source - Declining 3. Minor Source - Stable 4. Major Source - Declining 5. Minor - Stable
Intercity Bus (operating & capital)	1. Major Interstate Routes: Fares 2. Branch & feeder routes: Private capital, Fares	1. Sole Source - Declining 2. Private

APPENDIX H

MALHEUR COUNTY COMPREHENSIVE PLAN AND RECOMMENDED CHANGES TO DEVELOPMENT CODE

I. TSP ELEMENTS

1. Rule Requirements

OAR 660-12-020 (2)(b)
TSP shall include a road plan including a functional classification consistent with state and regional TSPs. Road standards for local streets to:
1) Address extensions of existing streets
2) Connections to existing/planned arterials and collectors
3) Connections to neighborhood destinations

OAR 660-12-020 (2)(c)
TSP shall include a description of public transportation services for the disadvantaged including:
1) identification of inadequacies
2) description of intercity bus and passenger rail system

OAR 660-12-020 (2)(d)
The TSP shall include a bicycle and pedestrian plan

OAR 660-12-045(6)
Bicycle and pedestrian plans must include improvements that connect neighborhood activity centers (schools, shopping, etc.)

OAR 660-12-020 (2)(e)
The TSP shall include air, rail, water and pipeline transportation plans

2. Analysis

COMPREHENSIVE PLAN:

The Comprehensive Plan of Malheur County currently addresses Transportation policy in two main areas: the Transportation segment of Section 2, (Inventories and Background Information), and the transportation policies listed in Section 3 (Goal 12: Transportation).

Both of these sections describe the current street classification system, and together provide a fundamental outline of plans and policies for the provision of a transportation system. The County may wish to consider replacing the Transportation segment of Section 2, (Inventories and Background Information) with the Transportation System Plans developed in (Chapter 7) of the TSP. Such adoption would include a revised street classification system and access management standards. Further refinement of the Comprehensive Plan will occur by altering and adding to the existing transportation policies listed in Section 3 (Goal 12: Transportation).

A number of the issues outlined in the TSP Elements (above), are adequately addressed in the existing Comprehensive Plan transportation sections. However, a few recommended changes may aid in facilitating TSP compliance and adoption:

3. Recommendations

Section 3 (Goal 12: Transportation):

~~1. The County Court will adopt a road design, construction, and improvement ordinance.~~

~~2.~~ 1. All County road activities (except those concerning state highways) will comply with the Malheur County road design, construction and improvement standards as adopted within the Malheur County Transportation System Plan (TSP). In addition, all development proposals, plan amendments, or zone changes shall conform with the adopted TSP.

2. Amendments to the comprehensive plan and land use regulations which ***significantly affect*** a transportation facility shall assure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. A plan or land use regulation amendment ***significantly affects*** a transportation facility if it:

a. Changes the functional classification of an existing or planned transportation facility;

b. Changes standards implementing a functional classification system;

c. Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility or;

d. Would reduce the level of service of the facility below the minimum acceptable level identified in the Transportation System Plan.

3. The County shall endeavor to develop a transportation system that enhances the livability of each jurisdiction and accommodates growth and development through careful planning and management of existing and future transportation facilities. Plans for new transportation facilities and extensions of existing facilities will identify ~~impacts on~~: (a) ~~the transportation needs of all citizens, including the handicapped and the elderly;~~ street connections to existing and planned arterials and collectors, including interconnection with neighborhood destinations; (b) ~~local land use patterns;~~ and conformance with bicycle and pedestrian plans.

4. Plans for new transportation facilities will identify impacts on: (a) local land use patterns; (b) the local economy; (c) environmental quality; (d) energy use and resources; (e) existing transportation systems; (f) fiscal resources; and (g) natural resources.

~~4.~~ 5. ~~Transportation improvements and services that meet the needs of elderly and handicapped residents will be encouraged.~~ The County shall endeavor to increase the use of alternative modes of transportation (walking, bicycling, rideshare/carpooling, and transit) through improved access, safety and service. In addition, the County shall identify existing inadequacies in provision of public transportation service for the elderly and disadvantaged. Efforts to provide such service shall include: support of a commuter system to the Snake River Correctional Institution, ongoing support and utilization of available Ride-Share Programs enhancement and coordination of transportation services for the disadvantaged; coordination between state and local agencies to reinstate intercity passenger service between Ontario/Vale/Nyssa and Burns (bus) as well as Amtrak service.

~~22. County roads will be classified as principal arterials, minor arterials, major collectors, and local roads. Local roads will be further divided into primary local roads, secondary local roads, or special use local roads.~~

~~34. The county will adopt and implement an airport approach zone to ensure the safe operation of airports and the development of a compatible environment around airports.~~

34. The County shall coordinate with local municipalities and the Oregon Department of Transportation Aeronautics Section in the adoption of Airport Overlay Zones and Airport Runway Approach Zones. The following policies shall be applied when considering planned airport facilities or expansions:

A. To avoid danger to the public safety from potential aircraft accidents, commercial and residential uses resulting in concentrations of people shall not be permitted beneath the airport approach surfaces and an area within 500 feet parallel from the runway centerline. Land uses around the airport shall be required to provide an environment that will not be adversely affected by noise and safety problems and will be compatible with the airport and its operations.

B. Local airports may create Advisory Committees. These committees shall be responsible for advising the sponsors during the development of Airport Master plans, implementing ordinances or in individual land use actions.

C. Encourage development of Airport Master Plans that will include a land use element which shall protect airport regions from development that could conflict with aircraft approach safety, or threaten surrounding development.

D. Because of potential bird hazards to airborne aircraft, land uses beneath designated airport approach surfaces within 5,000 feet off the approach end of runway(s) accommodating piston engine aircraft, and within 10,000 feet of the approach end of runway(s) accommodating jet aircraft shall not create water impoundments, sanitary landfills, or sewer treatment plants or any other land use activity which might increase bird activity within the airport environment.

~~35. The county will participate in and encourage the adoption of airport master plans.~~

LAND DEVELOPMENT CODE:

No code amendments recommended at this time to meet the above sections of the TPR.

II. TSP PREPARATION

1. Rule Requirements

OAR 660-12-015 (4)
The TSP prepared by the County must be adopted as part of the Comprehensive Plan

OAR 660-12-015 (5)
Preparation of the TSP will be coordinated with state and federal agencies and other jurisdictions.

OAR 660-12-015 (6)
Transportation airport and port districts must participate in preparation of the TSP and adopt plans for the transportation facilities they maintain consistent with the TSP.

2. Analysis

The TSP shall be adopted as part of the County's Comprehensive Plan. The development of the TSP is being coordinated with ODOT, road districts, all local governments and various stakeholders, including airports.

3. Recommendations

COMPREHENSIVE PLAN:

Include adoption of TSP.

LAND DEVELOPMENT CODE:

No code amendments recommended at this time to meet the above sections of the TPR.

III. PROTECTION OF TRANSPORTATION FACILITIES/IMPROVEMENTS ON RURAL ROADS

1. Rule Requirements

OAR 660-12-045(2)
Local governments shall adopt regulations/policies to protect transportation facilities for the following topics:
1) access management standards
2) future operation of roads and transit corridors (if applicable)
3) control of land use around airports
4) coordinated review of transportation facility projects, including notice to ODOT of certain actions
5) land use, density should be consistent with road classifications in TSP

OAR 660-12-045(3)
Local governments must amend subdivision regulations in accordance with the following directions:
1) provide bike parking in multi-family developments 4 units or more
2) provision of pedestrian connections from new subdivisions/multi-family development to neighborhood activity centers
3) off-site road improvements must accommodate bicycle and pedestrian facilities on arterials and major collectors

OAR 660-12-045 (7)
Local governments shall provide street standards that minimize right-of-way widths and pavement width

2. Analysis

Much of these sections of the TPR are aimed at urban areas and apply only to areas within Urban Growth Boundaries (UGBs). Therefore, the following analyses note where the TPR requirements do not apply.

OAR 660-12-045(2)

1) The existing comprehensive plan discusses access control to arterial highways and in general terms to collectors and arterials. Goal 12 policy number 12 states: "*The subdivision ordinance will provide access control.*" See both the Comprehensive Plan and Land Development Code recommendations, below.

OAR 660-12-060

COMPREHENSIVE PLAN:

Section 3 (Goal 12: Transportation):

36. The County shall review all proposed Comprehensive Plan Amendments which significantly affect transportation facilities to assure that allowed land uses are consistent with identified function, capacity and level of service.

LAND DEVELOPMENT CODE:

No code amendments recommended at this time to meet the above sections of the TPR.

V. DETERMINATION OF TRANSPORTATION NEED

1. Rule Requirements

OAR 660-12-030(1)
The TSP should identify the following transportation needs:
1) state, regional and local
2) needs of the transportation disadvantaged
3) freight movement for industrial and commercial uses

OAR 660-12-030(2) and (3)
County TSPs shall use the state TSP for information on state needs.
Within UGBs, local transportation needs are based on population and employment forecasts for 20 years

2. Analysis

Current transportation policies are based on out-of-date state and regional information and needs. Several chapters within the TSP (2, 3, 4, and 5) include updated data and information, which is utilized in producing policies and recommendations. Additional language is recommended which will aid in clarifying the Comprehensive Plan in regard to this requirement.

3. Recommendations

COMPREHENSIVE PLAN:

Section 3 (Goal 12: Transportation):

30. The County Court will appoint a Road Advisory Committee to review the county's transportation needs and to review the transportation element of the

comprehensive plan every three years, or whenever a more urgent need exists. The Road Advisory Committee shall also be responsible for periodically supplementing the Comprehensive Plan with up-to-date state information and data utilized in determining transportation policies.

LAND DEVELOPMENT CODE:

No code amendments recommended at this time to meet the above sections of the TPR.

VI. EVALUATION AND SELECTION OF TRANSPORTATION SYSTEM ALTERNATIVES

1. Rule Requirements

OAR 660-12-035(1)
The following alternatives shall be analyzed in the TSP:
1) improvements to existing facilities
2) new facilities
3) system management
4) demand management measures
5) no build alternative

OAR 660-12-035(3)
Standards for evaluation include:
1) transportation system shall support urban and rural development by providing transportation system that will serve the land uses identified in the comprehensive plan;
2) transportation system shall be consistent with state and federal protection of air, land and water quality measures;
3) transportation system shall minimize adverse economic, social, environmental and energy consequences;
4) the transportation system shall minimize conflicts between modes;
5) the transportation system shall avoid reliance on one mode of travel and reduce reliance on the automobile.

OAR 660-12-035(8)
Where existing and committed transportation facilities can adequately serve land uses in the acknowledged comprehensive plan, local governments are not required to evaluate alternatives (above)

2. Analysis

Alternatives analysis and standards of evaluation are developed as part of the TSP (Chapter 6). The analysis in Chapter 6 focused on three alternatives: 1) "No Action" alternative, 2) a "Build" alternative, and 3) a TSM/TDM alternative. Between the three alternatives included in Chapter 6, improvements to existing facilities, new facilities,

system management, demand management measures and a no build alternative were addressed as required by the TPR. Incorporation of these analyses will be part and parcel of the final TSP, no Comprehensive Plan policies or ordinances are required.

3. Recommendations

Not Applicable.

