

2. TRANSPORTATION TODAY AND TOMORROW IN THE GRANTS PASS URBAN AREA

This chapter includes a description of the existing transportation system in the study area, and information about current travel patterns and operating conditions for this system. Information about current levels of congestion (or “Level of Service”) is included on major roadways and at major intersections, along with the information about accidents. Major traffic generators in the study area are identified, along with areas where future growth is expected. In addition, this chapter includes a summary of transportation system needs and deficiencies related to: functional classification revisions, substandard facilities, high accident locations, missing links in the roadway system, public transportation, nonmotorized travel (bicycles and pedestrians), aviation, rail, and truck.

Existing Transportation System in the Grants Pass Urban Area

The transportation system in the study area is made up of several discrete elements, including roadways, public transit services, sidewalks, trails and other facilities for bicyclists and pedestrians, facilities and services for rail and aviation, and pipelines. The following sections and figures provide a summary of the study area transportation system.

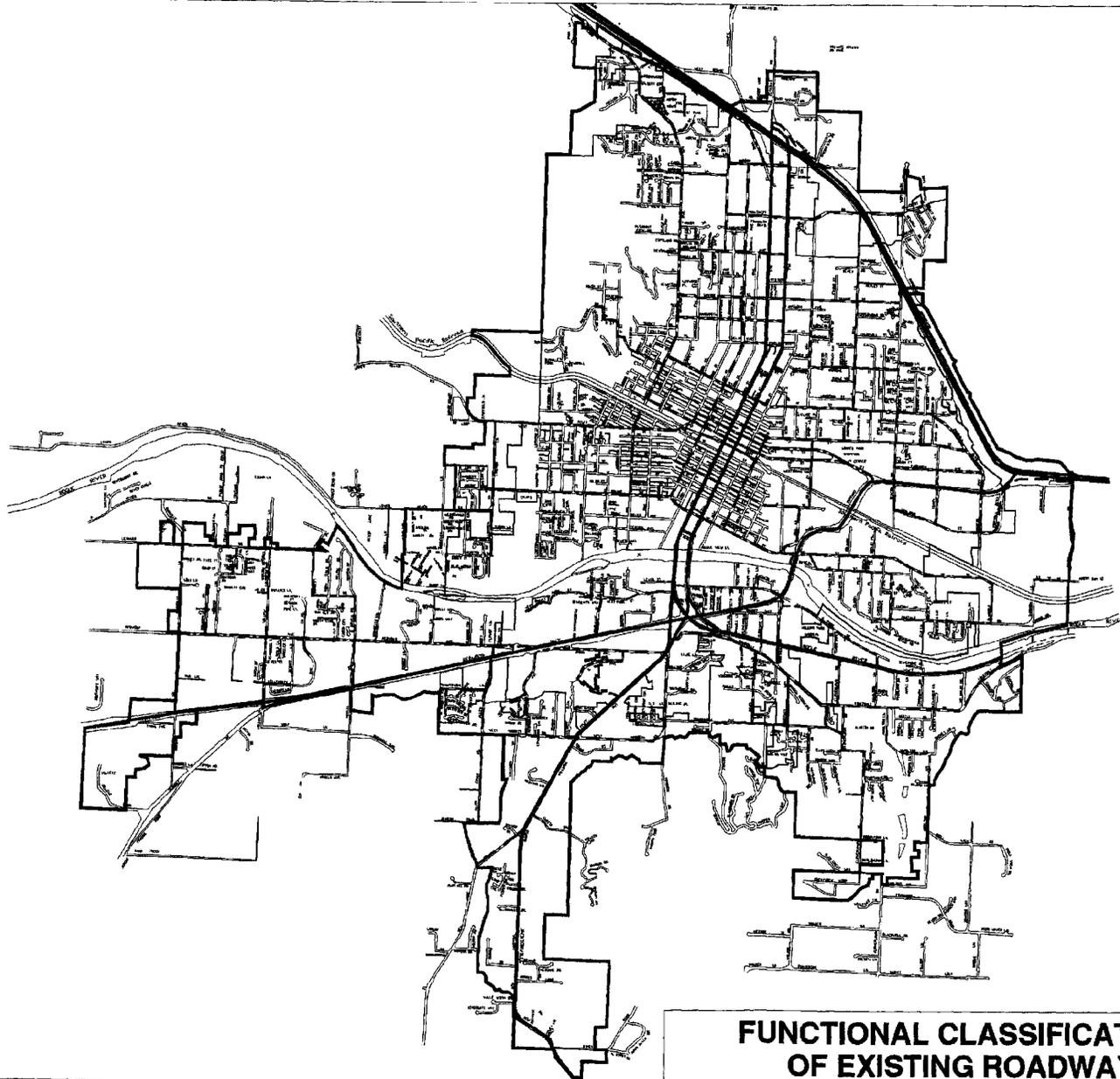
Functional Street Classification

The street and highway system is composed of a hierarchy of streets designed to provide for mobility (or the movement of people and goods), and access to adjacent properties in an efficient manner. The classification of streets is done to determine the degree to which individual streets (or segments of streets) should emphasize mobility versus property access, two functions which are potentially in conflict. Providing a high degree of access to property (which means allowing for traffic to leave/enter the roadway freely) impedes the ability of the roadway to move traffic; providing for large volumes of moving traffic, and/or high speeds for travel impedes access to properties.

Depending on the function of the roadway, it will be designed and operated differently to facilitate through movement of traffic or traffic entering/leaving the roadway. The Grants Pass Urban Area functional classification system is currently comprised of five different types of facilities. They are described in Table 2-1. A map showing the current functional classification of the roadways in the study area is included in Figure 2-1, and detailed descriptions of the roadways are included in Appendix B to this Plan. It should be noted that Figure 2-1 does not include proposed roadway extensions.

Table 2-1: Functional Classification of Roadways

Facility Type	Function or Emphasis - Mobility vs Property Access
State Highways (includes freeways, highways, and principal state routes)	Mobility - with no direct access to adjacent properties from the roadway, and limited access to arterial streets - generally serves intercity travel at relatively high travel speeds - right of way (ROW) between 60-230 feet, 2-6 travel lanes varies
Arterial Streets 6000+ ADT	Mobility - with access to other arterials and minimal direct property access - generally continuous for long distances providing connections with highways, major destinations and other arterials - serves longer trips (5+ miles) - speeds of 40-45 mile per hour - ROW from 60-100 feet, 2-4 travel lanes
