

City of Creswell Transportation System Plan

Prepared for
the City of Creswell

Prepared by
Lane Council of Governments

August 1998

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Disclaimer

The inclusion of proposed projects and actions in this plan does not obligate or imply obligations of funds by any jurisdiction for project level planning or construction. However, the inclusion of proposed projects and actions does serve as an opportunity for the projects to be included, if appropriate, in documents such as the State Transportation Improvement Program (STIP). Such inclusion is not automatic. It is incumbent on the state, county, city, and general public to take action to encourage and support inclusion into the STIP at the appropriate time.

Projects included in the STIP are required to have funds available so the number of projects which can be included are constrained by funding levels.

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Table of Contents

Chapter 1. Introduction

A. Overview	1
B. Plan Context	1
C. Planning Assumptions	2
D. Planning Process	2
E. Organization of the Plan	3

Chapter 2. Existing Conditions

A. Introduction	5
B. Road System	5
C. Bicycle System	12
D. Pedestrian System	12
E. Public Transit	12
F. Air, Rail, Water, and Pipelines	15
G. Natural Resource Features	16
H. Land Use	17
I. Cultural Features	19
J. Transportation Issues	21

Chapter 3. Future Conditions and Transportation Needs

A. Introduction	23
B. Population and Employment	23
C. Allocation of Housing and Employment	26
D. Projected Traffic Volumes	26
E. Public Transportation	32
F. Bicycle and Pedestrian System	32

Chapter 4. Recommended Transportation System Plan

A. Introduction	33
B. Transportation System Plan Goals	33
C. Transportation System Plan Policies	34
D. Proposed Street Plan	37
E. Roadway Classification	39
F. Street Standards	41
G. Interstate 5 Interchange Refinement Plan	47
H. Access Management	48
I. Proposed Bicycle Plan	48
J. Proposed Pedestrian Plan	49
K. Proposed Transit Plan	49

Maps

1	Study Area	6
2	Roadway Condition	7
3	Access Controlled Areas and Jurisdictional Responsibility	8
4	Location and Number of Accidents 1/91 Through 10/96	10
5	Average Daily Trips	11
6	Existing Sidewalks	13
7	Plan Designations	18
8	Transportation Issues	20
9	Vacant Land and Transportation Analysis Zones	27
10	Estimated Daily Traffic Volumes - 2015	29
11	Estimated PM Peak Hour Traffic Volumes - 2015	30
12	Estimated PM Peak Hour Congestion - 2015	31
13	Proposed Street Plan	38
14	Proposed Roadway Classification	40
15	Proposed Truck Routes	42
16	Proposed Bicycle Plan	50
17	Proposed Pedestrian Plan	51
18	Proposed Transit Service Areas	52
19	High-Priority Capital Projects	60
20	Medium-Priority Capital Projects	61
21	Low-Priority Capital Projects	62

Figures

1	Arterial Roadway Standards	43
2	Major Collector Roadway Standards	44
3	Minor Collector Roadway Standards	45
4	Local Street Standards	46

Tables

1	Creswell Housing Units Projections	24
2	Lane County Employment Projections	25
3	Creswell Employment Projections	25
4	Vacant Acres by Plan Designation by TAZ	26
5	Proposed Street Standards	41
6	Proposed Access Spacing	48
7	Capital Projects Summary	63-64

Appendices

- A TSP Inventory Database Methodology
- B Existing Roadway Conditions Database
- C Employment Allocation and Dwelling Units
- D Citizen Involvement Plan
- E Traffic Modeling Process and 1994 Base Case Analysis
- F Capital Project Cost Assumptions
- G Glossary of Terms
- H Compatibility with State Transportation Planning Rule and Other Plans

The following appendix is available under separate cover:

- I Interstate 5 Interchange Refinement Plan

Chapter One

Introduction

A. Overview

The City of Creswell (City), in coordination with Lane County and the Oregon Department of Transportation (ODOT), initiated a study of the City's transportation system in May 1996. The purpose of the study is to provide a long-range policy document and project list that will guide the development of Creswell's transportation system for the next 20 years. The Transportation System Plan (TSP) will be updated every five years. The goals and policies contained in the TSP will become part of Creswell's Comprehensive Plan and Ordinance and amendments will be completed to implement these policies.

The TSP will be used as the basis for the development of transportation related capital improvements. It addresses multiple transportation modes including bicycle, pedestrian, automobile, and public transportation as well as air, rail, and pipeline issues.

B. Plan Context

In 1991, and later revised in 1995, the Land Conservation and Development Commission (LCDC) adopted the Transportation Planning Rule (TPR) (OAR 660-12-010) to guide regional and local transportation planning. The primary purpose of this rule is to carry out the purposes of LCDC Goal 12: Transportation. The TPR requires cities and counties to develop a plan including the following:

- A road plan for a network of streets;
- A bicycle and pedestrian plan;
- A public transportation plan;
- An air, rail, water, and pipeline plan;
- A transportation finance plan, and
- Policies and ordinances for implementing the transportation system plan.

The purpose of Oregon's Statewide Planning Goal 12: Transportation is "To provide and encourage a safe, convenient and economic transportation system." Goal 12 states:

"A transportation plan shall

- (1) Consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian;
- (2) Be based upon an inventory of local, regional and state transportation needs;
- (3) Consider the differences in social consequences that would result from utilizing differing combinations of transportation modes;
- (4) Avoid principal reliance upon any one mode of transportation;
- (5) Minimize adverse social, economic and environmental impacts and costs;
- (6) Conserve energy;
- (7) Meet the needs of the transportation disadvantaged by improving transportation services;
- (8) Facilitate the flow of goods and services so as to strengthen the local and regional economy; and
- (9) Conform with local and regional comprehensive land use plans."

The TSP is intended to meet all of the requirements of the state's TPR, the administrative rule that implements Goal 12. A discussion of the compatibility of the TSP with state law and other plans is included as Appendix H.

C. Planning Assumptions

The focus of the TSP are the transportation systems and issues within Creswell's urban growth boundary (UGB). The planning time frame for the TSP is to the year 2015. During the development of the TSP several factors were recognized to exist outside the UGB that greatly influence transportation planning within the UGB. These factors include the location of adjacent employment areas, rural residential development dependent on the City, and the jurisdictional responsibility and design of existing transportation facilities. These factors are addressed in the TSP as appropriate.

In 1996, the population inside the Creswell city limits was estimated at 2,715. Approximately 700 more people reside outside the city limits but within the UGB, bringing the total population within the UGB to about 3,400 people. A population estimate within the UGB for the year 2015 is about 5,400 people, assuming an annual average growth rate of 2.6 percent which is similar to what actually occurred between 1980 to 1995.

D. Planning Process

Citizen involvement was an important component of the TSP process. Development of Creswell's TSP was guided by a citizen's advisory committee (CAC) approved by the Creswell City Council. CAC members represented a range of transportation and governmental interests including bus service, business, bicycle transportation, police department, school, senior/disabled, fire department, airport, development, mayor, and planning commission. The CAC met on a monthly basis during the development of the TSP. The Goals of the CAC were to:

- Develop a TSP consistent with the state TPR;
- Develop a citizen involvement plan that fits local conditions and priorities;
- Develop a TSP that provides an efficient transportation system for pedestrians, bicyclists, public transit users, and automobile users, and for the movement of goods and the provision of services; and
- Make recommendations to the Planning Commission and the City Council for adoption and implementation of the TSP.

Public involvement activities included presentations to a joint meeting of the Creswell Chamber of Commerce and Kiwanis. A public workshop was held at the Creswell Community Center on April 29, 1997. This workshop introduced the community to the TSP process and solicited input on identified transportation issues. ODOT staff also used the workshop to present the Interstate 5 Interchange Refinement Plan scope and draft alternatives.

The draft TSP was released to the public in January 1998. A copy of the draft plan was forwarded to ODOT, Lane County, Lane Transit District, and the Department of Land Conservation and Development. Staff met with the CAC in March 1998 to review agency comments and in April another public open house was held to gain public input.

Comments received during review of the TSP and staff response to these comments were summarized into a single document. This document was presented at a joint work session with the Creswell Transportation Citizen's Advisory Committee, Creswell Planning Commission, and Creswell City Council in May 1998. Following this meeting, changes to the plan were noted in an amendments documents.

A joint public hearing on the TSP was held with the Creswell Planning Commission, Lane County Planning Commission, and Lane County Roads Advisory Committee on June 4, 1998. Changes as a result of the public hearing were forwarded with a recommendation to the Creswell City Council and Lane County Board of Commissioners. The elected officials held a joint public hearing on August 10, 1998. The TSP was officially adopted by both elected bodies on August 10, 1998.

Adoption of the TSP constitutes an amendment to the Creswell Comprehensive Plan. As such, amendments to the Comprehensive Plan must also be adopted by Lane County. The TSP goals and policies will replace transportation-related goals and policies in the Comprehensive Plan. The rest of the TSP will be incorporated into the Comprehensive Plan as a Transportation Element and will replace transportation related background information. The TSP goals and policies are the only part of the plan that will have the force of law. The Transportation Element will provide background information and guidance for revisions to Creswell's Zoning and Subdivision Ordinances.

E. Organization of the Plan

The TSP is organized into six chapters and several appendices.

Chapter One: Introduction - This chapter introduces the TSP context, assumptions, and planning process.

Chapter Two: Existing Conditions - This chapter describes the TSP study area. It presents a description and inventory of the existing transportation system including roadway, bicycle, pedestrian, and public transportation, and air, rail, and pipeline elements. The chapter also presents a discussion of natural and cultural features related to these systems. The chapter also describes identified transportation issues within the study area.

Chapter Three: Future Conditions and Transportation Need - This chapter presents a detailed discussion of projected population, employment, and transportation volumes. It also describes the projected transportation needs for each of the plan elements.

Chapter Four: Recommended TSP - This chapter describes and presents maps of the recommended transportation system plan for each of the transportation elements. It also presents recommended goals and policies to implement the TSP.

Chapter Five: Plan Implementation - This chapter describes the various actions required to implement the TSP. Implementation actions include prioritized capital improvement projects, Ordinance revisions, and other implementation strategies.

Chapter Six: Financing Strategies - This chapter describes existing and potential funding sources to implement the preferred capital improvements and other implementation strategies described above.

Chapter Two

Existing Conditions

A. Introduction

The development of the City of Creswell (City) Transportation System Plan (TSP) began with an assessment and evaluation of the existing transportation system within the Creswell study area. The study area is essentially the entire Creswell urban growth boundary (UGB) as shown on Map 1. The Creswell UGB contains about 1,220 acres, 630 acres of which are within the city limits. The UGB contains lands both east and west of Interstate 5. The Interstate 5 Interchange is a significant transportation feature in the community. The I-5 Interchange Refinement Plan contains much more detailed existing conditions for the Interchange/Oregon Avenue/Highway 99 area. This information includes level of service calculations at key intersections within this area.

B. Road System

A complete inventory of Creswell's road system was conducted in summer 1996. All roadway segments in the UGB were evaluated for pavement condition, number of lanes, and surface type. The pavement width and right-of-way width for each segment was also recorded, in addition to the location of on-street parking along arterials, jurisdictional responsibility, and areas of access control. The methodology used to develop the inventory and a spreadsheet containing this information are presented in Appendix A. Other information collected included the location of traffic control devices, the number and location of traffic accidents, and average daily traffic counts.

Roadway Condition

Map 2 illustrates the roadway condition within the UGB. In general, most roadways that are paved are either in good or fair condition. This map also shows the location of gravel roadways and unbuilt public right-of-ways.

Access Control and Jurisdictional Responsibility

Roadways within the Creswell UGB are under the jurisdiction of the City, Lane County, or the Oregon Department of Transportation (ODOT). These areas are shown on Map 3. Highway 99 (Goshen-Divide Highway) and Cloverdale Road (Springfield-Creswell Highway) are the primary state facilities besides Interstate 5. Melton Road east of Interstate 5 is also under state control. County facilities include those facilities outside the Creswell city limits but within the UGB. As areas within the city are annexed, the City normally develops an agreement with Lane County to take over maintenance responsibilities for these roads. The majority of the roads within the UGB are under City control. One exception is Dale Kuni Road, which runs from Cloverdale Road to Highway 99. The entire length of Dale Kuni Road, which includes sections within the current city limits, remain under county control.

ODOT has two types of access management for state roadways: access by permit and access control. Access control is the most restrictive form of access management, limiting the number and type of access points. These areas are also shown on Map 3. In general, ODOT has access control on Oregon Avenue about 750 feet west of the interchange and on Cloverdale Road from the interchange to the east edge of the UGB.

To Highway 99



Creswell Airport



Garden Lake Park



City of Creswell

Creswell High School

Creslane Elem. School

Creswell Middle School

Creswell Transportation System Plan

Map 1

Study Area



UGB



Creswell Transportation System Plan

Map 1

Study Area



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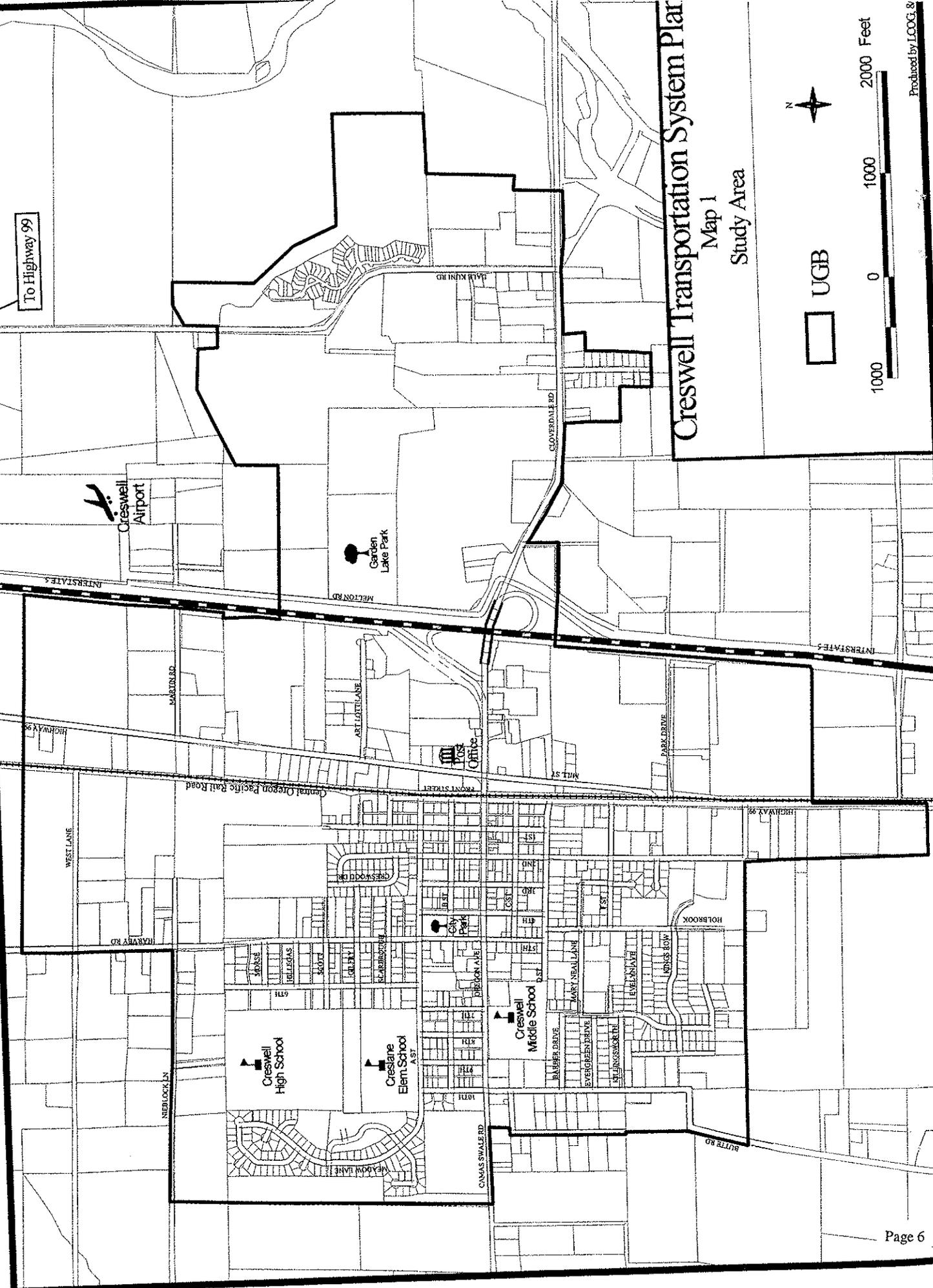
To Highway 99



Creswell High School

Crestane Elem School

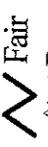
Creswell Middle School



Creswell Transportation System Plan

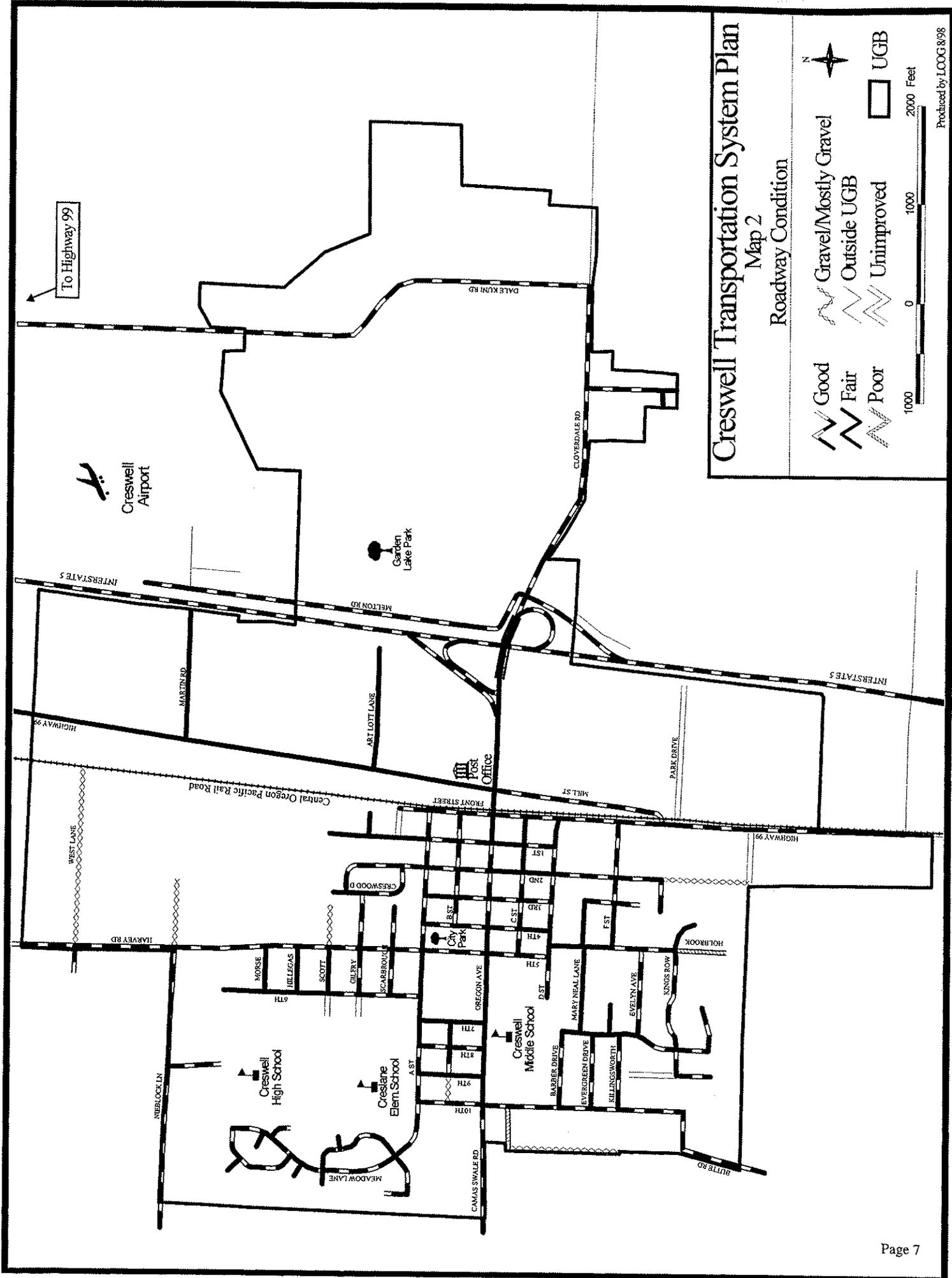
Map 2

Roadway Condition

-  Good
-  Fair
-  Poor
-  Gravel/Mostly Gravel
-  Outside UGB
-  Unimproved
-  UGB



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Creswell Transportation System Plan

Map 3

ODOT Access Controlled Areas and Jurisdictional Responsibility

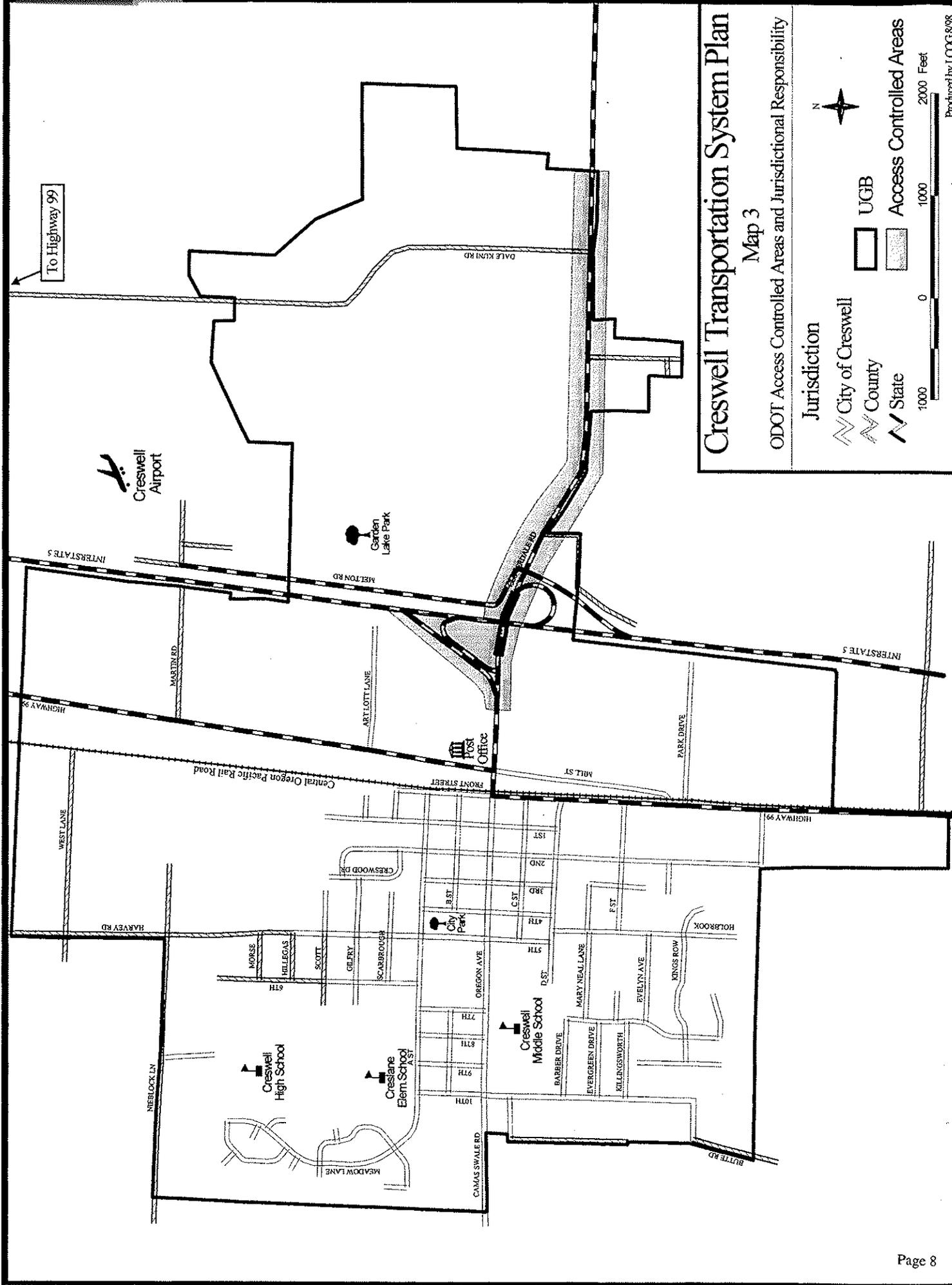
Jurisdiction

-  City of Creswell
-  County
-  State

Access Controlled Areas

-  UGB
-  Access Controlled Areas

1000 0 1000 2000 Feet

Traffic Control

The only signalized intersection in Creswell is at the corner of North Highway 99 and Oregon Avenue. This intersection controls traffic east-west along Oregon Avenue and north-south between Highway 99 and Mill Street. This signal was installed in summer 1975 and is maintained by ODOT with electrical cost funded by the City. The Level of Service calculated at this intersection is Level C.

Flashing warning lights are also located along Oregon Avenue near the railroad crossing. These lights are also maintained by ODOT. The Level of Service calculated at this intersection is Level E.

Accidents

The number and location of traffic accidents were tallied for the period January 1991 through October 1996 are shown on Map 4. A total of 84 accidents occurred during this period. The area near the corner of Highway 99 and Oregon Avenue had the highest number of accidents with 18. The areas just east and west of the Interstate 5 Interchange also had a relatively high number of accidents during this period. No fatalities were noted during the recorded period. Two accidents involving pedestrians were noted during the review period.

Traffic Counts

The existing transportation system is dominated by automobile and truck traffic. Alternative modes such as bicycles and pedestrians are present but represent only a small portion of the total trips within the study area. Average daily traffic volumes are presented on Map 5. As shown on this map, the majority of trips enter or leave Creswell via Oregon Avenue and Interstate 5. At about 12,400 daily trips per day on average, the stretch of Oregon Avenue from the Highway 99 traffic signal to Front Street receives the greatest number of traffic trips daily. The next highest number of average daily trips is the stretch of Oregon Avenue from the Highway 99 traffic signal east to the Interstate 5 Interchange. This stretch receives the highest P.M. peak hour traffic trips per day.

In addition to the data presented on this map, current traffic counts were used to project future traffic volumes to the year 2015. These data, including a calculation of roadway capacity and existing and projected congestion ratios, are presented in Chapter 3.

As discussed above, ODOT conducted an Interstate 5 Refinement Plan concurrent with the development of the TSP. As part of the refinement plan, additional data were collected including traffic volumes, turning movements, and a 14-hour manual classification count. These data are presented in the refinement plan included as Appendix I.

Creswell Transportation System Plan

Map 4

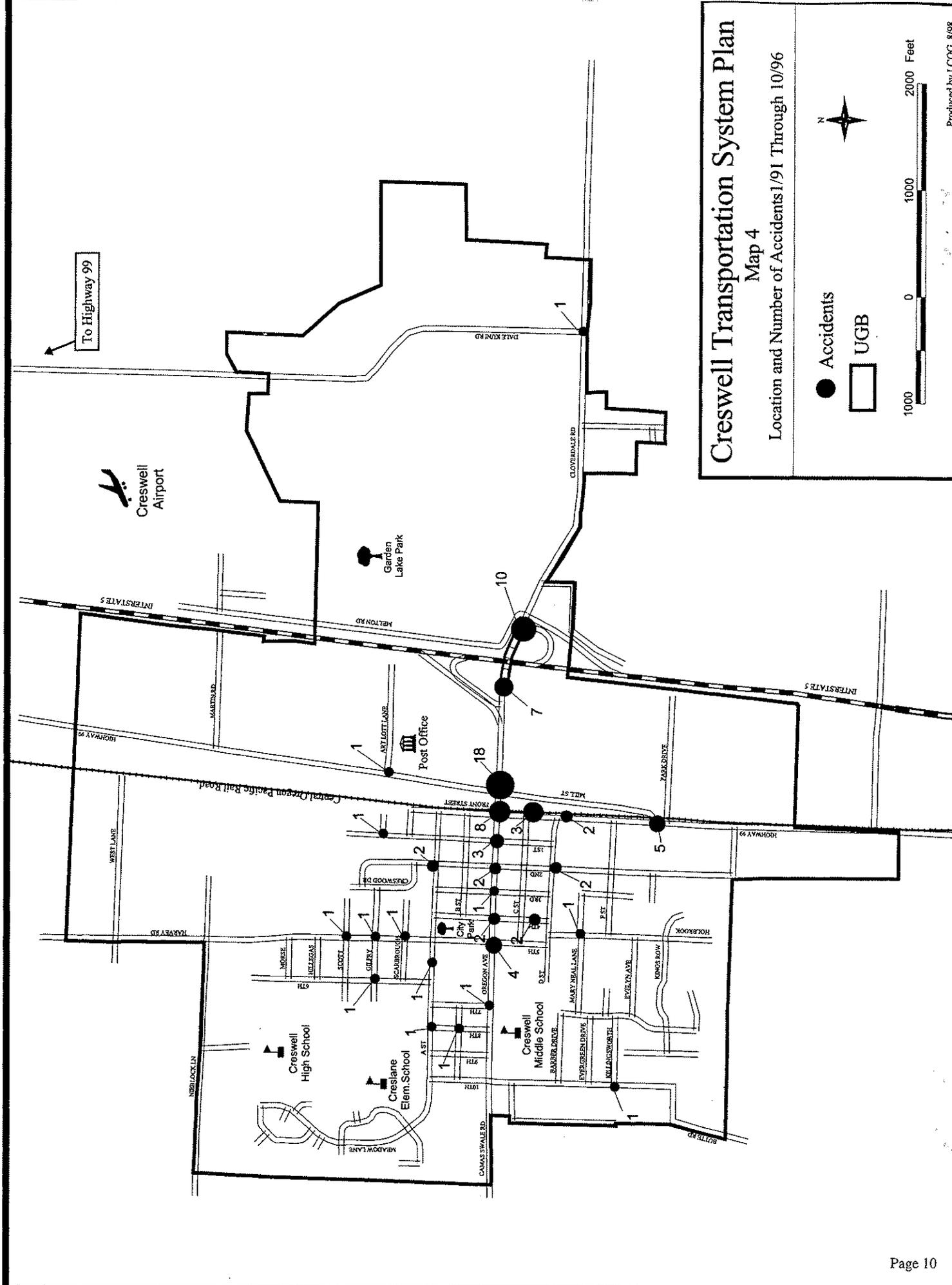
Location and Number of Accidents 1/91 Through 10/96

● Accidents

□ UGB



Produced by LCOG, 8/98

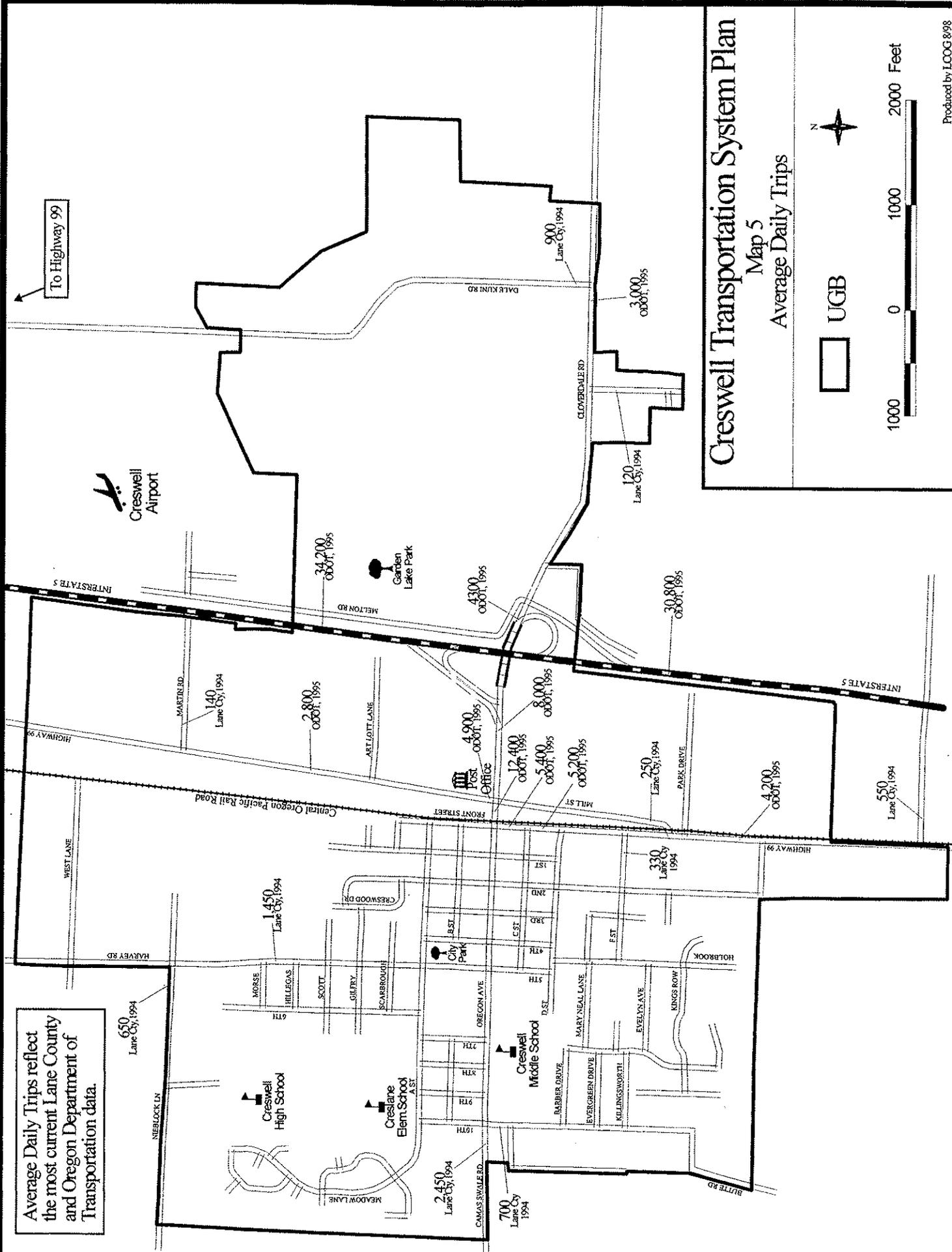


Average Daily Trips reflect the most current Lane County and Oregon Department of Transportation data.