REVISED GOAL 12: TRANSPORTATION POLICIES (AT A GLANCE) MALHEUR COUNTY COMPREHENSIVE PLAN

1. All County road activities (except those concerning state highways) will comply the Malheur County road design, construction and improvement standards as adopted within the Malheur County Transportation System Plan (TSP). In addition, all development proposals, plan amendments, or zone changes shall conform with the adopted TSP.

2. Amendments to the comprehensive plan and land use regulations which ***significantly affect*** a transportation facility shall assure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. A plan or land use regulation amendment ***significantly affects*** a transportation facility if it:

   a. Changes the functional classification of an existing or planned transportation facility;

   b. Changes standards implementing a functional classification system;

   c. Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility or;

   d. Would reduce the level of service of the facility below the minimum acceptable level identified in the Transportation System Plan.

3. The County shall endeavor to develop a transportation system that enhances the livability of each jurisdiction and accommodates growth and development through careful planning and management of existing and future transportation facilities. Plans for new transportation facilities and extensions of existing facilities will identify ~~impacts on~~: (a) ~~the transportation needs of all citizens, including the handicapped and the elderly;~~ street connections to existing and planned arterials and collectors, including interconnection with neighborhood destinations; (b) ~~local land use patterns;~~ and conformance with bicycle and pedestrian plans.

4. Plans for new transportation facilities will identify impacts on: (a) local land use patterns; (b) the local economy; (c) environmental quality; (d) energy use and resources; (e) existing transportation systems; (f) fiscal resources; and (g) natural resources.

~~4.~~ 5. ~~Transportation improvements and services that meet the needs of elderly and handicapped residents will be encouraged.~~ The County shall endeavor to increase the use of alternative modes of transportation (walking, bicycling, rideshare/carpooling, and transit) through improved access, safety and service. In addition, the County shall identify existing inadequacies in provision of public transportation service for the elderly and disadvantaged. Efforts to provide such service shall include: support of a commuter system to the Snake River Correctional Institution, ongoing support and utilization of available Ride-Share Programs enhancement and coordination of transportation services for the disadvantaged; coordination between state and local agencies to reinstate intercity passenger service between Ontario/Vale/Nyssa and Burns (bus) as well as Amtrak service.

6.
7.
8. **Policies Unchanged**
9.
10.

11. Access control will be guided by Access Management guidelines as developed in the Transportation System Plan. ~~along collectors and arterials will be limited to the minimum required for reasonable use of the highway by the abutting property owner and, where possible, adjoining property owners will share access.~~

12.
| **Policies Unchanged**
21.

22. The County shall protect the function of existing and planned as identified in the TSP. Such protection shall occur through the application of appropriate land use regulations.

23.
| **Policies Unchanged**
29.

30. The County Court will appoint a Road Advisory Committee to review the county's transportation needs and to review the transportation element of the comprehensive plan every three years, or whenever a more urgent need exists. The Road Advisory Committee shall also be responsible for periodically

supplementing the Comprehensive Plan with up-to-date state information and data utilized in determining transportation policies.

Policies Unchanged

34. The County shall coordinate with local municipalities and the Oregon Department of Transportation Aeronautics Section in the adoption of Airport Overlay Zones and Airport Runway Approach Zones. The following policies shall be applied when considering planned airport facilities or expansions:

    A. To avoid danger to the public safety from potential aircraft accidents, commercial and residential uses resulting in concentrations of people shall not be permitted beneath the airport approach surfaces and an area within 500 feet parallel from the runway centerline. Land uses around the airport shall be required to provide an environment that will not be adversely affected by noise and safety problems and will be compatible with the airport and its operations.

    B. Local airports may create Advisory Committees. These committees shall be responsible for advising the sponsors during the development of Airport Master plans, implementing ordinances or in individual land use actions.

    C. Encourage development of Airport Master Plans that will include a land use element which shall protect airport regions from development that could conflict with aircraft approach safety, or threaten surrounding development.

    D. Because of potential bird hazards to airborne aircraft, land uses beneath designated airport approach surfaces within 5,000 feet off the approach end of runway(s) accommodating piston engine aircraft, and within 10,000 feet of the approach end of runway(s) accommodating jet aircraft shall not create water impoundments, sanitary landfills, or sewer treatment plants or any other land use activity which might increase bird activity within the airport environment.

35. The County shall notify the Oregon Department of Transportation in regard to land use actions requiring a public hearing, land use applications for land division, development applications which affect private access to roads, and all development applications which occur within Airport Overlay Zones.

36. The County shall review all proposed Comprehensive Plan Amendments which significantly affect transportation facilities to assure that allowed land uses are consistent with identified function, capacity and level of service.

37. The County shall coordinate with the Oregon Department of Transportation to implement the highway improvements listed in the Statewide Transportation Improvement Program (STIP) that are consistent with the Transportation System Plan and comprehensive plan.

38. It is the policy of the County to plan and develop a network of streets, access ways, and other improvements, including bikeways and safe street crossings where applicable to promote safe bicycle and pedestrian opportunities.

39. The County shall require streets and access ways where appropriate to provide direct and convenient access to neighborhood activity centers.

40. In areas of new development the County shall investigate the existing and future opportunities for bicycle and pedestrian access ways. Many existing access ways such as user trails established by school children distinguish areas of need and should be incorporated into the transportation system.

41. Bikeways and pedestrian access way should help to connect to regional travel routes.

42. Bikeways and pedestrian access ways shall be designed and constructed to minimize potential conflicts between transportation modes. Design and construction of such facilities shall follow the guidelines established by the Oregon Bicycle and Pedestrian Plan.

43. Maintain and repair of existing bikeways and pedestrian access ways (including sidewalks) shall be given equal priority to the maintenance and repair of motor vehicle facilities.

APPENDIX I

STATE AND COUNTY ROAD ACCIDENT HISTORY (1992 – 1996)

TABLE I-1
STATE HIGHWAY ACCIDENTS IN MALHEUR COUNTY 1992-1996

Accident Number	Date	Time	Location	Mile-post	Collision Type	Surface	Total Vehicles Involved	No. of people in Vehicle 1	No. of people in Vehicle 2	Number Killed	Number Injured
229	5/19/95	1A	HY 5	223.3	FIX	DRY	1	1	0	0	1
2	1/1/92	7P	HY 5	225.75	SS-O	WET	2	2	2	0	1
3	1/1/92	7P	HY 5	225.75	FIX	WET	2	2	2	0	0
17	1/1/92	7P	HY 5	225.75	FIX	WET	1	4	0	0	1
271	6/22/96	6P	HY 5	236.75	FIX	DRY	1	1	1	0	0
291	6/28/94	3P	HY 5	239.86	REAR	DRY	1	2	2	0	1
379	7/9/93	2P	HY 5	240.16	TURN	DRY	2	5	5	0	5
64	1/27/96	6P	HY 5	240.41	FIX	ICY	1	2	0	0	0
192	7/17/94	3A	HY 5	245.6	FIX	DRY	1	1	1	1	0
53	1/17/93	10A	HY 5	246	O-TN	SNO	1	2	0	0	0
1	1/7/94	UNK	HY 5	247.3	FIX	DRY	1	1	0	1	0
385	7/17/93	10A	HY 5	249.17	NONC	WET	1	1	0	0	0
287	8/25/95	9P	HY 5	249.98	ANML	DRY	2	2	2	1	0
250	6/22/96	11P	HY 5	250.61	O-TN	DRY	1	1	1	0	1
501	10/17/94	3P	HY 5	255.25	TURN	DRY	2	3	3	0	2
506	10/25/95	6P	HY 5	255.94	O-TN	DRY	1	1	1	0	1
559	11/15/95	6P	HY 5	256.25	ANML	WET	1	3	2	0	0
420	8/23/93	9P	HY 5	257	REAR	DRY	2	3	1	0	2
82	2/22/92	10A	HY 5	261.7	ANML	WET	2	1	1	0	1
212	5/2/95	1A	HY 5	261.96	FIX	WET	1	1	1	0	0
578	10/20/93	9A	HY 5	263.85	REAR	DRY	1	1	1	0	0
439	9/9/94	9A	HY 5	265	TURN	DRY	1	1	1	0	0
58	2/8/95	8A	HY 5	266.22	REAR	DRY	3	14	5	0	11
136	3/24/94	UNK	HY 5	266.69	ANML	DRY	1	1	1	0	0
580	11/25/94	6P	HY 5	267	REAR	ICY	2	2	2	0	2
632	12/14/96	1P	HY 5	267.96	REAR	DRY	2	2	0	0	1
439	9/24/96	9A	HY 5	269.25	TURN	DRY	1	1	1	0	1
74	2/17/92	8P	HY 5	272.08	ANML	WET	2	4	3	0	2
334	7/17/94	6P	HY 5	272.71	FIX	DRY	1	2	2	0	0
173	4/18/92	9P	HY 5	273.15	ANML	DRY	1	3	0	0	0
116	3/31/94	1P	HY 5	274	FIX	DRY	1	2	0	0	2
266	6/16/96	10P	HY 5	274.09	FIX	DRY	1	1	1	0	1
231	5/15/94	12P	HY 5	274.31	REAR	DRY	3	5	5	0	4
337	7/23/95	7A	HY 5	274.75	FIX	DRY	1	1	1	0	3
454	1/27/92	11A	HY 5	274.79	FIX	SNO	1	1	1	0	0
524	9/27/93	11A	HY 5	276.09	TURN	DRY	2	3	3	0	1
281	6/7/92	1A	HY 5	276.26	FIX	DRY	2	2	1	0	1
90	2/16/95	7P	HY 5	276.29	ANML	WET	1	3	3	0	0
177	4/29/92	7P	HY 5	277.21	O-TN	DRY	1	1	1	0	0
36	1/22/92	3A	HY 5	277.36	FIX	DRY	1	1	0	0	3
575	10/15/93	1P	HY 5	277.37	FIX	DRY	1	1	1	0	0
665	12/25/94	3A	HY 6	352	FIX	ICY	1	2	2	0	0
273	6/25/96	10P	HY 6	352.5	ANML	DRY	1	2	0	0	0
586	11/27/94	4P	HY 6	352.5	SS-O	ICY	2	5	0	0	2
439	9/15/92	6A	HY 6	352.55	ANML	DRY	3	3	2	0	1
669	12/29/92	10A	HY 6	352.63	O-TN	ICY	1	2	2	0	0
178	4/15/94	5A	HY 6	352.8	ANML	DRY	1	5	5	0	0
578	11/22/92	9A	HY 6	353.01	O-TN	WET	4	7	4	0	1
10	1/8/93	12P	HY 6	353.1	REAR	ICY	2	3	2	0	0
29	1/1/94	9P	HY 6	353.5	FIX	ICY	1	1	1	0	0
470	11/26/94	4P	HY 6	353.71	FIX	WET	1	1	1	1	0
404	8/28/92	10A	HY 6	354	ANML	DRY	1	4	0	0	0
80106	5/11/96	4A	HY 6	354	ANML	DRY	1	3	2	0	0
186	4/14/95	8P	HY 6	354.5	O-TN	WET	2	4	4	0	2
319	7/5/95	9A	HY 6	354.63	FIX	DRY	1	2	1	0	3
568	11/28/95	11A	HY 6	354.78	SS-O	WET	2	2	1	0	0
27	1/1/94	8P	HY 6	355	FIX	ICY	1	1	1	0	0
578	11/24/94	12P	HY 6	355	REAR	ICY	1	1	0	0	0
604	12/3/96	9A	HY 6	355	SS-O	ICY	2	2	2	0	1
652	12/17/92	1P	HY 6	355.9	FIX	WET	3	7	7	0	2
235	5/24/92	5A	HY 6	356	ANML	DRY	1	2	2	0	0
603	12/3/96	2P	HY 6	356	FIX	ICY	1	2	2	0	2
80214	9/3/96	10A	HY 6	356.01	FIX	DRY	1	3	2	0	0
202	5/10/96	5A	HY 6	357	REAR	DRY	1	4	2	0	1
551	11/9/95	10A	HY 6	357.01	O-TN	DRY	1	2	2	0	2
558	11/14/95	UNK	HY 6	357.46	O-TN	SNO	1	2	2	0	0