Collector Street 3000-6000 ADT	Mobility - connecting neighborhoods to each other and to major arterials and/or freeways - generally continuous facilities for moderate distances, serving shorter trips of 2-5 miles in length, providing a moderate level of access to adjacent properties - ROW 50-80 feet with 2 travel lanes
Local Collector Streets 1000-3000 ADT	Access - and local circulation within neighborhoods to "collect" and "distribute" trips and connect to higher level arterials - providing a relatively high level of access to adjacent properties - typically 2 lanes with 50-60 feet of ROW
Local Access Streets <1000 ADT	Access - to adjacent properties - designed for short trips within neighborhoods connecting to collectors and higher level arterials - 2 lanes with ROW up to 60 feet



Functional Classifications	
State Highway	—————
Arterial	- - - - -
Collector	- - - - -
Local Collector	- - - - -
Local	—————
Private	—————

**FUNCTIONAL CLASSIFICATIONS
OF EXISTING ROADWAYS**

**Figure
2-1**

Major Traffic Generators

Existing average daily traffic (ADT) volumes for roadways in the study area were obtained from the Oregon Department of Transportation's (ODOT) Traffic Engineering Section and Transportation System Monitoring Unit, the Josephine County Public Works Department, and from the City of Grants Pass Engineering Division. The counts were obtained over the period from 1991 to 1993. ADT for individual facilities that were counted during this period is included in Appendix B.

As shown in that table, traffic volumes vary greatly by facility, and in some cases, by sections of facility. This is due in part to the location and characteristics of major "traffic generators", i.e., land uses that tend to generate or attract lots of traffic. Major traffic generators within the study area are shown in Figure 2-2. They tend to be concentrated along the four state highway corridors, as described below.

- **Highway 99** (6th and 7th Streets) - strip commercial area, business park, and hospital between Morgan Lane and Midland Avenue; medical services between Midland Avenue and Manzanita Avenue; downtown commercial and business area between A Street and M Street.
- **Redwood Highway** - strip commercial area, business park, and County Fairgrounds between Highway 99 and Allen Creek Road; industrial area in the vicinity of Dowell Road.
- **Grants Pass Parkway** - commercial area between Agness Avenue and Beacon Drive; industrial area north and south of the railroad tracks and west of Grants Pass Parkway.
- **Rogue River Highway** - strip commercial area between Maple Lane and Carnahan Drive.

Truck Traffic

There are no designated truck routes within the Grants Pass Urban Area. With the exception of local deliveries, most of the truck traffic can be classified as through or inter-regional trips that must utilize portions of the local street system for travel between state highways and I-5. Truck volume data was obtained from ODOT's Traffic Engineering Section and Transportation System Monitoring Unit, based on vehicle classification counts performed between 1991 and 1993.