Creswell Transportation System Plan

Map 5

Average Daily Trips



C. Bicycle System

Currently, there are no designated bicycle facilities in the City. Bicycle usage appears to be low to moderate and generally occurs within the street or on sidewalks. The use of sidewalks by bicyclists can present conflicts with pedestrian use of these facilities. Creswell is well suited to increased bicycle usage in town with its small size and relatively flat terrain. The development of adequate bicycle facilities should encourage increased recreational and short trip bicycle usage.

D. Pedestrian System

The pedestrian system within the study area is limited to sidewalks. During the inventory phase of the project, all sidewalks within the study area were mapped and evaluated for condition. Also, the location of wheelchair ramps and crosswalks were noted. The location of existing sidewalks is presented on Map 6. Most sidewalks are about five feet wide and the condition of these facilities range between good and poor. Street segments on the map indicated as partial sidewalks usually have a sidewalk on only one side or a part of one side. Key areas that lack sidewalks or require sidewalk repairs are included on the list of pedestrian system improvements.

E. Public Transit

Until September 22, 1997, public transportation in and around Creswell was limited to demand-response service to the elderly and persons with disabilities operated by South Lane Wheels and volunteer-based services for the elderly and persons with disabilities. There are no inter-city bus or rail connections.

Fixed-Route Transit Services

Lane Transit District (LTD) is the sole fixed-route, public mass transit provider operating within Lane County. LTD's service boundaries were originally established in 1971 when the District was formed and includes those communities that participate in paying a business payroll tax, the local funding mechanism used to pay for LTD service operations. LTD has the authority to provide bus service throughout Lane County. Communities located outside the LTD service area that desire LTD fixed-route services can work with LTD and their elected officials to request bus service. This partnership involves the LTD Board, the governing body of the community, and the community residents.

Creswell is not within LTD's present service boundary, although the transit district originally established by the Legislative Assembly encompasses all of Lane County. LTD has received requests for service to Cottage Grove and Creswell. In 1996, a concentrated effort began by a local grass roots organization known as *Friends of LTD* to support and promote the initiation of LTD fixed-route service to the area. An initiative vote was held in both Creswell and Cottage Grove and was unsuccessful in both cities. This year, a second initiative passed successfully in Cottage Grove. As part of the service design, Creswell was asked to join this service. The Creswell City Council allocated funds to provide limited service to Creswell.

Creswell Transportation System Plan

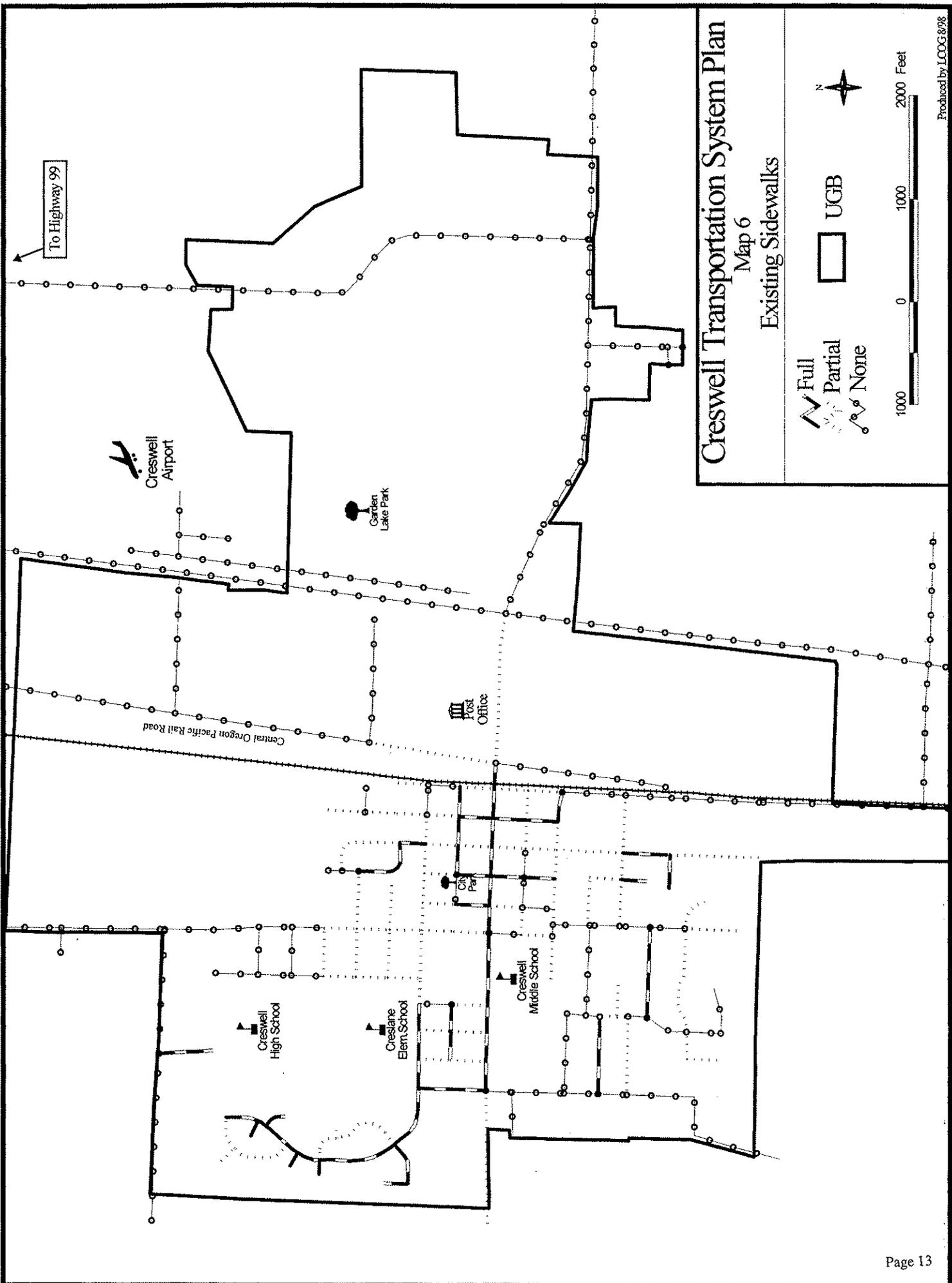
Map 6

Existing Sidewalks

- Full
- Partial
- None
- UGB



Produced by LCOG 8/98



LTD began providing service to Creswell and Cottage Grove on September 22, 1997. This service is being offered on a trial basis for 12 months. Service is offered six times daily during weekdays and two times on Saturday. Service within Creswell is limited to a single stop. A park-and-ride facility located on City-owned property at the corner of South 1st and C Streets. Service within Cottage Grove provides a loop by Wal-Mart and to the downtown commercial area.

Paratransit (Demand-Response) Transit Services

Acting on behalf of LTD, LCOG oversees and coordinates with providers to operate services funded through the *Special Transportation Fund for the Elderly and Disabled* (ORS 391.800 - 391.830). Specialized transportation for elderly and disabled residents of the Creswell area is provided through volunteer escort services coordinated through the **RideSource Escort** program and through South Lane Wheels, a local private non-profit service provider.

RideSource Escort is a volunteer-based, door-through-door service primarily for medical trips coordinated with the assistance of LCOG's Senior and Disabled Services' Outreach Program and Lane Community College's Senior Companion Program. In fiscal year 1995-96, volunteers using their own vehicles provided rides to ten elderly and disabled individuals in Creswell. Special Transportation Fund (STF) revenues were used to reimburse volunteers for mileage costs.

South Lane Wheels contracts with LCOG and other local agencies to provide services primarily to the elderly and people with disabilities in the south Lane County area. Their service area includes Cottage Grove, Dorena, Culp Creek, Creswell, London, and Saginaw. Service is local except for medical trips into Eugene and Springfield for those who require the use of a wheelchair accessible vehicle. South Lane Wheels provided a total of 1,065 one-way rides to Creswell residents during 1996 and 1,070 rides in 1997.

There are obvious deficiencies in the service. Volunteer provided rides are limited and do not serve individuals that use wheelchairs. South Lane Wheels provides rides to persons using wheelchairs but these trips into Eugene and Springfield are only to and from medical appointments. Specialized services for the elderly and persons with disabilities do not serve other individuals within the community who also have limited transportation options such as young people seeking employment and social activities or those living on low-incomes. Although South Lane Wheels has worked diligently to expand its ridership and use by those other than the elderly and disabled, limited resources prevents them from growing enough to adequately address the transit needs of the community.

Inter-City Passenger Bus or Rail Services

Greyhound Lines is the only available inter-city service traveling through Eugene and Cottage Grove. There is no direct service to Creswell.

F. Air, Rail, Water, and Pipelines

The air, rail, water, and pipeline components make up a significant part of Creswell's transportation system. The most significant component is air, due to the presence of the Creswell Municipal Airport.

Air

The City of Creswell owns a Basic Utility General Aviation airport, which is leased to a private operator. The airport is located northeast of the city between Interstate 5 and Dale Kuni Road and is accessed from Melton Road off Cloverdale Road. Creswell Municipal Airport (Hobby Field) is located on a 28-acre site and has a runway, a parallel taxiway, paved apron, 45 T-hanger spaces and 40 paved tie-down spaces. The runway is a visual approach runway equipped with MIRL lighting. It is 3100 feet long and 60 feet wide, with an asphalt surface, and has an elevation of 535 feet. The parallel taxiway is 3100 feet long and 40 feet wide, also asphalt. Support services include fixed based operation, flight instruction and charter, fuel facilities, unicom radio, and an administration and maintenance building. There are 86 aircraft based at the airport as of January 1996. Because of its anticipated future role as a reliever for the Eugene Airport, Hobby Field is defined in the State's system as a Level 2 airport.

Air service for passengers and freight is also regionally available at Eugene's Mahlon-Sweet Airport, located approximately 17 miles northwest of the study area. Mahlon-Sweet Airport provides regularly scheduled service to national destinations with connections to nearby international airports in Portland, San Francisco, and Seattle.

Rail

Creswell is served by the Siskiyou line that runs a distance of 300 miles from Eugene to Black Butte, California. The line, formerly owned by Southern Pacific Railroad, was taken over by the Central Oregon & Pacific Railroad in 1995. Since that time, service has increased slightly. Currently, the company operates four scheduled trains through Creswell, six days per week. Two freight trains pass through Creswell, one at about 2:30 a.m. traveling south and another at about 7:00 a.m. traveling north. Two other local trains also pass through Creswell one at about 4:00 p.m. traveling south and another at about 9:00 p.m. traveling north. Extra trains operate one or two times a month. One spur line currently exists in the Creswell area to serve Bald Knob Lumber Mill. As of late this spur receives limited usage.

The Eugene Station provides the nearest passenger rail service, with Amtrak Routes running north on the Valley Main Line and south on the Cascade Main Line. These lines account for significant passenger activity due to Amtrak's Coast Starlight train, which has stops in Seattle, Portland, Salem, Albany, and Eugene, as well as connections to Chemult, Klamath Falls, and points south all the way to Los Angeles. In 1992, 45,742 passengers got on or off at the Eugene Station.

Water

There are no navigable waterways in the planning area. The Coast Fork of the Willamette River runs north-south just east of the study area.

Pipelines

Natural Gas

Northwest Pipeline Company operates a major regional natural gas transmission line between Portland and Eugene, which passes through the planning area. The gas is distributed in the Creswell area by Northwest Natural Gas Company. This six-inch, high-pressure main interconnects storage facilities in the state as well as Interstate sources.

Petroleum Fuels

Southern Pacific Transportation Company operates an eight-inch major transmission pipeline, extending from Portland to Eugene, which has been in operation since 1962. This pipeline is a common carrier, designed to handle alternately regular, premium or unleaded gasoline and diesel fuel. It currently transmits almost 30,000 barrels of fuel per day to Eugene. From Eugene, it is distributed to various companies for shipment by truck to end destinations or for storage in tank facilities nine miles south of Creswell. This southern terminal serves not only all of Lane County, but parts of southern Oregon as well. Without the pipeline it would require about 150 tank trucks operating on the road system through Creswell, or 60 railroad tank cars, each day from Portland passing through Creswell to serve the distribution point.

G. Natural Resource Features

Slope

Creswell and its immediate surrounding area is relatively flat river valley approximately 541 feet above sea level. There are few steep slope areas or slope constraints located within the Creswell UGB. Creswell Butte rises to over 900 feet, but other than its initial rise most of the Butte is located just south of the UGB.

Soils

Soils within Creswell are for the most part Class I, II, III, and IV soils as identified in the Soil Capability Classification System of the U.S. Soil Conservation Service (now the Natural Resource Conservation Service). Permeability is good for Class I, moderate for Class II, and slow for Classes III and IV. There are only small pockets of Class III or Class IV soils in Creswell, therefore soil related development constraints do not apply for Creswell. The only soil limitations would be for agricultural or forestry purposes, which are already limited by land use decisions, ownership parcel size, and water availability.

Surface Water Drainage

Hills Creek is the primary drainage feature flowing through Creswell in a north to northeast direction toward the Willamette River. The creek flows from the industrial area west of Interstate 5 under the freeway to Garden Lake Park. According to the Creswell Comprehensive Plan, "land uses immediately adjacent to stream courses should be maintained in open use categories" However, other than Garden Lake Park, Creswell Plan designations do not define this greenway strip.

Creswell participates in the Federal Flood Insurance Program (FEMA), and in association with that program has identified flood plain and hazard areas within the City. If a development proposal is located within the designated flood plain zone, developers undergo a more extensive review of their proposal to determine the site specific flood hazards of the property, and additional measures that must be applied to prevent damage in the event of flooding. Actual build-out in these areas may be

less than if not a flood prone area, since site design, engineering, construction, and insurance costs are often higher.

Due to the relative flatness of the valley, lack of uniform grade and some areas that lack well-defined natural drainage, localized ponding occurs throughout the Creswell area. The principle area of concern lies between Interstate 5 and the Willamette River. Most of the area east of Interstate 5 is within the floodway fringe, which may experience flooding during the 100-year storm event. Creswell has designated almost half of this area for tourist/convention/resort development, assuming that this type of development will be able to address the expensive engineering analysis and construction constraints necessary to meet flooding hazards.

Wetlands

The presence of wetlands may influence the extent of development and/or where it occurs. Development proposals that may impact wetlands are regulated and permitted by the Army Corps of Engineers and the Oregon Division of State Lands. If wetlands are located on property, before development can occur the boundaries of the wetland must be clearly delineated; wetland impacts should be avoided if possible; and, if impacts do occur, mitigation must replace the features lost by development.

A comprehensive inventory of wetlands has not been conducted for Creswell so wetland features for this report are based on the National Wetlands Inventory (NWI). The NWI provides basic data about the general characteristics and extent of wetlands in the nation. The NWI identifies the general boundaries of wetlands; however, in many instances, actual wetland boundaries and features are more extensive than what is identified through this national classification system. In other instances, NWI information is out-dated and although a wetland feature is indicated on the NWI map, human influences have since altered or even eliminated that feature.

Most of Creswell's wetlands are associated with Hills Creek both east and west of the freeway. Hills Creek and several large ponds are located in Garden Lake Park. A small wetland is also found north of Oregon Avenue within the Ash Grove Subdivision.

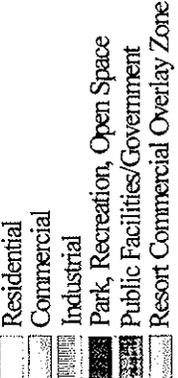
H. Land Use

As shown on Map 7, the majority of land in Creswell is designated for residential development. Commercially designated areas are along Oregon Avenue, north and south on Highway 99, and east of the Interstate 5 Interchange. Industrially designated areas occur along Mill Street south of Oregon Avenue and along the north edge of the UGB.

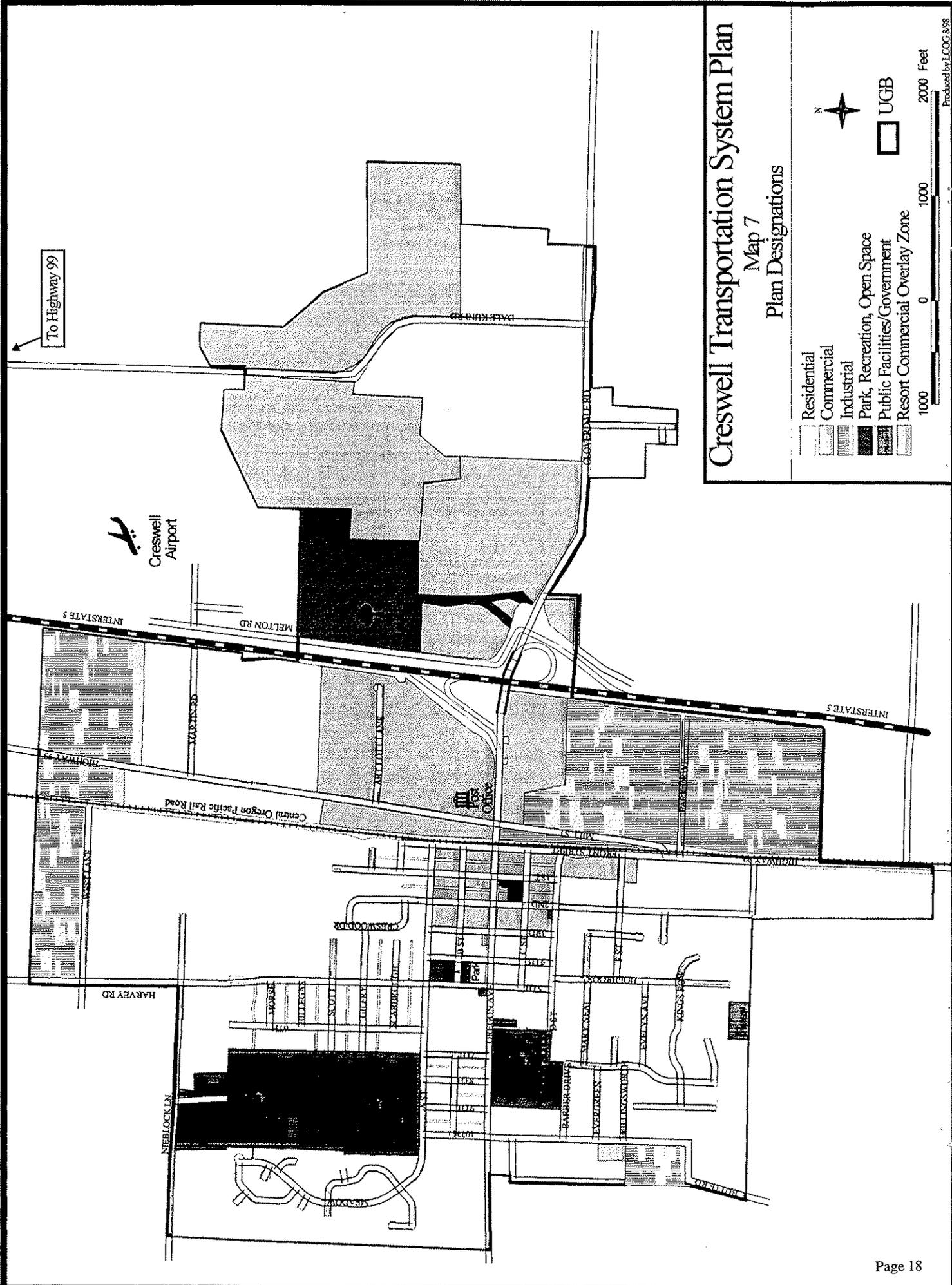
Creswell Transportation System Plan

Map 7 Plan Designations





 1000 0 1000 2000 Feet



I. Cultural Features

Parks and Open Space

Creswell has two City-owned parks totaling about 35 acres. A two-acre site is located between 4th and 5th Street, just north of Oregon Avenue, and a 33-acre site just east of Interstate 5. Other in-city park needs are provided in conjunction with private developments including a park and commercial campground in the northwest quadrant of the Interstate 5 Interchange and a park near F Avenue in association with multi-family housing. Emerald Valley Golf Course in the eastern portion of Creswell, encompasses 167 acres. Expansion of this 18-hole, privately owned complex is likely.

Public parks and open space just outside of Creswell are also important in serving the parks and open space needs of Creswell residents. The Willamette River Greenway, east of Creswell, provides important recreational opportunities such as trails, boat launching sites, and scenic river corridors. In addition, most of Creswell Butte lies just south of the Creswell UGB. Creswell Butte is a forested out-cropping that provides important natural relief and environmental enhancement and open space for the city. Since in-city parks and open space opportunities are limited, transportation links with these out-of-city locations become important considerations.

Schools

Current and future school locations generally should have access to, but be located away from major vehicle arterials. Creswell has an elementary, middle, and high school. Creswell High School and Creswell Elementary comprise about 53 acres off A Avenue in the northeast portion of the city. Creswell Middle School, just south of Oregon Avenue, encompasses about 16 acres.

Historical Features

The location of significant historical features is important from a transportation perspective for two reasons:

1. The local community may desire to provide better access to these sites.
2. Design of transportation systems should ensure that these sites are protected.

Creswell requires a site review permit for the alteration and/or demolition of any designated historic site or structure.

Historical considerations have been ascertained from historical research conducted by the Creswell Area Historical Society and are identified in the Creswell Comprehensive Plan. Six sites are clustered in the central part of the city. These sites include:

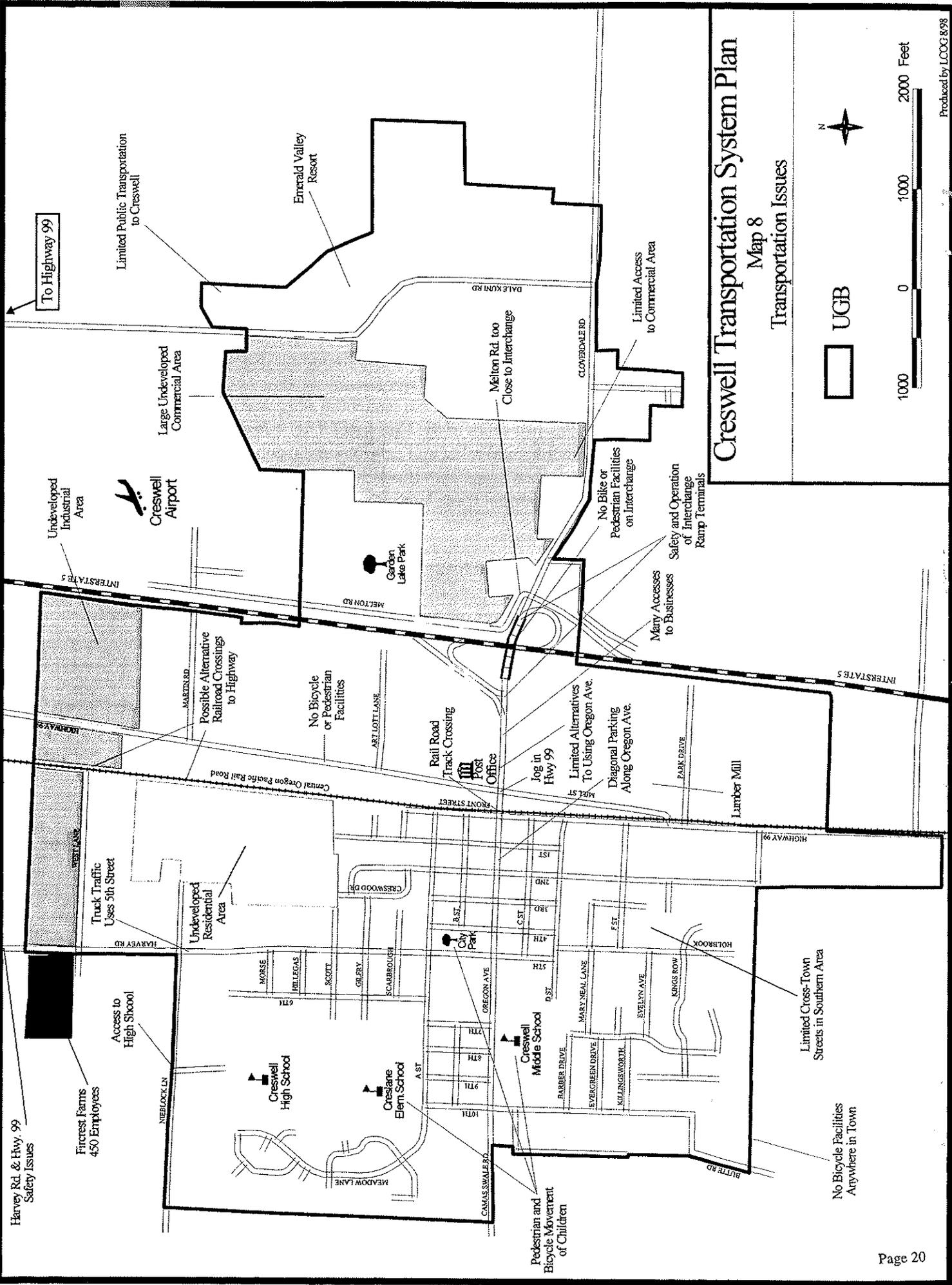
- Creswell Library - Located on 2nd and D Avenue, dated 1874;
- Creswell Historical Museum - Located at 5th and Oregon Avenue, dated 1889;
- Presbyterian Church - South 4th and C Avenue, dated 1906;
- Duane D. Hodges Landmark - S. Mill and Oregon Avenue, dated 1974; and
- Adam Schmitte House - Located at 115 West D Street, dated late 19th century.

Creswell Transportation System Plan

Map 8 Transportation Issues



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The Creswell Cannery is also listed on the State of Oregon Inventory of Historic Sites and Buildings. The City, however, has found that this building has little historic significance and cannot be justified for protection because the structure has deteriorated and cannot be meaningfully restored.

J. Transportation Issues

Several transportation issues relevant to the TSP are illustrated on Map 8. Issues were identified at the beginning of the study by the CAC, public input, and through staff review. The majority of automobile-related issues are site specific to the section of Oregon Avenue, from the Interstate 5 Interchange to Front Street. These issues are listed below.

Interstate 5 Interchange, Oregon Avenue, and Highway 99

- Limited alternatives to using Oregon Avenue to get onto Interstate 5
- Railroad tracks/stop signs confusing as to which lane to be in
- Southbound off-ramp from Interstate 5 (excessive speed, not enough yield, KOA/AM-PM potential hazards)
- Diagonal parking along Oregon Avenue is a safety hazard
 - Limits bicycle usage
- Many accesses to Shoprite parking lot and other businesses in this area
- Access between Knechts Auto Parts and Siuslaw Valley Bank hazardous
- No parking allowed on Oregon Avenue - Mill Street to Overpass (Are signs still in place?)
- Jog in Highway 99 at Oregon Avenue
- Right-turn lane going north on Highway 99 is confusing
- All facilities in this area are inadequate for bikes and pedestrians
- Limited access to Commercial property east of interchange near Melton Road
- Parking in front of Dari Mart (C St. and Highway 99 South) obstructs view for cars getting onto Highway 99 from C Street

Other Roadways

- Access on Mill Street
- Limited outlets in north part of city (West Lane or Nieblock Road)
- Signage in general should be evaluated

Other Issues

- Truck traffic from north part of city onto Oregon Avenue (Fircrest currently uses Harvey Road to Oregon Avenue and does not use Highway 99)
- No bike lanes or bike racks anywhere
- No wheel chair ramps in Creswood Subdivision
- Safety issues for school children (i.e., areas lacking sidewalks - Harvey Road, Nieblock Lane, Highway 99, Post Office to Art Lott Lane, 7th, 8th, and 9th Streets, Oregon Avenue to A Street, Railroad crossing)
- Lack of a local street plan to guide future street development
- Limited public transportation

Chapter Three

Future Conditions and Transportation Needs

A. Introduction

This chapter describes the projected future conditions for population, housing, employment, and traffic volumes. A discussion of public transportation, bicycle, pedestrian, and roadway needs is also included.

B. Population and Employment

As part of the transportation system plan for the Creswell urban growth boundary (UGB), projections of housing units were created for 2015. These housing units are used in the transportation modeling process to identify the traffic counts and patterns associated with residential development for the 20-year planning period.

In addition, projections of employment were also created for 2015. These employment projections are used in the transportation modeling process to verify trip rates and travel patterns associated with commercial and industrial development, in order to anticipate travel behavior over the 20-year planning period.

Population Projections

To develop 2015 projected housing units for the Creswell UGB, various assumptions about population growth and residential development were necessary. Below is a description of these assumptions.

Population

In 1996, the population inside the Creswell city limits was estimated at 2,715, with an estimated total of about 3,400 people living in the UGB. About 700 people live outside the city limits within the UGB. Population in the Creswell UGB is projected to reach 5,400 persons by 2015. This assumes an annual average growth rate of 2.6 percent for the city population. This rate is similar to the 2.6 annual average rate that occurred during the 1980 to 1995 time period. It also assumes that approximately 100 additional units will be built inside the UGB and outside the city limits.

Number of Households

To determine the number of households requiring housing in 2015, the population is divided by an assumed average persons per household. Average household size has been declining both nationally, and locally over the past 30 years and is expected to continue to decline but more gradually. Based on decennial census data, average household size did decline in Creswell between 1970 and 1980 from 2.86 to 2.63; however, during the 1980s, it rose to 2.68. Consequently, the 1990 average household size figure of 2.68 will be assumed. Subtracting the assumed group quarters population of 60 and applying this average household size results in a total of 1,993 households inside the UGB in 2015. In 1990, there were 886 households within the city limits.

Number and Types of Housing Units

Determining the number of housing units needed in 2015 requires assumptions about the percentage of housing units by housing type. In addition, to ensure a healthy housing market, a 2 percent vacancy rate was assumed for owner units and a 5 percent vacancy rate for renter units. The assumption regarding the owner/renter split by housing type was taken from the 1990 Census.

To develop an assumption on the percentage of housing units by housing type, the Lane County Geographic Information System, the existing Creswell Comprehensive Plan and local input were reviewed. All sources indicated that over half of the housing in the Creswell UGB will be single-family, detached units. Based on these assumptions, a total of 2,058 housing units are projected. Table 1 below compares existing housing and housing projected for the year 2015.

**Table 1
Creswell Housing Units Projections**

Housing Type	Percentage of Units		Number of Units		New Units
	1996	2015	1996	2015	
Single-Family, Detached*	64	62	787	1,276	489
Multi-Family	15	15	181	309	128
Duplex	5	5	57	103	46
Manufactured Dwelling in Parks	16	18	194	370	176
Total	100	100	1219	2,058	839

* Includes manufactured dwellings on individual lots.

A total of 2,058 housing units are projected in the Creswell UGB by 2015. This represents an increase of 839 units between 1996 and 2015.

Employment Projections

The 2015 employment projections for the Creswell UGB area are largely based on employment projections for Lane County. The county projection was used to develop a projection for Census Tract 11 in which Creswell resides. Creswell lies roughly within the center of Census Tract 11. The census tract generally extends from the southern edge of the Eugene Metropolitan boundary to just north of Saginaw in the south.

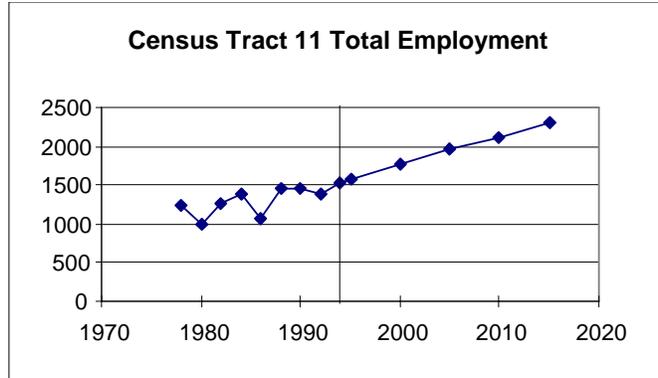
The Census Tract projection was used to estimate a projection for the Creswell UGB area. This methodology was selected because more reliable historical data is available for Census Tract 11 than for the Creswell UGB.

The Data

Annual historical employment data for Lane County, provided by the Oregon Employment Division was used for this analysis. Biannual historical employment data from 1978-1994 for Census Tract 11 was also used. Although, total employment in the Creswell UGB is known for 1994, it is not available for any other year.

The Census Tract Projection

The historical data for Lane County and Census Tract 11 were used to develop a trend for Census Tract 11 employment as a percentage of Lane County employment. The extension of the 1978-1994 trend was used along with the Lane County employment projection for 2015 to arrive at a 2015 projection for the Census Tract.



**Table 2
Lane County Employment Projections**

Employment by Area Geographic Area	1994	2015	Total New Employment	1994 - 2015 Average Growth Rate
Lane County	125,900	177,074		1.6%
Census Tract 11	1,540	2,294	754	1.9%

The Creswell UGB Area Projection

In 1994, employment in the Creswell UGB area comprised 63 percent of the total employment in Census Tract 11. Because of Oregon planning rules, most of the growth in employment in the Creswell area should occur inside the UGB. Therefore, Creswell UGB employment should increase as a percentage of total employment in Census Tract 11. In 2015, then, Creswell UGB employment should be more than 63 percent of Census Tract 11 employment.

If all of the employment growth projected to occur in the Census Tract, occurs inside the Creswell UGB (no growth outside the UGB), the projection for the UGB area would be 1726. This would mean an increase in employment in Creswell’s UGB by 754 employees over the 21-year period, or 35 employees per year on average.

**Table 3
Creswell Employment Projections**

Employment by Area Geographic Area	1994	2015	New Employment	UGB % of CT	1994 - 2015 Average Growth Rate
Creswell UGB - even growth	972	1,450	478	63%	2.5%
Creswell UGB - all growth	972	1,726	754	87%	2.8%

It is reasonable to expect that there will be some increase in employment outside of the UGB since firms located there may grow. However, to be consistent with planning guidelines, the UGB area

should be able to accommodate most new employment expected to locate in the census tract since it is the only city in the area.