TABLE I-1
STATE HIGHWAY ACCIDENTS IN MALHEUR COUNTY 1992-1996

Accident Number	Date	Time	Location	Mile-post	Collision Type	Surface	Total Vehicles Involved	No. of people in Vehicle 1	No. of people in Vehicle 2	Number Killed	Number Injured
138	2/24/93	5P	HY 6	358.13	NONC	ICY	1	1	1	0	1
129	2/15/93	3P	HY 6	359.33	REAR	ICY	2	5	5	0	0
91	2/15/93	12P	HY 6	359.39	PARK	ICY	1	1	1	0	0
31	1/1/94	3A	HY 6	359.63	REAR	ICY	1	2	2	0	0
267	6/1/94	6A	HY 6	359.63	O-TN	DRY	1	1	1	0	1
281	6/20/94	3P	HY 6	359.63	MISC	DRY	1	1	0	0	0
337	7/20/94	5A	HY 6	359.63	ANML	DRY	1	1	1	0	1
218	5/5/93	7P	HY 6	360	SS-O	DRY	1	1	0	0	0
651	11/23/93	10A	HY 6	361	NONC	ICY	1	2	2	0	0
80	2/7/94	8P	HY 6	361.15	O-TN	ICY	1	2	1	0	2
327	7/29/92	1A	HY 6	361.15	REAR	DRY	2	2	0	0	1
532	11/6/93	1A	HY 6	361.4	O-TN	DRY	1	1	0	1	0
635	12/6/94	10A	HY 6	362	SS-O	SNO	2	4	3	0	3
216	5/8/92	5P	HY 6	362.12	O-TN	DRY	1	1	1	0	0
123	2/15/93	11A	HY 6	362.54	SS-O	ICY	5	2	1	0	0
238	5/26/96	4P	HY 6	362.63	NONC	DRY	1	2	2	0	2
85	2/24/92	5P	HY 6	363.15	O-TN	DRY	2	2	1	0	0
11	1/8/96	4A	HY 6	363.18	O-TN	WET	1	1	1	0	1
349	9/10/95	7P	HY 6	363.3	O-TN	DRY	1	2	1	1	1
583	11/26/94	11A	HY 6	363.5	FIX	ICY	1	5	5	0	0
630	12/29/95	5P	HY 6	363.5	NONC	SNO	1	2	2	0	0
666	12/27/94	6A	HY 6	363.5	O-TN	ICY	1	4	0	0	5
346	7/7/93	9A	HY 6	363.6	O-TN	DRY	1	3	2	0	1
60	1/20/93	10A	HY 6	363.65	NONC	WET	1	1	1	0	0
453	11/16/92	12P	HY 6	363.7	FIX	DRY	1	3	3	1	2
554	11/22/96	5A	HY 6	364	SS-O	WET	2	3	1	0	1
21	1/25/94	1A	HY 6	364	FIX	WET	1	1	1	0	1
498	10/16/94	1A	HY 6	364	FIX	DRY	1	1	1	0	0
28	1/1/93	9A	HY 6	364.63	REAR	ICY	1	2	2	0	0
464	8/27/93	4P	HY 6	364.63	O-TN	DRY	1	3	3	0	0
228	4/17/93	1A	HY 6	364.64	FIX	DRY	1	1	0	0	0
428	9/15/96	2P	HY 6	365	FIX	DRY	1	2	2	0	0
587	11/27/94	9A	HY 6	365	FIX	ICY	1	2	2	0	0
624	12/2/94	7A	HY 6	365	MISC	ICY	1	2	2	0	0
190	4/20/96	6A	HY 6	365.18	O-TN	WET	1	1	1	0	1
170	4/8/94	4P	HY 6	365.63	FIX	DRY	1	2	0	0	0
649	12/22/96	6P	HY 6	366.55	REAR	ICY	1	1	1	0	0
81	2/7/94	3A	HY 6	367	O-TN	ICY	1	3	3	0	1
275	6/29/96	1A	HY 6	367.5	ANML	DRY	1	4	4	0	0
410	8/2/93	4P	HY 6	367.5	O-TN	DRY	1	1	1	0	1
563	11/21/95	4A	HY 6	367.5	REAR	DRY	1	1	1	0	1
28	1/1/94	8P	HY 6	368.5	O-TN	ICY	1	5	5	0	0
302	6/27/92	5A	HY 6	368.63	ANML	DRY	1	4	0	0	0
122	2/15/93	4P	HY 6	369	O-TN	ICY	1	1	1	0	0
653	11/24/93	6A	HY 6	369.45	O-TN	ICY	1	6	4	0	0
548	9/16/94	UNK	HY 6	369.5	SS-O	ICY	2	1	0	0	1
567	11/29/96	8A	HY 6	369.5	O-TN	ICY	1	1	1	0	1
477	10/5/92	4P	HY 6	369.63	ANML	DRY	1	1	1	0	0
193	5/18/92	1A	HY 6	369.8	O-TN	DRY	1	5	0	0	3
33	1/2/94	9A	HY 6	370	FIX	ICY	1	1	1	0	0
259	6/3/96	4P	HY 6	370	REAR	DRY	1	1	1	0	0
440	9/16/92	7A	HY 6	370.63	O-TN	DRY	2	8	2	0	10
630	12/6/94	8A	HY 6	371.2	FIX	ICY	1	2	2	0	1
649	12/12/94	11A	HY 6	371.45	O-TN	ICY	3	5	4	0	4
558	11/24/96	6A	HY 6	371.5	FIX	WET	1	2	0	0	1
79	2/11/95	7P	HY 6	372	O-TN	ICY	2	2	2	0	2
51	1/23/94	11P	HY 6	372.18	O-TN	ICY	1	1	1	0	0
71	2/12/92	7A	HY 6	372.18	O-TN	DRY	1	1	1	0	1
687	12/7/93	2P	HY 6	372.18	O-TN	ICY	1	2	2	0	0
65	1/24/93	UNK	HY 6	373.13	NONC	ICY	1	3	3	0	0
232	5/15/94	11P	HY 6	373.55	ANML	DRY	1	3	3	0	0
274	6/28/96	9P	HY 6	373.55	ANML	DRY	1	5	5	0	0
54	2/25/92	10A	HY 6	373.8	O-TN	DRY	1	1	0	0	1
290	7/7/96	3P	HY 6	374	FIX	DRY	1	1	1	0	0
606	12/3/96	7A	HY 6	374	FIX	ICY	1	2	2	0	1
124	2/15/93	10A	HY 6	374.07	FIX	ICY	2	2	1	0	0

TABLE I-1
STATE HIGHWAY ACCIDENTS IN MALHEUR COUNTY 1992-1996

Accident Number	Date	Time	Location	Mile-post	Collision Type	Surface	Total Vehicles Involved	No. of people in Vehicle 1	No. of people in Vehicle 2	Number Killed	Number Injured
273	5/29/93	12P	HY 6	374.39	SS-O	DRY	1	3	1	0	0
614	12/16/95	8A	HY 6	374.43	FIX	ICY	1	5	5	0	1
424	9/24/92	3P	HY 6	374.53	SS-O	DRY	3	4	4	0	1
658	12/23/96	4P	HY 6	374.57	FIX	ICY	1	2	2	0	0
504	10/22/96	11A	HY 6	374.59	REAR	DRY	1	1	1	0	0
32	1/7/95	8A	HY 6	374.98	ANGL	SNO	2	2	1	0	0
184	4/16/96	2P	HY 6	374.98	TURN	DRY	2	3	1	0	1
667	12/27/92	12P	HY 6	376	FIX	SNO	1	1	1	0	1
250	7/28/94	1P	HY 6	376.43	TURN	DRY	2	6	6	1	5
579	10/22/93	3P	HY 6	377.09	O-TN	DRY	1	1	1	0	0
172	4/10/94	4P	HY 6	377.2	REAR	DRY	2	5	2	0	1
653	12/22/96	1A	HY 6	377.58	FIX	ICY	1	1	1	0	0
240	5/28/92	4P	HY 6	377.76	MISC	DRY	2	2	2	0	0
641	12/20/96	UNK	HY 6	377.8	FIX	SNO	1	2	0	0	0
33	1/7/95	3P	HY 6	377.95	FIX	WET	1	2	2	0	2
77	2/11/95	8P	HY 6	377.95	FIX	ICY	3	6	6	0	3
78	2/11/95	10P	HY 6	377.95	FIX	SNO	1	1	1	0	0
647	12/12/94	10A	HY 6	377.98	FIX	ICY	1	1	0	0	0
291	6/16/92	2A	HY 6	378	O-TN	WET	2	3	2	0	3
544	11/3/96	10P	HY 7	180.25	O-TN	DRY	1	1	0	0	1
53	1/23/94	8P	HY 7	181.07	FIX	WET	1	2	2	0	0
563	10/5/93	2P	HY 7	181.38	O-TN	DRY	1	1	1	0	0
362	7/29/92	11P	HY 7	181.82	ANML	DRY	1	3	2	0	0
412	8/6/93	1P	HY 7	182.8	FIX	DRY	1	1	0	0	1
73	2/2/95	10A	HY 7	184.57	O-TN	ICY	1	1	0	0	0
344	7/6/93	5P	HY 7	185.5	REAR	DRY	2	6	1	0	3
448	11/7/96	9A	HY 7	187.57	HEAD	DRY	2	3	3	1	1
66	2/6/92	6P	HY 7	187.6	ANML	DRY	1	2	2	0	0
666	12/26/96	6P	HY 7	188.07	ANML	DRY	1	2	2	0	0
329	7/16/95	10P	HY 7	188.27	ANML	DRY	1	3	0	0	0
518	10/31/92	7P	HY 7	189.02	ANML	WET	1	4	4	0	0
27	1/31/96	8A	HY 7	189.27	ANGL	DRY	1	1	1	0	0
401	7/31/93	11P	HY 7	190.57	NONC	UNK	1	2	2	0	1
209	5/1/92	1P	HY 7	190.8	FIX	DRY	1	2	2	0	2
165	4/16/96	1P	HY 7	190.82	REAR	DRY	1	2	2	0	0
37	1/30/92	9A	HY 7	190.84	FIX	DRY	1	1	1	0	1
136	3/21/92	9A	HY 7	190.9	ANML	DRY	1	2	2	0	0
634	12/4/92	11A	HY 7	191.57	O-TN	ICY	1	1	1	0	0
55	1/18/93	2P	HY 7	191.97	SS-M	SNO	1	7	6	0	1
508	10/23/96	9P	HY 7	191.99	O-TN	WET	1	2	0	0	1
505	10/22/95	9A	HY 7	192	O-TN	DRY	1	1	0	0	1
242	5/31/96	5P	HY 7	192.5	O-TN	DRY	1	1	1	0	1
285	6/11/93	8P	HY 7	192.57	O-TN	DRY	1	1	1	0	1
338	7/10/92	5A	HY 7	193.8	ANML	DRY	1	1	0	0	0
375	8/17/96	1P	HY 7	193.9	NONC	DRY	1	2	2	0	1
485	10/14/92	8P	HY 7	194.44	ANML	DRY	1	2	2	0	0
661	12/23/92	5P	HY 7	194.71	ANML	DRY	2	3	2	0	0
165	4/2/94	9P	HY 7	195	O-TN	DRY	3	5	5	0	4
41	1/10/93	1P	HY 7	195.21	O-TN	ICY	1	1	1	0	1
174	4/13/94	4P	HY 7	195.5	FIX	DRY	1	2	1	0	1
506	10/25/92	4P	HY 7	195.5	O-TN	DRY	1	1	1	0	1
7	1/7/95	11A	HY 7	195.6	HEAD	ICY	2	3	3	0	2
49	1/15/96	6P	HY 7	196.5	O-TN	DRY	1	1	1	0	1
661	12/23/94	8A	HY 7	196.5	TURN	DRY	1	1	0	0	0
462	8/27/93	2A	HY 7	197	O-TN	DRY	1	1	1	0	0
447	8/15/93	10P	HY 7	197.3	FIX	WET	1	1	0	0	0
265	6/16/95	6A	HY 7	197.44	O-TN	DRY	1	1	1	0	1
55	1/24/94	10A	HY 7	198	O-TN	DRY	2	2	2	0	1
381	7/12/93	7A	HY 7	198.04	O-TN	DRY	1	1	0	0	1
128	3/20/92	UNK	HY 7	199	ANML	DRY	1	4	4	0	0
229	5/14/94	7P	HY 7	199	O-TN	DRY	1	1	1	0	1
326	7/6/94	5A	HY 7	199	O-TN	DRY	1	2	1	0	0
381	8/2/94	6A	HY 7	199	FIX	DRY	1	1	1	0	0
289	6/14/92	1A	HY 7	199.41	O-TN	DRY	2	6	6	0	2
572	11/17/94	6P	HY 7	199.5	ANML	WET	1	1	1	0	0
635	1/24/93	1P	HY 7	199.57	O-TN	DRY	1	1	1	0	0