Average daily truck volumes on **Redwood Highway/6th Street** traveling southbound between I-5 and A Street are around 550 trucks per day; this accounts for about 3.6 percent of total daily traffic volume. Between A and D Streets the volumes of trucks is about the same, but accounts for only 2.7 percent of the daily traffic volumes in this area

(due to higher total traffic volumes in this location.) In the vicinity of Harbeck Road and Jacksonville Highway (where there is two way traffic) truck volumes are approximately 550/day, accounting for about 2.5 percent of daily traffic. On the northbound segment (7th Street), there are about 500 trucks/day between M and E streets (2.1 percent of daily traffic), and between A Street and I-5 there are around 520 trucks/day, representing about 3.5 percent of daily traffic volumes.

On **Grants Pass Parkway** there are about 350 trucks/day between Rogue River Highway and M Streets (around 3.5 percent of daily traffic.) There are about 400 trucks/day on **Rogue River Highway**, which is about 2.1 percent of total daily traffic.

Public Transportation

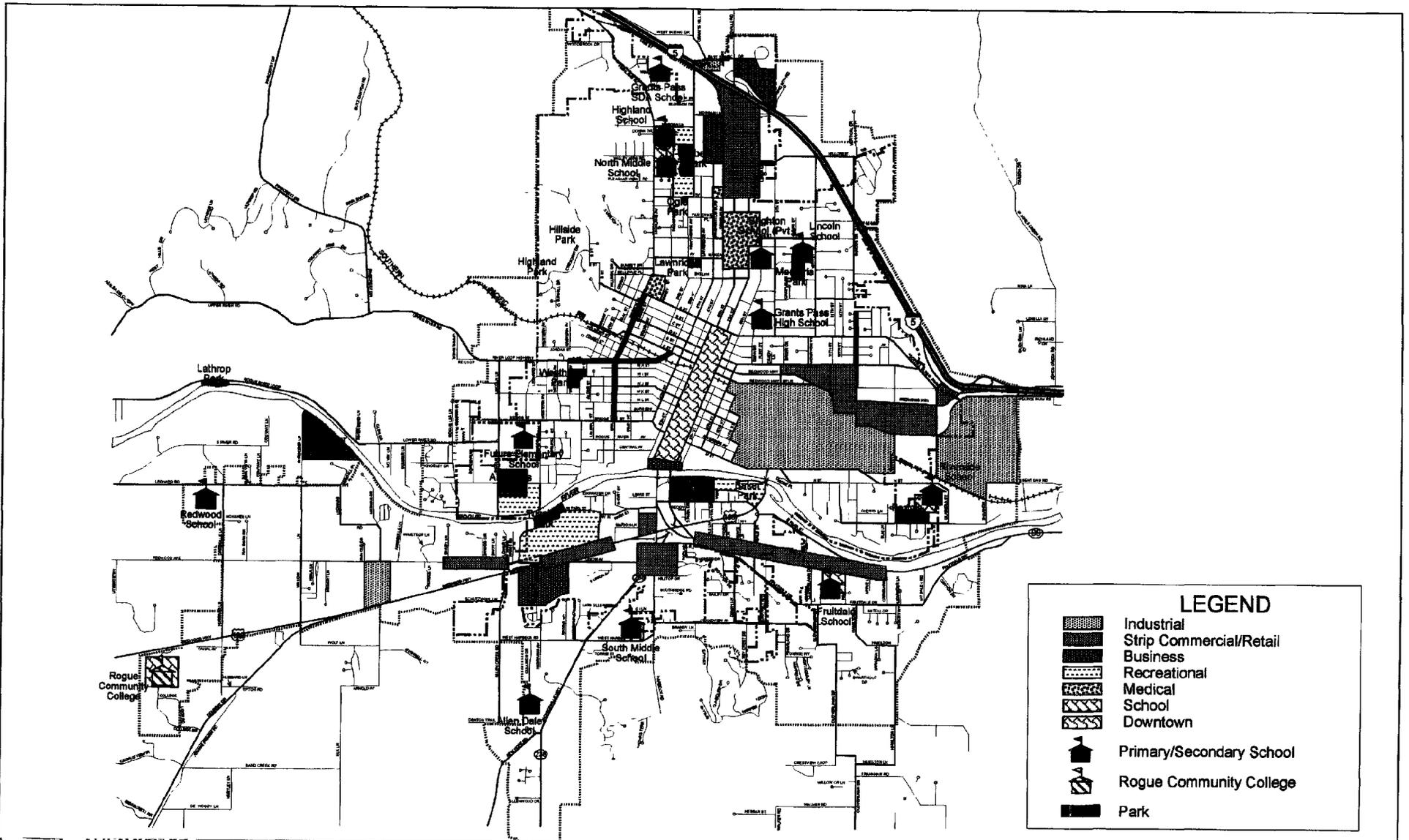
Public transportation within the Grants Pass Urban Area is currently provided by the Rogue Transit System. This is operated by a private operator (Rogue Transportation, Inc.), which also provides local taxi service and shuttle service to the airport in Medford. There is only one transit route in the area, configured as a continuous loop. Figure 2-3 shows the current route. It operates along Highway 99 from Morgan Lane through the downtown area to Redwood Highway, then along Redwood Highway to the Rogue Community College, and along A, D and F Streets between the downtown and Beacon Drive.