For comparison, Creswell’s Comprehensive Plan contains an employment goal to have 40 jobs for every 100 residents. If Creswell’s population reaches about 5,400 persons by 2015 as projected, there would be a total of 2,160 jobs or about 434 more than projected above.

C. Allocation of Housing and Employment

The projected housing and employment numbers were used to anticipate travel volumes and patterns associated with residential, commercial, and industrial development. The Creswell study area was divided into 14 Transportation Analysis Zones (TAZ) and vacant land by plan designation was calculated for each zone as shown on Map 9. The amount of vacant land by plan designation by TAZ is presented in Table 4 below. Project dwelling units were then allocated to available vacant land. Single-family units were allocated at a density of five units/acre and all other dwelling types were allocated according to their relative densities. Projected employment was allocated according to the amount of vacant land available. The details of the allocation exercise are contained in Appendix C.

**Table 4
Vacant Acres by Plan Designation by TAZ**

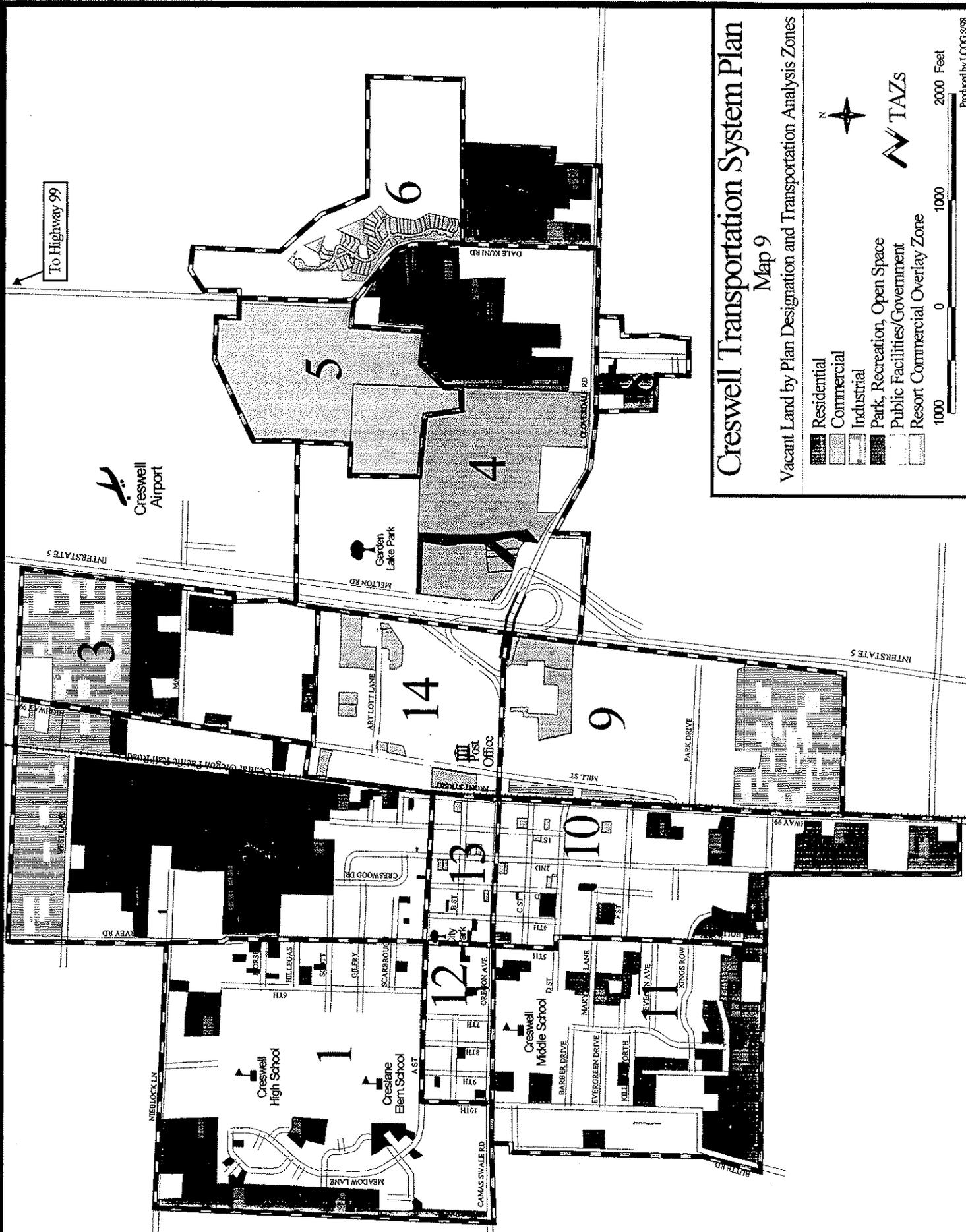
Acres by Development Type	TAZ Number														Total Acres
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Residential Acres	42	73	17	36	0	0	23	4	0	24	32	1	0	0	252
Commercial Acres	0	0	0	51	60	11	0	0	9	1	0	0	1	9	142
Industrial Acres	0	27	26	0	0	0	0	0	30	0	0	0	0	0	83
Total acres	42	100	43	87	60	11	23	4	39	25	32	1	1	9	477

D. Projected Traffic Volumes

A Level 2 analysis was conducted to project traffic volumes to the year 2015. As described above, projected employment and housing were allocated to each TAZ according the plan designations and available vacant land. The number of households and employees were then multiplied by their respective trip rates. Survey and traffic count data was also reviewed to determine how many vehicle trips occur between Creswell, Lane County, and the Eugene-Springfield Metropolitan area. Creswell has a high number of commuter trips to the metropolitan area.

At this point, trip information was entered into the transportation modeling software, Emme\2. Based on trip information, Emme\2 assigns each trip to the shortest route that connects the trip’s origin and destination. The origin and destination of each trip is now known as well as the number of cars on the road.

Map 9-vacant land by plan des and taz



Creswell Transportation System Plan

Map 9

Vacant Land by Plan Designation and Transportation Analysis Zones

- Residential
- Commercial
- Industrial
- Park, Recreation, Open Space
- Public Facilities/Government
- Resort Commercial Overlay Zone



The model was then calibrated using the existing traffic counts and checked for accuracy. When traffic patterns in the model closely reflected the real world condition, the same steps were repeated using housing and employment projections for the year 2105.

The maps produced by the model for 1994 and the year 2015 include estimated daily traffic volumes, estimated P.M. peak hour traffic volume, and estimated P.M. peak hour congestion. The maps for the year 2015 are presented on Map 10 through Map 12. Additional maps developed during the modeling process are included as Appendix E. Except for a few areas discussed below, Creswell's roadway system functions well in its present condition and is expected to maintain acceptable service levels throughout the planning period.

Oregon Avenue (Interstate 5 Interchange to Front Street)

The roadway segments along Oregon Avenue from the Interstate 5 Interchange to Front Street currently experience a low to moderate level of congestion. This situation is aggravated due to the location of railroad tracks within this stretch. As described in the previous chapter, a scheduled north bound train passing through Creswell about 7:00 a.m. could impact commuter traffic along this stretch. As traffic volume increases as well as train frequency this situation will only get worse. The level of congestion for this stretch is projected to raise too high by the year 2015 as shown on Map 12.

The Oregon Department of Transportation has conducted a refinement plan for this area concurrently with this TSP.

Front Street at Oregon Avenue

Front Street is located about 40 feet west of the railroad tracks. Highway 99 jogs onto the southern extension of Front Street from Oregon Avenue without traffic control. The segment of Front Street north of Oregon Avenue presents difficult traffic issues for drivers wanting to enter Oregon Avenue from the north. Due to a grade change of roughly ten feet between the railroad tracks and Front Street and the volume of traffic at this intersection, entering Oregon Avenue from Front Street can be both time consuming and dangerous. Consideration should be given to converting Front Street to one-way going north only.

Creswell Estimated PM Peak Hour Congestion - 2015

emme/2

LINKS:
 i = 100.999
 & j = 100.999
 & mod = a

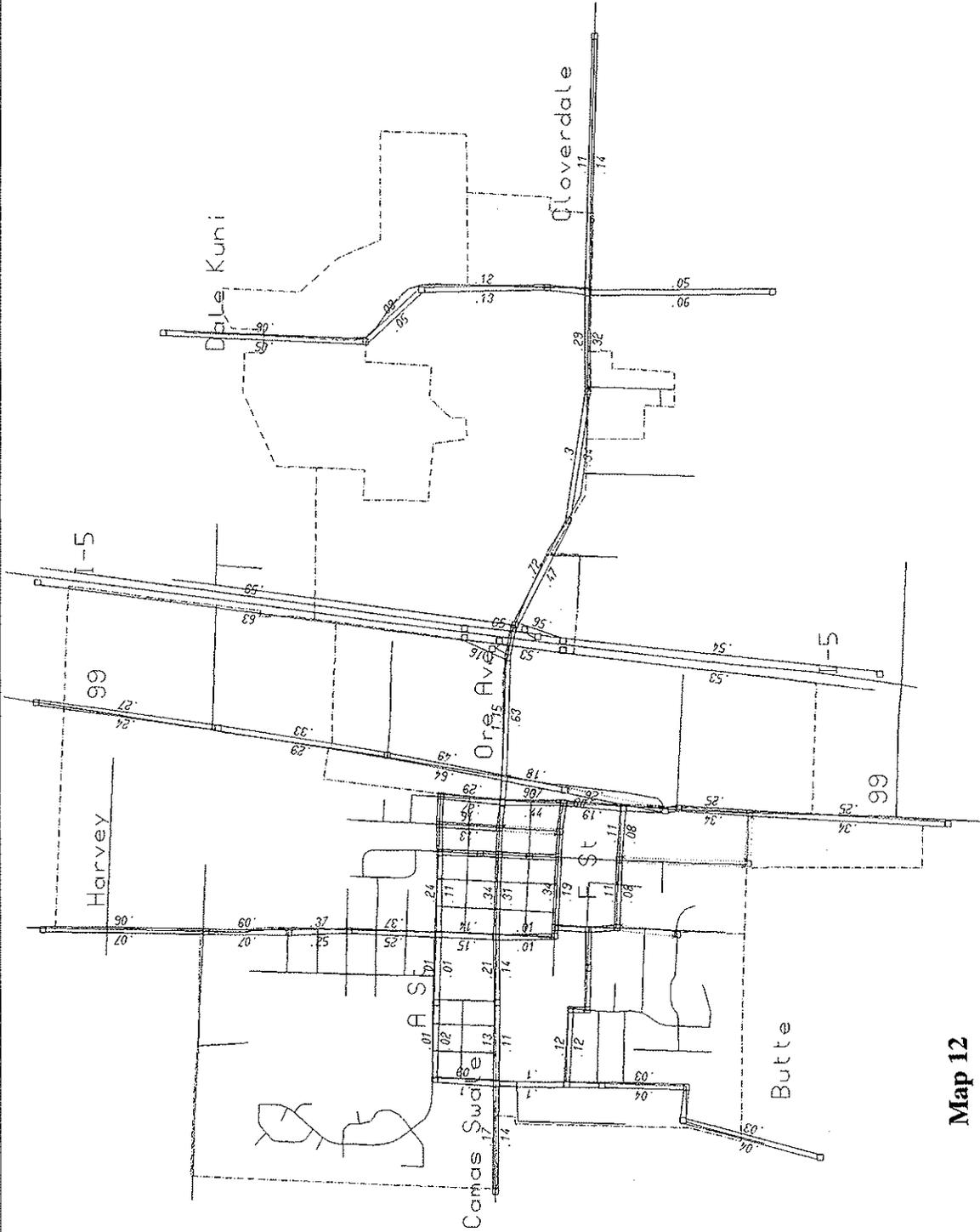
v/c > .85
 High Congestion

v/c .71 - .85
 Mod. Congestion

v/c < .71
 Low Congestion

WINDOW:
 252.22/156.334
 254.83/158.286

97-05-01 16:54
 MODULE: 2.13
 ORESOND.T...jvs



Map 12

EMME/2 PROJECT: Creswell TSP
 SCENARIO 4: 2015 Creswell PM Peak Hour

E. Public Transportation

In 1995, the LTD and the cities of Creswell, and Cottage Grove jointly funded a transportation needs assessment. The survey completed by Marstat, a local research firm, was conducted as a statistically valid sample. The purpose of the needs assessment was to determine whether Creswell and Cottage Grove residents were interested in public bus service, measure whether there was support for bus service, and whether residents were willing to finance bus service.

A total of 100 surveys were completed in Creswell. Eighty-seven percent of the respondents who work outside Creswell, mostly in the Eugene-Springfield area. Ninety-four percent of the respondents use a car to get to work and only 7 percent car pool. Seventy-nine percent of the respondents shop outside Creswell at least once a week.

The survey indicated a high level of interest and desire among Creswell residents for public transportation. Due to the high percentage of Creswell residents working and shopping outside of Creswell in the Eugene-Springfield area, public bus service may be a viable and useful alternative for Creswell residents.

LTD began a one year trial run to Creswell and Cottage Grove on September 22, 1997. After the year, the cities will decide whether they want to continue with LTD bus service and, therefore, join the LTD service area.

F. Bicycle and Pedestrian System

As mentioned in the previous chapter, Creswell currently does not have any designated bicycle facilities. Also as discussed previously, the pedestrian system is lacking key connections between the schools, to the park, and to the downtown commercial area. The provision of bicycle and pedestrian facilities particularly to the downtown commercial area could help to reduce short vehicle trips to this area thus reducing congestion. A complementary and interconnected pedestrian/bicycle/pedestrian/public transit system will reduce dependence on only the automobile and enhance the overall operation of the transportation system.

Chapter Four

Recommended Transportation System Plan

A. Introduction

This chapter contains the City of Creswell's (City) recommended transportation system plan (TSP). The chapter includes proposed transportation system goals and policies, the recommended roadway classification system and proposed truck routes, proposed street standards, and proposed system maps for the roadway, bicycle, pedestrian, and public transportation elements.

Development of the Creswell TSP was guided by a series of broad goals. From these goals came the more specific policies and implementation measures. The goals as written may never be fully achieved in their entirety, but provide a target towards which the City can strive. Policies provide the basis for a consistent course of action to move the community towards its goals. The goals and policies will replace transportation related goals and policies in the Comprehensive Plan. They will have the force of law. The rest of this chapter will be included a Transportation Element of the Comprehensive Plan and will provide guidance for implementing ordinances in the Creswell Zoning and Subdivision Ordinances.

B. Transportation System Plan Goals

Goals

- 1. Transportation Balance**
Provide for a balanced transportation system to give mobility to all segments of the community.
- 2. Quality of Life**
Enhance the city's quality of life by providing efficient, safe, convenient, economic, and aesthetically pleasing transportation systems for the movement of people and goods.
- 3. Alternative Modes**
Reduce reliance on the automobile by providing more safe and convenient options for bicycling, walking, paratransit, carpooling, and public transportation.
- 4. Connectivity**
Create an interconnected street plan to support existing and future land uses.
- 5. Equity**
Provide transportation opportunities for the transportation disadvantaged.
- 6. Minimize Negative Impacts**
Maximize the benefits and minimize negative effects of transportation on the social, economic, and natural environment.

- 7. Compatibility of Systems**
Minimize conflicts and facilitate compatibility and connections between transportation modes.
- 8. Safety**
Create a safe and efficient transportation system.
- 9. Financially Sound**
Create a transportation system that is financially feasible, cost-effective, acceptable, and that minimizes administrative costs.

C. Transportation System Plan Policies

1. Coordination

- a. The City shall develop a coordinated approach to the operation, development, and maintenance of jointly managed transportation facilities.
- b. The City shall identify methods to insure future coordination of transportation planning project development activities with Lane County Land Management and Public Works Transportation Planning Departments and the Oregon Department of Transportation.

2. Protection of Transportation Facilities

- a. The City shall protect the function of existing and planned roadways as identified in the transportation system plan.
- b. The City shall include a consideration of their impact on existing or planned transportation facilities in all land use decisions.
- c. The City shall protect the function of existing or planned roadways through application of appropriate land use regulations.
- d. The City shall consider the potential to establish or maintain pedestrian ways, paths or bikeways prior to the vacation of any public easement or right-of-way.
- e. The City shall require the dedication of right-of-way for planned transportation facilities as identified in the transportation system plan.
- f. Land development shall not encroach into the setbacks required for future street expansion.

3. Protection of Airport

- a. The function of the Creswell Airport shall be protected through the application of appropriate land use designations to assure future land uses are compatible with continued operation of the airport.

4. Access Management

- a. The City shall develop an access control ordinance for major roadways including arterials and major collectors.
- b. Driveways shall access the street with the lowest roadway classification. For example, a house on the corner of a collector and a local street shall gain access from the local street.

5. Layout and Design of Transportation Facilities

- a. Roadways shall be designed to efficiently and safely accommodate emergency service vehicles.
- b. The City shall adopt standards for streets, bike lanes, multi-use paths, sidewalks, transit, and other transportation facilities and shall require such facilities at the time of land division or development.
- c. Streets, bikeways, and pedestrian ways shall be designed to meet the needs of pedestrians and cyclists in order to promote safe and convenient bicycle and pedestrian circulation in the community. Unless an equally adequate alternative route is proposed, all arterials and collectors shall have bike lanes. Bicycle facilities shall be designed for both internal circulation and to provide linkages to regional travel.
- d. Direct and convenient access for motor vehicles, public transit, bicycles, and pedestrians shall be provided to major activity centers including schools and other public buildings, shopping areas, parks, and employment centers.
- e. All streets, bicycle, and pedestrian facilities shall connect to other existing and planned future facilities outside the development. Cul-de-sacs and other dead end street types shall be discouraged except where topography, natural features, or land development patterns preclude street connectivity. A multi-use path connecting the end of the cul-de-sac to other streets or activity areas shall be encouraged.
- f. Streets identified as future transit routes shall be designed to safely and efficiently accommodate transit vehicles and pedestrians. Coordinating with transit on curb return radius, lane width, and other transit needs is important to ensure transit can be accommodated.
- g. Street design shall be responsive to topographic changes and scenic views and shall minimize impacts to natural features including wetlands, drainage ways, streams, riparian areas, and wildlife corridors.

- h. New pedestrian facilities and reconstructed existing facilities shall be built to City standards in accordance with state and federal law.
- i. City gateways, entranceways, and other key roadways shall be identified and improved with beautification and scenic amenities. Aesthetic improvements may include street design, landscaping, lighting, utility lines, park strips, noise abatement, transit amenities, etc.
- j. Where appropriate, the street system and its infrastructure shall be utilized to convey and treat stormwater runoff.

6. Maintenance

- a. Maintenance and repair of existing roadways shall continue to be a high priority.
- b. Maintenance and repair of bikeways and pedestrian ways shall be given equal priority to the maintenance and repair of automobile facilities.

7. Bicycle Facilities

- a. Bicycle safety devices such as bicycle-proof drain grates, rubberized pads at railroad crossings, and appropriate signage shall be used throughout the bicycle system.
- b. The City shall establish standards in the City zoning ordinance and subdivision ordinance for secure and safe bicycle parking and locking facilities for all new multi-family residential developments with four or more units, new retail development, and new office and institutional development.

8. Pedestrian Facilities

- a. The City shall identify high-priority areas lacking sidewalks and wheelchair curb cuts and construct improvements in these areas.

9. Interstate 5 Interchange Refinement Plan

- a. The City shall coordinate with the Oregon Department of Transportation (ODOT) to adopt a preferred alternative for the reconstruction of the Interstate 5 Interchange and Highway 99 and Oregon Avenue redesign.
- b. The City shall support ODOT access control regulations east and west of the interchange ramp terminals.

10. Public Transportation

- a. The City shall support the provision of basic mobility service for the elderly and people with special transportation needs.

- b. The City shall encourage demand management programs such as park-and-ride facilities, carpooling, and vanpools to reduce single-occupancy automobile trips between Creswell and the Eugene-Springfield metropolitan area.
- c. The City shall encourage the development of a fixed-route public transportation service between Creswell, Cottage Grove and the Eugene-Springfield metropolitan area.

11. Rail

- a. The City shall continue to support the use of the railroad for freight service by designating land along the tracks for uses that depend on freight.

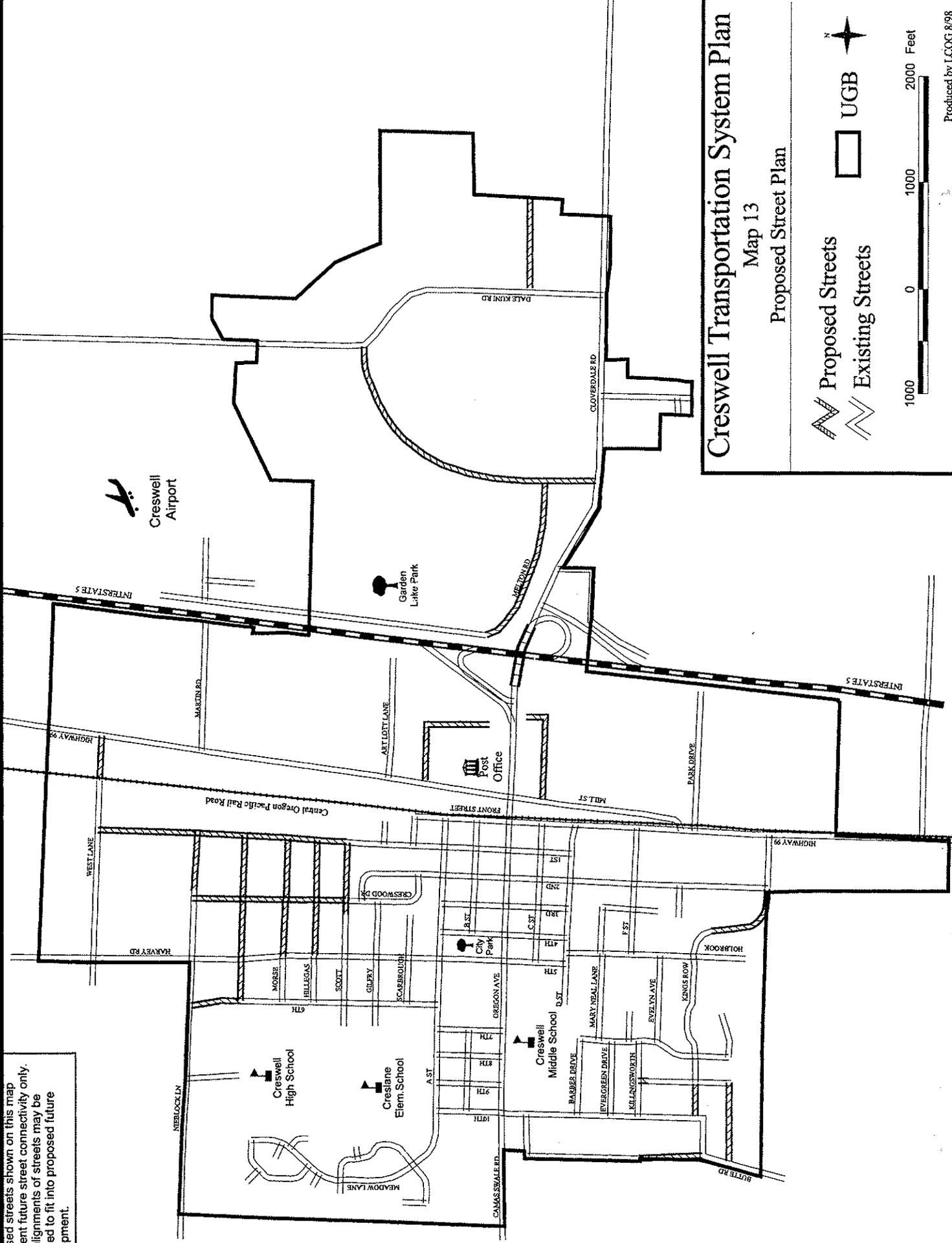
D. Proposed Street Plan

The proposed street plan shows the general location of future street alignments. The plan is meant to serve as a guide as undeveloped parcels develop within the community. The exact location of future streets will be determined at the time of development. In general, the proposed street plan strives to provide connections with the existing street network. The proposed roadway classification system described below indicates the proposed classification of these roadways.

As shown on Map 13, new streets west of Interstate 5 are proposed to serve the undeveloped property to the east of North 5th Street and west of the railroad tracks. Creswood Drive and North 1st Street are proposed to be extended to the north to connect with Nieblock Lane. North 1st Street is proposed to extend beyond Nieblock Lane to connect with West Lane. The proposed street plan includes a future extension of West Lane to the east across the railroad tracks to connect with Highway 99. This connection would provide access to undeveloped Industrial property west of the railroad tracks and also a direct connection from Highway 99 to the Fircrest Farms poultry plant on West Lane just west of Harvey Road. In the south part of the city, several minor roadway extensions are proposed to enhance alternate routes for accessing Highway 99 and Butte Road. In addition, two local streets are proposed to serve developed and undeveloped parcels north and south of Oregon Avenue east of Highway 99 and Mill Street. These roadways are proposed to reduce traffic burdens on Oregon Avenue. The location of these two roadways will need to be refined over time.

East of Interstate 5 the proposed street plan includes a realignment of Melton Road to the east connecting with a new road gaining access off Cloverdale Road and connecting with Dale Kuni Road near the Emerald Valley Resort. Another local street is also proposed to serve undeveloped property off Dale Kuni Road to the east.

Proposed streets shown on this map represent future street connectivity only. Final alignments of streets may be designed to fit into proposed future development.



Creswell Transportation System Plan

Map 13

Proposed Street Plan

Proposed Streets
 Existing Streets
 UGB

1000 0 1000 2000 Feet

N

E. Roadway Classification

The transportation system within the City is facilitated by a hierarchy of streets. The City has identified a four-tier classification system to include arterial, major collector, minor collector, and local streets. Because Interstate 5 is classified as an Interstate highway, it is not part of this system. Streets perform various roles in the community ranging from carrying relatively large volumes of primarily through traffic to providing direct access to abutting property. The use of a street classification system will provide consistency among the City, County, and State transportation plans. The proposed classification system is illustrated on Map 14.

Arterials

With the exception of Oregon Avenue west of Front Street, all arterial streets in Creswell also are state facilities designated as District Highways. According to the Oregon Highway Plan, the management objective of District Highways 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.

Arterials are intended to serve as a primary route for travel within and between community areas. Access to an arterial is normally from the collector or local road system rather than to serve property directly. Individual access should be managed on arterials to minimize degradation to capacity, traffic safety, and transit. Sidewalks and bike lanes are normally provided on an arterial and transit typically operates on arterials.

Proposed Arterials: Oregon Avenue, Highway 99 (Goshen Divide Highway), and Cloverdale Road (Springfield-Creswell Highway).

Major Collector

A major collector is intended to serve traffic from local streets and minor collectors to the arterial system. Individual accesses are allowed but minimized to protect system capacity and traffic safety. Sidewalks and bike lanes are normally required on a major collector. Transit typically operates on major collectors and arterials.

Proposed Major Collectors: Harvey Road/North 5th Street, South 5th Street/Holbrook Street/Kings Row extension to Highway 99, Butte Road, either Nieblock Lane or West Lane, Dale Kuni Road, and a proposed roadway to connect with Dale Kuni from Cloverdale Road.

Minor Collector

A minor collector is intended to provide access to abutting properties and to serve local access needs of neighborhoods, including limited through traffic. New development that generates a significant volume of traffic should be discouraged from locating on minor collectors that serve residential areas. Sidewalks are normally required on minor collectors and bike lanes are usually only required in accordance with the proposed bicycle plan as shown on Map 16. Transit may occasionally operate on minor collectors and local streets.

Creswell Transportation System Plan

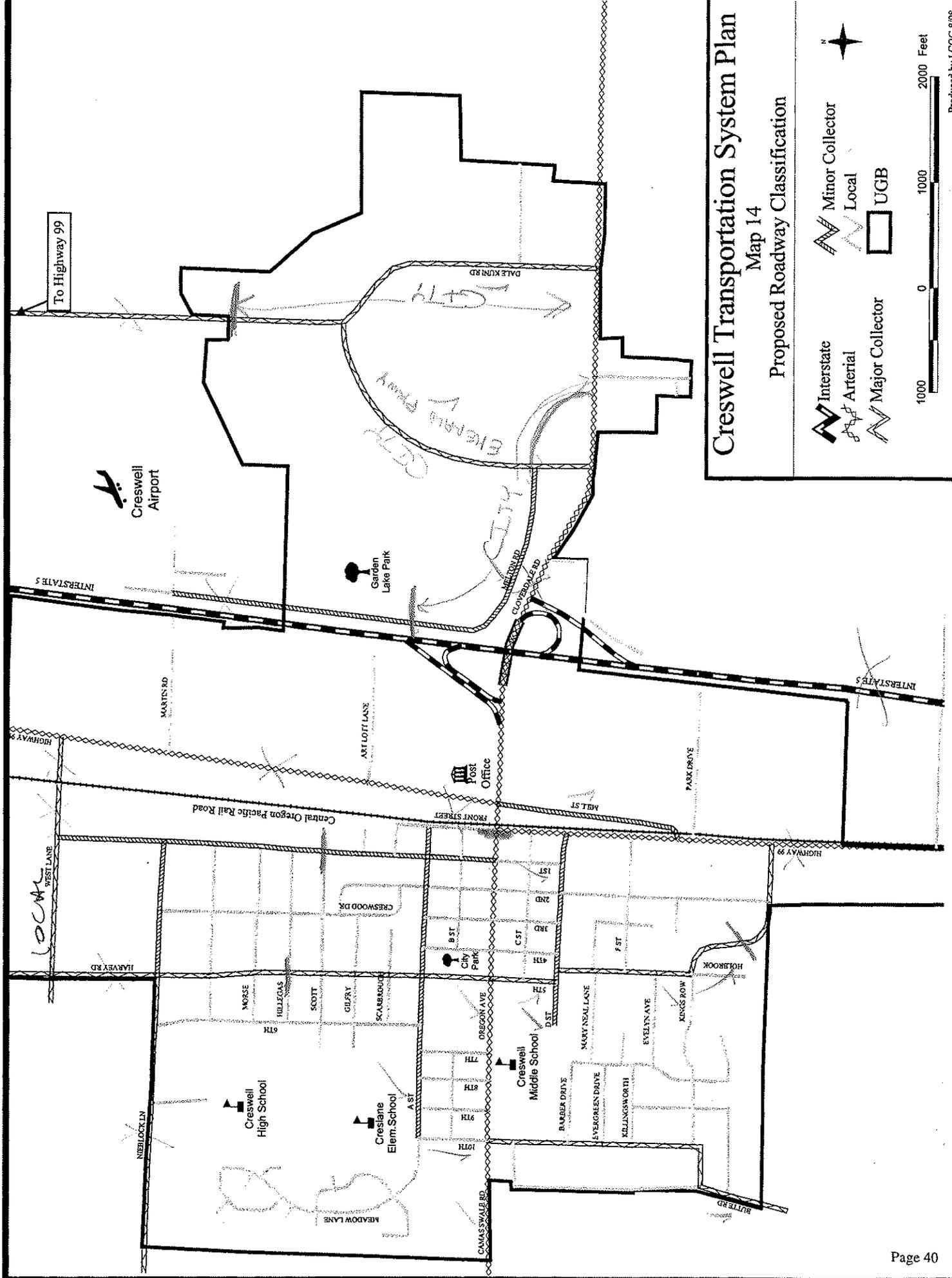
Map 14

Proposed Roadway Classification

-  Interstate
-  Arterial
-  Major Collector
-  Minor Collector
-  Local
-  UGB



Produced by LCOG 8/98



Proposed Minor Collectors: Melton Road, A Street, North 1st Street, D Street and Mill Street south of Oregon Avenue.

Local Street

A local street is intended to provide direct property access and is not intended to serve through traffic. Sidewalks are normally required as per the proposed pedestrian plan and Creswell’s Subdivision Ordinance.

Proposed Local Streets: All streets not identified in the previous categories.

Truck Routes

A truck route is signed as the primary access for trucks to industrial areas in Creswell. Future improvements on streets identified as truck routes should take into consideration the heavy volume of trucks, special needs for traffic control, road geometry, access during construction, and possible traffic/pedestrian/bicycle conflicts. Proposed truck routes are shown on Map 15.

Proposed Truck Routes: Highway 99 north and south of Oregon Avenue, Oregon Avenue from Interstate 5 to Highway 99, either Nieblock Lane or West Lane from Harvey Road to Highway 99, Harvey Road north of Nieblock Lane to Highway 99, and Cloverdale Road. Mill Street may also serve as a truck route on a limited basis to serve businesses along that roadway.

F. Street Standards

Street standards are contained in the Creswell Land Subdivision Ordinance. Street standards are presented with minimum and maximum paving and right-of-way widths. Paving widths are measured from the inside of the curb and sidewalk dimensions include a six-inch curb width. The proposed street standards will require modifications to Creswell existing street standards. Proposed street standards are compared in Table 5 and illustrated on Figures 1-4.

**Table 5
Proposed Street Standards**

Street Type	R.O.W. Width		**Paving Width		*Sidewalk Width	Bike Lane Width
	Min.	Max.	Min.	Max.		
Arterial	60 ft.	120 ft.	36 ft.	52 ft.	6.5 ft.	6 feet
Major Collector	50 ft.	80 ft.	34 ft.	46 ft.	5.5 ft.	6 feet
Minor Collector	50 ft.	80 ft. .	34 ft.	46 ft.	5.5 ft.	6 feet if required
Local Street	40 ft.	60 ft.	20 ft.	36 ft.	5.5 ft.	not required

*Includes curb width.