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STATE HIGHWAY ACCIDENTS IN MALHEUR COUNTY 1992-1996

Accident Number	Date	Time	Location	Mile-post	Collision Type	Surface	Total Vehicles Involved	No. of people in Vehicle 1	No. of people in Vehicle 2	Number Killed	Number Injured
32	1/7/93	5P	HY 7	199.71	NONC	ICY	1	1	0	0	0
503	9/5/93	1P	HY 7	199.71	FIX	DRY	1	2	2	0	0
187	5/7/92	5P	HY 7	202.14	O-TN	DRY	1	1	1	0	0
135	3/5/96	1P	HY 7	202.27	O-TN	WET	1	1	0	0	0
55	1/18/96	4P	HY 7	202.6	O-TN	SNO	1	2	2	0	1
136	3/6/96	8A	HY 7	202.6	O-TN	DRY	1	1	1	0	1
84	2/13/95	10A	HY 7	203	FIX	ICY	1	2	2	0	2
646	11/19/93	1P	HY 7	204.71	ANML	DRY	1	1	1	0	0
656	11/25/93	12P	HY 7	204.71	ANML	DRY	1	3	3	0	0
88	2/5/96	6P	HY 7	205	ANML	WET	1	4	4	0	0
237	5/31/95	4P	HY 7	205	FIX	WET	1	2	2	0	0
316	6/18/93	11A	HY 7	205.58	SS-M	DRY	2	2	2	0	0
606	12/7/95	3P	HY 7	207	O-TN	ICY	1	1	1	0	2
68	2/9/92	2A	HY 7	207.5	FIX	DRY	2	3	2	0	1
368	8/13/96	7P	HY 7	209	O-TN	DRY	1	1	0	0	0
654	11/24/93	12P	HY 7	209	FIX	ICY	1	1	1	0	0
544	11/3/95	12P	HY 7	209.5	ANML	DRY	1	1	0	0	0
121	2/14/93	6P	HY 7	209.71	ANML	DRY	1	5	4	0	0
691	12/7/93	11A	HY 7	209.71	NONC	ICY	1	1	1	0	0
377	8/20/92	10P	HY 7	209.9	ANML	DRY	1	2	2	0	0
45	1/21/95	UNK	HY 7	211.4	ANML	DRY	1	1	1	0	0
132	3/27/92	8P	HY 7	212	O-TN	DRY	1	1	1	0	1
406	8/30/94	UNK	HY 7	212.8	O-TN	DRY	1	1	1	0	0
363	8/8/96	3P	HY 7	213	FIX	DRY	1	2	2	0	0
137	2/24/93	7P	HY 7	216.5	ANML	ICY	1	1	1	0	0
267	6/20/92	8P	HY 7	216.78	FIX	DRY	1	1	1	0	0
426	9/7/95	3P	HY 7	216.78	O-TN	DRY	1	1	1	0	1
94	2/20/94	9A	HY 7	216.83	O-TN	DRY	1	1	1	0	1
459	8/25/93	9P	HY 7	216.83	O-TN	DRY	1	1	0	0	1
688	12/7/93	12P	HY 7	217	O-TN	SNO	1	2	2	0	0
564	11/22/95	3P	HY 7	217.5	FIX	DRY	2	2	1	0	7
267	5/24/93	1P	HY 7	218	FIX	DRY	1	2	2	0	0
382	8/25/96	3A	HY 7	218	ANML	DRY	1	4	4	0	0
202	5/28/92	9A	HY 7	218.16	O-TN	DRY	3	3	3	0	4
485	10/2/94	8A	HY 7	219.57	ANML	DRY	1	1	1	0	0
576	10/17/93	3P	HY 7	220.46	O-TN	DRY	1	1	1	0	1
576	11/18/92	7A	HY 7	221.16	O-TN	DRY	1	1	0	0	0
86	2/4/96	9P	HY 7	221.5	O-TN	SNO	1	1	1	0	1
145	6/19/94	7P	HY 7	221.76	O-TN	DRY	1	4	2	1	6
296	6/25/93	10A	HY 7	221.76	O-TN	DRY	1	1	1	0	1
556	11/4/94	10P	HY 7	222	O-TN	ICY	1	1	1	0	1
642	12/11/94	11A	HY 7	222	FIX	SNO	1	2	0	0	2
45	1/12/94	6P	HY 7	223.1	ANML	DRY	1	2	2	0	0
234	4/27/93	8A	HY 7	224	FIX	DRY	1	1	1	0	1
481	10/9/92	7P	HY 7	224.24	ANML	DRY	1	2	2	0	0
98	2/23/94	9A	HY 7	224.44	ANML	DRY	2	4	4	0	0
641	12/6/92	11A	HY 7	225.16	O-TN	WET	1	2	2	0	0
640	12/6/92	6P	HY 7	225.49	FIX	ICY	2	2	2	0	0
231	4/24/93	12P	HY 7	225.5	SS-O	DRY	1	1	0	0	0
503	10/22/96	7P	HY 7	226.28	ANML	DRY	1	1	1	0	0
1	1/4/96	12P	HY 7	226.72	HEAD	ICY	1	2	2	1	0
61	2/2/92	11A	HY 7	226.97	SS-M	WET	3	2	0	0	2
62	2/2/92	11A	HY 7	226.97	FIX	WET	2	4	4	0	0
573	11/20/94	12P	HY 7	227	O-TN	ICY	1	4	0	0	4
325	7/12/95	6P	HY 7	227.49	FIX	DRY	1	1	1	0	0
335	7/7/92	4P	HY 7	228	FIX	DRY	2	2	1	0	1
495	10/20/92	10P	HY 7	228	ANML	DRY	1	1	1	0	0
495	10/14/95	7A	HY 7	229.49	ANML	DRY	1	2	2	0	0
284	6/11/93	11P	HY 7	229.5	FIX	DRY	1	2	2	0	0
186	4/25/94	11A	HY 7	230.2	FIX	DRY	1	1	1	0	0
136	2/23/93	2P	HY 7	231.44	FIX	WET	1	3	3	0	0
608	12/4/96	9P	HY 7	232.99	FIX	ICY	1	2	2	0	0
357	8/6/96	9P	HY 7	233	ANML	DRY	1	4	0	0	0
220	5/10/92	9P	HY 7	234.43	FIX	DRY	1	1	1	0	1
576	11/21/94	1A	HY 7	234.5	ANML	DRY	1	1	1	0	1
50	1/22/94	12P	HY 7	235.27	FIX	ICY	1	1	1	0	1