**Measured inside of curb to inside of curb.

Creswell Transportation System Plan

Map 15

Proposed Truck Routes

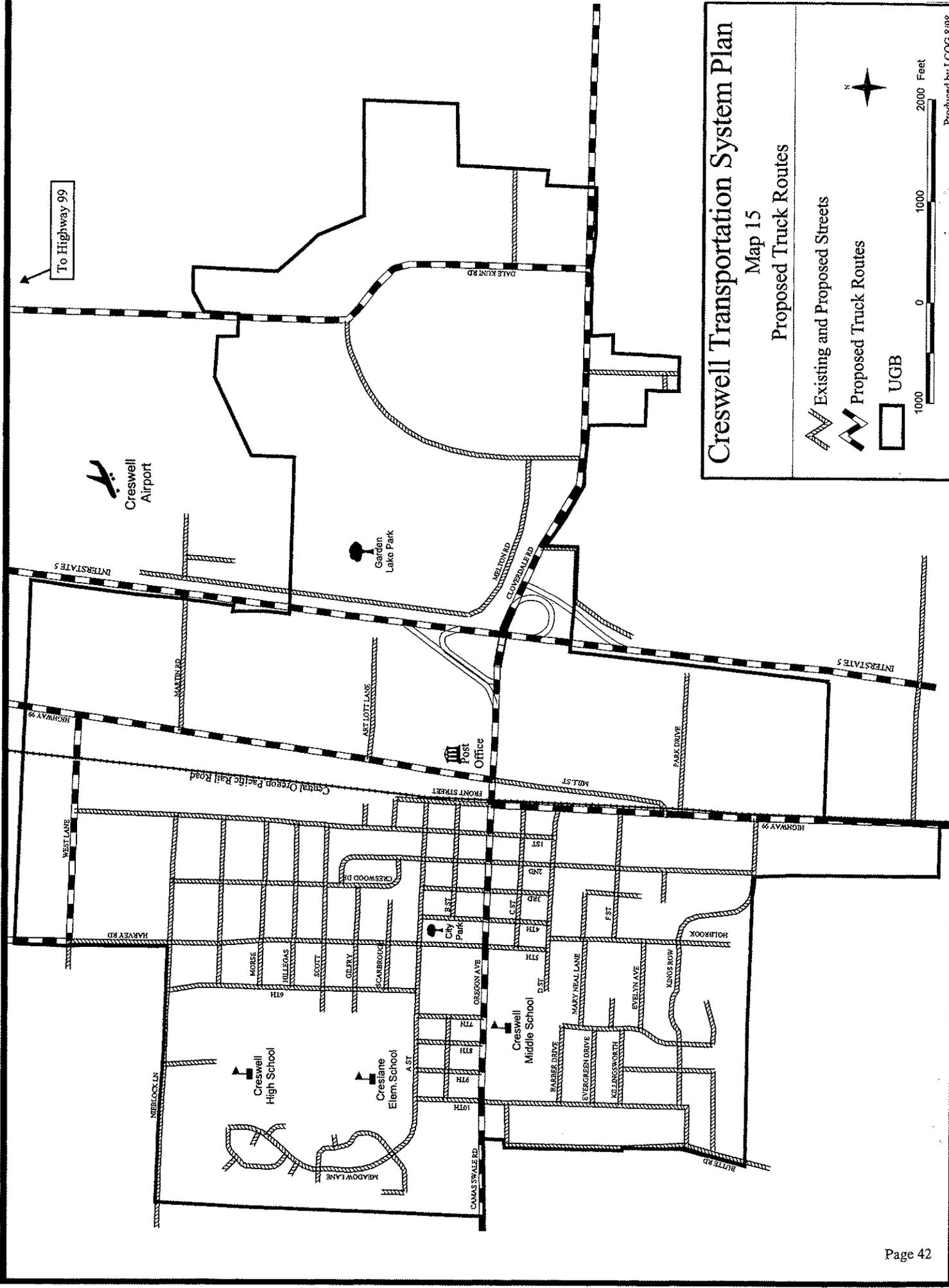
Existing and Proposed Streets

Proposed Truck Routes

UGB

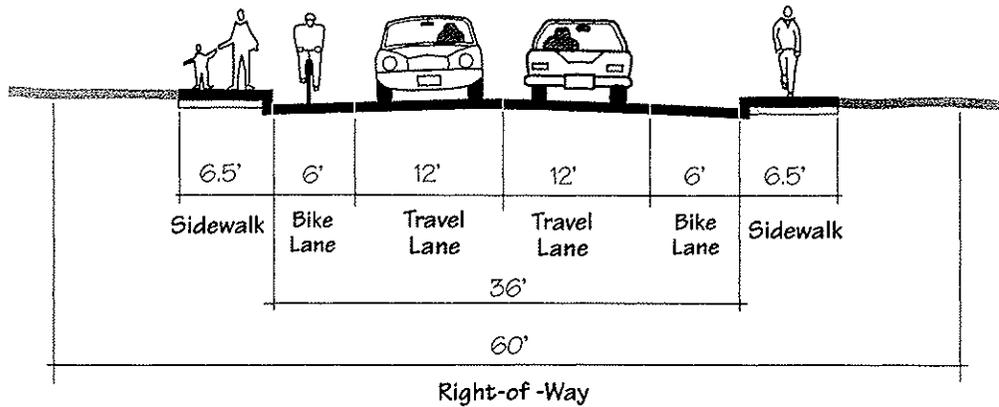


Produced by LCOG 8/98

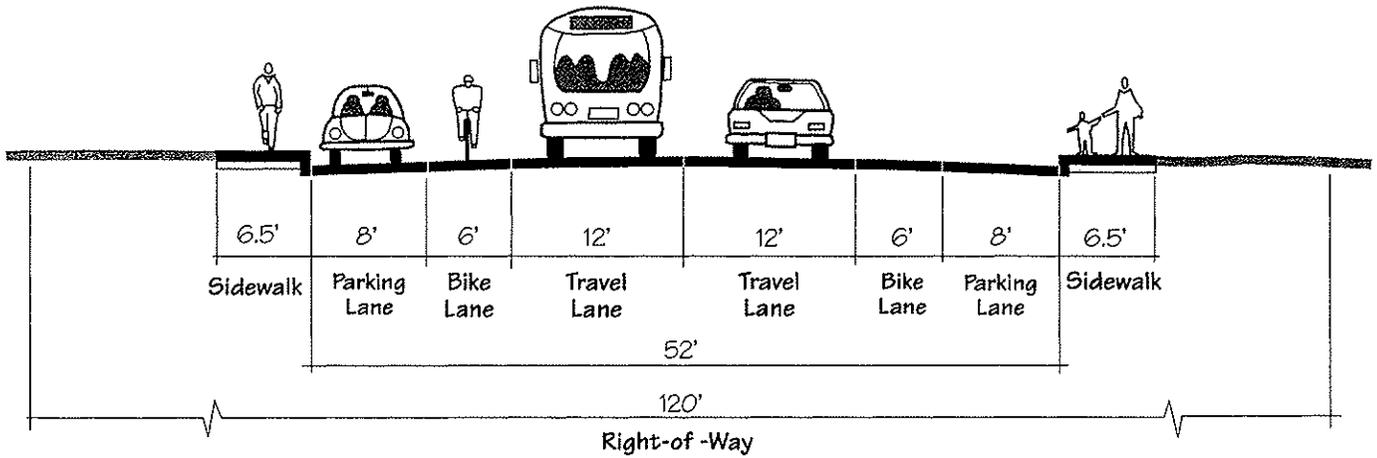


Arterials

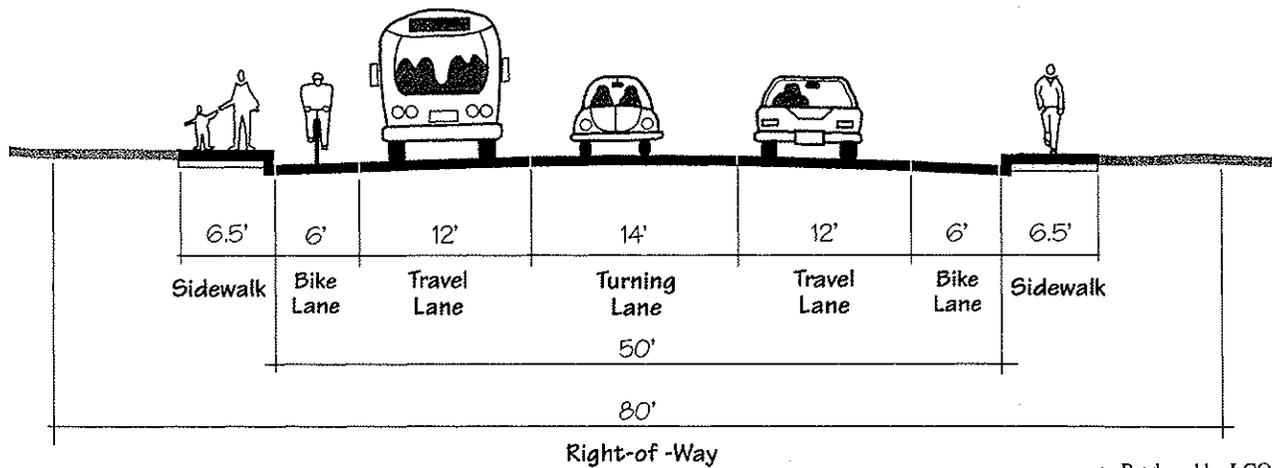
Minimum (no parking)



Maximum (on-street parking allowed)



Typical (with center turn lane)

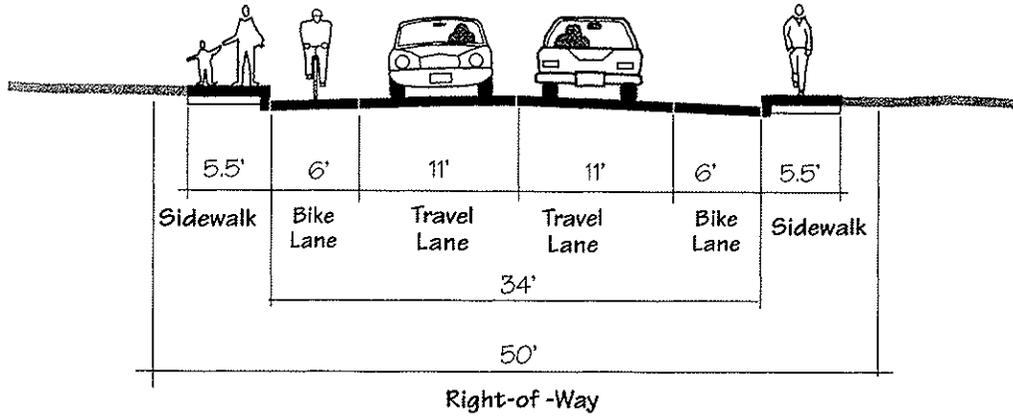


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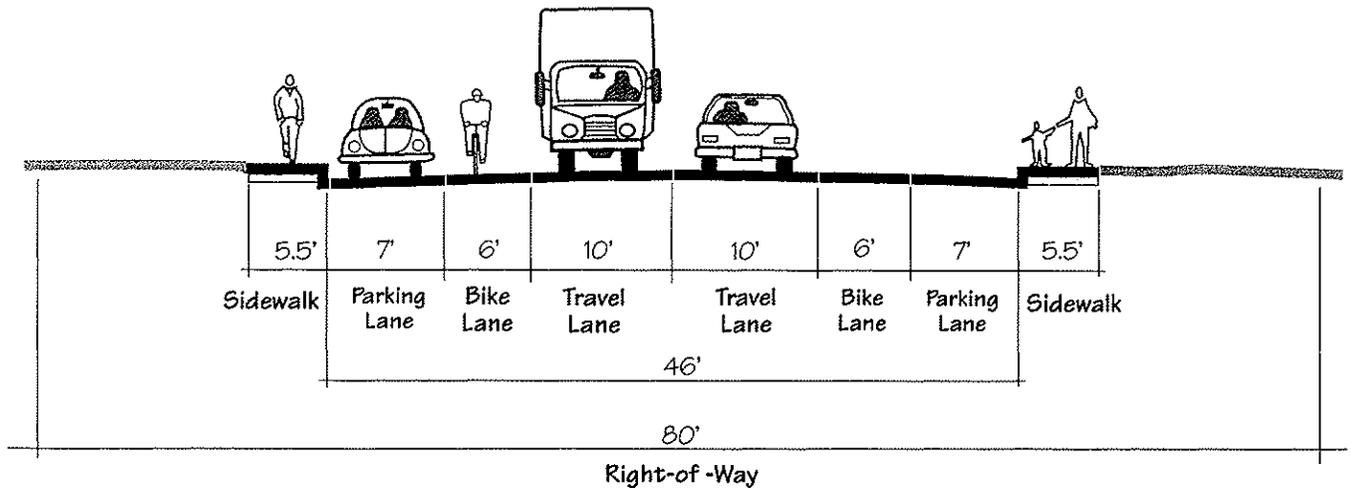
Creswell Transportation System Plan
Figure - 1
Proposed Street Standards

Major Collectors

Minimum (with bike lanes and no parking)



Maximum (with bike lanes and on-street parking allowed)



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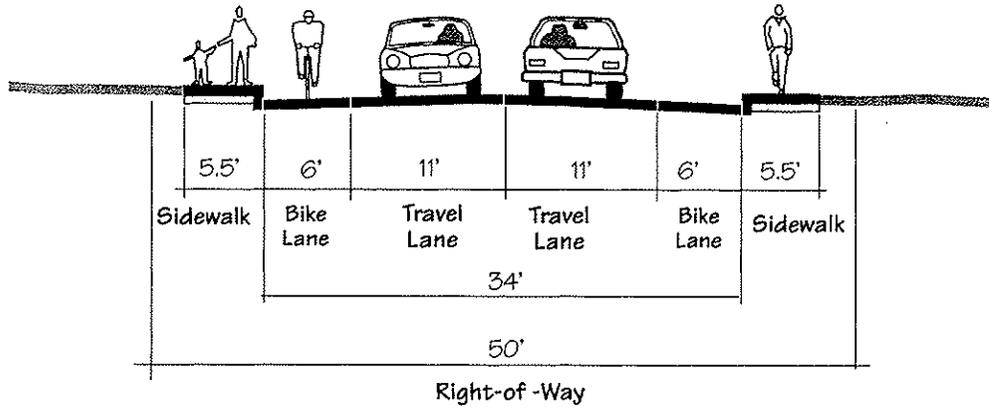
Creswell Transportation System Plan

Figure - 2

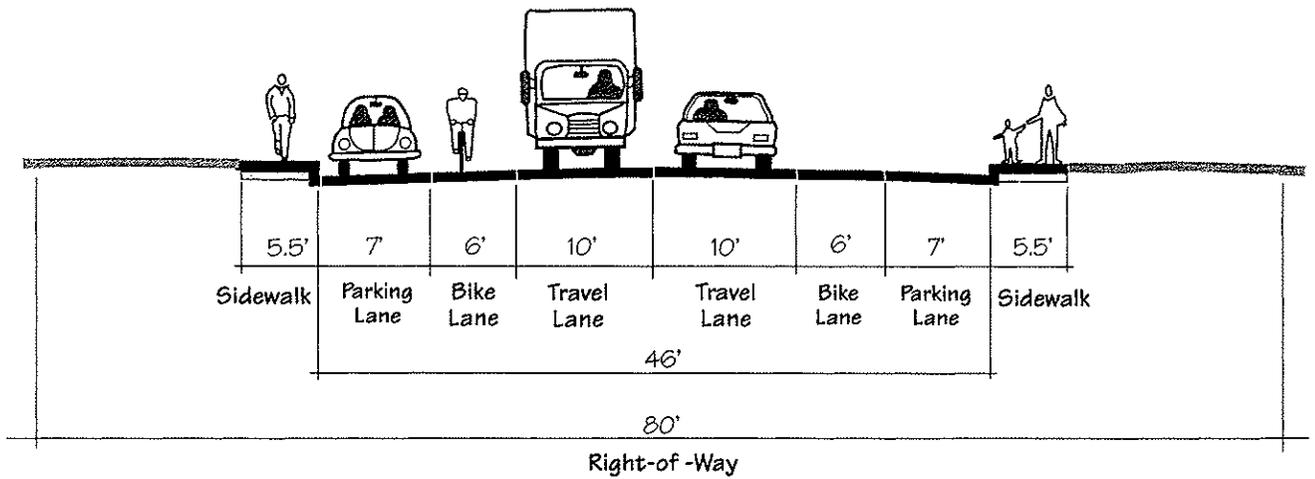
Proposed Street Standards

Minor Collectors

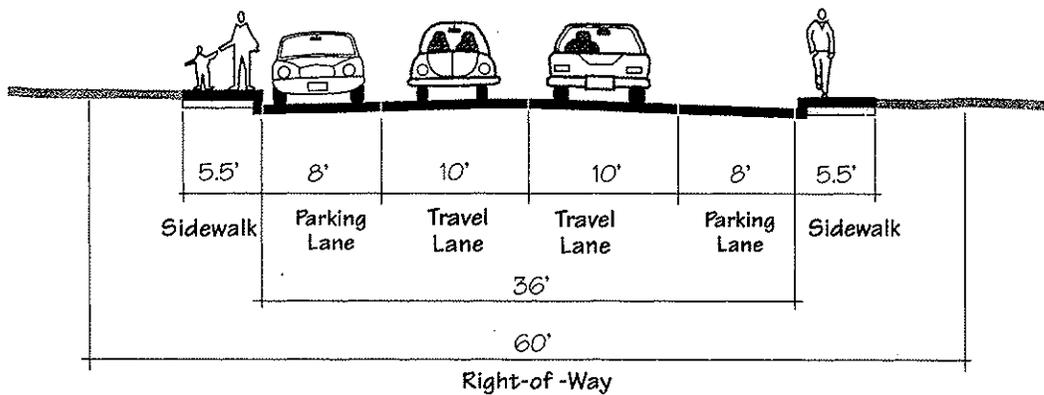
Minimum (with bike lanes* and no parking)



Maximum (with bike lanes* and on-street parking allowed)



Typical (without bike lanes)



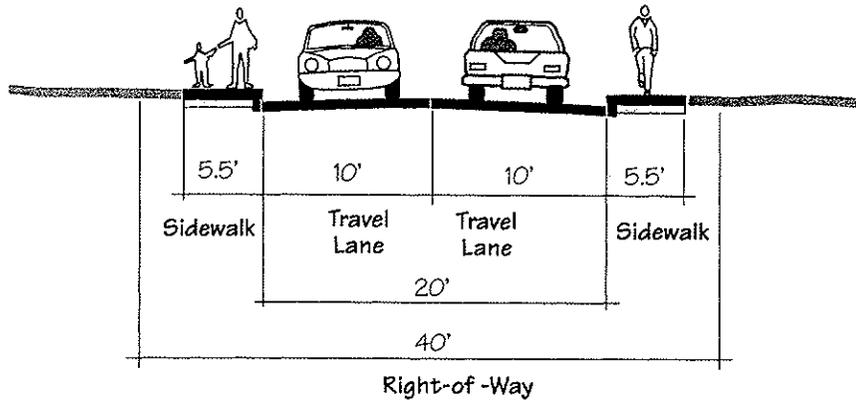
Produced by LCOG, 8/98

*bike lanes required only if identified in bicycle plan

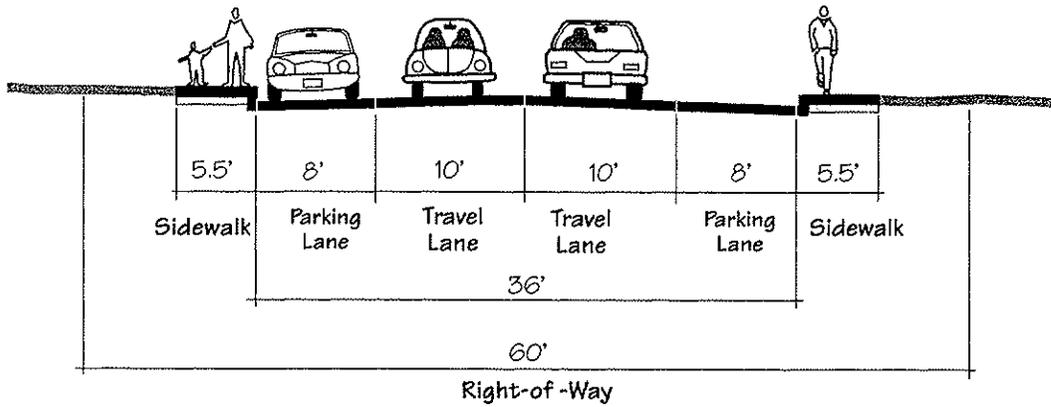
Creswell Transportation System Plan
Figure - 3
Proposed Street Standards

Local Streets

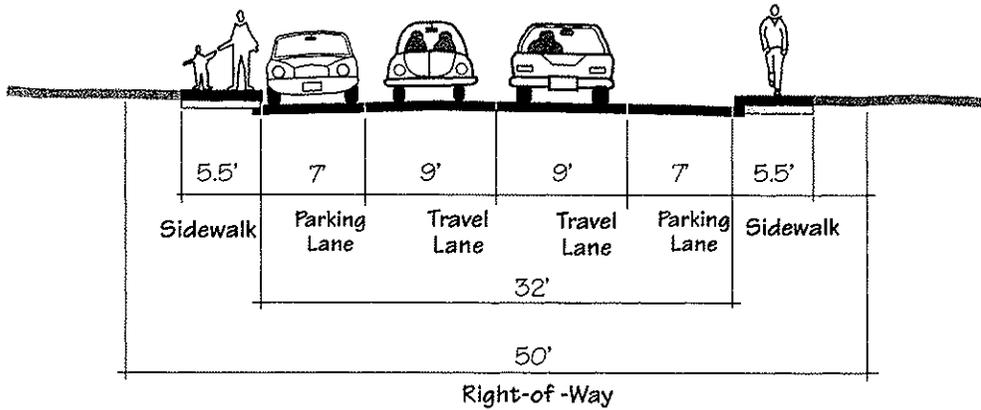
Minimum (no parking)



Maximum (on-street parking)



Typical (on-street parking)



Produced by LCOG, 8/98

Creswell Transportation System Plan

Figure - 4

Proposed Street Standards

G. Interstate 5 Interchange Refinement Plan

The Creswell/Interstate 5 Interchange Refinement Plan was conducted simultaneously and directly with the Creswell TSP. Details of the interchange alternative are contained in the ODOT Refinement Plan in Appendix I.

Three design concepts of the interchange and Highway 99 were presented to the Creswell CAC. Based on recommendations from the CAC and ODOT, Concept 1 was forwarded as the preferred alternative.

Concept 1 has three distinct but related elements: 1) calls for improving the interchange, 2) shows improvements for the intersection of Highway 99/Oregon Avenue and, 3) involves access management to ensure the safety and operations of the investment. The total cost is \$ 13.5 million.

Interchange Reconstruction Improvements: Cost -- \$7.5 million

- Reconstruct existing interchange to current design standards.
- Provide a second southbound entrance ramp when necessary.
- Include signalization at ramp terminals.
- Move west ramp terminal is 50 meters to the east.
- Move intersection of Melton Road 175 meters to the east.
- Reconstruct interchange bridge to three lanes and provide for all travel modes.
- Improve Oregon Ave. (west ramp to Highway 99) to a five-lane section.

Highway 99/Oregon Ave. Intersection Improvements: Cost -- \$6 million

- Construct a grade separated crossing over the railroad connecting Mill St. to the S. Highway 99 (Goshen-Divide).
- Improve the existing signal at the Oregon Ave./Highway 99 intersection.
- Include a signal at new Kings Row and Highway 99 intersection.
- Provide possible accesses along Highway 99 to the commercial areas north and south of Oregon Ave.
- Mitigate right-of-way impacts along the improved Highway 99 section south of Oregon Ave.

Access Management

- Construct median treatments along Oregon Ave. from the west ramp to the Highway 99/Mill St. intersection.
- Move Melton Road further to the east.
- Develop access control line 150 meters from the west ramp terminal.
- Enforce existing access control lines from the east ramp terminal.
- Provide local street accesses from Highway 99 and Mill St. to the commercial areas along Oregon Ave.
- The Oregon Department of Transportation, the City of Creswell and local business and property owners should create an access management plan. This plan should at least implement a local circulation pattern for the area south and north of Oregon Ave. that is bounded by Oregon Ave., Mill St., and Goshen-Divide Highway.

Implementation Actions

- Coordinate with Creswell TSP Citizen Advisory Committee.
- Conduct meetings or/and open houses with interested groups or individuals.
- Local adoption of Interchange Refinement Plan by the Creswell City Council and Lane County Board of Commissioners.
- Review and endorsement by ODOT.
- Future inclusion into the Statewide Transportation Improvement Program (STIP).

H. Access Management

Access to roadways and mobility along these roadways often conflict. Access management strives to balance access to developed land while ensuring movement of traffic in a safe and efficient manner. As described above, different roadways are designed for different purposes. Local roads are designed for local traffic, slow speeds, and numerous driveways. Collectors have a balanced responsibility where access to adjacent properties is as important as movement. Collectors typically carry a moderate volume of traffic during the day, with increasing traffic during the morning and evening commute. Arterials carry the majority of commuter traffic, goods, and services each day across the city. Movement is more critical on arterials than access to adjacent property.

Access management must be closely coordinated with ODOT and Lane County. ODOT has two types of access management for state roadways: access by permit and access control. Areas with access control and the jurisdictional responsibility of Creswell road system are shown on Map 3. In general, ODOT has access control on Oregon Avenue about 750 feet west of the interchange and on Cloverdale Road from the interchange to the east edge of the UGB. Access points should be spaced according to Table 6 below.

**Table 6
Proposed Access Spacing**

Roadway Type	Access Spacing
Arterial	150 feet
Major Collector	75 feet
Minor Collector	50 feet
Local Street	25 feet

I. Proposed Bicycle Plan

The proposed bicycle plan is illustrated on Map 16. As described earlier, no bike lanes currently exist in the city. The proposed bicycle plan includes a combination of on-street striped bike lanes and off-street multi-use paths. Three multi-use paths are shown on the proposed bicycle plan to connect Art Lott Lane with Garden Lake Park, to connect the west-end of D Street with Oregon Avenue through Creswell Middle School, and to connect Oregon Avenue with Nieblock Lane to the north. These paths will serve both pedestrian and bicycle travel and provide recreational and travel oriented opportunities.

The proposed bicycle plan includes on-street bike lanes on all arterials and major collectors with a few exceptions. At the preference of the CAC, bike lanes are not included on Oregon Avenue. An alternative route is proposed along both A Street north of Oregon Avenue and D Street south of

Oregon Avenue. These routes are proposed to connect with Oregon Avenue at Front Street/Highway 99 on the east and 10th Street/Butte Road on the west. In addition, the D Street bike lane would connect with a proposed multi-use bicycle path through the Creswell Middle School. Both A Street and D Street are classified as minor collectors. Other bicycle facilities include bike lanes on Highway 99 North and South and Cloverdale Road.

J. Proposed Pedestrian Plan

Map 17 illustrates the proposed pedestrian plan. This map shows the location of existing and proposed sidewalk improvements that are expected to occur within the planning period. Over time, most streets within the Creswell UGB may eventually have sidewalks. The pedestrian plan strives to provide pedestrian connections between residential areas and pedestrian destinations such as schools, parks, and the commercial district. Sidewalk widths are specified in the street standards section according to roadway classification. For new street improvements, sidewalks are required at the time of development. The timing of the installation of the sidewalks is specified in the Land Subdivision Ordinance. Pedestrian facilities are vital for safe and convenient access to transit.

In addition to filling in gaps in the sidewalk system around the schools and park, sidewalks are proposed along the east side of Highway 99 north of Oregon Avenue and along the east side of Butte Road south of Oregon Avenue. Three multi-use paths are also shown on the pedestrian plan to connect Art Lott Lane with Garden Lake Park, to connect the west end of D Street with Oregon Avenue through Creswell Middle School, and to connect Oregon Avenue with Nieblock Lane to the north. These paths will serve both pedestrian and bicycle travel.

K. Proposed Transit Plan

The Lane Transit District began providing service to Creswell on September 22, 1997. This service is being offered on a trial basis for 12 months. Service is offered six times daily during weekdays and two times on Saturday. Route 98 which serves Creswell also provides service to Cottage Grove on the same schedule. Service within Creswell is limited to a park-and-ride located near the corner of South 1st and C Streets. Service within Cottage Grove provides a loop by Wal-Mart and the downtown commercial area.

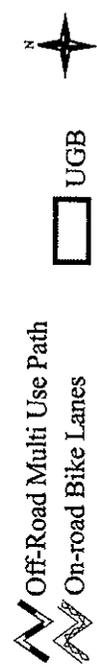
Map 18 shows the location of the existing park-and-ride facility and the location of other possible transit service areas. Within the 20-year planning horizon it is likely a looped transit route would be feasible within Creswell. The feasibility of this service will be evaluated as the pilot project progresses. The opinion of Creswell residents surveyed indicates a majority of residents desire public transit. Public transportation between Creswell and Eugene should be maintained and evaluated. Service to Cottage Grove should also be considered. In addition, local transit circulating within Creswell should be considered.

The City should continue to support expanding programs such as RideSource and South Lane Wheel, which provide service to the elderly and people with special transportation needs.

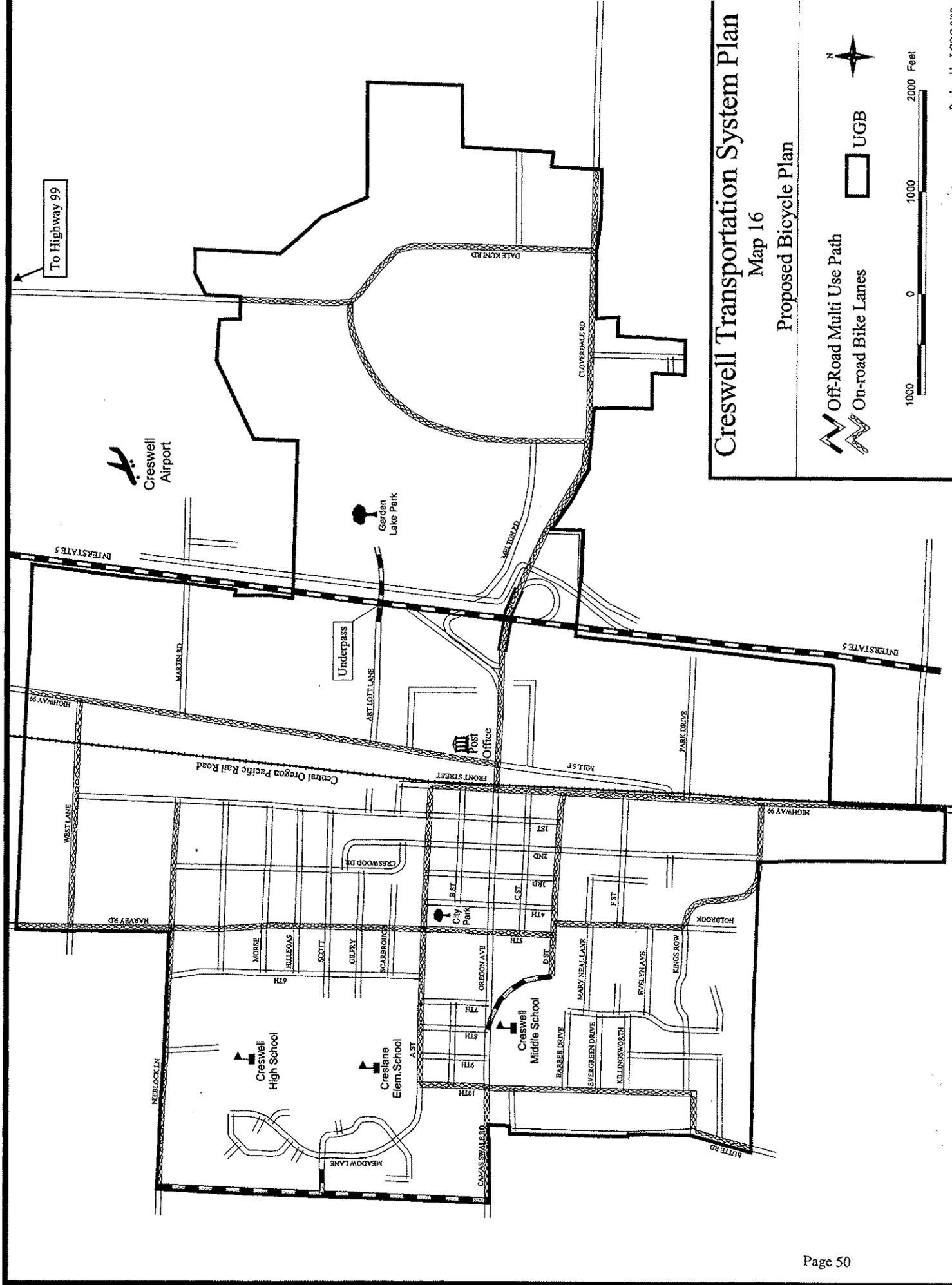
Creswell Transportation System Plan

Map 16

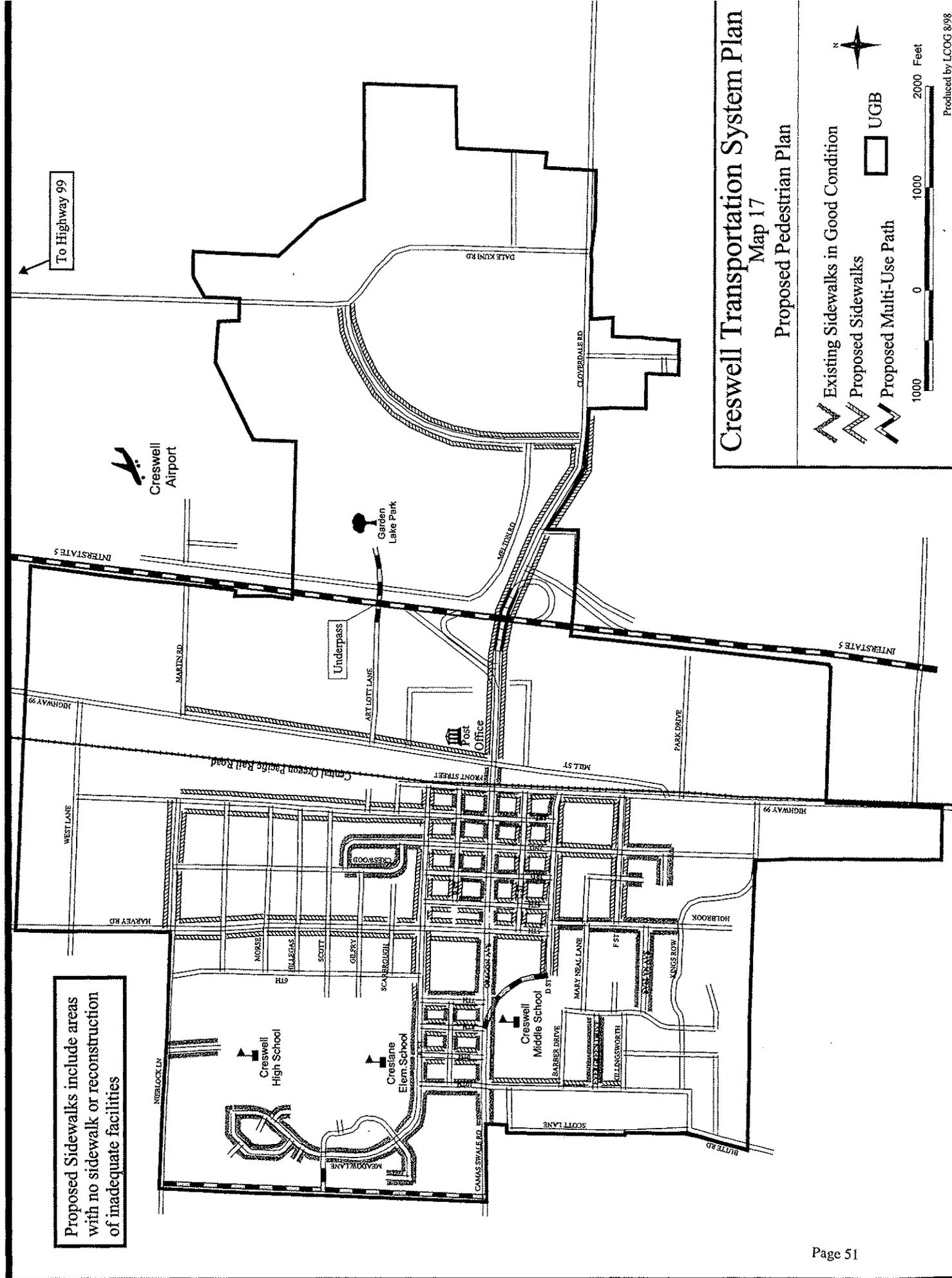
Proposed Bicycle Plan



Produced by LCOG 8/98



Proposed Sidewalks include areas with no sidewalk or reconstruction of inadequate facilities



Creswell Transportation System Plan

Map 17

Proposed Pedestrian Plan

Existing Sidewalks in Good Condition
 Proposed Sidewalks
 Proposed Multi-Use Path
 UGB

Creswell Transportation System Plan

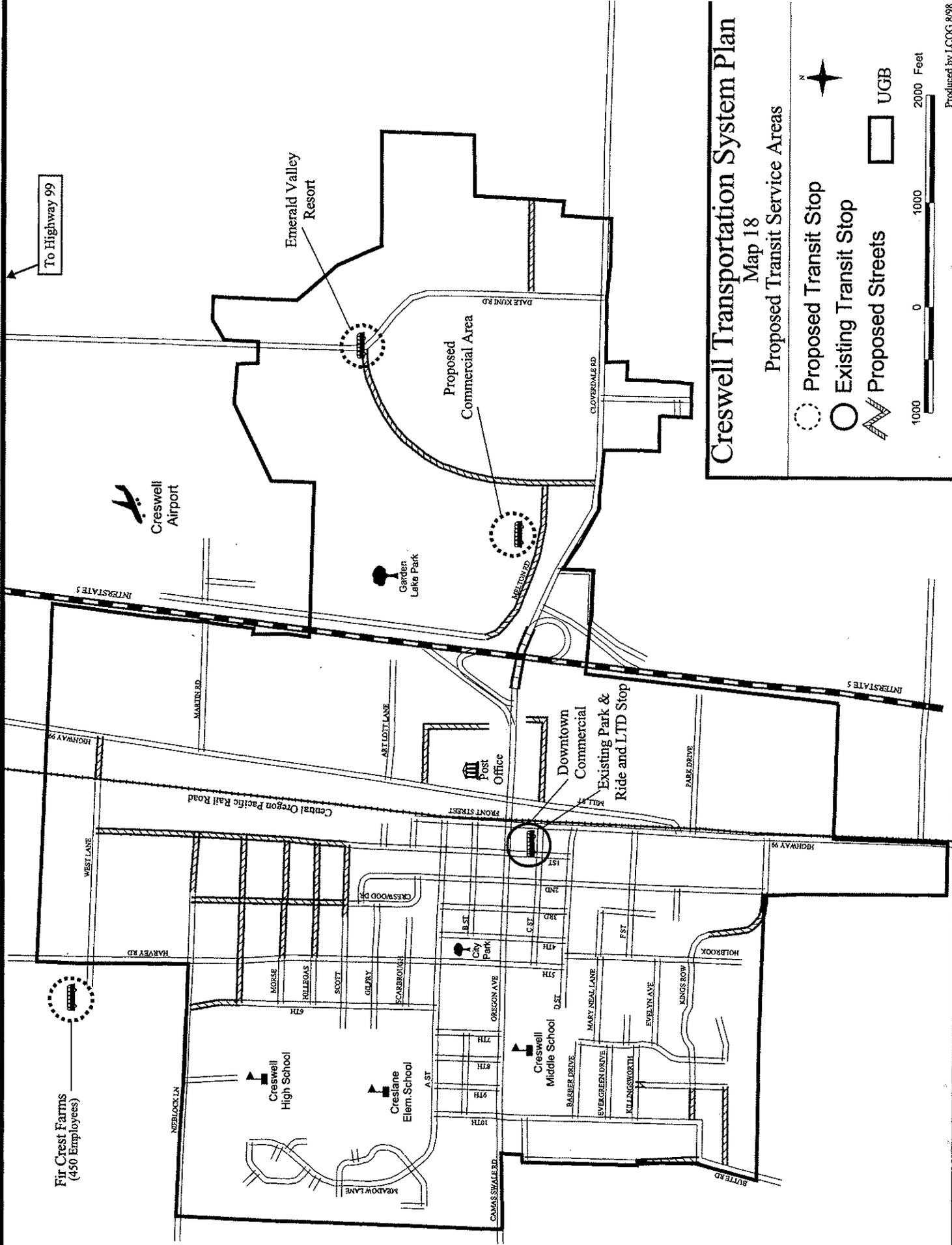
Map 18

Proposed Transit Service Areas

-  Proposed Transit Stop
-  Existing Transit Stop
-  Proposed Streets
-  UGB



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To Highway 99

Fir Crest Farms
(450 Employees)

Creswell
Airport

Emerald Valley
Resort

Garden
Lake Park

Proposed
Commercial Area

Post
Office

Downtown
Commercial
Existing Park &
Ride and LTD Stop

Creswell
High School

Creslane
Elem. School

Creswell
Middle School

Chapter Five

Plan Implementation

A. Introduction

Implementation of the City of Creswell (City) Transportation System Plan (TSP) will require a combination of capital improvements, ordinance amendments, and other implementation strategies such as education. Plan implementation also involves both site-specific improvements and system-wide enhancements. This chapter identifies proposed projects, ordinances, and strategies to implement the goals and policies of the TSP. Capital projects are grouped according to the proposed timing and priority of the project: high priority (one to five years), medium priority (six to ten years) and low priority (more than ten years). Potential funding sources and financing mechanisms for these projects are discussed in Chapter Six. A summary of all proposed capital projects is presented in the following Table 7. Cost assumptions used to calculate project costs are included in Appendix F.

B. Capital Projects

High-Priority Projects

The following projects are the highest priority projects expected to be completed within the next one to five years. Projects are presented in random order and are shown on Map 19. Implementation of these projects will be refined during the project design phase and will depend on identifying and securing funding. The project lead for each is identified for each high-priority project based on jurisdictional responsibility.

1. North 5th Street - North 5th Street from Oregon Avenue north to Morse is identified in the proposed street classification system as a major collector to serve north-south traffic north of Oregon Avenue. This 2,200-foot section is currently undersized and sidewalks are lacking in many areas. North 5th Street is identified to have a bike lane in the proposed bicycle plan. Parking is a consideration in determining the project design width. A typical section for a major collector with parking on both sides is 46 feet of paving. The estimated cost of this section including sidewalks and bike lanes is \$261,800. This estimate includes a 40 percent contingency cost but does not include the cost for right-of-way acquisition if needed. The exact street profile and location will be determined during project design. This may include limiting on-street parking. Every effort will be made to minimize impacts to existing vegetation and adjacent properties.

Project Lead - City

2. South 5th Street - South 5th Street from Oregon Avenue south to Holbrook is also identified in the proposed street as a major collector and to serve as a bike route. This two block section ties in with a proposed bike lane and street improvements on D Street. The major collector system uses D Street for a half block before continuing south on Holbrook Lane. The estimated cost of full improvements for this 600-foot section, including sidewalks and bike lanes, is \$71,400. This estimate includes a 40 percent contingency cost but does not include the cost for right-of-way acquisition, if needed. The exact street profile and location will be determined during project design. This may include limiting on-street parking. Every effort will be made to minimize impacts to existing vegetation and adjacent properties.

Project Lead - City

3. D Street - D Street from Highway 99 to its end at the Creswell Middle School is also identified as a minor collector in the proposed classification system. It is also proposed to include bike lanes and serve as an alternate route to Oregon Avenue. D Street is also proposed to connect South 5th Street to Holbrook Lane as part of the major collector system. This 1,695-foot section would include a 38- to 42-foot paved section, sidewalks, and striped bike lanes. Parking would only be allowed on one side. The estimated cost of this project is about \$189,840 including a 40 percent contingency cost. This estimate does not include the cost of right-of-way acquisition, if needed. The exact street profile and location will be determined during project design. This may include limiting on-street parking. Every effort will be made to minimize impacts to existing vegetation and adjacent properties.

Project Lead - City

4. A Street - A Street from Front Street west to 10th Street is identified as a minor collector in the proposed classification system. It is also proposed to include bike lanes as an alternate route to Oregon Avenue. This 2,400-foot section from Front Street to about 7th Street is currently undersized and many areas are lacking sidewalks. This project would reconstruct A Street to 42 feet including sidewalks and bike lanes to 7th Street and provide bike lane striping from 7th Street to 10th Street. The estimated cost of this project is about \$272,160 including a 40 percent contingency cost. This estimate does not include the cost of right-of-way acquisition, if needed. The exact street profile and location will be determined during project design. This may include limiting on-street parking. Every effort will be made to minimize impacts to existing vegetation and adjacent properties.

Project Lead - City

5. Miscellaneous Bike Lane Striping, - Several other streets are identified in the proposed bicycle plan as high-priority projects. The streets listed below are generally in good repair and have adequate capacity in the short term and only the addition of bike lanes is needed. The estimated cost of bike lane striping on both sides of these streets is \$38,260.
 - Front Street from Oregon Avenue to A Street (630 feet)
 - Holbrook Lane from D Street to Kings Row (1,269 feet)
 - 10th Street from Oregon Avenue to A Street (650 feet)
 - Oregon Avenue from 10th Street west to edge of UGB (1,277 feet)

Project Lead - City

6. Miscellaneous Bicycle Improvements (not shown on map) - As the City encourages bicycle usage, certain system repairs such as installing bicycle-proof storm drain gates, rubberized pads at railroad crossing, and other necessary safety devices will be necessary. These repairs are estimated to cost about \$3,000. An additional cost of \$2,000 is estimated for bicycle system signs and stencils. The City should work with other agencies and business owners as needed to provide adequate bicycle parking at schools, parks, shopping and employment centers, park-and-ride facilities, and other bicycle destinations. The estimated cost of these improvements is \$2,000. The total cost of this project group is estimated at \$7,000.

Project Lead - City

7. D Street Multi-Use Path - A multi-use path is proposed to be constructed from the west end of D Street near the Creswell Middle School to connect with Oregon Avenue. This path would serve both pedestrian and bicycle functions. The path would be about ten feet wide and constructed of asphalt. This 650-foot path would cost approximately \$10,920 including a 40 percent contingency cost.

Project Lead - City and School District

8. Miscellaneous Sidewalks - Several street sections within the city are in relatively good condition and only lack adequate pedestrian facilities. Both of the projects listed below would include a sidewalk on only the east side of the road. The estimated cost of these projects is \$93,660. Because both of these roadways may need further widening and repairs in the future, a temporary sidewalk installation may be appropriate. This project could consist of an asphalt pedestrian walkway with rolled curb. The cost of this installation would reduce the project cost to about \$40,000. These projects include:

- Highway 99 from Oregon Avenue to Martin Road (3,104 feet)
- Butte Road from Oregon Avenue to Killingsworth. (1,356 feet)

Since Highway 99 is a state facility this project would need to be coordinated with the Oregon Department of Transportation (ODOT). This project should also be coordinated with Medium Priority Project 1 described below.

Project Lead - City and ODOT

9. Harvey Road - This project is outside the Creswell UGB but influences activities within it. The intersection of Harvey Road and Highway 99 presents limitation to truck usage. The Fircrest Farms facility is located along Harvey Road. Trucks entering and leaving the facility often use North 5th Street and Oregon Avenue. Conversations with Fircrest management indicate that usage of the Harvey Road route would become more feasible if improvements were made to this intersection. This route is identified in the TSP proposed truck routes plan. The City should encourage Lane County to include this project in the County's capital improvements project list. The cost of this project is unknown.

Project Lead - Lane County

10. Front Street - This project involves closing Front Street to only one-way traffic going north from Oregon Avenue to B Street. Safety issues associated with automobiles entering Oregon Avenue at this intersection would be eliminated. The project would mainly involve signage and minor striping changes. Bicycles would still be able to use this section traveling south. Automobiles wanting to enter Oregon Avenue would be re-routed to North 1st Street. This project is estimated to cost \$3,500.

Project Lead - City

11. Oregon Avenue - Interstate 5 Interchange to Front Street - Access management, safety improvements, and adequate bicycle and pedestrian facilities are severely inadequate along this stretch of Oregon Avenue. This section of roadway receives the highest traffic volumes of any street in the city. Moderate levels of congestion are experienced today, with increasing congestion assured in the future. This roadway segment is one of the focuses of the ODOT Interstate 5 Interchange Refinement Plan. This project is to continue to support ODOT in its efforts to develop short-, medium-, and long-range solutions. Short-term solutions could include such projects as access management strategies, consolidation of access points, installation of adequate pedestrian and bicycle facilities, and other safety devices at key intersections and the railroad track.

Project Leads – ODOT and City

12. Gateway Enhancements - This project would provide signage and other landscaping treatments to various city gateway areas. These areas should include Highway 99 north and south entrances, Oregon Avenue west entrance, and Cloverdale Road east entrance. This project is estimated to cost \$2,000.
13. North 1st Street from Oregon Avenue to end - North 1st Street is identified in the proposed classification system as a minor collector and is not proposed to include bike lanes. This project involves roadway widening to about 36 feet and sidewalk installation. Sidewalks in this area are mostly lacking. Improvements to this roadway would assist with balancing traffic volumes along North 5th Street. North 1st Street is proposed to eventually connect with West Lane to the north. The estimated cost of this 1,600-foot section including a 40 percent contingency cost is \$104,000.
14. Seek ODOT funding for Interchange Refinement Plan Preferred Alternative - Coordinate with ODOT to fund the Preferred Alternative in the Interchange Refinement Plan. The City will work with ODOT to seek funding for this project in the Statewide Transportation Improvement Program (STIP). The estimated cost of this project is \$13.5 million (Interchange Reconstruction \$7.5 million, Highway 99/Oregon Avenue \$6.0 million).

Project Lead - City and State

Medium-Priority Projects

The following projects are the medium-priority projects expected to be completed within the next six to ten years. Projects are presented in random order as shown on Map 20. The priority and timing of these projects will be evaluated when evaluation of the TSP occurs in three to five years.

Implementation of these projects will be refined during the project design phase and will depend on identifying and securing funding.

1. Highway 99 from Oregon Avenue to Martin Road - Highway 99 north of Oregon Avenue is identified as a major collector and to contain bike lanes. This roadway serves both through-traffic trips and local trips to housing and businesses. This project would involve minor roadway widening and the installation of sidewalks and bike lanes. High-Priority Project 8 described above prescribed the installation of sidewalks along the east side of this segment. These projects should be coordinated. This project calls for the completion of roadway widening improvements and the installation of full sidewalk and bike lane improvements. The estimated cost of this project is \$108,920 including a 40 percent contingency cost. This project will require coordination with ODOT.
2. Highway 99 from Oregon Avenue to Market Street - Highway 99 south of Oregon Avenue is also identified as a major collector and to contain bike lanes. This 4,200-foot section would involve minor roadway widening and the installation of bike lanes and sidewalks on only the west side. The estimated cost of this project is \$147,000 including a 40 percent contingency cost. This project will require coordination with ODOT.
3. West Lane from Harvey Road to Highway 99 - This project is proposed as a new road construction to provide an alternative route to access Highway 99 in the north part of the city. The proposed roadway would provide direct access to the Fircrest Farms facility and undeveloped industrial property west of the railroad tracks. The proposed route would require a railroad crossing near Highway 99. The proposed road is designated in the proposed classification system as a major collector and would include sidewalks and bike lanes. Right-of-way currently exists for most of the section west of the railroad tracks. The cost of this 2,200-foot section for roadway, sidewalks, and bike improvements, including a 40 percent contingency cost, is estimated at \$261,800. The cost of railroad crossing improvements is unknown at this time.
4. Cloverdale Road from Interstate 5 to Dale Kuni Road - This project includes striping bike lanes on both sides as identified in the proposed bicycle plan. Most of this section is currently adequate to include these facilities. This project should be coordinated with ODOT. The estimated cost of this project, including a 40 percent contingency cost, is \$53,340.

5. Miscellaneous Bike Lane Striping - This project includes bike striping and minor shoulder work on several more streets identified in the proposed bicycle plan. The estimated cost of these projects is \$189,840 including a 40 percent contingency cost.
 - Butte Road from Oregon Avenue to UGB south (3,000 feet)
 - Nieblock Lane from Harvey road to west end (2,500 feet)
 - Harvey Road from Morse St. to UGB north (2,400 feet)
 - Dale Kuni Road from Cloverdale Road to Emerald Valley Resort (3,400 feet)

6. Miscellaneous Sidewalk Paving - Several street sections within the city are in relatively good condition and only lack adequate pedestrian facilities. The projects listed below would include a sidewalk on both sides and some minor roadway repair work. The estimated cost of these projects including a 40 percent contingency is \$104,098. These projects include:
 - North 9th Street from Oregon Ave. to A Ave. (644 feet)
 - North 7th Street from Oregon Ave. to A Ave. (653 feet)
 - F Street from Highway 99 to Holbrook (1267 feet)

7. Lane Transit District (LTD) Park-and-Ride - This project involves an evaluation of appropriate public transit facilities in the community. A City-owned property at the corner of South 1st and C Street is currently being used to serve LTD. This project will assess the adequacy of this site or proposed an alternative location. Project siting should give consideration to automobile, pedestrian, and bicycle connections and to the availability of other amenities such as sewer and water.

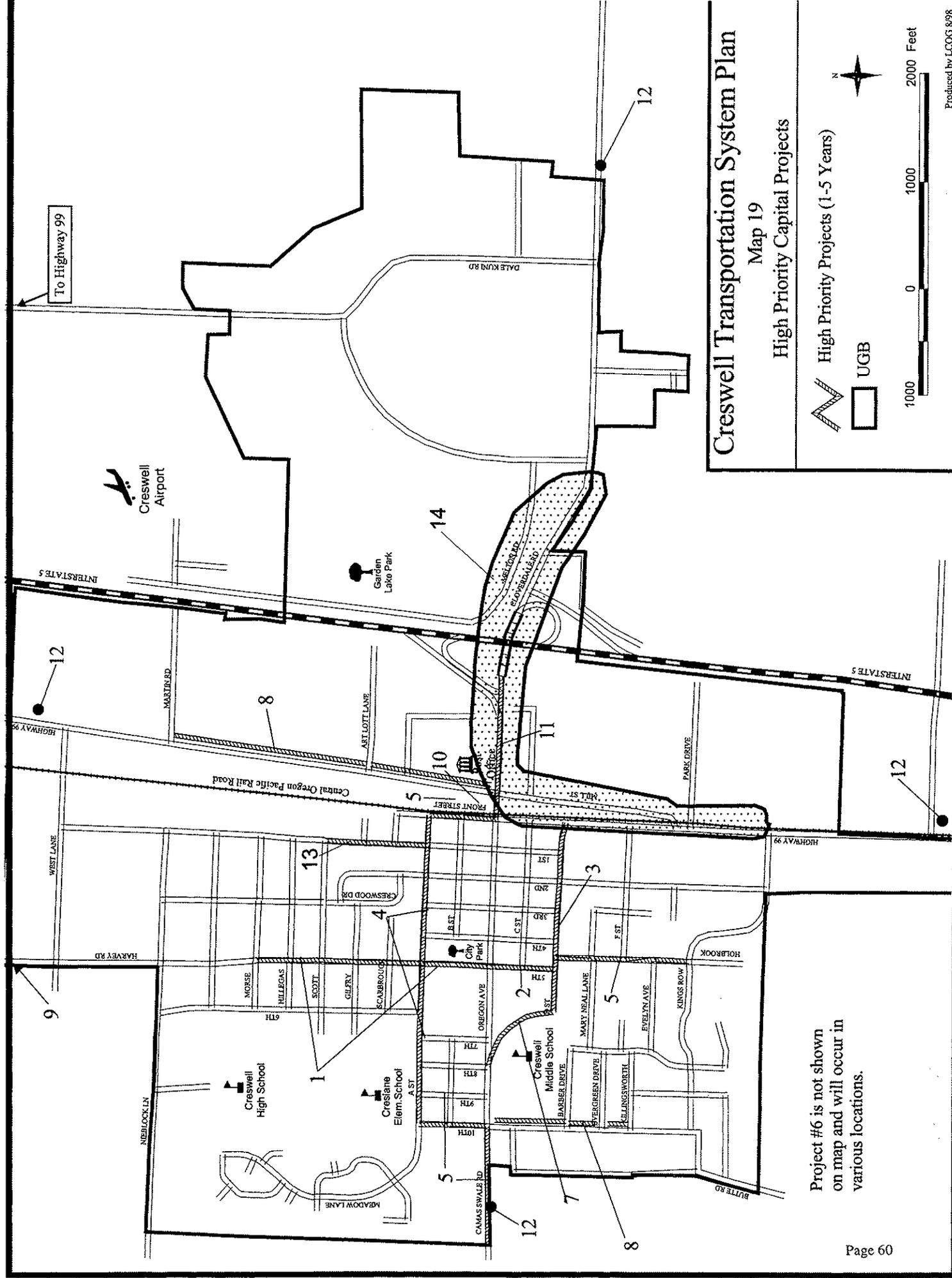
8. Downtown Parking and Design - This project will evaluate the feasibility of converting diagonal parking located along Oregon Avenue west of Front Street to parallel parking. The project will also evaluate alternative parking locations and other downtown pedestrian- and bicycle-oriented design features, for example, curb extensions at key intersections, the inclusion of trash enclosures, seating, drinking fountains, bicycle racks, and landscaping. The project will strive to implement low-cost solutions where feasible. The estimated cost of the evaluation phase of this project is estimated at \$5,000-\$10,000. Implementation cost will depend on the preferred solutions.

9. Mill St./Highway 99 Intersection - This project would improve the intersection of Mill St. and Highway 99 at the railroad crossing. The intent is for a short-term safety and operation improvement. A feasibility/effectiveness study would be conducted. There are initial constraints at this intersection that include: right-of-way will be needed from the railroad; the intersection may be enlarged and aligned at a right angle, which could have right-of-way impacts; and this project may require approval from the railroad. The estimated cost of this project is unknown.

Low-Priority Projects

The following projects are the low-priority projects expected to be completed in greater than ten years. Projects are presented in random order as shown on Map 21. The priority and timing of these projects will be evaluated when evaluation of the TSP occurs in three to five years. Implementation of these projects will be refined during the project design phase and will depend on identifying and securing funding. Project timing will depend on identifying and securing funding. Cost estimates for these projects are only included when they can be readily calculated. The actual project costs may be higher depending on when the projects are conducted.

1. Multi-Use Bike Paths - Two additional multi-use paths are proposed within the study area. These paths would serve both pedestrian and bicycle functions and would be about ten feet wide and constructed of asphalt. The total paving for these project is estimated to cost \$70,560 including a 40 percent contingency cost. The Art Lott Lane to Garden Lake Park multi-use path connection may involve additional costs associated with facilities to get under Interstate 5. A small bridge crossing already exists in this location. The two projects are:
 - Oregon Avenue to Nieblock (3,200 feet)
 - Art Lott Lane to Garden Lake Park (1,000 feet)
2. Kings Row from Holbrook to Highway 99 - Kings Row is classified in the proposed classification system as a major collector to provide an alternative access to Highway 99 in the southeast portion of town. It is already identified to include bike lanes. The right-of-way for this extension is already purchased. The estimated cost of this project, including a 40 percent contingency cost, is \$191,192.
3. Interstate 5 Interchange and Highway 99 Refinement Plan - A preferred alternative was selected by CAC and a list of improvements and project costs developed. The specifics of this project are presented in the Refinement Plan. The inclusion of this project in the low-priority list is more a function of the size of the project and the reality of securing the required funding rather the need for the project. As mentioned previously, the study area for the refinement plan contains the majority of Creswell's transportation-related issues. As development continues to put pressure on this system, the need for this project will increase. The estimated cost of the preferred refinement plan alternatives is \$13.5 million (\$7.5 million for interchange work and \$6.0 million for Highway 99 realignment).



Creswell Transportation System Plan

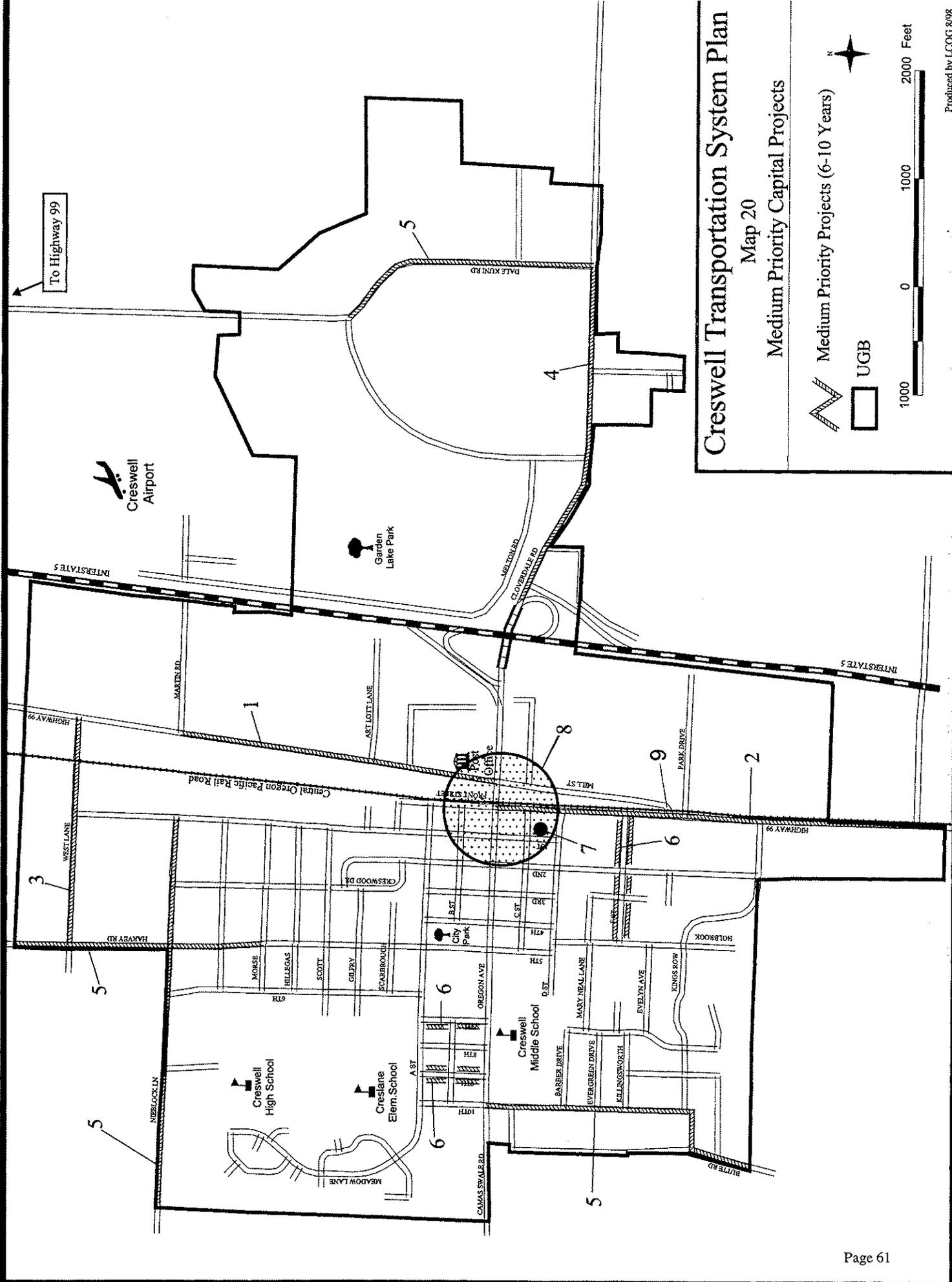
Map 19

High Priority Capital Projects

-  High Priority Projects (1-5 Years)
-  UGB



Project #6 is not shown on map and will occur in various locations.