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Accident Number	Date	Time	Location	Mile-post	Collision Type	Surface	Total Vehicles involved	No. of people in Vehicle 1	No. of people in Vehicle 2	Number Killed	Number Injured
180	4/12/96	8A	HY 7	236.6	O-TN	DRY	1	2	2	0	0
552	11/2/94	1A	HY 7	237.5	O-TN	DRY	1	1	1	0	0
139	3/9/96	1P	HY 7	238	O-TN	DRY	1	1	1	0	1
357	7/22/92	6A	HY 7	239.49	O-TN	DRY	1	1	1	0	1
31	1/6/93	1A	HY 7	240.05	ANML	DRY	1	2	2	0	0
22	1/22/93	7A	HY 7	240.16	SS-M	ICY	2	5	5	0	1
297	7/13/96	1P	HY 7	240.38	O-TN	DRY	1	2	2	0	0
347	8/20/96	9A	HY 7	240.63	O-TN	DRY	1	3	0	0	2
640	12/10/94	1A	HY 7	240.63	ANML	DRY	1	1	1	0	0
37	1/9/93	12P	HY 7	240.76	FIX	ICY	1	2	2	0	0
389	8/6/92	6A	HY 7	241.49	NONC	DRY	1	1	1	0	1
147	3/15/95	8A	HY 7	242	O-TN	DRY	2	4	4	0	0
445	9/10/94	9A	HY 7	242	ANML	DRY	1	2	2	0	0
563	11/5/92	8P	HY 7	242.18	ANML	DRY	2	1	0	0	0
358	8/6/96	10P	HY 7	242.23	ANML	DRY	1	3	3	0	1
446	9/24/92	10P	HY 7	242.48	ANML	DRY	2	4	3	0	0
263	6/12/95	5P	HY 7	244.31	FIX	DRY	1	5	5	0	1
440	9/24/96	4P	HY 7	244.31	REAR	DRY	1	4	4	0	1
369	7/30/93	8P	HY 7	244.81	ANML	DRY	1	3	3	0	1
3	1/3/96	8A	HY 7	246.55	REAR	DRY	1	1	1	0	0
190	4/29/94	11P	HY 7	246.55	FIX	DRY	1	1	1	0	0
61	1/24/96	1P	HY 7	246.72	REAR	ICY	1	1	1	0	0
215	5/3/95	2P	HY 7	246.82	FIX	DRY	1	2	2	0	0
450	9/14/94	7A	HY 7	247.02	O-TN	DRY	1	1	1	0	1
134	2/20/93	4A	HY 7	247.52	ANML	DRY	1	1	1	0	0
219	5/3/94	2P	HY 7	247.52	O-TN	DRY	1	2	2	0	0
334	6/30/93	8A	HY 7	247.52	ANML	DRY	1	2	2	0	0
133	3/2/96	7P	HY 7	247.7	REAR	DRY	1	3	3	0	0
368	8/5/95	10A	HY 7	247.7	TURN	DRY	2	3	3	0	0
226	4/12/93	6A	HY 7	248	FIX	DRY	2	2	2	0	1
651	12/16/92	8P	HY 7	248	FIX	ICY	3	4	3	0	0
135	2/23/93	8A	HY 7	248.02	FIX	ICY	1	1	1	0	0
513	10/31/96	5P	HY 7	248.3	TURN	DRY	1	1	1	0	1
656	12/15/94	6P	HY 7	248.5	REAR	ICY	2	3	1	0	1
575	11/17/92	11P	HY 7	248.52	ANML	DRY	1	1	1	0	0
30	1/1/94	8A	HY 7	249.2	O-TN	ICY	1	1	1	0	1
585	11/28/92	1A	HY 7	249.51	FIX	ICY	1	4	4	0	4
269	6/20/96	5A	HY 7	249.8	FIX	DRY	1	2	2	0	0
49	1/21/94	7A	HY 7	250	FIX	ICY	1	1	1	0	1
79	2/7/94	7A	HY 7	250.11	HEAD	ICY	1	2	2	0	1
627	12/1/92	9A	HY 7	250.86	ANML	SNO	1	1	0	0	0
463	9/25/94	2A	HY 7	251	FIX	DRY	1	1	1	0	0
180	4/19/94	3A	HY 7	251.5	O-TN	DRY	1	1	1	0	1
474	10/4/92	8P	HY 7	251.52	ANML	DRY	1	4	4	0	0
397	8/23/95	7P	HY 7	251.8	SS-O	DRY	2	3	3	0	2
388	7/20/93	3A	HY 7	252.27	ANML	DRY	1	2	2	0	0
1121	2/14/93	6P	HY 7	252.43	NONC	ICY	1	1	1	0	1
260	6/5/96	1A	HY 7	252.5	SS-M	DRY	1	1	1	0	0
425	9/25/92	10P	HY 7	252.5	O-TN	DRY	1	2	0	0	1
320	6/20/93	12P	HY 7	253.05	REAR	DRY	1	3	3	0	0
494	10/13/95	5P	HY 7	253.06	REAR	DRY	1	2	0	0	1
26	1/2/95	6P	HY 7	253.11	ANML	DRY	1	1	1	0	0
494	10/19/92	3A	HY 7	253.11	FIX	DRY	3	6	2	0	2
588	10/29/93	6A	HY 7	253.17	O-TN	DRY	1	1	1	0	1
342	7/30/94	11P	HY 7	253.36	FIX	DRY	1	1	0	0	0
117	2/7/93	UNK	HY 7	253.43	ANML	DRY	1	2	2	0	0
74	2/4/96	7P	HY 7	254.18	SS-M	SNO	1	1	0	0	0
57	2/4/95	12P	HY 7	254.19	REAR	DRY	2	6	6	0	2
85	2/4/93	3P	HY 7	254.44	REAR	DRY	1	1	1	0	0
227	5/15/96	3P	HY 7	254.44	REAR	WET	1	1	1	0	0
233	5/16/94	1P	HY 7	254.44	FIX	DRY	1	3	3	0	3
161	4/7/96	2P	HY 7	254.69	TURN	DRY	1	1	1	0	0
117	3/3/94	8A	HY 7	255.19	FIX	DRY	1	1	1	0	3
303	6/29/92	7A	HY 7	255.19	ANGL	WET	2	3	1	0	3
455	9/17/94	9A	HY 7	255.19	TURN	DRY	2	3	3	0	1
483	10/13/92	9A	HY 7	255.2	REAR	DRY	3	7	7	0	0

TABLE I-1
STATE HIGHWAY ACCIDENTS IN MALHEUR COUNTY 1992-1996

Accident Number	Date	Time	Location	Mile-post	Collision Type	Surface	Total Vehicles Involved	No. of people in Vehicle 1	No. of people in Vehicle 2	Number Killed	Number Injured
652	12/22/96	5P	HY 7	255.29	FIX	ICY	1	1	1	0	0
19	1/18/94	8A	HY 7	255.36	FIX	ICY	1	1	0	0	0
665	12/25/92	2P	HY 7	255.4	FIX	ICY	1	5	3	0	4
63	2/5/94	UNK	HY 7	255.69	FIX	DRY	1	1	1	0	0
108	3/27/92	12P	HY 7	255.7	REAR	DRY	2	2	0	0	1
294	6/24/93	2P	HY 7	256.08	SS-M	DRY	2	4	4	0	2
213	4/30/93	7P	HY 7	256.19	REAR	DRY	1	2	0	0	0
39	1/8/94	12P	HY 7	256.2	TURN	SNO	1	3	3	0	0
236	5/20/94	5P	HY 7	256.21	SS-M	DRY	2	4	4	0	0
117	3/5/96	2P	HY 7	256.45	O-TN	WET	1	4	4	0	1
5	1/3/95	4P	HY 7	256.8	SS-M	DRY	2	2	2	0	0
77	2/7/96	5P	HY 7	257.19	REAR	DRY	1	1	0	0	0
288	7/6/96	6P	HY 7	257.19	REAR	DRY	1	4	4	0	0
31	1/15/92	9A	HY 7	257.2	ANGL	DRY	3	4	4	0	2
218	5/9/96	11A	HY 7	257.2	SS-O	DRY	1	2	0	0	0
334	7/5/92	4P	HY 7	257.2	TURN	DRY	3	5	2	1	2
509	9/7/93	4P	HY 7	257.2	REAR	DRY	3	7	7	0	4
624	12/28/95	4P	HY 7	257.62	REAR	DRY	2	2	2	0	0
131	3/19/94	8P	HY 7	258.14	TURN	DRY	1	2	2	0	0
181	4/15/96	7P	HY 7	258.14	O-TN	DRY	1	1	1	0	1
182	4/21/94	3P	HY 7	258.14	FIX	DRY	1	1	0	0	1
119	3/23/95	8A	HY 7	258.2	TURN	DRY	3	3	2	0	0
332	6/30/93	8A	HY 7	258.2	TURN	DRY	2	2	1	0	0
417	9/5/96	11P	HY 7	258.2	TURN	DRY	2	2	2	0	0
493	10/13/95	9P	HY 7	258.2	TURN	DRY	2	4	3	0	0
638	11/9/93	5P	HY 7	258.2	TURN	DRY	3	4	4	0	1
262	5/20/93	2A	HY 7	258.97	FIX	DRY	2	4	1	0	1
291	7/8/96	9A	HY 7	259	O-TN	DRY	1	1	1	0	1
516	9/19/93	5A	HY 7	259.17	NONC	DRY	1	1	1	0	1
298	7/13/96	5P	HY 7	259.42	FIX	DRY	1	5	4	0	0
186	3/20/93	7P	HY 7	259.67	ANGL	DRY	1	1	0	0	1
418	9/7/96	10A	HY 7	260.5	O-TN	DRY	1	4	4	0	3
131	3/23/92	3P	HY 7	260.67	FIX	DRY	2	4	4	0	1
500	10/22/92	4P	HY 7	260.67	ANGL	DRY	2	4	3	0	2
503	10/23/92	5P	HY 7	260.67	TURN	DRY	2	2	2	0	0
659	12/23/96	1P	HY 7	261	HEAD	ICY	2	6	5	0	1
518	10/31/95	6A	HY 7	261.42	ANML	DRY	1	1	1	0	0
658	11/29/93	8A	HY 7	261.58	FIX	ICY	1	4	3	0	3
475	10/5/92	4P	HY 7	261.67	REAR	DRY	2	2	1	0	1
220	5/9/96	5P	HY 7	261.68	FIX	DRY	1	2	2	0	0
653	12/14/94	2P	HY 7	262	FIX	ICY	1	1	1	0	0
196	4/28/96	10P	HY 7	262.18	FIX	DRY	1	2	2	0	0
114	3/1/96	7P	HY 7	262.34	ANML	DRY	1	1	1	0	0
309	8/17/92	11A	HY 7	262.43	TURN	DRY	2	3	1	1	1
141	4/6/92	5P	HY 7	262.67	REAR	DRY	4	6	2	0	0
188	4/20/96	12P	HY 7	262.67	REAR	DRY	2	6	6	0	1
308	7/2/96	12P	HY 7	262.67	TURN	DRY	2	2	2	0	1
664	12/25/94	2P	HY 7	262.67	TURN	DRY	2	3	2	0	1
402	8/26/94	5P	HY 7	262.73	FIX	DRY	1	1	1	0	0
256	5/9/93	3A	HY 7	263.9	O-TN	DRY	1	2	2	0	2
127	2/15/93	4P	HY 7	264.41	O-TN	ICY	1	1	1	0	0
8	1/5/96	8A	HY 7	264.56	TURN	DRY	1	1	1	0	1
83	2/13/95	11A	HY 7	264.66	FIX	SNO	1	1	1	0	0
126	3/18/92	4P	HY 7	264.66	TURN	DRY	3	4	2	0	1
138	3/4/95	1P	HY 7	264.66	TURN	DRY	1	2	2	0	0
320	7/22/96	8P	HY 7	264.66	TURN	DRY	1	1	0	0	0
456	8/23/93	5P	HY 7	264.66	TURN	DRY	2	2	1	0	1
651	12/12/94	9A	HY 7	264.66	TURN	ICY	1	1	1	0	0
253	6/6/92	2P	HY 7	264.99	REAR	DRY	2	3	3	0	0
465	10/23/92	4P	HY 7	264.99	REAR	DRY	2	2	2	0	1
69	2/16/94	7A	HY 7	265	FIX	DRY	1	1	1	0	0
235	5/18/94	6A	HY 7	265	O-TN	WET	1	1	1	0	0
433	8/2/93	5P	HY 7	265.01	REAR	DRY	2	2	2	0	1
31	1/7/95	11P	HY 7	999.99	NONC	ICY	1	1	0	0	0
313	7/12/96	2A	HY 7	999.99	FIX	DRY	1	2	0	0	0
335	7/20/95	11A	HY 7	999.99	REAR	DRY	1	1	0	0	0

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STATE HIGHWAY ACCIDENTS IN MALHEUR COUNTY 1992-1996

Accident Number	Date	Time	Location	Mile-post	Collision Type	Surface	Total Vehicles Involved	No. of people in Vehicle 1	No. of people in Vehicle 2	Number Killed	Number Injured
569	11/27/95	4P	HY 7	999.99	FIX	SNO	1	1	0	0	0
628	12/12/96	11A	HY 7	999.99	FIX	ICY	1	3	3	0	0
434	9/21/96	6A	HY 7	SP258.30	FIX	DRY	1	1	1	0	1
363	7/31/92	9P	HY442	81.39	ANML	DRY	1	2	2	0	0
78	4/11/93	3P	HY442	86.9	O-TN	DRY	1	2	1	1	0
249	5/17/92	7P	HY442	91	REAR	DRY	2	6	3	0	3
78	2/19/92	UNK	HY449	10.09	ANML	WET	1	1	1	0	2
551	11/2/94	6A	HY449	10.5	ANML	DRY	1	1	1	0	0
290	6/27/94	3P	HY449	10.74	O-TN	DRY	1	1	1	0	0
299	6/23/92	12P	HY449	10.85	O-TN	DRY	1	1	1	0	0
600	12/5/95	1P	HY450	0.5	O-TN	SNO	1	1	1	0	1
655	11/25/93	9P	HY450	0.65	O-TN	ICY	1	1	0	0	1
394	7/25/93	9A	HY450	0.71	BACK	DRY	2	2	2	0	0
276	6/25/95	6A	HY450	0.91	FIX	DRY	2	3	0	1	3
261	6/10/96	9A	HY450	1.35	REAR	DRY	2	3	3	0	0
126	3/30/95	8A	HY450	1.53	FIX	DRY	1	1	1	0	0
355	8/1/96	7A	HY450	2.51	FIX	DRY	1	2	2	0	1
314	6/17/93	4P	HY450	2.8	SS-O	DRY	2	2	1	0	0
69	2/11/92	9P	HY450	3.03	O-TN	WET	1	1	1	0	0
46	1/21/95	10A	HY450	3.08	O-TN	ICY	2	2	1	0	0
6	1/4/95	1A	HY450	3.11	FIX	DRY	1	1	1	0	0
571	10/14/93	1P	HY450	3.11	O-TN	DRY	1	1	0	0	0
620	12/9/96	9P	HY450	3.11	O-TN	WET	1	1	1	0	1
235	5/30/95	10P	HY450	3.2	ANML	DRY	1	1	1	0	0
548	11/12/96	8P	HY450	4	ANML	DRY	1	1	1	0	0
132	2/19/93	3A	HY450	4.11	FIX	ICY	1	1	1	0	0
436	8/3/93	10P	HY450	4.16	NONC	DRY	1	1	0	0	1
262	6/12/96	3P	HY450	4.28	TURN	DRY	1	1	1	0	0
128	2/15/93	2P	HY450	4.41	NONC	ICY	1	1	0	0	0
185	4/8/95	8A	HY450	4.69	TURN	DRY	2	4	3	0	0
213	5/28/94	7A	HY450	5	FIX	DRY	2	2	2	0	0
27	1/11/92	7P	HY450	5.07	O-TN	DRY	2	5	5	0	2
274	6/10/94	5P	HY450	5.12	MISC	DRY	2	2	1	0	0
48	1/20/94	8A	HY450	5.22	FIX	ICY	1	1	0	0	0
83	2/22/92	UNK	HY450	5.9	FIX	WET	2	2	2	0	1
126	3/19/96	1P	HY450	6.02	REAR	DRY	1	1	1	0	0
152	4/29/92	5P	HY450	6.24	REAR	DRY	2	2	1	0	1
341	8/13/96	9A	HY450	6.24	O-TN	DRY	1	1	0	0	1
564	11/28/96	11A	HY450	6.3	TURN	WET	1	6	4	0	1
496	10/17/96	2A	HY450	6.94	O-TN	DRY	1	1	1	0	0
511	10/28/96	7P	HY450	7.46	ANML	DRY	1	1	1	0	0
119	3/9/96	2A	HY450	8.59	FIX	DRY	1	1	0	0	0
447	9/30/96	7A	HY450	8.72	FIX	DRY	1	1	1	0	0
35	1/21/92	7P	HY450	8.96	ANML	DRY	1	1	1	0	0
176	4/5/96	5P	HY450	9.39	FIX	DRY	1	3	2	0	2
18	1/1/92	1P	HY450	10.69	FIX	DRY	1	2	2	0	1
219	5/10/95	6P	HY450	11.21	REAR	DRY	2	3	3	0	1
341	7/29/94	6P	HY450	11.21	TURN	DRY	2	4	3	0	0
226	5/14/96	3P	HY450	11.22	REAR	WET	1	2	2	0	0
387	8/18/95	6P	HY450	11.82	TURN	DRY	2	2	1	0	0
505	10/25/92	8P	HY450	12.47	FIX	DRY	1	1	1	0	0
30	1/14/92	11P	HY450	13.22	FIX	ICY	2	2	0	0	1
211	5/27/94	4A	HY450	13.5	FIX	DRY	1	1	1	0	1
325	7/5/94	9P	HY450	15.2	ANML	DRY	1	2	2	0	0
652	12/13/94	6A	HY450	19.5	ANML	ICY	1	1	1	0	0
161	4/3/92	9P	HY450	20	FIX	DRY	3	5	5	0	2
432	8/2/93	9P	HY450	SP 15.23	HEAD	DRY	2	3	3	0	1
142	3/13/96	8P	HY450	SP 20.23	ANML	DRY	1	1	0	0	0
397	8/22/94	7P	HY451	3.61	FIX	DRY	1	1	1	0	0
259	5/17/93	10P	HY451	4.92	NONC	DRY	2	9	9	0	7
307	6/5/93	5P	HY451	4.92	NONC	WET	1	2	2	0	2
488	10/10/96	7P	HY451	4.92	ANGL	DRY	1	1	1	0	1
488	10/3/94	8P	HY451	5.42	ANML	DRY	1	1	1	0	0
359	7/25/92	9A	HY451	6.35	TURN	DRY	2	3	3	0	0
320	7/18/92	1P	HY451	7.46	O-TN	DRY	3	5	5	0	2
227	5/17/92	5P	HY451	9.4	FIX	DRY	2	4	4	0	2

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STATE HIGHWAY ACCIDENTS IN MALHEUR COUNTY 1992-1996

Accident Number	Date	Time	Location	Mile-post	Collision Type	Surface	Total Vehicles Involved	No. of people in Vehicle 1	No. of people in Vehicle 2	Number Killed	Number Injured
37	1/7/94	6A	HY451	9.65	NONC	DRY	1	1	1	0	0
605	12/6/95	5P	HY451	9.65	TURN	SNO	2	2	2	0	1
68	1/31/96	2P	HY454	1.43	TURN	DRY	1	1	1	0	0
28	1/5/95	6P	HY454	SP 0.00	SS-M	SNO	4	6	6	0	3
436	9/4/94	3A	HY455	0.1	ANML	DRY	1	1	1	0	0
127	3/18/92	11P	HY455	0.21	O-TN	DRY	1	1	0	0	1
313	6/14/93	2P	HY455	0.62	BACK	DRY	2	1	1	0	0
646	12/21/96	1A	HY455	1.25	FIX	ICY	1	5	5	0	0
319	6/19/93	UNK	HY455	4.7	O-TN	WET	1	2	2	0	1
329	7/9/94	8A	HY455	4.7	ANML	DRY	1	1	1	0	0
662	12/23/94	2P	HY455	5.5	REAR	WET	2	2	2	0	0
385	8/6/94	10P	HY455	7	FIX	DRY	1	1	1	0	0
508	10/27/95	9A	HY455	7	O-TN	DRY	1	2	2	0	1
443	9/26/95	2A	HY455	8	ANML	DRY	1	2	1	0	0
283	6/11/92	6P	HY455	8.2	O-TN	DRY	1	1	1	0	1
648	11/22/93	6P	HY455	8.73	FIX	ICY	1	1	1	0	1
348	9/17/94	2A	HY455	9.88	O-TN	DRY	1	5	0	1	4
623	12/1/94	8P	HY455	11.7	FIX	WET	1	2	2	0	0
437	9/5/94	11P	HY455	13.2	ANML	DRY	1	2	2	0	0
46	1/12/96	7A	HY455	13.56	O-TN	ICY	1	1	1	0	0
53	1/28/95	6P	HY455	13.62	FIX	WET	1	2	2	0	1
72	2/12/92	8A	HY455	13.63	FIX	ICY	1	1	0	0	0
481	9/5/93	11P	HY455	13.64	O-TN	DRY	1	1	0	0	1
356	7/22/92	5P	HY455	14.24	REAR	DRY	4	5	3	0	3
134	3/30/92	4A	HY455	14.92	FIX	DRY	2	4	2	0	3
197	4/2/93	8P	HY455	15.93	O-TN	DRY	1	1	0	0	1
138	4/3/92	11P	HY455	16.03	O-TN	DRY	2	4	1	0	3
622	12/23/95	3A	HY455	16.9	O-TN	DRY	1	1	0	0	1
562	11/26/96	8A	HY455	16.96	FIX	ICY	1	1	1	0	0
245	5/30/92	10P	HY455	17.01	O-TN	DRY	1	1	1	0	1
410	9/3/92	2P	HY455	17.21	TURN	WET	2	4	2	0	3
511	10/29/94	1P	HY455	17.21	TURN	DRY	2	3	2	0	2
516	10/30/95	3P	HY455	17.27	REAR	DRY	3	12	3	0	2
352	7/11/93	12P	HY455	17.58	REAR	DRY	1	3	0	0	1
513	9/12/93	7A	HY455	18.07	O-TN	DRY	2	2	2	0	1
663	12/24/92	3P	HY455	18.82	FIX	SNO	1	1	0	0	0
442	9/10/94	5P	HY455	19.27	TURN	DRY	1	1	1	0	0
424	9/14/96	12P	HY455	19.32	TURN	DRY	1	1	1	0	0
653	12/17/92	1P	HY455	19.32	SS-O	ICY	2	2	2	0	2
101	3/16/92	8A	HY455	19.4	FIX	DRY	1	1	0	0	1
387	10/17/96	9P	HY455	19.5	FIX	DRY	1	1	0	1	0
89	2/5/96	8A	HY455	19.55	FIX	ICY	1	1	1	0	0
458	9/20/94	10A	HY455	19.59	FIX	DRY	1	2	1	0	1
288	8/28/95	11P	HY455	19.63	O-TN	DRY	2	3	0	1	0
627	12/12/96	8A	HY455	19.63	O-TN	ICY	1	1	1	0	1
442	9/20/92	5P	HY455	19.65	TURN	DRY	3	9	4	0	0
492	10/16/92	9A	HY455	19.69	O-TN	DRY	1	1	0	0	0
433	9/21/96	6A	HY455	20	ANML	DRY	1	1	0	0	0
62	2/13/95	5P	HY455	20.46	TURN	DRY	1	1	1	0	1
75	2/17/92	10A	HY455	20.67	O-TN	UNK	1	2	0	0	0
428	9/8/95	6A	HY455	20.96	ANML	DRY	1	1	0	0	0
237	5/22/94	UNK	HY455	21	FIX	DRY	1	1	1	0	0
333	7/5/92	3P	HY455	21	FIX	DRY	1	1	1	0	0
386	8/30/96	9P	HY455	21	O-TN	DRY	1	1	1	0	1
57	1/19/96	10A	HY455	21.5	O-TN	ICY	1	2	0	0	1
586	10/27/93	UNK	HY455	21.8	O-TN	DRY	1	3	0	0	1
391	8/12/92	6A	HY455	22.01	ANML	DRY	1	2	0	0	0
179	4/11/96	5P	HY455	22.31	TURN	DRY	2	5	5	0	2
459	10/7/92	7A	HY455	22.31	ANGL	DRY	2	2	1	0	1
59	1/21/96	8A	HY455	22.35	FIX	ICY	1	1	0	0	1
39	1/15/95	4P	HY455	22.41	FIX	DRY	1	1	1	0	0
34	1/4/96	12P	HY455	22.71	O-TN	DRY	1	1	1	0	1
382	8/14/95	9A	HY455	23	SS-O	DRY	2	2	1	0	0
260	6/13/92	12P	HY455	23.06	O-TN	DRY	2	4	1	0	2
279	7/2/96	7P	HY455	23.16	O-TN	DRY	1	2	2	0	1
380	8/12/95	1P	HY455	23.17	TURN	DRY	3	7	4	0	0