Creswell Transportation System Plan

Map 20

Medium Priority Capital Projects

Medium Priority Projects (6-10 Years)

UGB

1000 0 1000 2000 Feet

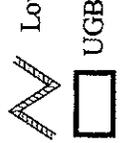
To Highway 99

Creswell Transportation System Plan

Map 21

Low Priority Capital Projects

Low Priority Projects (>10 Years)



1000 0 1000 2000 Feet

Produced by LCOG 8/98

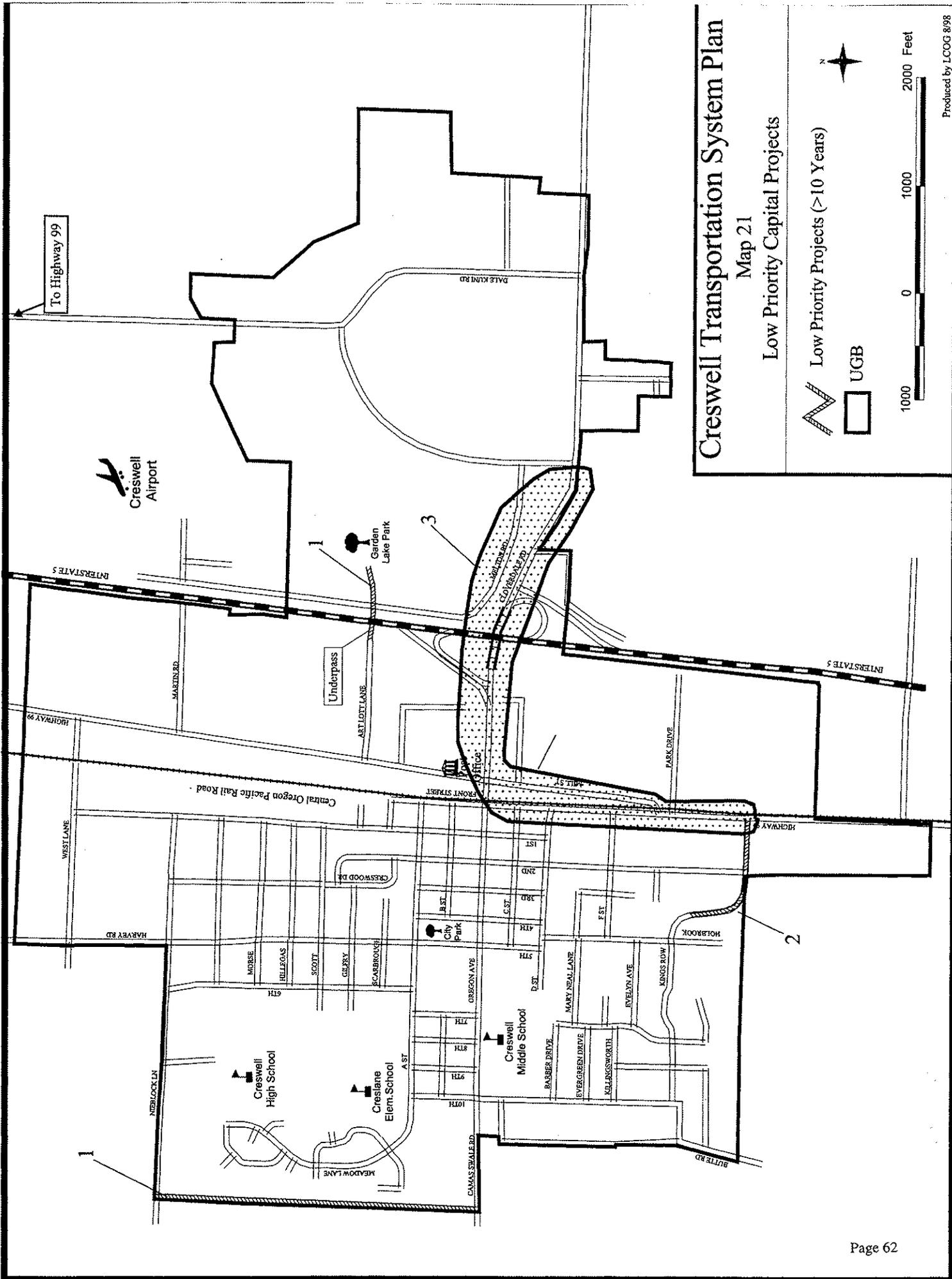


Table 7
Creswell Transportation System Plan
Capital Projects Summary

Project Number	Project Name	From	To	Length (ft)	Paving			Project Type			Project Lead	Estimated Cost
					Upgrade	Sidewalks	Bike Lanes	Other	Bike Lanes	Other		
High-Priority Projects, 1 to 5 Years												
1	North 5th Street	Oregon Ave	Morse	22,000	Upgrade	X	X				City	\$261,800
2	South 5th Street	Oregon Ave	Holbrook	600	Upgrade	X	X				City	\$71,400
3	D Street	Highway 99	Creswell	1,695	Upgrade	X	X				City	\$189,840
4	A Street	Front Street	Middle School	2,400	Upgrade	X	X				City	\$272,160
5	Misc. Bike Lane Striping		10th Street	-	-	-	-				-	-
A	Front Street	Oregon Ave	A Street	630			X				City	\$6,300
B	Holbrook Lane	D Street	Kings Row	1,269			X				City	\$12,690
C	10th Street	Oregon Ave	A Street	650			X				City	\$6,500
D	Oregon Ave	10th Street	UGB	1,277			X				City	\$12,770
6	Miscellaneous Bicycle Improvements	Citywide	Citywide	N/A						Misc. Multi-Use Path	City	\$7,000
7	D Street Multi-Use Path	Near West end of D St	Oregon Ave	650							City/School District	\$10,920
8	Miscellaneous Sidewalks											
A	Highway 99	Oregon Ave	Martin Rd	3,104			X				ODOT	\$65,184
B	Butte Rd	Oregon Ave	Killingsworth	1,356			X				City	\$28,476
9	Harvey Rd	Intersection with HWY 99										
10	Front Street	Oregon Ave	B Street	N/A						Repairs	Lane County	Unknown
				324						Signage	City	\$3,500
11	Oregon Ave	1-5 Interchange	Front Street	1,691			X			Access	ODOT	Unknown
12	Gateway Enhancements	City Gateway areas										
A	Highway 99	North UGB	Same	N/A								
B	Highway 99	South UGB	Same	N/A						Signage	City/ODOT	\$500
C	Camas Swale Rd	West UGB	Same	N/A						Signage	City/ODOT	\$500
D	Cloverdale Rd	East UGB	Same	N/A						Signage	City/ODOT	\$500
13	North 1st Street	A Street	End	3,000	X	X				Signage	City	\$273,000
14	Seek ODOT funding for Interchange Refinement Plan Preferred Alternative			1,445	Upgrade	X	X				ODOT	\$13,500,000

Table 7
Creswell Transportation System Plan
Capital Projects Summary

Project Number	Project Name	From		To		Length (ft)	Project Type			Project Lead	Estimated Cost*
							Paving	Sidewalks	Bike/Lanes		
Medium-Priority Projects, 6 to 10 Years											
1	Highway 99	Oregon Ave		Martin Rd		3,104		X		City/ODOT	\$108,920
2	Highway 99	Oregon Ave		Market Street		4,200		X		City/ODOT	\$174,000
3	West Lane	Harvey Rd		Highway 99		2,200		X		City	\$261,800
4	Cloverdale Rd	I-5		Dale Kuni Rd		3,810		X		ODOT	\$53,340
5	Misc. Bike Lane Striping					-		-		-	-
A	Butte Rd	Oregon Ave		UGB South		3,000		X		City	\$50,400
B	Nieblock Ln	Harvey Rd		West End		2,500		X		City	\$42,000
C	Harvey Rd	Morse St		UGB North		2,400		X		County	\$40,320
D	Dale Kuni Rd	Cloverdale Rd		Emerald Valley Resort		3,400		X		County	\$57,120
6	Misc. Sidewalk Paving					-		-		-	-
A	North 9th St	Oregon Ave		A St		644		X		City	\$26,331
B	North 7th St	Oregon Ave		A St		635		X		City	\$25,963
C	F Street	Highway 99		Holbrook		1,267		X		City	\$51,804
7	LTD Park and Ride	Corner of South 1st and C St				N/A				City	Unknown
8	Downtown Parking and Design	Oregon Ave		West of Front						Study	\$5,000-
9	Mill St/Highway 99 Intersection	Corner of Highway 99 and South Mill St				N/A				Study	\$10,000
Low-Priority Projects, > 10 Years											
1	Multi-Use Bike Paths					-		-		-	-
A	Path	Oregon Ave		Nieblock Ln		3,200				Multi-Use Path	\$53,760
B	Path	Art Loft Lane		Garden Lake Park		1,000				Multi-Use Path	\$16,800
2	Kings Row	Holbrook		Highway 99		1,720		X		NA	\$191,192
3	I-5 Interchange Refinement Plan	I-5		Highway 99		1,445		X		ODOT	\$13,500,000

C. Ordinance Revisions

Several areas have already been discussed requiring amendments to Creswell's Land Subdivision or Zoning Ordinances. The specific wording of these revisions will be developed as part of the Creswell Ordinance Update project. Some of the topics to be addressed in Ordinance revisions include the following:

1. Street Design Standards - adopting new standards as described in Chapter Four and other design considerations.
2. Allowing modifications to the range of adopted street standards. Modifications would require approval by the Planning Commission and City Fire Chief according to set of identified criteria.
3. Access Management and Access Spacing Standards as described in Chapter Four.
4. Bicycle Parking Requirements for multiple-family and commercial development.
5. Allowing Reductions in Automobile Parking Requirements.
6. Modifying Land Subdivision to encourage street and pedestrian connectivity.
7. Developing specific standards for pedestrian and bicycle facility design.
8. Include public transportation considerations in subdivision and site review.

Chapter Six

Financing Strategies

A. Introduction

As described in the previous chapter, a number of projects have been identified to implement the City of Creswell (City) Transportation System Plan (TSP). Several of the projects are needed to improve the existing street system. Other projects that address alternative modes, such as pedestrian, bicycle, and public transportation, will warrant additional facilities and services to safely accommodate future demand. Unlike the roadway funds, funding sources are limited for bicycle improvements. The total cost of proposed bicycle system improvements is significantly higher than the local share of Bicycle Funds available. For this reason, a bicycle funding strategy for improvements should emphasize alternate sources, consolidation with other street and maintenance projects, and cost-effective improvements such as re-stripping. Funding for these and other projects will come from a variety of sources as summarized below.

B. Federal Funding Sources

Some federal funding programs are administered by the State. Those programs are listed in this section.

Intermodal Surface Transportation Efficiency Act: Funding through the Intermodal Surface Transportation Efficiency Act (ISTEA) is targeted to improvements that demonstrate beneficial impacts towards implementing a region's TSP, enhance the multi-modal nature of the transportation system, and meet local land use, economic, and environmental goals. Funding categories created by ISTEA are intended to provide an area with more discretion in allocating federal transportation funds to projects from highway improvements to transit improvements, management systems, and non-vehicular modes such as bicycle and pedestrian improvements. The ISTEA funding programs include: National Highway System, Interstate Program, Surface Transportation Program, and National Scenic Byways Program. The federal legislation that authorizes ISTEA terminated in November 1997 and was extended by President Clinton for an additional six months. A new federal funding package is currently under development, but there is uncertainty about continuation of, and/or funding levels for, some existing programs.

Highway Enhancement System (HES)

This Federal Highway Administration program provides funding for safety improvements on public roads.

National Highway System (NHS)

Provides funding for a variety of activities on any highway currently designated as a principal arterial. In Creswell, this would mean Interstate 5.

Surface Transportation Program

Funding for transportation enhancement activities is provided under the Surface Transportation Program (STP) of the ISTEA. These enhancement activities include the provision of facilities for pedestrians and bicycles. Ten percent of each state's share of STP funds are to be set aside for transportation enhancements. These funds are dispersed through ODOT's regional offices. The project must be included in the State Transportation Improvement Program (STIP) to receive STP funds. This is the most flexible of the funding programs and can fund improvements on any highway except those with a functional classification of local street or rural minor collector. These roads are now collectively referred to as federal-aid routes. Transit capital improvement projects are also eligible for funding through this category. Each eligible city is suballocated a portion of the State's STP funds. The project sponsor must request inclusion of the project in the annual Transportation Improvement Program.

Transportation Enhancement Program

The state is required to set aside a portion of its STP funds for projects that will enhance the cultural and environmental values of the state's transportation system. Projects need to demonstrate a link to the intermodal transportation system. It funds enhancements such as mitigation of water pollution due to highway runoff, landscaping or other scenic beautification, bicycle/pedestrian projects, historic preservation, acquisition of scenic easements and scenic or historic sites, archaeological planning and research, and preservation of abandoned railway corridors.

Highway Bridge Replacement and Rehabilitation Program

The Highway Bridge Replacement and Rehabilitation Program (HBRR) provides funding for the replacement and rehabilitation of structures regardless of functional classification. A portion of the HBRR Program is allocated for the improvement of structures under the jurisdiction of cities and counties. Bridges under local jurisdiction are added to the program based on a selection process agreed upon by the Oregon Department of Transportation (ODOT), the League of Oregon Cities, and the Association of Oregon Counties. A technical ranking system, based on sufficiency rating, cost factor, and the load capacity is applied to proposed projects, and those that rank highest state-wide receive top-priority funding.

Timber Receipts

The U.S. Forest Service (USFS) and Bureau of Land Management share revenue from timber receipts with counties in Oregon. Lane County then shares with the cities within the county through a county/city road partnership agreement. The share of forest revenues is no longer directly tied to the level of timber harvests. The USFS revenues have permitted Lane County to make significant capital improvements to its road system. Funds from this source are declining.

Community Development Block Grants

Community Development Block Grants (CDBG) are administered by the Department of Housing and Urban Development and accessed through the state. Although CDBG funds could be used for transportation projects in eligible areas cities, these funds have traditionally been used for other types of infrastructure projects.

Land and Water Conservation Fund

This grant program is administered by ODOT. Funds are derived under Public Law 88-578 from the National Park Service, Department of the Interior. Grants are available for the acquisition of land and the development of public outdoor recreation facilities. Grants are limited to 50 percent of the total project cost. The cities and counties are responsible for the remaining project cost.

Bicycle/pedestrian paths have been funded under this program in instances where they have been shown as needed in connection with outdoor recreation activities.

Local Rail Freight Assistance

Rail freight improvement projects compete nationally for scarce federal Local Rail Freight Assistance (LRFA) program funds that must be matched by state, local, or private sources. LRFA provides grants to rehabilitate low-density branch and short line railroads, allowing them to provide cost effective rail freight service to communities.

C. State Funding Sources

Oregon Department of Transportation

Statewide Transportation Improvement Program

ODOT allocates state and federal funding for transportation projects in the STIP. The STIP is a staged, multi-year, state-wide, intermodal program of transportation projects. The STIP is not a funding source, rather it is a project prioritization and scheduling document developed through various planning processes that involve local and regional governments and transportation agencies. Aeronautics, rail, public transit, bicycle/pedestrian, and highway projects are included. Public meetings are held throughout the state prior to adoption by the Oregon Transportation Commission (OTC). The adopted STIP lists projects by ODOT's regions. These regional offices are responsible for administration and disbursement of the funds.

State Highway Fund (also known as gas tax)

The State of Oregon, collects gas tax revenues, vehicle registration fees, and weight mile taxes on freight carriers. ODOT, through the Department of Revenue, receives these revenues and disperses a portion of them to individual cities and counties based on their percentage of state-wide population. The Oregon constitution limits the use of these funds to capital projects within right-of-ways. ODOT uses its allocation for maintenance and to fund capital projects in the STIP. Cities may use funds for local street, bike lane, and sidewalk upgrades, maintenance, and new construction. A reasonable amount of this fund (at least 1 percent) must be spent on bicycle and pedestrian facilities.

ODOT administers an annual grant program for bicycle and pedestrian projects using Highway Fund money. This grant program funds projects that cost up to \$100,000 and is based on a 20 percent local match. It is for bicycle and pedestrian projects within road right-of-ways or for bicycle maps.

Access Management Program

Approximately \$500,000 is set aside each year to address access management issues, including the evaluation of existing approach roads to state highways. Over the years, many approach roads have become unsafe due to higher speeds and increased traffic volumes. The program will identify those locations, determine necessary mitigation, prioritize improvements, and correct problems.

Local Government Fund Exchange

This program helps local governments make the most effective use of limited transportation funding. To reduce their administrative burden, local governments can agree to develop their projects with state funds, which are easier to administer, while the state uses the local governments' federal funds for state projects. This program allows flexibility in spending.

Community Transportation Program

The Community Transportation Program (CTP) provides money to fund public and special needs transportation in small cities and communities throughout the state. The program is financed by a combination of state, federal, and local matching funds. The program is a unified project application, review, and selection process for discretionary funds. These funds are made available under the Federal Transit Act, Elderly Persons with Disabilities Program, the Non-Urbanized Area Formula Program, and the Special Transportation Fund.

Special Transportation Fund (STF)

The *Special Transportation Fund for the Elderly and Disabled* (ORS 391.800 - 391.830) revenues are collected through the state cigarette tax and distributed based on a formula that considers the elderly population in poverty. The funds that come into Lane County are then allocated to the rural districts based on population and service needs according to the STF Advisory Committee. The STF is the only dedicated revenue source in the State of Oregon for specialized transportation for the elderly and disabled. This funding source has been declining over the years due to the reduction in the amount of cigarette tax collected. There is awareness that new sources of revenue are needed. Acting on behalf of the Lane Transit District (LTD), Lane Council of Governments oversees and coordinates with providers to operate services funded through STF.

Rail Freight Program

Although ODOT does not own or operate any rail lines, the ODOT Rail Freight Program assists in the rehabilitation of publicly and privately-owned rail lines through planning and the administration of federal and state funded programs.

State Rail Rehabilitation Fund

The fund was established by the state legislature to be used for rail line acquisition, track rehabilitation, improvement of rail properties, planning, or any other method of reducing the costs of lost rail service. However, this program has never received an allocation of funds.

Oregon Economic Development Department (OEDD)

Special Public Works Funds

The State of Oregon, through lottery proceeds passed through the OEDD, has provided grants and loans to local government to construct, improve, and repair public infrastructure in support of local economic development and job creation. The application of this funding source for transportation improvements is limited. Funds for rail projects are also available through the OEDD. Projects must compete with other public works projects submitted by local and state agencies. As of 1996, OEDD had administered approximately \$4.5 million in lottery funds to develop three rail projects.

Immediate Opportunity Fund

ODOT funds the Immediate Opportunity Fund through an annual \$5 million allotment from the State Motor Vehicle Fund. OEDD administers the fund. The funds are set aside to provide OEDD the opportunity to respond quickly to transportation improvements that demonstrate a significant benefit to economic development and job creation. The program has been expanded recently to include alternate modes that reduce vehicle miles traveled (VMT) and for new technologies that improve commerce or safety. The maximum amount available for a single project is \$500,000. A key factor in determining eligibility for funds is whether an immediate commitment of funds is required to influence the location, relocation, or retention of a firm in Oregon. Funding is reserved for cases where an actual transportation problem exists, and where a location decision hinges on immediate commitment of road construction resources.

D. Lane County Funding Sources

Lane County Road Fund

This is a set of funds collected from the County's share of the state motor vehicle fund and federal timber receipts. These funds can be used for the restoration and upgrading of county facilities such as Harvey Road, Butte Road, and West Lane.

Economic Development Assistance Program

Economic Development Assistance Program (EDAP) is funded through the county road fund. Funds may be used to improve the marketability of *for sale* industrial properties or to improve access to existing industrial businesses. The goal of EDAP is to create family-wage jobs that directly benefit local communities. The future of this funding source is in question due to the county's diminishing share of federal timber receipts.

Payroll Tax

LTD typically funds its services through an employer payroll tax.

E. City Funding Sources

City Transportation Fund

This is a set of funds from the City's share of the State motor vehicle fund and the federal timber receipts allocated through Lane County. See above for more description of these funding sources.

System Development Charges

System development charges (SDCs) could be collected as vacant parcels of land are developed or as redevelopment occurs. This charge would be based on the development's impact on the overall transportation system. Transportation SDCs are based on the land use type, the size of the development (number of dwelling units or number of acres), the number of trips per unit of development (derived from the Institute Transportation Engineers Manual), and the fee/trip rate. These funds may also be used for financing alternative modes projects. Creswell could create an SDC based on this transportation plan. The costs of setting up an SDC can be covered in the charge itself.

Debt Financing

General Obligation Bonds: Bonds are sold by the municipal government to fund public infrastructure and other improvements, and are repaid with property tax revenue. Voters must approve general obligation bond sales.

Revenue Bonds: Bonds sold by the City and repaid with revenue from an enterprise fund, which has a steady revenue stream such as a water or sewer fund. The bonds are typically sold to fund improvements in the system that is producing the revenue. They are a common means to fund large high cost capital improvements that have a long useful life.

User Fees

In general, the users pay based on their use of, or impact on, the system.

Local Gas Tax: The City or County could implement a local gas tax, in addition to the existing revenues from the state gas tax. Several cities and counties in Oregon have a local gas tax. Given the current anti-tax atmosphere, it may be difficult to get voter approval on a local gas tax.

Local Vehicle Registration Fee: Counties can implement a local vehicle registration fee. A portion of the County fee would be allocated to cities in Lane County. The fee would provide a stable and reasonable funding source, but is unlikely to receive local support.

Street Utility Fee: Similar to a water or sewer utility fee, a fee would be assessed in the City for use of streets. Implementing a street utility fee would require voter approval and political support would likely be low.

Special Assessments

Assessments pay for on-site or adjacent public improvements. The property owners directly benefit from the improvement.

Local Improvement District: The property owners who will benefit from the improvements pay an assessment of the project cost. In Creswell, this approach is usually taken for sidewalk improvements or street widening.

Agreement for Improvements: It does not always make sense for a land divider or property owner to install the required improvements (including streets and sidewalks) at the time of development. If that is the case, s/he executes and files with the City an agreement to pay for future improvements. Creswell keeps these agreements in files organized by street and will pull them at the time of a capital improvements project.

F. Private Developers

The majority of local streets and sidewalks are paid for at the time of development by the developer who includes the cost in the sale price of the homes or properties. This will also apply to bikeways, bicycle parking, and transit facilities. In this way, the benefiting users are paying for the cost of the system installation. The City then is responsible for maintaining improvements within the public right-of-way.

Appendix A

TSP Inventory Database Methodology

Name

Name of a road for which there are one or more segments in the study area. Each record refers to attributes of a single segment, where a segment is a stretch of road or road right-of-way typically ending where intersected by another street or significant boundary or break-point (e.g., the UGB). Multiple segments have the same name, so a segment's *unique* name is a combination of "Name" + "From" + "To", such as: "6TH ST *from* A ST *to* B ST". Where no name was known, the code "unknown" was entered.

From

The name of the street (or one of the streets) touching the West or North end of the segment. "From" and "To" are arbitrary for most non-grid streets. If the street does not continue beyond the *from*-point, a code of "START" was entered. Where no name was known, the code "unknown" was entered.

To

The name of the street (or one of the streets) touching the East or South end of the segment. "From" and "To" are arbitrary for most non-grid streets. If the street does not continue beyond the *to*-point, a code of "END" was entered. Where no name was known, the code "unknown" was entered.

Length

The length of the roadway segment in feet -- derived from ARC/INFO calculations, ArcView estimates, or field measurements. Populated (i.e., 456.783) decimal places indicate the source was ARC/INFO; whole numbers indicate ArcView estimates or field measurements.

Functional Class

Arterial - Arterials are intended to serve as a primary route for travel within and between community areas. Access to an arterial is normally from the collector or local road system rather than to serve property directly. Individual access should be managed on arterials to minimize degradation to capacity and traffic safety. Sidewalks and bike lanes are normally provided on an arterial.

Major Collector - A major collector is intended to serve traffic from local streets and minor collectors to the arterial system. Individual accesses are allowed but minimized to protect system capacity and traffic safety. Sidewalks and bike lanes are normally required on a major collector.

Minor Collector - A minor collector is intended to provide access to abutting properties and to serve local access needs of neighborhoods, including limited through traffic. New development that generates a significant volume of traffic should be discouraged from locating on minor collectors that serve residential areas. Sidewalks are normally required on minor collectors and bike lanes are usually only required in accordance with the proposed bicycle plan.

Local Street - A local street is intended to provide direct property access and is not intended to serve through-traffic. Sidewalks are normally required as per the proposed pedestrian plan and Creswell’s Subdivision Ordinance.

No. of Lanes

Presumed to be “2” in most cases, and presumably two-way unless otherwise noted. Odd numbers of lanes indicate the presence of an additional center turning-refuge lane. Gravel roads were given a number of lanes of “1”. Unused rights-of-way were given a number of lanes of “0”.

Roadway Width

The width of the paved portion of the segment (the “roadway”) in feet. Variation was not identified below the level of the segment, so variation in width has been averaged to the nearest whole number.

Roadway Condition

The condition of the paved portion or “roadway” of the segment. The basic categories are based on ODOT standards. Special codes were used to identify other segment conditions. Varying conditions were not identified below the segment level. The following is a key to all codes used in this field (*the POOR, FAIR and GOOD categories were adapted from ODOT definitions*):

Code	Meaning
POOR	Paved roadway. Areas of instability, marked evidence of structural deficiency, large crack patterns (alligatoring), heavy and numerous patches, and/or deformation very noticeable. Riding quality ranges from acceptable to poor.
FAIR	Paved roadway. Generally stable, with minor areas of structural weakness evident. Cracking easy to detect, patched but not excessively. Deformation is more pronounced and easily noticed. Good riding quality.
GOOD	Paved roadway. Stable, may have minor cracking, generally hairline and hard to detect. Minor patching and some minor deformation may be evident. Very good riding surface.
GRAVEL	Segment has gravel surface instead of paved roadway.

UNBUILT	Segment roadway is inaccessible, unsurfaced (pavement or gravel), or altogether absent, but right-of-way is not vacated.
REMOVED	Segment of paved roadway was removed, but right-of-way is not vacated.
OUTSIDE UGB	Segment is outside the study area, but has been included for mapping purposes.

Jurisdiction

The ownership of the right-of-way (and roadway) for the segment. Maintenance, and other responsibilities may fall upon other jurisdictions than the owner (e.g., federal highways are maintained by ODOT) as per intergovernmental agreement. The “CITY/COUNTY” code refers to those roads that were identified, in intergovernmental agreements between Lane County and the relevant cities, as being part of the *Regional Road Network* (RRN), and which have been also been surrendered to the jurisdiction of the city. Originally, these roads were usually county roads within the city limits, but now are owned and maintained by the city, with maintenance funds from the county, according to the intergovernmental agreements. The “COUNTY/RRN” code refers to those roads that were identified as being part of the RRN, but which, despite being inside the city limits, do not fall under city jurisdiction and no funds are transferred to the city for their maintenance.

Sidewalks

Presence of sidewalks along the segment. Codes used are as follows:

Code	Meaning
FULL	Full, unobstructed, unbroken sidewalks present on both sides of the roadway.
PARTIAL	Sidewalks present, but partial (obstructed or broken on either side and/or missing on one side).
NONE	No sidewalks present along existing, adequate roadway.
NA	No sidewalks present due to lack of adequate roadway (road condition is gravel, unbuilt or removed).

Sidewalk condition data was collected on field maps, but has not been entered on this table.

Bike Lanes

Presence of bike lanes along the segment. Codes used are as follows:

Code	Meaning
FULL	Full width, unobstructed and unbroken, paved bike lanes on both sides of the segment, either striped lanes or paved shoulder.
PARTIAL	Bike lanes present, but partial (obstructed or broken on either side and/or missing on one side).
NONE	No sidewalks present along existing, adequate roadway.
NA	No sidewalks present due to lack of adequate roadway (road condition is gravel, unbuilt or removed).

Right of Way (width)

Width, in feet, of the right-of-way associated with a particular road segment. Variation was captured by a range, such as 40'-60'.

Truck Routes - This field indicates the presence or absence of a designated truck route. A truck route is signed as the primary access for trucks to industrial areas in Creswell. Future improvements on streets identified as truck routes should take into consideration the heavy volume of trucks, special needs for traffic control, road geometry, access during construction, and possible traffic/pedestrian/bicycle conflicts.

Appendix B Existing Roadway Conditions Database

Road Segment Name	North or West From	South or East to	Length	Functional Class	# of Lanes	Road Width	Roadway Condition	Jurisdiction	Sidewalks	Bike Lanes	# of Lanes	R-O-W Width
10TH	A Ave	B Ave	298	Local	2	36	Good	City	Full	None	4	60'
10TH	B Ave	OREGON AVE	347	Local	2	36	Good	City	Full	None	4	60'
10TH (BUTTE)	BARBER DR	EVERGREEN DR	327	Major Coll.	2	30	Good	City/Co.	None	None	3	60'
10TH (BUTTE)	OREGON AVE	SCOTT	246	Major Coll.	2	23	Good	City/Co.	None	None	3	60'
10TH (BUTTE)	SCOTT	BARBER DR	510	Major Coll.	2	22	Good	City/Co.	None	None	3	60'
10TH (BUTTE)	EVERGREEN DR	KILLINGSWORTH	274	Major Coll.	2	22	Good	City/Co.	None	None	3	60'
1ST	C Ave	D Ave	309	Local	2	40	Good	City	Full	None	4	60'
1ST	OREGON AVE	C Ave	322	Local	2	44	Fair	City	Full	None	4	60'
1ST	B Ave	OREGON AVE	322	Minor Coll.	2	39	Good	City	Full	None	4	60'
1ST	A Ave	B Ave	310	Minor Coll.	2	22	Good	City	Partial	None	2	60'
1ST	CLARK	A Ave	307	Minor Coll.	2	18	Fair	City	Partial	None	2	60'
1ST	AVON	CLARK	287	Minor Coll.	2	20	Fair	City	Partial	None	2	60'
1ST	START	AVON	396	Minor Coll.	2	30	Fair	City	Partial	None	2	60'
2ND	CRESWOOD DR (S)	A Ave	120	Local	2	36	Good	City	Full	None	3	60'
2ND	CRESWOOD DR (N)	CRESWOOD DR (S)	788	Local	2	36	Good	City	Partial	None	3	60'
2ND	A Ave	B Ave	313	Local	2	26	Good	City	Partial	None	3	60'
2ND	B Ave	OREGON AVE	321	Local	2	30	Good	City	Partial	None	3	60'
2ND	OREGON AVE	C Ave	321	Local	2	21	Fair	City	Partial	None	2	60'
2ND	C Ave	D Ave	305	Local	2	21	Fair	City	Partial	None	2	60'
2ND	F Ave	2ND ST CUL DE SAC	455	Local	2	36	Good	City	Full	None	3	60'
2ND	D Ave	F Ave	637	Local	2	25	Good	City	Partial	None	2	50'
2ND	2ND ST CUL DE SAC	KINGS ROW	884	Local	1	0	Gravel	City	Partial	NA	0	60'
2ND ST Cul de Sac	START	2ND	321	Local	2	30	Good	City	Full	None	3	50'
3RD	A Ave	B Ave	314	Local	2	31	Fair	City	Partial	None	3	60'
3RD	B Ave	OREGON AVE	323	Local	2	32	Good	City	Full	None	3	60'
3RD	OREGON AVE	C Ave	318	Local	2	32	Good	City	Full	None	3	60'
3RD	C Ave	D Ave	304	Local	2	32	Good	City	Full	None	3	60'
3RD	F Ave	END	250	Local	2	32	Good	City	Full	None	3	50'
3RD	MARY NEAL	F Ave	265	Local	2	32	Good	City	Partial	None	3	50'
4TH	A Ave	B Ave	313	Local	2	20	Good	City	Partial	None	2	60'
4TH	B Ave	OREGON AVE	325	Local	2	30	Good	City	Full	None	2	60'
4TH	OREGON AVE	C Ave	314	Local	2	20	Good	City	Partial	None	2	60'
4TH	C Ave	D Ave	305	Local	2	20	Fair	City	None	None	2	60'
5TH	A Ave	B Ave	309	Major Coll.	2	23	Good	City/Co.	Partial	None	3	40'
5TH	B Ave	OREGON AVE	333	Major Coll.	2	27	Good	City/Co.	Partial	None	3	40'
5TH	OREGON AVE	C Ave	305	Major Coll.	2	21	Good	City	None	None	3	40'
5TH	C Ave	D Ave	307	Major Coll.	2	21	Good	City	Partial	None	2	40'
5TH	HILLEGAS	SCOTT	310	Major Coll.	2	26	Good	City/Co.	Partial	None	3	60'
5TH	SCOTT	GILFRY	313	Major Coll.	2	28	Good	City/Co.	Partial	None	2	60'
5TH	GILFRY	SCARBROUGH	319	Major Coll.	2	40	Good	City/Co.	Partial	None	4	60'
5TH	SCARBROUGH	A Ave	304	Major Coll.	2	21	Good	City/Co.	Partial	None	2	60'
5TH	MORSE	HILLEGAS	314	Major Coll.	2	26	Good	County	None	None	3	60'
6TH	MORSE	HILLEGAS	315	Local	2	19	Fair	County	None	None	1	60'
6TH	HILLEGAS	SCOTT	307	Local	2	20	Fair	County	None	None	2	60'
6TH	SCOTT	GILFRY	314	Local	2	32	Good	City	Partial	None	3	60'
6TH	GILFRY	SCARBROUGH	308	Local	2	21	Good	City	Partial	None	2	60'
6TH	SCARBROUGH	A Ave	308	Local	2	21	Good	City	Partial	None	2	60'

Road Segment Name	North or West From	South or East to	Length	Functional Class	# of Lanes	Road Width	Roadway Condition	Jurisdiction	Sidewalks	Bike Lanes	# of Lanes	R-O-W Width
6TH	START	MORSE	401	Local	2	19	Fair	County	None	None	1	60'
7TH	B Ave	OREGON AVE	341	Local	2	25	Fair	City	Partial	None	3	40'
7TH	A Ave	B Ave	312	Local	2	18	Fair	City	None	None	2	40'
7TH	MARY NEAL LN	EVERGREEN DR	133	Local	2	20	Fair	City	None	None	2	50'
7TH	EVELYN	KINGS ROW	415	Local	2	34	Good	City	Full	None	3	60'-70'
7TH	EVERGREEN DR	F Ave	163	Local	2	34	Good	City	Full	None	3	unknown
7TH	F Ave	KILLINGSWORTH	107	Local	2	34	Good	City	Full	None	3	60'
7TH	KILLINGSWORTH	EVELYN AVE	184	Local	2	34	Good	City	Full	None	3	70'
7TH	BARBER DR	MARY NEAL LN	183	Local	2	20	Good	City	None	None	2	50'
7TH	KINGS ROW	QUEENS	331	Local	2	24	Good	City	Partial	None	3	60'-70'
8TH	A Ave	B Ave	308	Local	2	34	Good	City	Full	None	3	60'-70'
8TH	B Ave	OREGON AVE	341	Local	2	34	Good	City	Full	None	3	60'
9TH	A Ave	B Ave	303	Local	2	27	Fair	City	Partial	None	3	60'-70'
9TH	B Ave	OREGON AVE	341	Local	2	19	Fair	City	Partial	None	2	60'
9TH	KINGS ROW	END	348	Local	2	22	Good	City	Partial	None	2	40'
9TH	START	KINGS ROW	472	Local	2	22	Unbuilt	City	Partial	NA	0	40'-50'
A Ave	6TH	5TH	462	Minor Coll.	2	20	Fair	City	Partial	None	2	60'
A Ave	5TH	4TH	267	Minor Coll.	2	30	Good	City	Partial	None	3	60'
A Ave	4TH	3RD	284	Minor Coll.	2	29	Good	City	Partial	None	3	60'
A Ave	3RD	2ND	284	Minor Coll.	2	30	Good	City	Partial	None	3	60'
A Ave	7TH	6TH	243	Minor Coll.	2	20	Fair	City	Partial	None	2	60'
A Ave	9TH	8TH	279	Minor Coll.	3	38	Good	City	Full	None	4	50'
A Ave	8TH	7TH	254	Minor Coll.	2	38	Fair	City	Full	None	2	60'
A Ave	10TH	9TH	283	Minor Coll.	2	38	Good	City	Full	None	4	50'
A Ave	2ND	1ST	284	Minor Coll.	2	21	Good	City	Partial	None	3	60'
A Ave	1ST	FRONT ST	290	Minor Coll.	2	22	Good	City	None	None	3	60'
ART LOTT LANE	HWY 99	END	1208	Local	2	20	Fair	City	None	None	2	50'-60'
ASTORIA	START	BROOKHURST	174	Local	2	34	Good	County	None	None	3	70'
AVON	1ST	END	232	Local	2	12	Fair	City	None	None	1	60'
B Ave	3RD	2ND	283	Local	2	30	Good	City	Full	None	3	60'
B Ave	4TH	3RD	285	Local	2	20	Good	City	None	None	2	60'
B Ave	8TH	7TH	256	Local	2	20	Fair	City	Partial	None	2	50'
B Ave	9TH	8TH	279	Local	2	28	Good	City	Partial	None	3	60'
B Ave	10TH	9TH	279	Local	1	0	Gravel	City	NA	NA	0	60'
B Ave	2ND	1ST	282	Local	2	30	Good	City	Full	None	3	60'
B Ave	1ST	FRONT ST	287	Local	2	30	Good	City	Full	None	3	60'
BARBER DRIVE	10TH	7TH	766	Local	2	20	Good	City	None	None	2	60'
BROOKHURST	CLOVERDALE RD	ASTORIA	762	Local	2	34	Good	County	None	None	3	60'-70'
BROOKHURST	ASTORIA	END	143	Local	2	34	Good	County	None	None	3	60'
BUTTE RD	KILLINGSWORTH	UGB-SOUTH	1885	Major Coll.	2	22	Good	City/Co.	None	None	2	60'-80'
C Ave	5TH	4TH	261	Local	2	26	Good	City	Partial	None	2	60'
C Ave	4TH	3RD	290	Local	2	19	Good	City	None	None	2	60'
C Ave	3RD	2ND	281	Local	2	19	Good	City	None	None	2	60'
C Ave	2ND	1ST	274	Local	2	32	Fair	City	Full	None	5	60'
C Ave	1ST	FRONT ST	288	Local	2	42	Fair	City	Full	None	4	60'
CEDAR	START	MEADOW LN	136	Local	2	30	Good	City	Full	None	3	50'
CEDAR	MEADOW LN	MEADOW LN	425	Local	2	30	Good	City	Full	None	3	50'
CEDAR	START	CEDAR (CORNER)	231	Local	2	30	Good	City	Full	None	3	50'
CEDAR	MEADOW LN	CEDAR CDS1	0	Local	2	30	Good	City	Partial	None	3	50'
CEDAR	CEDAR CDS1	MEADOW LN	0	Local	2	30	Good	City	Partial	None	3	50'