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Accident Number	Date	Time	Location	Mile-post	Collision Type	Surface	Total Vehicles Involved	No. of people in Vehicle 1	No. of people in Vehicle 2	Number Killed	Number Injured
487	10/14/92	6A	HY455	23.5	ANML	DRY	1	1	1	0	1
155	4/19/94	10A	HY455	24	REAR	DRY	2	5	5	0	1
8	1/7/95	4P	HY455	24.01	TURN	SNO	3	5	5	0	0
545	11/3/95	12P	HY455	24.01	REAR	DRY	2	2	2	0	0
400	8/24/94	1P	HY455	24.27	REAR	DRY	2	2	2	0	2
141	3/13/96	3P	HY455	24.58	SS-M	DRY	1	2	1	0	0
645	11/18/93	7A	HY455	24.69	FIX	DRY	1	1	1	0	1
480	10/7/95	3P	HY455	25.06	SS-M	DRY	2	4	0	0	0
208	5/1/92	12P	HY455	25.13	TURN	DRY	2	2	2	0	0
234	5/23/92	2P	HY455	25.13	TURN	DRY	2	3	2	0	0
352	7/18/92	1P	HY455	25.13	TURN	DRY	3	5	5	0	6
494	10/12/96	5P	HY455	25.13	REAR	DRY	1	2	2	0	0
509	10/26/96	4P	HY455	25.13	TURN	DRY	1	3	3	0	1
562	11/5/92	10P	HY455	25.13	TURN	DRY	2	4	2	0	2
120	2/13/93	5P	HY455	25.3	FIX	UNK	1	1	1	0	1
154	3/27/96	12P	HY455	25.4	TURN	WET	1	1	1	0	1
289	6/15/93	2P	HY455	25.4	BACK	DRY	1	1	0	0	0
483	10/7/96	8A	HY455	25.45	SS-O	DRY	1	2	1	0	0
133	2/20/93	4P	HY455	27.02	REAR	WET	3	6	6	0	3
622	12/10/96	5P	HY455	29.33	O-TN	WET	1	1	1	0	1
526	9/28/93	9A	HY455	29.8	TURN	DRY	2	2	1	0	0
637	12/6/92	1P	HY455	30.29	MISC	ICY	2	1	1	0	0
63	2/15/95	3P	HY455	30.3	ANGL	DRY	2	2	1	0	2
488	10/14/92	4P	HY455	30.3	ANGL	DRY	3	4	0	0	4
34	1/20/92	8A	HY455	30.3	REAR	ICY	2	2	2	0	1
195	5/19/92	6P	HY455	30.3	ANGL	DRY	2	3	3	0	2
156	3/30/96	3P	HY455	30.31	ANGL	DRY	3	9	5	0	3
638	12/20/96	9P	HY455	30.31	TURN	ICY	1	1	1	0	0
436	9/6/92	2A	HY455	30.32	FIX	DRY	1	1	0	0	0
629	11/2/93	4P	HY455	30.92	REAR	DRY	1	6	6	0	0
300	6/23/92	9A	HY455	31.3	REAR	DRY	4	4	3	0	1
202	4/12/93	4P	HY455	31.3	REAR	DRY	1	1	1	0	0
272	6/25/96	5P	HY455	31.3	REAR	DRY	2	2	1	0	1
640	11/10/93	3P	HY455	31.3	REAR	DRY	1	2	2	0	0
334	6/25/96	4P	HY455	31.31	REAR	DRY	1	1	1	0	1
43	1/10/96	7A	HY455	31.35	SS-M	ICY	2	5	5	0	1
42	1/10/96	7A	HY455	31.43	REAR	ICY	1	1	1	0	1
549	11/14/96	8A	HY455	31.55	SS-O	DRY	2	2	1	0	0
195	5/2/94	8A	HY455	31.67	O-TN	DRY	1	1	1	0	1
161	4/1/94	8P	HY455	31.68	TURN	DRY	1	1	1	0	1
162	4/1/94	8P	HY455	31.68	REAR	DRY	2	1	1	0	0
200	5/15/94	1P	HY455	31.78	REAR	DRY	2	7	3	0	4
121	3/16/92	UNK	HY455	999.99	FIX	DRY	1	1	0	0	1
631	12/14/96	8A	HY455	999.99	FIX	ICY	1	1	1	0	0
571	11/11/92	6P	HY455	SP 11.85	ANML	DRY	3	10	9	0	0
330	7/28/96	6P	HY455	SP 18.10	REAR	DRY	3	4	4	0	0
158	4/2/96	5P	HY455	SP 20.42	TURN	DRY	2	2	1	0	2
86	2/24/92	12P	HY455	SP 20.69	FIX	DRY	1	4	0	0	4
277	6/11/94	5P	HY455	SP 27.02	REAR	DRY	3	4	3	1	1
269	6/3/94	2P	HY455	SP 27.11	REAR	DRY	4	6	5	0	1
643	12/7/92	4P	HY455	SP 28.38	HEAD	ICY	2	2	0	0	2
571	11/16/94	9A	HY456	0.05	REAR	UNK	1	1	0	0	0
140	4/5/92	2A	HY456	1.6	O-TN	DRY	1	3	2	0	3
304	6/3/93	3P	HY456	2.23	O-TN	DRY	1	3	2	0	0
170	4/15/95	5A	HY456	3.4	O-TN	DRY	1	1	1	0	0
82	2/9/94	10P	HY456	3.51	SS-M	SNO	1	1	1	0	1
321	7/1/94	UNK	HY456	4	O-TN	DRY	1	1	1	0	0
99	3/15/92	3P	HY456	4.7	FIX	DRY	1	1	1	0	1
145	3/16/96	10A	HY456	5	O-TN	DRY	1	2	0	0	1
154	3/28/95	8P	HY456	5.5	REAR	DRY	3	3	3	0	1
337	8/6/96	12P	HY456	7.3	O-TN	DRY	1	4	2	0	0
696	12/12/93	11A	HY456	8.8	O-TN	WET	1	1	1	0	0
46	1/13/93	5P	HY456	8.98	TURN	ICY	1	1	1	0	0
16	1/21/95	8A	HY456	10	O-TN	DRY	1	1	1	0	0
36	1/5/94	8P	HY456	12.44	O-TN	ICY	1	6	6	0	0
276	6/11/94	1P	HY456	13	O-TN	DRY	1	2	2	0	1

TABLE I-2
MALHEUR COUNTY
ROAD ACCIDENT HISTORY (1/1/96-9/18/97)

Accident Number	Date	Time	Street	Cross Street	Injuries	Alcohol
1996-00039	7/15/96	2:15	Yturri		N	Y
1997-00076	6/25/97	11:25	Russel	Recla	N	Y
1996-00023	6/26/96	21:40	Railroad	Hwy 201	N	N
1996-00061	9/21/96	9:48	Railroad	Hwy 201	N	N
1996-00082	11/11/96	19:57	Railroad	Butte	N	N
1997-00048	4/18/97	22:20	Railroad	Halliday	N	Y
1997-00049	4/21/97	18:40	Railroad	Butte	N	Y
1997-00104	8/17/97	17:56	Railroad	Clark	N	Y
1997-00069	6/12/97	16:55	Owyhee Lake		N	N
1997-00107	8/19/97	14:00	Owyhee Lake		N	N
1997-00062	5/31/97	15:10	Owyhee	Hwy 201	N	N
1997-00097	7/30/97	8:27	Owyhee	Heritage	N	N
1996-00010	5/11/96	17:15	Overstreet	Kurtz	N	N
1996-00094	12/8/96	19:13	Lytle		N	N
1997-00064	6/1/97	16:48	Lytle		N	N
1997-00116	9/2/97	21:30	Lytle		N	N
1997-00105	8/19/97	1:00	Lincoln	Butler	N	N
1996-00050	8/13/96	9:35	Ivanhoe	Hwy 201	N	Y
1996-00007	4/16/96	14:10	Foothills	Butte	N	N
1997-00106	8/21/97	10:25	Enterprise	Echo	N	N
1996-00089	11/28/96	17:50	Clark	Green	N	Y
1996-00044	7/24/96	16:10	Butte	Hwy 20/26	N	Y
1996-00031	7/7/96	21:25	Bully Creek	Graham	Y	Y
1997-00071	6/14/97	16:19	Bully Creek		Y	Y
1996-00012	5/18/96	20:12	Boatlanding	Hwy 52	Y	N
1996-00016	6/6/96	7:30	Aracdia	Gamble	N	N
1996-00083	11/18/96	15:50	Aracdia	Gem	N	Y
1997-00036	3/28/97	18:00	Aracdia	Columbus	N	N
1997-00089	7/11/97	14:25	Aracdia	Gem	N	N
1996-00074	10/14/96	11:30	Alameda	Railroad	N	N
1996-00087	11/24/96	4:30	Alameda	King	N	N
1996-00093	12/7/96	15:30	Alameda	Railroad	N	Y
1997-00001	1/1/97	:30	Alameda	King	N	N
1997-00093	7/23/97	1:05	Alameda	Morgan	Y	N

County of Malheur

251 'B' STREET WEST • VALE, OREGON 97918

Public Works
541-473-5191

FAX & MAILING

March 6, 1998

Andy Mortensen
W&H Pacific
8405 SW. Nimbus Avenue
Beaverton, OR 97008-7120

RE: Malheur County TSP

Dear Andy:

Rather than send you my marked-up draft document, I decided to write up a list of my suggested changes, which is attached. You are already aware of many of these. I presume you will search and revise the text as necessary to reflect these changes.

Please call me if there are any questions or problems.

Sincerely,

Jim

Jim Kimberling
Public Works Director

enclosure

LIST OF CHANGES
TO THE
MALHEUR COUNTY TSP FINAL DRAFT

Page	Item
-	In the Acknowledgements, under Staff, "Jon Beal" is mispelled.
i	Delete dots after The Transportation System Management (TSM)/Transportation line.
ii	Change the name of Appendix B to "State and County Roadway and Bridge Inventory Data".
	Change the name of Appendix C to "State Highway Future Traffic Projections".
	Change the name of Appendix D to "State Highway Level of Service Analysis".
	Change the name of Appendix F to "Draft Malheur County Roadway Ordinance".
	Correct the name of Appendix G to "Transportation Systems Funding Sources".
iii	Figure 7-3 is on Page 7-8.
1-3	In Figure 1-1 delete "Jordan Valley District" and its boundary line, and revise District 2's boundary.
2-3	In Figure 2-1 same comments as Figure 1-1 above.
2-8	In Paragraph 4., last sentence, change "(Adrian Arenak) 450 Parma 5 pm" to "(Adrian-Arena), 450 (Parma)".
4-19	In the State bridge list change the last one to "Highway 20/26 over the Snake River at Nyssa (mp 266.81)."
5-5	Figure 5-3 is missing.
7-1	All of Chapter 7 needs to be double-sided pages.
7-11	In Table 7-2 there is a superscript 2 after Highway 201 that refers to what?
7-13	Under Project 6 replace the last two sentences with: "One bridge has been rehabilitated and another is under contract for replacement. Planning level costs are estimated to be $1.13 million for the remaining twelve bridges. Current County and Road District funding levels are expected to be adequate to cover this cost."
7-14	Under Project 8 in the third sentence delete "County".
	Under Project 8 in the last sentence replace "County" with "Road District".
	Under Project 10 add "Assuming the Homedale Branch Line RR will be abandoned," to the beginning of the second sentence.
	Under Project 10 delete the second (last) paragraph.
7-15	Under Project 11 in the next to last sentence delete: "and the Nyssa Road District".
	Under Project 13 replace the last sentence with: "These intersection safety improvements should be

MALHEUR COUNTY POTATO GROWERS ASSOCIATION

October 14, 1997

Judge Russ Hursh
Commissioner Tom Butler
Commissioner John Bishop

Dear Sirs,

The Malheur County Potato Growers wish to express their concerns over the county traffic flow problems in the Ontario area. Many of our farm trucks must pass through Ontario hauling potatoes to the Ore-Ida plant. The increased traffic in the town over the past few years makes truck traffic a problem. A south by-pass along SW 18th Avenue would alleviate much of this problem as well as divert most of the semi-truck traffic away from the town. This would reduce the traffic problem in town and increase the safety of Ontario city streets.

Ore-Ida is the major processor of Malheur County potatoes and are delivered to the plant in farm trucks during the harvest season or are stored in out-lying storages and delivered by semis during the remainder of the year. Diverting these trucks from the center of town makes sense and is a high priority for the potato farmers of this county.

Your help will be greatly appreciated.

Sincerely,

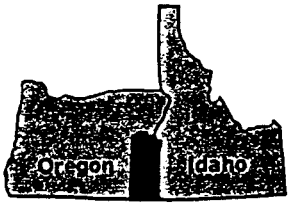
R J. Pressley

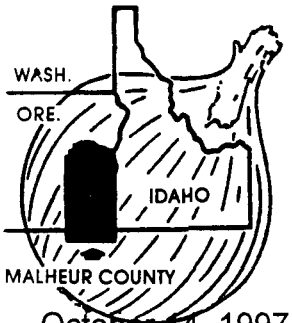
Ron Pressley, President
Malheur County Potato Growers

cc Bob Graham
W & H Pacific

RP/mj

710 S.W. 5TH AVE.
ONTARIO, OREGON
97914
(503) 881-1417





Malheur County
ONION GROWERS ASSOCIATION

"The Home of Mild Sweet Spanish Onions"
710 S. W. 5th Avenue . . . Ontario, Oregon 97914
Phone (503) 881-1417

October 14, 1997

Judge Russ Hursch
Commissioner Tom Butler
Commissioner John Bishop

Dear Sirs:

I am writing on behalf of the Malheur County Onion Growers Association to encourage you to promote the solution to a growing problem. That problem is increased truck traffic in the Ontario city limits. Many of our farm trucks pass through Ontario delivering onions and other produce to sheds in Ontario or ones on the Idaho side. Onion acreage has increased from about 5,000 acres ten years ago to over 12,000 acres today in Malheur County. That represents about 30,000 farm truck loads going to the local packing sheds. I do not have an estimate of the number of loads that would go to Ontario, but since two of the highest volume onion sheds are located in Ontario, it is safe to say that a sizable percentage of those trucks go through town.

The increased traffic through Ontario in recent years makes it more difficult and time consuming for our truck drivers to get to their destination. Increased truck traffic (farm and semi's) makes traveling in Ontario more dangerous. Building a south by-pass would relieve the town of much of the truck traffic and improve the safety and convenience for car drivers. A south by-pass would allow us to get our trucks into the packing sheds without creating a hardship on car traffic. I feel a south by-pass along SW 18th Avenue is the most urgent problem facing Malheur County traffic today. Please do all you can to facilitate this project. Thank you.

Sincerely,

Reid K. Saito

Reid Saito, President
Malheur County Onion Growers Association

RS/tn

cc Bob Graham
W & H Pacific

4-14-98 Public Hearing 9:30 AM

4-14-98

Twenty Year Planning should include a diesel street car from Boise to Nyssa Vale, Ontario and Weiser. Part of the money could come from rail roads who have a monopoly on the freight from the area.

Josiah Batchelder

Oregon
John A. Kitzhaber, M.D., Governor

Transportation & Growth Management Program
1175 Court Street NE
Salem, OR 97310-0590
(503) 373-0066
FAX (503) 378-2687

A Joint Program
of the
Department of
Transportation
and the
Department of
Land Conservation
and
Development

Larry Ksionzyk
Land Use and Transportation Planner
Transportation & Growth Management

Jim Kimberling
Jon Beal
Malheur County
251 "B" Street West
Vale, Oregon 97918

Thank you for forwarding us a copy of the Malheur County Transportation System Plans for our review. It is obvious that you and everyone involved in the process has spent a great deal of time and effort assembling the information necessary to produce this document.

This letter does not separated my comments on Vale and Jordan Valley from my comments on Malheur's TSP because I believe you will have an interest in them too. I have divided these comments into two parts. In the first, they are general and apply to all the plans. In the second section, my comments are specific to each plan. You will find comments on Malheur County in the general section and in the Malheur County section.

General Comments:

The Malheur County, Vale and Jordan Valley studies recommend street standards and ordinance changes to facilitate implementation of the Transportation System Plan. These recommendations should identify the specific chapter and section of the ordinance that is to be updated and then make the appropriate changes to them. Street sections and their supporting tables should also show narrower standards. The Transportation Planning Rule (OAR 660-12-045(7)), directs local governments to establish standards for local streets that minimize pavement width and total right of way consistent with the operational needs of the facility. Examples of these standards can be found in "Skinny Streets" and APA's "Recommendations for Pedestrian, Bicycle and Transit Friendly Development Ordinances." Each cross section should include the following where appropriate: street trees, planting strips, sidewalks, bike lanes, on street parking, curbs, shoulders, swales, crosswalks, bulbed corners, pavement widths, pedestrian scaled lighting, bicycles (Highways 20 and 95 are State Designated Bicycle Routes), right of way, speed limit signs and approximate building setback.

The DLCD supports the proposal to designate Special Transportation Areas in the

standards and the function of affected streets, to insure that new development provides on-site streets and access ways 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." Change the third paragraph to read: *This option is recommended for Vale.* Also, in **Table 6-5**, on page 6-13, change **Project 15**'s recommendation from "*Do not Implement*" to "*Implement - Low Cost,*"to be consistent with above.

In **Figure 4-3**, it is difficult to distinguish where sidewalks are planned for one side of the street and where they are planned for two sides.

A figure for the proposed STA project should include street sections showing the following pedestrian scale design elements: street trees, planting strips, on street parking, pedestrian scale lighting, street furniture, crosswalks, mid block crossings, bike lanes, curbs, building setbacks and street widths.

Please include figures that show where existing streets will connect to new developments and how these developments will connect to existing and adjacent developments (see: Vale's Comprehensive Plan Map 1845 C which shows developed land adjacent to land in the UGA). On page 7-3, **Figure 7-3**, the location of proposed connections to existing streets should be clearly shown on this map and described in the text. The APA in, "Recommendations for Pedestrian, Bicycle and Transit Friendly Development Ordinances," 1993, suggests that the following ordinance language is used to assure that streets in new developments connect to existing streets: "All streets, alleys and pedestrian pathways shall connect within the development and to existing and planned streets outside the development. Streets shall terminate at other streets or at parks, schools or other public land within a neighborhood. Local roads shall align and connect with other roads when crossing collectors and arterials."

Table 7-2, should recommend pedestrian scaled street lighting for the STA and local streets. The Transportation and Planning Rule defines pedestrian scale as: "site and building design elements that are dimensionally less than those intended to accommodate automobile traffic, flow and buffering. Examples include ornamental lighting of limited height;" (roughly, 14 feet high or less).

Table 7-3, Implementation Plan. It may be possible to begin work on the Malheur Bike Path sooner than is shown in the table. The City of Vale can start by exploring the availability of ISTEA Enhancement Funds for the project immediately, as recommended on page 8-11, second paragraph.

Page 9-1, first bullet, delete a typographical error - *that*.

Vale and Jordan Valley plans. The STA's could be a useful tool to help communities comply with the goals of the Transportation System Plan while ensuring that ODOT's facilities outside the Urban Growth Boundaries maintain their level of service. I suggest that the definitions, findings, policies and ordinances necessary to implement STA's for each jurisdiction be included in their respective plans; and that proposed boundaries be clearly indicated on the Recommended Street Project Map and supported by tables and sections that show their design elements. These elements should include: street trees, planting strips, on street parking, pedestrian scale lighting, street furniture, building setbacks, crosswalks, mid block crossings, corner bulbing, bike lanes, curbs, speed limit signs and street widths.

In each study, a paragraph on cul-de-sacs and access ways is included in the **Approval of Subdivision Section**. Please delete the following typographical error: *access ways shall be provided connecting the ends of cul-de-sacs are planned,*

Specific Comments:

Comments and Recommended Changes for the Malheur County Study:

Change the roadway cross sections in **Figure 7-1**, page 7-2, to show how bicycle and pedestrian traffic are accommodated (Highway 95 and 20 are designated state bicycle routes).

Comments and Recommended Changes for the Vale Study:

On page 6-5, the cost of sixteen curb extensions is listed as $32,600. This amount seems low.

Please show a cross section for the proposed Malheur River bike path that includes its design elements.

Page 6-12, **Project 15: Revise Zoning and Development Codes to support alternative travel modes**. Please delete the second paragraph of this section and change the recommendation of the third paragraph. The second paragraph suggests that a city as small as Vale would not benefit from the code changes that are *required* by Section 660-12-045, of the Transportation Planning Rule. Subsection (045 (3)) states: "Local governments shall adopt land use or subdivision regulations for urban areas and rural communities [to require:] as set forth below. The purposes of this section are to provide for safe and convenient pedestrian, bicycle and vehicular circulation consistent with management

Comments and Recommended Changes for the Jordan Valley Study:

On page 5-3, the study states that the single largest employer, the Kin Ross Delamar Mining Company, with approximately 250 employees, is expected to close in five to seven years. Do the projected population figures take this into account?

Page 6-2. The effect of **Project 1**, page 6-2, **Modify Turning Radius on US Highway 95 in Jordan Valley.** The text reads: "this will allow vehicles to make the turn at higher speeds and drive faster through town." This is inconsistent with the goals of **Project 2**: **Implement Measures to Reduce Speeding on Highway 95 in Jordan Valley** and the proposed Special Transportation Area included in **Project 4, Provide and Implement Access Management for Highway 95 in Jordan Valley**. Would it be possible to use the funds that are presently slated for realigning the turn to instead fund the proposed STA?

Project 2, page 6-2. The Institute of Transportation Engineers states that the posting of speed limits has little effect on how fast drivers drive. The determining factors are a street's design and feel:"In the United States, studies have generally shown that speed limit signs have very little impact on driver speed on major streets. Drivers consistently ignore posted speed limits, and run at speeds which the drivers consider reasonable, comfortable, convenient and safe under existing conditions. Divers appear not to operate by the speedometer but by the conditions they meet." Design elements that would make the street appear slower and effectively reduce speeding are the same as those that make a street appealing to pedestrians: sidewalks, street trees, planter strips, on street parking, mid block crossings, crosswalks, pedestrian scaled lighting and bulb corners.

cc: Bob Cortright, TGM
John Preston, ODOT