Road Segment Name	North or West From	South or East to	Length	Functional Class	# of Lanes	Road Width	Roadway Condition	Jurisdiction	Sidewalks	Bike Lanes	# of Lanes	R-O-W Width
CEDAR CDS1	CEDAR	END	130	Local	2	30	Good	City	Partial	None	3	50'
CLARK	1ST	FRONT ST	295	Local	2	0	Unbuilt	City	NA	NA	0	60'
CLOVERDALE RD	INTERSTATE 5	MELTON RD	143	Arterial	2	27	Poor	State	None	None	3	70'-80'
CLOVERDALE RD	DALE KUNI RD	UGB-EAST	2989	Arterial	2	22	Outside	State	None	FULL	3	-
CLOVERDALE RD	BROOKHURST	DALE KUNI RD	1027	Arterial	2	22	Good	State	None	PARTIAL	3	80'
CLOVERDALE RD	MELTON RD	ZINIKLER	796	Arterial	2	24	Good	State	None	PARTIAL	3	70'-80'
CLOVERDALE RD	ZINIKER	BROOKHURST	1844	Arterial	2	22	Good	State	None		3	80'-90'
CRESWOOD DR	START	END OF 2ND	134	Local	2	35	Good	City	Full	None	3	60'
CRESWOOD DR	END OF 2ND	GILFRY	158	Local	2	35	Good	City	Full	None	3	60'
CRESWOOD DR	GILFRY	2ND	638	Local	2	32	Good	City	Full	None	3	60'
D Ave	5TH	HOLBROOK	111	Minor Coll.	2	20	Good	City	None	None	2	60'
D Ave	HOLBROOK	4TH	150	Minor Coll.	2	28	Fair	City	Partial	None	2	60'
D Ave	4TH	3RD	293	Minor Coll.	2	38	Good	City	Partial	None	3	60'
D Ave	3RD	2ND	280	Minor Coll.	2	29	Good	City	Partial	None	2	60'
D Ave	2ND	1ST	272	Minor Coll.	2	22	Good	City	Partial	None	2	60'
D Ave	1ST	FRONT ST	292	Minor Coll.	2	32	Fair	City	Partial	None	5	60'
D Ave	START	5TH	407	Minor Coll.	2	20	Good	City	Partial	None	2	60'
DALE KUNI RD	PAST UGB NORTH	CLOVERDALE RD	4513	Major Coll.	2	22	Good	County	None	None	3	80'-160'
E Ave	HOLBROOK	3RD	465	Local	2	30	Fair	City	Full	None	2	30'
EVELYN AVE	7TH	HOLBROOK	871	Local	2	26	Good	City	Full	None	3	50'
EVERGREEN DRIVE	BUTTE	7TH	744	Local	2	32	Good	City	Full	None	3	50'
F Ave	7TH	END	304	Local	2	30	Fair	City	Full	None	3	40'
F Ave	3RD	2ND	256	Local	2	30	Good	City	Partial	None	3	50'
F Ave	HOLBROOK	3RD	449	Local	2	30	Fair	City	Full	None	3	50'
F Ave	2ND	FRONT	562	Local	2	31	Good	City	Partial	None	3	50'
FRONT ST	MILL ST	UGB SOUTH	135	Arterial	2	24	Good	State	None	FULL	4	60'
FRONT STREET	A Ave	B Ave	307	Local	2	20	Good	City	None	None	2	60'
FRONT STREET	B Ave	OREGON AVE	324	Local	2	20	Good	City	Partial	None	2	60'
FRONT STREET	CLARK	A Ave	304	Local	2	17	Good	City	Partial	None	2	60'
GILFRY	6TH	5TH	463	Local	2	39	Good	City	Partial	None	2	60'
GILFRY	START	6TH	228	Local	2	0	Unbuilt	City	NA	NA	0	60'
GILFRY	5TH	CRESWOOD DR	557	Local	2	27	Good	City	Partial	None	3	60'-70'
HARVEY RD	NIBLOCK	MORSE	903	Major Coll.	2	22	Good	County	None	None	3	70'-80'
HARVEY RD	WEST LANE	NIBLOCK LANE	990	Major Coll.	2	22	Good	County	None	None	3	70'-80'
HARVEY RD	UGB NORTH	WEST LANE	828	Major Coll.	2	22	Good	County	None	None	3	70'-80'
HIGHWAY 99	OREGON AVE	C Ave	322	Arterial	2	24	Good	State	Partial	FULL	4	60'
HIGHWAY 99	C Ave	D Ave	338	Arterial	2	24	Good	State	Partial	FULL	4	60'
HIGHWAY 99	D Ave	F ST	607	Arterial	2	24	Good	State	None	FULL	4	60'
HIGHWAY 99	ART LOTT LN	OREGON AVE	1225	Arterial	2	24	Fair	State	Partial	PARTIAL	4	60'-70'
HIGHWAY 99	MARTIN	ART LOTT LN	1879	Arterial	2	24	Fair	State	None	PARTIAL	4	60'-70'
HIGHWAY 99	UGB NORTH	MARTIN	2190	Arterial	2	20	Fair	State	None	PARTIAL	2	60'-70'
HIGHWAY 99	F Ave	MILL ST	445	Arterial	2	24	Good	State	None	FULL	4	60'
HIGHWAY 99	PARK DRIVE	KINGS ROW	752	Arterial	2	34	Good	State	None	FULL	4	60'
HIGHWAY 99	KINGS ROW	MARKET RD	1537	Arterial	2	34	Good	State	None	FULL	4	60'
HIGHWAY 99	MARKET RD	PAST UGB SOUTH	904	Arterial	2	25	Outside	State	None	FULL	0	-
HILLEGAS	6TH	5TH	464	Local	2	18	Fair	County	None	None	2	60'
HOAGLUND	MARTIN	END	495	Local	2	20	Outside	County	None	None	0	-
HOLBROOK	EVELYN	KINGS ROW	333	Major Coll.	2	34	Good	City	Full	None	2	50'
HOLBROOK	F Ave	EVELYN AVE	295	Major Coll.	2	34	Good	City	Full	None	2	50'
HOLBROOK	MARY NEAL LN	F Ave	282	Major Coll.	2	34	Fair	City	Full	None	2	40'50'

Road Segment Name	North or West From	South or East to	Length	Functional Class	# of Lanes	Road Width	Roadway Condition	Jurisdiction	Sidewalks	Bike Lanes	# of Lanes	R-O-W Width
HOLBROOK	KINGS ROW	END	520	Local	2	16	Poor	City	Partial	None	1	30'
HOLBROOK	D Ave	MARY NEAL LANE	359	Major Coll.	2	34	Fair	City	None	None	3	40'50'
INTERSTATE 5	INTERCHANGE	PAST UGB SOUTH	1782	Interstate	4	80	Good	State	None	NA	6	unknown
INTERSTATE 5	PAST UGB NORTH	INTERCHANGE	5356	Interstate	4	80	Good	State	None	NA	6	unknown
INTERSTATE 5	MARKET RD	out of study area	169	Interstate	4	80	Good	State	None	NA	6	unknown
INTERSTATE 5	PARK DRIVE	MARKET RD	2319	Interstate	4	80	Good	State	None	NA	6	unknown
KILLINGSWORTH	10TH	7TH	754	Local	2	26	Good	City	Partial	None	2	50'-60'
KINGS ROW	9TH	7TH	260	Local	2	54	Good	City	Full	None	3	60'
KINGS ROW	7TH	HOLBROOK	1026	Local	2	34	Good	City	Partial	None	3	60'-70'
KINGS ROW	HOLBROOK	END	357	Major Coll.	2	20	Fair	City	Partial	None	2	30'
KINGS ROW	2ND	FRONT ST (HWY 99)	536	Major Coll.	2	0	Unbuilt	City	NA	NA	0	50'
MARKET RD	HIGHWAY 99	INTERSTATE 5	1371	Local	2	0	Outside	County	None	None	0	-
MARKET RD	INTERSTATE 5	out of study area	1282	Local	2	0	Outside	County	None	None	0	-
MARTIN RD	MELTON RD	HOAGLUND	208	Local	2	20	Outside	County	None	None	0	-
MARTIN RD	HOAGLUND	END	428	Local	2	20	Outside	County	None	None	0	-
MARTIN RD	HWY 99	END	1290	Local	2	20	Fair	County	None	None	0	50'
MARY NEAL LANE	7TH	HOLBROOK	866	Local	2	20	Fair	City	None	None	2	50'
MEADOW	START	MEADOW LN	147	Local	2	34	Good	City	Full	FULL	3	50'
MEADOW LANE	CEDAR	CEDAR	764	Local	2	34	Good	City	Full	FULL	3	60'
MEADOW LANE	CEDAR	10TH	628	Local	2	34	Good	City	Full	FULL	3	50'-60'
MEADOW LANE	MEADOW LANE	CEDAR	224	Local	2	34	Good	City	Full	FULL	3	60'
MEADOW LANE	SPRUCE CT	PINE CT	264	Local	2	34	Good	City	Full	FULL	3	60'
MEADOW LANE	PINE CT	MEADOW CT	134	Local	2	34	Good	City	Full	FULL	3	60'
MEADOW LANE	PINE CT S	SPRUCE COURT	88	Local	2	34	Good	City	Full	FULL	3	60'
MEADOW LANE	PINE CT	PINE CT S	310	Local	2	34	Good	City	Full	FULL	3	60'
MELTON			0	Local		20	Good	State	None	None	0	
MELTON RD	START	MARTIN	454	Local	2	20	Good	County	None	None	0	unknown
MILL ST	OREGON AVE	HIGHWAY 99	1776	Local	2	22	Good	City	None	PARTIAL	3	60'
MORSE	6TH	5TH	457	Local	2	17	Fair	County	None	NONE	1	60'-70'
NIBLOCK LANE	HARVEY RD	END	692	Major Coll.	1	0	Gravel	County	NA	NA	0	40'-50'
NIBLOCK LANE	WILLIS ST	HARVEY RD	1196	Major Coll.	2	22	Good	County	None	None	2	40'-50'
NIBLOCK LN	START	WILLIS ST	1609	Major Coll.	2	22	Good	County	None	None	2	40'
OREGON AVE	5TH	4TH	262	Arterial	2	46	Fair	City/Co.	Full	None	5	80'
OREGON AVE	4TH	3RD	287	Arterial	2	58	Good	City/Co.	Full	None	5	80'
OREGON AVE	3RD	2ND	282	Arterial	2	58	Good	City/Co.	Full	None	5	80'
OREGON AVE	7TH	5TH	699	Arterial	2	34	Fair	City/Co.	Full	None	3	60'
OREGON AVE	9TH	8TH	280	Arterial	2	34	Fair	City/Co.	Full	None	3	70'
OREGON AVE	8TH	7TH	258	Arterial	2	34	Fair	City/Co.	Full	None	3	70'
OREGON AVE	UGB-WEST	10TH	1277	Arterial	2	22	Good	City/Co.	Partial	None	3	40'-50'
OREGON AVE	10TH	9TH	280	Arterial	2	34	Fair	City/Co.	Full	None	3	50'
OREGON AVE	2ND	1ST	277	Arterial	2	58	Good	City/Co.	Full	None	5	90'
OREGON AVE	1ST	FRONT ST	288	Arterial	2	58	Fair	City/Co.	Full	None	5	90'
OREGON AVE	HWY 99	INTERSTATE 5	1444	Arterial	2	48	Fair	State	Partial	None	4	70'-80'
OREGON AVE (99)	FRONT	MILL ST	247	Arterial	2	50	Fair	State	Full	None	4	70'-80'
PARK DRIVE	MILL	END	1569	Local	2	0	Unbuilt	City	NA	NA	0	40'
PINE COURT S	START	PINE CT	159	Local	2	30	Good	City	Full	None	3	50'
PINE CT	PINE CT N	MEADOW LANE	584	Local	2	30	Good	City	Partial	None	3	50'
PINE CT	PINE CT N	MEADOW LANE	323	Local	2	30	Good	City	Partial	None	3	50'
PINE CT N	START	PINE CT	175	Local	2	30	Good	City	Partial	None	3	50'
QUEENS	7TH	END	449	Local	2	24	Good	City	Partial	PARTIAL	3	60'

Road Segment Name	North or West From	South or East to	Length	Functional Class	# of Lanes	Road Width	Roadway Condition	Jurisdiction	Sidewalks	Bike Lanes	# of Lanes	R-O-W Width
SCARBROUGH	6TH	5TH	462	Local	2	21	Good	City	Partial	None	2	60'
SCARBROUGH	5TH	END	429	Local	2	21	Good	City	Partial	None	3	60'
SCOTT	6TH	5TH	464	Local	2	20	Fair	County	Partial	None	2	60'
SCOTT	START	6TH	232	Local	2	0	Unbuilt	County	NA	NA	0	60'
SCOTT	5TH	END	428	Local	1	17	Gravel	City	Partial	NA	0	30'
SCOTT LANE	SCOTT LANE	END	1120	Local	1	21	Gravel	County	NA	NA	0	50'
SCOTT LN	SCOTT LN	10TH	420	Local	2	18	Poor	City	None	None	2	50'
SPRUCE CT	MEADOW LN	END	226	Local	2	30	Good	City	Partial	None	3	50'
WEST LANE	HARVEY RD	END	1780	Major Coll.	1	19	Gravel	County	NA	NA	0	60'
WEST LANE	START	HARVEY RD	272	Major Coll.	2	20	Good	County	None	None	0	60'
WILLIS ST	NIBLOCK LN	END	527	Local	2	22	Good	City	Full	None	2	80'
ZINIKER LANE	CLOVERDALE RD	END	1538	Local	2	0	Outside	County	NA	NA	0	--

Appendix C

Estimated (1996) Creswell UGB Emp by Transportation Analysis Zones and Trip Rate Sectors

Sector	TAZ													Total
	1	2	3	4	6	8	9	10	11	12	13	14		
Ag/Const./Man.	14	20	5		0	0	57	3	38	5	6	45	193	
TCU	22	1	0		0	0	0	16	0	0	1	4	44	
Wholesale	0	2	0		0	0	46	0	0	0	0	0	48	
Retail	0	0	0		0	0	79	48	0	0	6	54	187	
FIRE	1	2	0		96	0	15	7	0	0	0	9	130	
Services/Gov.	3	0	0		28	0	15	121	8	0	2	1	178	
Education	136	0	0		0	0	0	9	42	0	0	0	187	
Total	176	25	5	0	124	0	212	204	88	5	15	113	967	

Allocated Employment (1996 - 2015)

Sector	TAZ													Total
	1	2	3	4	6	8	9	10	11	12	13	14		
Ag/Const./Man.		49	47				55						151	
TCU		11	11				12						35	
Wholesale		12	12				14						38	
Retail				106			19	2			2	18	147	
FIRE				74			13	1			1	13	102	
Services/Gov.				101			18	2			2	17	140	
Education				106			19	2			2	18	147	
Total	0	73	70	387	0	0	149	8	0	0	6	66	759	

Total Projected Employment by Sector and TAZ (2015)

Sector	TAZ													Total
	1	2	3	4	6	8	9	10	11	12	13	14		
Ag/Const./Man.	14	69	52	0	0	0	112	3	38	5	6	45	344	
TCU	22	12	11	0	0	0	12	16	0	0	1	4	79	
Wholesale	0	14	12	0	0	0	60	0	0	0	0	0	86	
Retail	0	0	0	106	0	0	98	50	0	0	8	72	334	
FIRE	1	2	0	74	96	0	28	8	0	0	1	22	232	
Services/Gov.	3	0	0	101	28	0	33	123	8	0	4	18	318	
Education	136	0	0	106	0	0	19	11	42	0	2	18	334	
Total	176	98	75	387	124	0	361	212	88	5	21	179	1726	

Allocation Process

1. Updated land use and inventoried vacant land
2. Assumed future employment mix would be the same as existing.
3. Subtracted existing employment from projected employment to get employment growth by industry (existing employment is actually 1994 emp. file, it is estimated to be the same in 1996).
4. Determined type of employment (development) allowed on commercial and industrial land
5. Allocated employment according to the amount of vacant land available

*Each vacant acre of industrial land received an equal amount of industrial employment.

*Because TAZ 5 and 6 are east of I-5 and zoned Resort Commercial, these TAZs were removed from the commercial land allocation. These TAZs did not receive any new employment.

Appendix C

Existing (1996) Creswell UGB Dwelling Units by Transportation Analysis Zones and Structure Type

Structure Type	TAZ													TOTAL
	1	2	3	4	5	7	8	9	10	11	12	13	14	
Single Family and Man.	206	129	9	24	15	2	19	3	107	169	50	39	30	802
Duplex	8	5	0	0	0	0	0	0	12	22	0	7	4	58
Multi-Family	24	0	0	0	0	0	0	2	88	34	29	2	2	181
Mobile Home (Park)	0	0	30	0	0	0	0	0	0	0	0	0	170	200
TOTAL	238	134	39	24	15	2	19	5	207	225	79	48	206	1241

Vacant Land by Transportation Analysis Zone

TAZ	1	2	3	4	5	7	8	9	10	11	12	13	14	TOTAL
Total Vacant Res Acres	42	73	17	36	0	23	4	0	24	32	1	0	0	251
<i>Est. % within City Limits</i>	<i>40%</i>	<i>50%</i>	<i>30%</i>	<i>0%</i>		<i>0%</i>	<i>0%</i>		<i>50%</i>	<i>60%</i>	<i>100%</i>	<i>100%</i>		
Acres within City Limits	17	37	5	0	0	0	0	0	12	19	1	0	0	90
% of total vacant land in TAZ	19%	41%	6%	0%	0%	0%	0%	0%	13%	21%			0%	100%

Allocated Dwelling Units (1996 - 2015) by Transportation Analysis Zones and Structure Type

Structure Type	TAZ													TOTAL
	1	2	3	4	5	7	8	9	10	11	12	13	14	
Single Family and Man. Home	87	192	27	0	0	0	0	0	63	99	5	1	0	474
Duplex	8	18	3	0	0	0	0	0	0	6	10		0	45
Multi Family	24	52	7	0	0	0	0	0	17	27			0	128
Man. Home in Park	32	70	10	0	0	0	0	0	23	36			0	170
TOTAL	151	332	46	0	0	0	0	0	103	168	15	1	0	817

Total Projected (2015) Dwelling Units by Transportation Analysis Zones and Structure Type

Structure Type	TAZ													TOTAL
	1	2	3	4	5	7	8	9	10	11	12	13	14	
Single Family and Man. Home	293	321	36	24	15	2	19	3	170	268	55	40	30	1276
Duplex	16	23	3	0	0	0	0	0	12	28	10	7	4	103
Multi Family	48	52	7	0	0	0	0	2	105	61	29	2	2	309
Man. Home in Park	32	70	40	0	0	0	0	0	23	36	0	0	170	370
TOTAL	389	466	85	24	15	2	19	5	310	393	94	49	206	2058

Allocation Process

1. Updated land use and inventoried vacant land
2. Projected dwelling units.
3. Allocated single-family units to TAZs 12 & 13 (at 5 units per acre).
4. Allocated all other dwelling units according to the amount of vacant land estimated to be within the city limits.

Each acre of vacant residential land outside of TAZs 12 & 13 received an equal amount of residential development.

Appendix D

Citizen Involvement Plan

Goal: To develop a broad-based citizen involvement plan that insures opportunities for the citizens of Creswell to be involved in all phases of the Creswell Transportation System Plan.

Public involvement will occur at key points in the project. Public involvement techniques will strive to discover the transportation needs of the community, inform the public about elements of the plan, and to solicit feedback on draft policies and implementation ordinances.

Citizen Involvement Techniques

1. Public Open Houses

Public workshops will be held during key project milestones:

- System Inventories and Issue Identification
- Evaluating Alternatives
- Draft Plan/Ordinance Development

Notice of public workshops will be advertised in the Creswell Chronicle and posted at key community locations.

2. Presentations to Community Groups

Presentations will be made to key community and service groups including:

- Chamber of Commerce
- Kiwanis

3. Communication with the Media

The Creswell Chronicle and other local media will be updated regularly on the project's status.

4. Community Survey

A survey of the community will be conducted to gather information on issue identification, community preferences, and evaluation of transportation system alternatives. Survey forms will be made available to local community groups and at City Hall.

5. Maintain Interested Parties Mailing List

Throughout the planning process a mailing list of interested parties will be maintained. This mailing list will be used to notify interested parties of key events and CAC meetings.

6. Updates to City Council and Planning Commission

Periodically throughout the project, members of the City Council and Planning Commission on the CAC will give periodic updates at City Council and Planning Commission meetings.

Appendix E

Creswell Transportation System Plan - Traffic Modeling Process

Steps	Results
I. Describe Existing Traffic Patterns	
A - Simplify study area Divide Creswell into transportation analysis zones	Map of transportation analysis zones
B - Estimate internal trips Determine housing and employment levels for each zone Multiply households and employees by their respective trip rates	How many Creswell trips Total number of trips that leave from each zone - from housing data Total number of trips that arrive at each zone - from employment data
C - Estimate external trips Review survey and count data to determine how many trips occur between Creswell, Lane County and the Metro area	How many external trips Total number of trips with one end in Creswell and another end outside Creswell
D - Distribute Trips At this point we know the total number of trips that include Creswell. For each zone we know how many trips arrive and depart, but for trips arriving, we do not know their origin. For trips departing we do not know their destination. We could calculate this manually, but it would be slow and involve many iterations. So, we use a computer program to distribute trips in such a way that each is matched with its most likely arrival or departure zone. Enter trip information into the transportation modeling software, Emme\2	Where trips come from and where they go The arrival and destination zone of each trip
E - Find the shortest path for each trip Based on trip information, Emme\2 assigns each trip to the shortest route that connects the trip's origin and destination	How they get there After Emme\2 has assigned trips to the shortest possible route, we know the number of cars on each road
F- Compare predicted volumes with actual traffic counts Make adjustments where necessary so Emme\2 traffic volume and real-world traffic volumes are close to equal.	A tool for analyzing existing traffic conditions and for estimating future conditions

II - Estimate Future Traffic Patterns

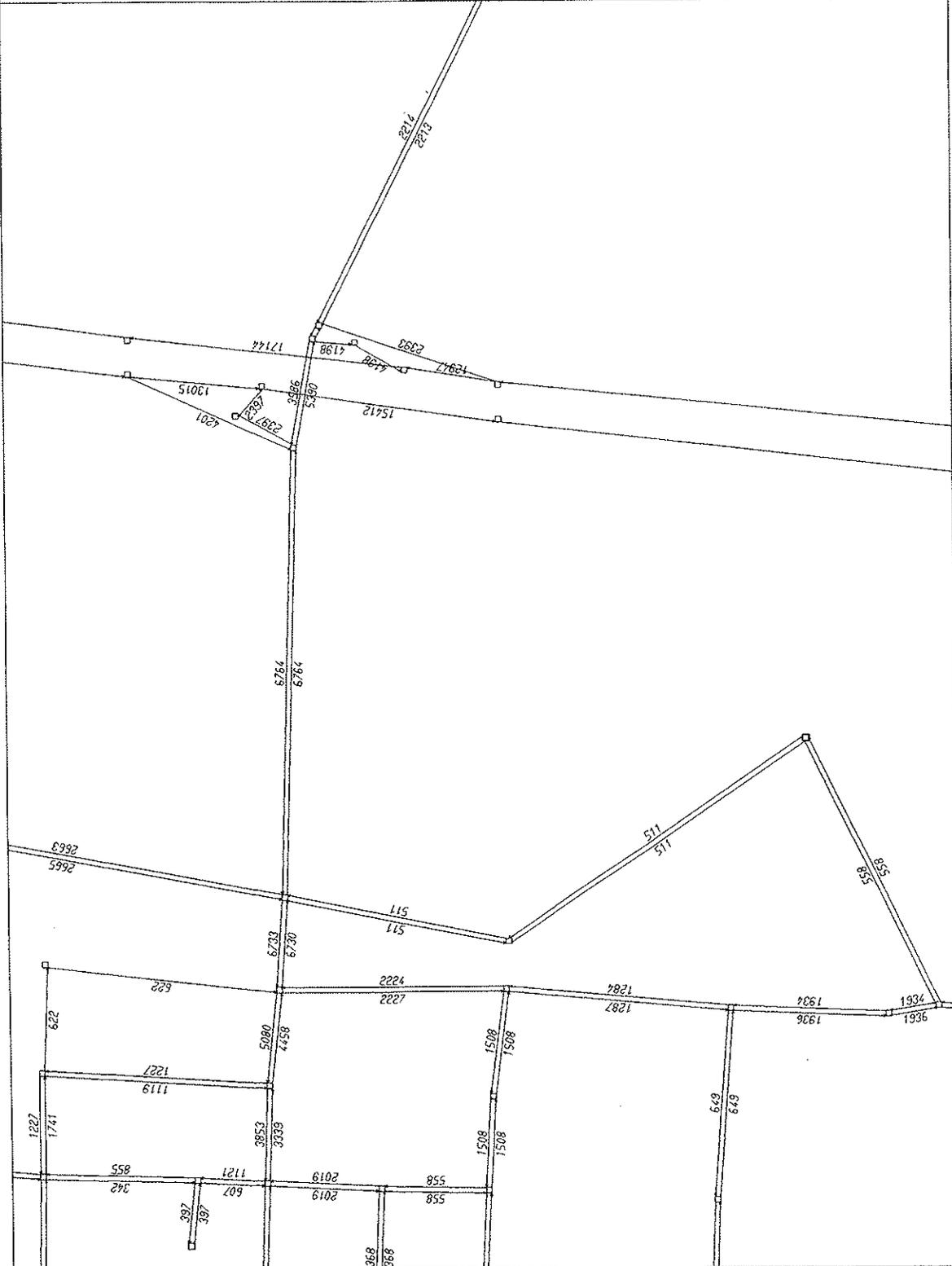
With traffic patterns in the model closely reflecting real world conditions we then repeat steps B through E, using estimates of housing and employment for the year 2015. The traffic volume that results from this process can be used to help identify future problem areas in the road system.

emme/2

LINKS:
all

WINDOW:
253/156 926
253 67/157 428
97-04-24 13 13
MODULE: 6 12
ORECONDNTvs

Creswell Estimated Daily Traffic Volume - 1994



EMME/2 PROJECT: Creswell TSP
SCENPRIO 1: 1994 Creswell

emme/2

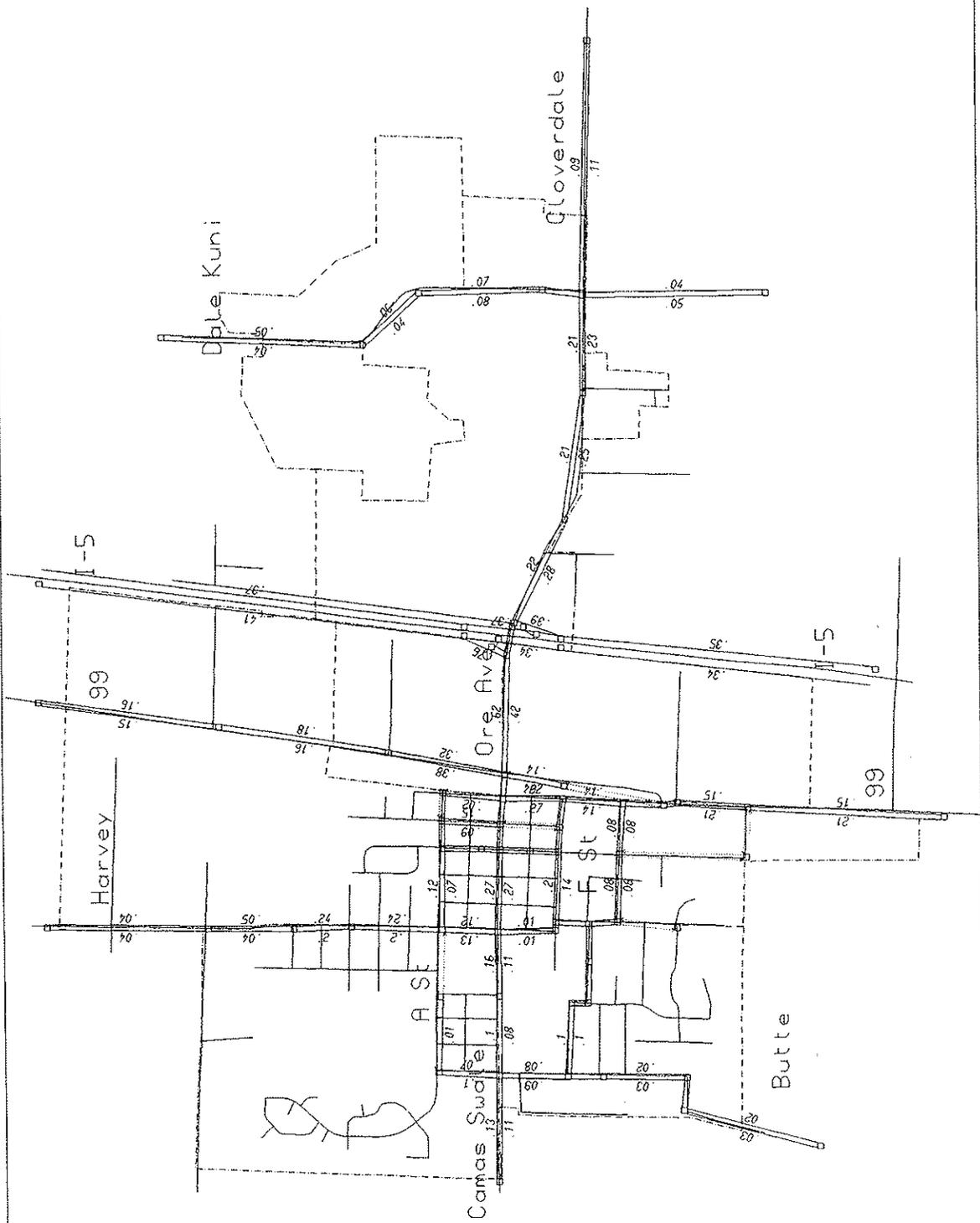
Creswell Estimated PM Peak Hour Congestion - 1994

LINKS.
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& j=100.999
& mod=0

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High Congestion
v/c 71-86
Mod. Congestion
v/c < .71
Low Congestion

WINDOW
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254.83/158.286

97-05-01 16:53
MODULE: 2 13
ORECONDIT...



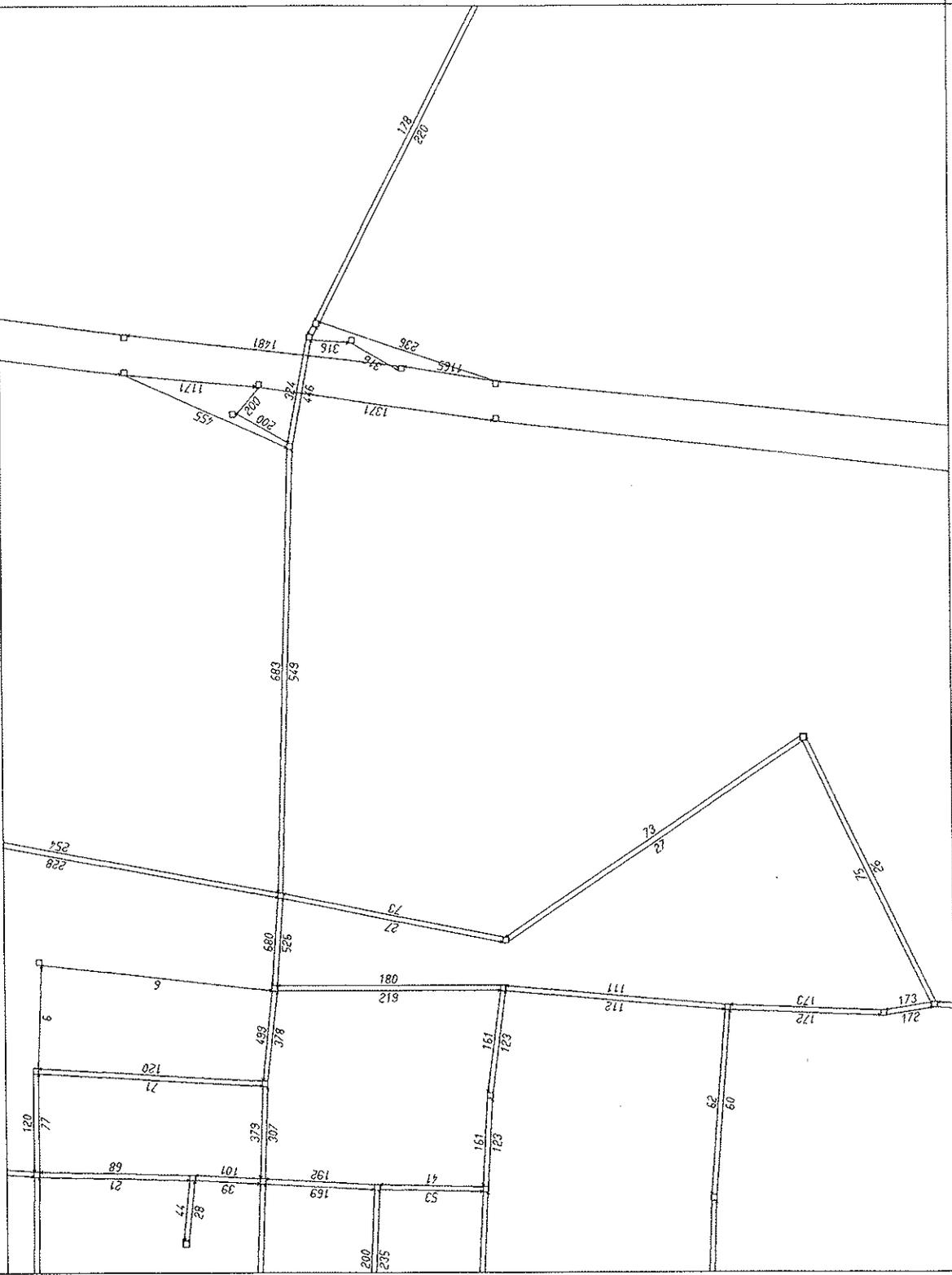
EMME/2 PROJECT: Creswell TSP
SCENARIO 2: 1994 Creswell PM Peak Hour

emme/2

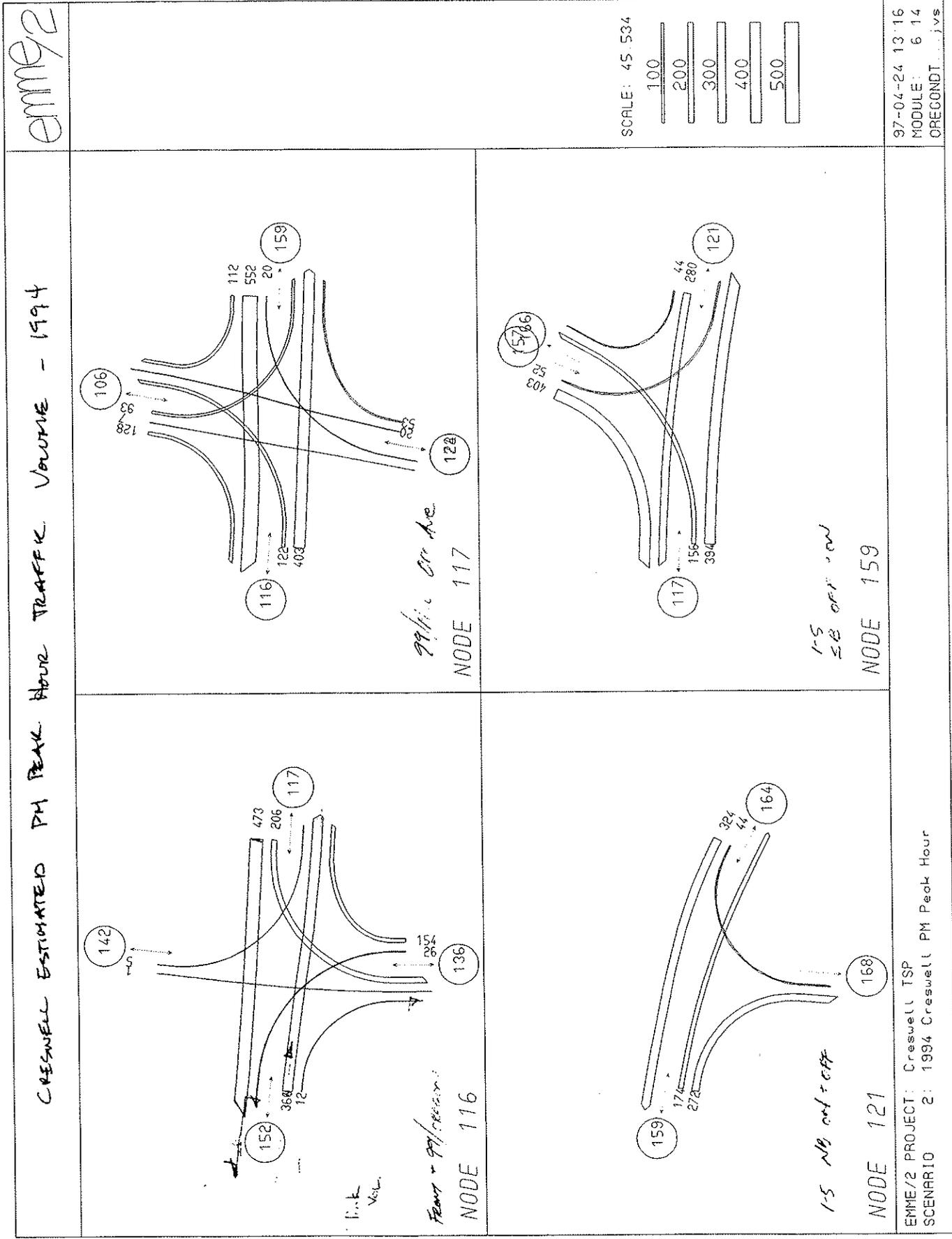
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all

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253/156.926
253.67/157.428
97-04-24 13:15
MODULE: 6 12
ORECOND: .jvs

Creswell Estimated PM Peak Hour Traffic Volume - 1994



EMME/2 PROJECT: Creswell TSP
SCENARIO 2: 1994 Creswell PM Peak Hour



Appendix F
Capital Project Cost Assumptions

Facility Type	Unit	Construction Cost (\$)
Curb	per linear foot	\$3.00
Curb and gutter	per linear foot	\$7.00
Sidewalk -five feet wide	per linear foot	\$9.00
Curb,gutter and sidewalk	per linear foot	\$15.00
Curb,gutter and sidewalks two sides	per linear foot	\$29.00
Bike lane striping and sidewalks	per linear foot	\$16.00
28-foot street paving (3-inch A.C.) with exc. and rock	per linear foot	\$28.00
30-foot street paving (3-inch A.C.) with exc. and rock	per linear foot	\$30.00
32-foot street paving (3-inch A.C.) with exc. and rock	per linear foot	\$32.00
36-foot street paving (3-inch A.C.) with exc. and rock	per linear foot	\$36.00
40-foot street paving (3-inch A.C.) with exc. and rock	per linear foot	\$40.00
42-foot street paving (3-inch A.C.) with exc. and rock	per linear foot	\$42.00
42-foot street paving and bike striping, sidewalks	per linear foot	\$81.00
44-foot street paving (3-inch A.C.) with exc. and rock	per linear foot	\$44.00
46-foot street paving (3-inch A.C.) with exc. and rock	per linear foot	\$46.00
46-foot street paving and bike striping, sidewalks	per linear foot	\$85.00
Multi-use path 10-ft wide, 3-inch asphalt	per linear foot	\$12.00
Multi-use path 10-ft wide, 4-inch concrete	per linear foot	\$14.00
Shoulder bike lane, 4 feet wide to highway standards	per linear foot	\$6.00
Shoulder bike lane and striped bike lanes (both sides)	per linear foot	\$14.00
Bicycle Lane Striping	per linear foot	\$5.00
Bicycle Lane Striping both sides	per linear foot	\$10.00
Bicycle stencil	per stencil	\$90.00
Bicycle sign	per sign	\$100.00
Cost Contingency	40 percent	1.4

* A 40 percent contingency cost will be added to each subtotal cost to account for engineering fees, inflation, and unforeseen circumstances. Estimates do not include right-of-way acquisition costs

Appendix G

Glossary of Terms

Access Control (Control of Access, or Controlled Access) - The regulated limitation of access. Achieved through the regulation of public access rights to and from properties abutting highway facilities. These regulations are categorized as Full Control of Access, Partial Control of Access, Access Management, and Driveway and Approach regulations.

- **Full Control of Access:** Preference is given to through traffic by providing access connections only with selected public roads and by prohibiting crossings at-grade and direct private driveway connections.
- **Partial Control of Access:** Preference is given to through traffic to a degree that, in addition to access connections with selected public roads, there may be some crossing at-grade and some private driveway connections. Full or Partial Control of Access is generally accomplished by legally obtaining access from the abutting property owners (usually at the time of purchase of right-of-way) or by the use of frontage roads.
- **Access Management:** Involves providing (or managing) access to land development while simultaneously preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed. Access Management views the highway and its surrounding activities as part of a single “system.” Individual parts of the “system” include the activity center and its circulation systems, access to and from the center, the availability of public transportation, and the roads serving the center. All parts are important and interact with each other. The goal is to coordinate the planning and design of each center to preserve the capacity of the overall system, and to allow efficient access to and from the activities.
- **Driveway and Approach Regulations:** These may be applied even though no control of access is obtained. Each abutting property is permitted access to the street or highway; however, the location, number, and geometrics of the access points may be governed by the regulations.

The principal advantages of control of access are the preservation or upgrading of service and safety of the roadway facility/facilities.

Accessibility - The opportunity to easily reach a given destination within a certain time frame without being impeded by physical or economic barriers.

Alternative Modes of Transportation - Forms of transportation that provide transportation alternatives to the use of single occupant automobiles. Examples include rail, transit, carpools, bicycles, and walking.

Alternative Work Hours - Work policies such as flex-time and staggered work hours and compressed work weeks that allow employees to meet transit, carpool, or vanpool schedules or to avoid commuting during peak hours traffic periods.

Americans with Disabilities Act (ADA) - Federal civil rights legislation for persons with disabilities, signed into law in 1990, that prohibits discrimination specifically in the areas of employment, public accommodation, public services, telecommunications and transportation. Transportation requirements include the provision of "comparable paratransit service" that is equivalent to general public fixed-route service for persons who are unable to use regular bus service due to a disability.

Arterial - Arterials are intended to serve as a primary route for travel within and between community areas. Access to an arterial is normally from the collector or local road system rather than to serve property directly. Individual access should be managed on arterials to minimize degradation to capacity and traffic safety. Sidewalks and bike lanes are normally provided on an arterial.

Average Daily Traffic (ADT) - The average number of vehicles passing a specified point in a typical 24-hour time frame. A measure of traffic volume.

Balanced Transportation System - A system that provides a range of transportation options and takes advantage of the inherent efficiencies of each mode.

Capacity - The maximum rate of flow at which persons or vehicles can be reasonably expected to traverse a point or uniform segment of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions; usually expressed as vehicles per hour or persons per hour.

Capital Improvement Program (CIP) - A plan for future capital infrastructure and program expenditures which identifies each capital project, its anticipated start and completion, and allocates existing funds and known revenue sources for a given period of time.

Comprehensive Plan - An official document adopted by a local government in which are set forth the general, long-range policies on how the community's future development should occur. A local comprehensive plan must be in compliance with state land use planning goals.

Congestion - A condition under which the number of vehicles using a facility is great enough to cause reduced speeds and increased travel times. Congestion is measured as the percent of capacity that is being used.

Low Congestion	=	Less than 71 % of capacity
Moderate Congestion	=	Between 71% and 86% of capacity
High Congestion	=	Greater than 86% of capacity

Connectivity - A term used to describe the qualities of easy access and appropriate connections between all parts of the transportation system, providing for ease of transfer between different modes of travel, such as rail to bus or bicycle to walking.

Cul-de-sac - A local street, usually only a few hundred feet in length and closed at one end, designed to serve the interior of a subdivision or large tract of land.

Design Standards - Those conditions that should be met when a new road is constructed, or when a deficient section is improved, including all relevant geometric and structural features required to provide some desired level of service over the life of the project, generally 20 years beyond project implementation.

Density - The average number of families, persons, or housing units per unit of land; usually density is expressed *per acre*"

Development Patterns - The overall development characteristics of an area, such as the built form of a city, town, district or neighborhood. For example, the development pattern in a downtown business district has different qualities and characteristics in terms of land use, architecture, street pattern and density than does an out-lying residential neighborhood.

Discontinuous Street - A street that is disconnected from other parts of the same street by land features, buildings, cross streets, etc. Cul-de-sacs or dead end streets are also discontinuous streets.

Environmental Impact Statement (EIS) - Document that studies all likely impacts that will result from major federally assisted programs. Impacts include those on the natural environment, as well as impacts on the economy and society, and those on the built environment of historical and aesthetic significance.

Environmental Protection Agency - The federal agency charged with protecting the environment. EPA is the source agency of air quality control regulations affecting transportation.

Express Bus Service - Bus services with limited stops, primarily at transfer points and activity centers, and higher average speeds. Often provided only during peak periods, and using freeways and high-occupancy vehicle facilities where available.

Floor Area Ratio (FAR) - A ratio comparing the amount of floor space to the total land area of a development site. Specified ratios are often required for commercial and industrial development projects, and are used in urban zoning ordinances to regulate the dimensions of multistory buildings.

Frequency of Service - The number of transit vehicles in a given time period passing by any given point on a route.

Goal 12 - One of 19 state-wide planning standards that makeup the state land use planning program. Goal 12 relates to transportation, and reads: "To provide and encourage a safe, convenient and economic transportation system." See Transportation Planning Rule.

Goals - A desired result or purpose. In planning, a goal is a broad statement of philosophy that describes the hopes of the people of the community for the future of the community. A goal may never be completely attainable but it is used as a point towards which to strive.

Group Bus Pass Programs - Programs designed for large groups or organizations to allow bulk purchases of transit passes for all members of the group at a significant cost savings.

Guaranteed Ride Home - Program to guarantee that an alternative modes employee will be provided a ride home in an emergency.

Household Characteristics - Used in the statistical study of human populations. Includes a variety of household attributes, such as number of family members, age, income, number of vehicles, and method of travel to work. The U.S. Census gathers household characteristics of the U S. population.

Impervious Surface - Surfaces which prohibit water from soaking into the ground. Concrete, asphalt, and rooftops are the most common urban impervious surfaces.

Infill Development - Development consisting of either (1) construction on one or more lots in an area which is mostly developed, or (2) new construction between two existing structures.

Infrastructure - The system of essential public services, utilities, and public and community facilities, e.g. water, sewerage, power, roads, schools, health facilities, necessary for the functioning of urban development.

In-migration - The number of persons moving into a geographic area within a given period of time. A component of an area's total population growth.

Interchange - A grade separated system of interconnecting roadways that provides for the movement of traffic between two or more roadways or highways on different levels.

Intermodal - Connecting individual modes of transportation and/or accommodating transfers between such modes.

Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 - The 1991 federal transportation funding legislation that provides for a new direction in transportation planning, with emphasis on protecting the environment and reducing congestion, relying on the most efficient transportation mode and providing increased flexibility to state and local governments on the use of federal funds.

Intersection - The general area where two or more highways join or cross, including the roadway and roadside facilities for traffic movements within it.

Interstate Highway System - That system of highways that connects the principal metropolitan areas, cities, and industrial centers of the United States, as well as routes of continental importance in Canada and Mexico.

Land Conservation and Development Commission (LCDC) - A 17-member commission established by Senate Bill 100 in 1973 to develop and administer Oregon's statewide planning goals.

Land Use - The way specific portions of land or the structures on them are used; for example commercial, residential, retail, industrial, and open space.

Land Use Decision - A final decision or determination made by a local government or special district that concerns the adoption, amendment, or application of: the goals, a comprehensive plan provision, a land use regulation, or a new land use regulation.

Land Use Board of Appeals (LUBA) - A board established by the state legislature in 1979 to hear and decide on contested land-use cases.

Level of Service - A measure of how well the transportation facility (street, intersection, sidewalk, bikeway, etc.) provides service. More congestion means a lower level of service. Congestion is measured as the percent of capacity that is being used.

- A - Free flow conditions: 32% of capacity
- B - Reasonably free flow conditions: 51% of capacity
- C - Operation stable: 71 % of capacity
- D - Lower speed range of stable flow : 86% of capacity
- E - Unstable flow: 100% of capacity
- F - Forced flow, stop and go operation: +100% of capacity

Local Street - Comprises all streets that are not collectors or arterials. It serves primarily to provide direct access to abutting land and access to the higher order systems. It offers the lowest level of mobility and usually contains no bus routes.

Local Street System - Comprises all facilities not in one of the higher order systems.

- Permits direct access to abutting properties and connections to the higher order systems.
- It offers the lowest level of mobility and usually contains no bus routes.

Major Collector - A major collector is intended to serve traffic from local streets and minor collectors to the arterial system. Individual accesses are allowed but minimized to protect system capacity and traffic safety. Sidewalks and bike lanes are normally required on a major collector.

Minor Collector - A minor collector is intended to provide access to abutting properties and to serve local access needs of neighborhoods, including limited through traffic. New development that generates a significant volume of traffic should be discouraged from locating on minor collectors that serve residential areas. Sidewalks are normally required on minor collectors and bike lanes are usually only required in accordance with the proposed bicycle plan.

National Highway System (NHS): A classification of roads authorized by ISTEA comprised of Interstate Highways and roads designated as important for interstate travel, national defense, intermodal connections, and international commerce. Federal funds are designated for projects on the NHS system. Highway 126 is part of the NHS.

Mixed Use - A development having a mixture of uses which may include office space, commercial activity, residential uses, parks and public places, and supporting public facilities and services. The development is designed so that the need to travel from one activity to another is minimized.

Mobility - Being able to move easily from place to place.

Modal Split (or Mode Share) - The proportion of total persons using a particular mode of travel.

Mode - A method of travel, such as automobile, transit, pedestrian, bicycle, or paratransit.

Multimodal - Involving several types of transportation, such as a trip using both rail and bus.

Non-Point Sources - Causes of water pollution that are not associated with point sources. Non-point sources include agricultural fertilizer or pesticide runoff, and sediment runoff from construction. Non-point sources of pollution may enter a sewer system and become a point source, such as urban runoff.

Oregon Transportation Plan (OTP) - The comprehensive, long-range plan for a multimodal transportation system for the state which encompasses economic efficiency, orderly economic development, safety and environmental quality.

Paratransit - Alternative known as *special or specialized* transportation that often includes flexibly scheduled and routed transportation services that use low-capacity vehicles, such as vans, to operate within normal urban transit corridors or rural areas. Services usually cater to the needs of persons for whom standard mass transit services would serve with difficulty or not at all. Common patrons are the elderly and persons with disabilities.

Park-and-ride - An access mode to transit and other high-occupancy vehicle modes in which patrons drive private automobiles or ride bicycles to a transit station, stop, or carpool/vanpool waiting area and park the vehicle in the area provided for that purpose (park-and-ride lots, park-and-pool lots, commuter parking lots, bicycle rack or locker).

Pedestrian Pathway - Pathway designed for pedestrian travel.

Policy - Statement adopted as part of the Plan to provide a specific course of action moving the community towards attainment of its goals. Due to budget constraints and other activities, all policies cannot be implemented at the same time. Generally, those with metropolitan-wide implications should receive priority consideration.

Retrofit - To change or upgrade an existing structure or system to meet new needs or requirements. For example, structurally strengthening an existing bridge, or upgrading a home's electrical and plumbing system to accommodate a solar water heater.

Ridesharing - Sharing of one vehicle by two or more commuters. While the concept of ridesharing applies primarily to carpools and vanpools, it is sometimes applied to transit as well. Commuters are matched with others having similar commute trip origins, destinations, and schedules.

Right-of-Way - Public space legally established for the use of pedestrians, vehicles or utilities. Right-of-way typically includes the street, sidewalk and buffer strip areas.

Sight Distance - The length of roadway ahead visible to the driver. The minimum sight distance available on a roadway should be sufficiently long enough to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path.

Site Design - The aspects of overall design relating to the form and function of a specific site. Site design deals with the configuration of elements on a particular site, usually for a specific project or purpose. These would include grading plans, building siting, and landscape planting plans.

Statewide Transportation Improvement Plan (STIP) - The STIP outlines the state-wide construction project schedule for the Oregon Department of Transportation (ODOT) and Metropolitan Planning Organizations. The STIP is not a planning document. It is a project prioritization and scheduling document.

Stormwater (Urban Runoff) - Rain that travels over land surfaces and drains into the street gutters or storm sewer pipes and is discharged into a ditch, channel, stream, or river. As stormwater travels over the land, it accumulates pollutants from roofs, yards, driveways, streets and industrial and commercial land uses.

Strip Commercial Development - A linear pattern of commercial development along a major street or highway, usually configured for the convenience of automobile travel.

Subdivision Street Pattern - Typically refers to a limited access, usually curvilinear street pattern, with a relatively high number of cul-de-sacs, designed to serve a low-density residential subdivision development. Other than at limited access points, this type of street pattern usually does not connect with other adjacent subdivision developments or to existing street patterns.

Telecommuting - A method of either working at home or at an off-site work station with computer facilities that link to the work site.

Traffic Calming - An integrated traffic planning approach that seeks to maximize mobility while creating a more livable city by reducing the undesirable side effects of that mobility.

Traffic Flow Improvements - Projects that are designed to enhance or improve the movement of vehicles on existing facilities such as freeways or streets. Some examples include ramp metering and signal timing improvements.

Transit Amenities - Items that support buses and bus riders. They include items such as bus stops, bus pads, turn-arounds, shelters, and benches.

Transportation Corridor - Major or high volume routes for moving people, goods and services from one point to another. They may serve many transportation modes or be for a single mode such as an air corridor.

Transportation Demand Management (TDM) - *Demand-based* techniques that are designed to change travel behavior in order to improve performance of transportation facilities and to reduce the need for additional road capacity. Methods include the use of alternative modes, ride-sharing and vanpool programs and trip-reduction ordinances.

Transportation Disadvantaged - Persons who must rely on public transit or paratransit services for most of their transportation. Typically refers to individuals without access to personal vehicle.

Transportation Needs - Estimates of the movement of people and goods consistent with an acknowledged comprehensive plan and the requirements of the Transportation Rule. Needs are typically based on projections of future travel demand resulting from a continuation of current trends as modified by policy objectives, including those expressed in Statewide Planning Goal 12 and the Transportation Rule, especially those for avoiding principal reliance on any one mode of transportation.

Transportation Planning Rule (TPR) - A state planning administrative rule, adopted by the Land Conservation and Development Commission in 1991 and amended in 1995, to implement state land use planning Goal 12, Transportation. The TPR requires metropolitan areas to show measurable progress towards reducing dependence on automobiles.

Transportation System Improvements (TSI) - TSI focuses on the supply side of transportation. TSI strategies include the full range of system improvements from improving the capacity and efficiency of the existing system to the construction or expansion of a new facility. TSI strategies are not limited to improvements for the automobile but also incorporates system improvements, expansion, and construction for transit, bicycles, and pedestrians.

Transportation System Management - Techniques for increasing the efficiency, safety, capacity or level of service of the existing transportation system without increasing its size. Examples include traffic signal improvements, traffic control devices including installing medians and parking removal, channelization, access management, ramp metering, and restriping for high-occupancy vehicle lanes.

Travel Mode - Means of transportation used, such as automobile, bus, bicycle, or by foot.

Trip Reduction Ordinances - Regulations which require developers or employers to participate in efforts to reduce automobile demand.

Urban Design - Urban design deals with the forms, functions, materials and activities of cities, and the use and management of urban settlements or their significant parts, such as neighborhoods or districts.

Urban Growth Boundary (UGB) - A site-specific line in the Comprehensive Plan that separates existing and future urban development from rural lands. Urban levels and densities of development, complete with urban levels of services, are planned within the UGB. A requirement of the state land use planning program.

Urban Facilities and Services - Those public facilities and services important to urban development. They are primarily planned for by local government and are provided within the current urban service area.

User Group - People with common characteristics in terms of how they use the transportation system. These characteristics include attitudes toward transportation choice, trip making patterns, and other shared travel behaviors. For example, retired persons, university students, and working parents can be considered different user groups.

Vanpool - Commuting in a seven to 15 passenger van, with driving undertaken by commuters. Some portion of the van's ownership and operating cost is usually paid for by the riders on a monthly basis. The van may be privately owned, employer-sponsored with the company owning and maintaining the vehicle, or it may be provided through a private company that leases vehicles. Fares may be charged, or the cost may be divided as agreed by the passengers.

Vehicle Capacity - The number of motor vehicles a highway or road is designed to carry over a given period of time at a given level-of-service.

Vehicle Miles of Travel (VMT) - The sum of distances traveled by all motor vehicles in a specified region. A requirement of the state Transportation Planning Rule is reducing vehicle miles traveled per capita.

Wetlands - Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Appendix H

Compatibility With State Transportation Planning Rule and Other Plans

<u>TPR Requirements/Recommendations</u>	<u>Creswell Transportation System Plan</u>
Public and Interagency Involvement	
<ul style="list-style-type: none"> • Establish Advisory Committees 	An 11-member Transportation Citizens Advisory Committee (CAC) was established to provide project guidance. A list of the CAC membership is included on the inside cover of the TSP.
<ul style="list-style-type: none"> • Develop Information Material 	Materials including reports, tables, and maps were prepared for public and agency review of the various TSP components. The Creswell Chronicle and Cottage Grove Leader periodically wrote stories on the plan. Informational packets were also prepared and made available to the general public attending meetings.
<ul style="list-style-type: none"> • Schedule Meetings and Public Hearings 	The CAC met monthly from June 1996 through September 1997. Following that, the CAC met four more times to review work products and provide input on public comments. Three public open houses were held to allow the public to review various aspects of the plan.
<ul style="list-style-type: none"> • Develop Other Methods to Involve the Community 	Staff made two presentations to the local Chamber of Commerce and Kiwanis. The open houses all included opportunities for the public to participate verbally and in writing.
<ul style="list-style-type: none"> • Coordinate the Plan With Other Agencies 	The TSP was coordinated closely with the City of Creswell, Oregon Department of Transportation (ODOT), and Lane County. Members of these organizations frequently attended most CAC meetings. The plan was also sent to the Department of Conservation and Development and Lane Transit District, who provided written comments. Concurrently with the TSP, ODOT developed a Refinement Plan for I-5 Interchange and Highway 99/Oregon Avenue area.

<u>TPR Requirements/Recommendations</u>	<u>Creswell Transportation System Plan</u>
Review Existing Plans, Policies, and Standards	
<ul style="list-style-type: none"> Review and Evaluate Existing Comprehensive Plan and state and federal plans 	<p>The Creswell Comprehensive Plan (1982) was reviewed and evaluated as part of the TSP Development. The following other plans were reviewed: The Oregon Transportation Plan, Oregon Highway Plan, Oregon Bicycle and Pedestrian Plan, Oregon Rail Passenger Policy and Plan and Oregon Rail Freight Plan, and American with Disabilities Act</p>
<ul style="list-style-type: none"> Analyze Existing Land Uses and Vacant Lands 	<p>Existing land uses and vacant lands within the TSP study area were updated. Maps and associated data were produced and analyzed by Transportation Analysis Zone.</p>
<ul style="list-style-type: none"> Review Population and Employment Forecasts 	<p>Population and employment data were updated and new forecasts developed. Housing by development type and employment by sector were allocated to vacant lands. These data were used in the Creswell TSP modeling effort.</p>
<ul style="list-style-type: none"> Review Existing Ordinances and Zoning, Subdivision, and Engineering Standards 	<p>The Creswell Zoning Ordinance and Subdivision Ordinance were reviewed for consistency with the TPR. Street standards and other engineering standards were analyzed for consistency with new TSP policies.</p>
<ul style="list-style-type: none"> Review Significant Transportation Studies 	<p>No significant transportation studies have been conducted in the Creswell area.</p>
<ul style="list-style-type: none"> Review Existing Capital Improvements and/or Public/Facilities Plans 	<p>The City does not currently have a transportation-related capital improvements program or public facilities plan.</p>

Inventory Existing Transportation System	
<ul style="list-style-type: none"> Street system (number of lanes, lane widths, traffic volumes, level of service, traffic signal location and jurisdiction, pavement conditions, functional classification and jurisdiction, truck routes, access points, and safety issues.) 	<p>A complete inventory of Creswell’s existing street network is included in Chapter Two and Appendices A and B of the TSP document.</p>
<ul style="list-style-type: none"> Bicycle Ways (type, location, width, condition, ownership/jurisdiction). 	<p>No dedicated bicycle facilities currently exist in Creswell. Chapter Two of the TSP describes the existing bicycle system.</p>
<ul style="list-style-type: none"> Pedestrian Ways (location, width, condition, ownership/jurisdiction). 	<p>Chapter Two and Appendices A and B describe the existing pedestrian system.</p>
<ul style="list-style-type: none"> Public Transportation Services (transit, intercity bus, passenger rail, special transit services). 	<p>A summary of existing public transportation service is provided in Chapter Two.</p>
<ul style="list-style-type: none"> Air Transportation 	<p>A discussion of the Creswell airport and services provided is included in Chapter Two.</p>
<ul style="list-style-type: none"> Freight Rail Transportation 	<p>A summary of freight rail transportation services is provided in Chapter Two.</p>
<ul style="list-style-type: none"> Water Transportation 	<p>There are no navigable waterways in the planning area.</p>
<ul style="list-style-type: none"> Pipeline Transportation 	<p>A summary of pipeline transportation services is provided in Chapter Two.</p>
<ul style="list-style-type: none"> Environmental Constraints 	<p>A discussion of natural features including slope, soils, surface water drainage, and wetlands is included in Chapter Two. A discussion of cultural features including parks and open space, schools, and historical features is also included in Chapter Two.</p>
<ul style="list-style-type: none"> Existing Population and Employment 	<p>Existing and projected population and employment is included in Chapter Three of the TSP.</p>

Determine Transportation Needs	
<ul style="list-style-type: none"> Population and Employment Forecasts 	<p>Population and employment forecasts are included in Chapter Three. Creswell was divided into 14 transportation analysis zones (TAZ). Housing and employment data were allocated by TAZ and projected to the year 2015. An EMME/2 model was developed to forecast future vehicle trips. The results of the model are included in Chapter Three and Appendices C and E.</p>
<ul style="list-style-type: none"> Determine Transportation Capacity Needs 	<p>A Level 2 analysis was conducted to project traffic volumes to the year 2015. The model was calibrated using existing traffic counts. The model projected future trip rates and origin and destination information. The model also estimated level of service, P.M. peak hour traffic volume, and P.M. peak hour congestion. This information is included in Chapter Three and Appendices C and E.</p>
<ul style="list-style-type: none"> Other Roadway Needs (safety, bridges, reconstruction, operation/maintenance) 	<p>The I-5 Interchange Refinement Plan, conducted concurrently with the TSP analyzed the Interchange and Highway 99/Springfield-Creswell Highway system. Other roadway needs are described in the Chapter Three of the TSP.</p>
<ul style="list-style-type: none"> Freight Transportation Needs 	<p>The proposed TSP will provide for adequate freight movement by rail and highway.</p>
<ul style="list-style-type: none"> Public Transportation Needs (special transportation needs, general public transit needs) 	<p>The proposed TSP identifies public transportation needs in Chapter Three.</p>
<ul style="list-style-type: none"> Bikeway and Pedestrian Needs 	<p>Bikeway and pedestrian system needs are described in Chapter Three</p>

Develop and Evaluate Alternatives	
<ul style="list-style-type: none"> Evaluate and Develop Transportation Goals 	Goals were established as part of the TSP development contained in Chapter 4.
<ul style="list-style-type: none"> Establish Evaluation Criteria 	The established goals formed the basis for evaluating projects. These are present in Chapter 4.
<ul style="list-style-type: none"> Develop and Evaluate Alternatives (no-build system, transportation system management, transportation demand management, transit feasibility, improvements to roadway system, land use alternatives, and combination alternatives). 	Chapter 3, Future Conditions and Transportation Needs generally identified the need for future projects. Project alternatives were developed and are presented as a final alternative (Chapter 4) and capital projects list Chapter 5. This includes the Interchange Refinement Plan.
<ul style="list-style-type: none"> Select Recommended Alternative 	The preferred plan alternative is contained in Chapters 4 and 5. The CAC reviewed and prioritized projects into high, medium, and low priorities. Project lists were also reviewed by the public at open houses.
Produce a Transportation System Plan	
<ul style="list-style-type: none"> Transportation Goals, Objectives, and Policies 	Transportation goals and policies are contained Chapter 4.
<ul style="list-style-type: none"> Street Plan Element (function street classification and design standards, proposed facility improvements, access management plan, truck plan safety improvements) 	All of these elements are contained in Chapter 4 of the TSP. The Interchange Refinement Plan is also included.
<ul style="list-style-type: none"> Public Transportation Element 	A transit plan including the possible of future transit service areas is contained in Chapter 4
<ul style="list-style-type: none"> Bikeway Element 	The bikeway plan is contained in Chapter 4.
<ul style="list-style-type: none"> Pedestrian System Element 	The pedestrian system plan is contained in Chapter 4 of the plan.
<ul style="list-style-type: none"> Air, Rail, Water, and Pipeline 	The City has an existing plan for the airport. Other elements are addressed in the needs section in Chapter 3 and plan goals and policies in Chapter 4.

Plan Review and Coordination	
<ul style="list-style-type: none"> Consistent with ODOT, Lane County, and other applicable plans 	Representatives from ODOT and Lane County attended most CAC meetings. In addition, the draft plan was reviewed by the Department of Land Conservation and Development and Lane Transit District.
Adoption	
<ul style="list-style-type: none"> Is it Adopted? 	A joint public hearing of the Creswell Planning Commission, Lane County Planning Commission, and Lane County Roads Advisory Committee was held on June 4, 1998. The Creswell City Council and Lane County Board of Commissioners held a public hearing on August 10, 1998. Adoption of the TSP is pending.
Implementation	
<ul style="list-style-type: none"> Ordinances (facilities, services, and improvements; land use or subdivision regulations) 	Implementing Ordinances will be developed following adoption of the TSP.
<ul style="list-style-type: none"> Transportation Financing/Capital Improvements Program 	Capital projects are contained in Chapter 5. Financing strategies are identified in Chapter 6 of the TSP.

Creswell Comprehensive Plan

The Creswell Transportation System Plan (TSP) is consistent with the Creswell Comprehensive Plan. The TSP is adopted as an amendment to the Comprehensive Plan and the TSP goals and policies replace transportation-related goals and policies contained in the Comprehensive Plan. The remainder of the TSP, including appendices, is adopted as background information to the Comprehensive Plan. The Creswell Comprehensive Plan Diagram will also be amended to reflect amendments contained in the TSP.