Service is provided Monday through Friday between 6:00 a.m. and 6:00 p.m., and on Saturday between 8:00 a.m. and 5:00 p.m.. The minimum headway (or time between buses) is one hour. The fare is one dollar. Existing ridership on the Rogue Transit System is around 100 passengers/day.

There is a strong community interest in providing public transit services, especially to meet the transportation needs of people who do not, or cannot, provide their own transportation (such as the young, the elderly, disabled people and people without access to a private vehicle.)

The current situation in Grants Pass is unique due to the fact that transit service is being provided by a private, rather than public agency. Since the transit service is provided by a private "for profit" operator, this limits the types of public funds that could potentially be used to finance transit service. The operator must rely on fares and other revenue to operate the system, which limits the amount of service that can be provided to the community, and impacts the long term prospects for continued public transit services in the area.

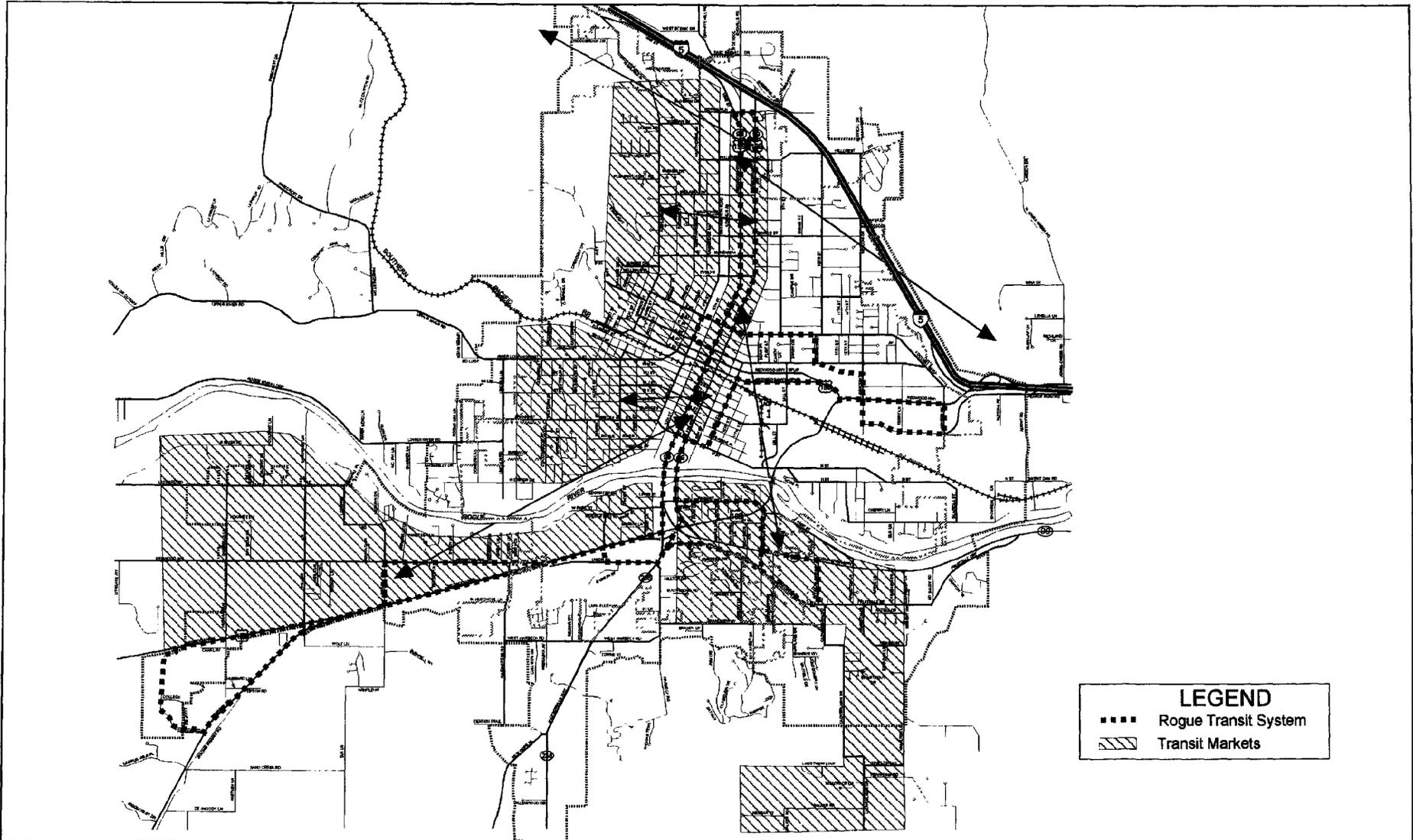
In addition to the public transit service, other transportation services are provided by some social service agencies, and by private tourist operations. However, these services are restricted to the clients of the agency (or business) providing the service and are usually limited to specific trip purposes and/or locations. Regularly scheduled transportation services operating in the area include:



Existing Major Traffic Generators

**Figure
2-2**

**Grants Pass
Urban Area
Transportation Plan**



LEGEND
 - - - - - Rogue Transit System
 ▨ Transit Markets

Transit Route and Markets

Figure 2-3

Grants Pass Urban Area Transportation Plan

- **Grants Pass Taxi** - operating five round trips per day between Grants Pass, Rogue River and Medford - \$12.00 fare each way - primary market is trips to/from the Medford/Jackson Airport
- **Greyhound/Trailways** - operating four trips/day in each direction between Grants Pass and Medford, with connections to point beyond - \$5.50 fare each way;
- **Josephine County Community Services** - provides transportation for eligible individuals over the age of 60 who cannot drive or have no access to an automobile - recipients receive one trip/month between Grants Pass and Medford for a \$3.00 fare - they can schedule two trips/month to the VA Hospital in Roseburg for a \$5.00 fare;
- **Western Transportation Lines** - operates morning and afternoon shuttle services between Medford, Gold Hill, Rogue River, Grants Pass and Cave Junction - fares range from \$4.00 - \$8.00 - principal market is students going to/from Rogue Community College.

It is likely that community needs for public transit will increase due to: (1) overall growth in the area's population; (2) changes in the composition of the population, with more people becoming dependent on public transit (especially the elderly); (3) increased emphasis on travel by means other than the private automobile to reduce congestion and total VMT (vehicle miles traveled); and (4) requirements to improve air quality and address other environmental problems related to automobile use.

Nonmotorized Travel Modes

Bicycles

Given the large number of tourists visiting the area, the numerous area attractions, and the relatively flat terrain, there is a lot of potential for bicycle travel within the study area. Many roadways within the Grants Pass Urban Area are suitable for bicycle travel. State highways and many arterial routes generally have adequate shoulders for bicycles or sufficient pavement width to accommodate bicyclists safely. On most collector streets and lower classification roadways there is generally less pavement width; however, traffic volumes are less and there is not as much competition between motorized and nonmotorized travel modes.

There are some designated bike routes within the study area that have been striped on the pavement and/or signed to identify their presence and location. Routes considered the most desirable for bicycle travel according to the 1992 Josephine County Bicycle Guide are shown in Figure 2-4. In the Guide, routes are divided into four categories, defined by the Josephine County Bikeway Advisory Committee: (1) paved roads with minimal or no shoulders, (2) paved shoulders outside the "fog line" 2-4 feet wide, (3) paved shoulders 4 feet and wider with possible bike lane designation, and (4) separated bike path.

One of the largest generators of bicycle traffic in the area is the Rogue Community College. It is served by a separated bike path or wide shoulders on street until the 6th and 7th Street bridges over the Rogue River. At that point bicyclists must share the travel lanes with vehicular traffic. There are separate bike paths along the 7th Street/Jacksonville Highway

(between Park Street and Union Avenue).

Pedestrians

Figure 2-5 illustrates the system of sidewalks in the Grants Pass Urban Area. Pedestrian facilities in the area consist of sidewalks along one or both sides of the roadway. The sidewalk system is the most complete in the downtown core and along the major commercial corridors. In the older residential neighborhoods sidewalks are limited, or non-existent. A more extensive system of sidewalks exists in newer residential tracts and neighborhoods, but there are few pedestrian connections between neighborhoods.

Pipelines

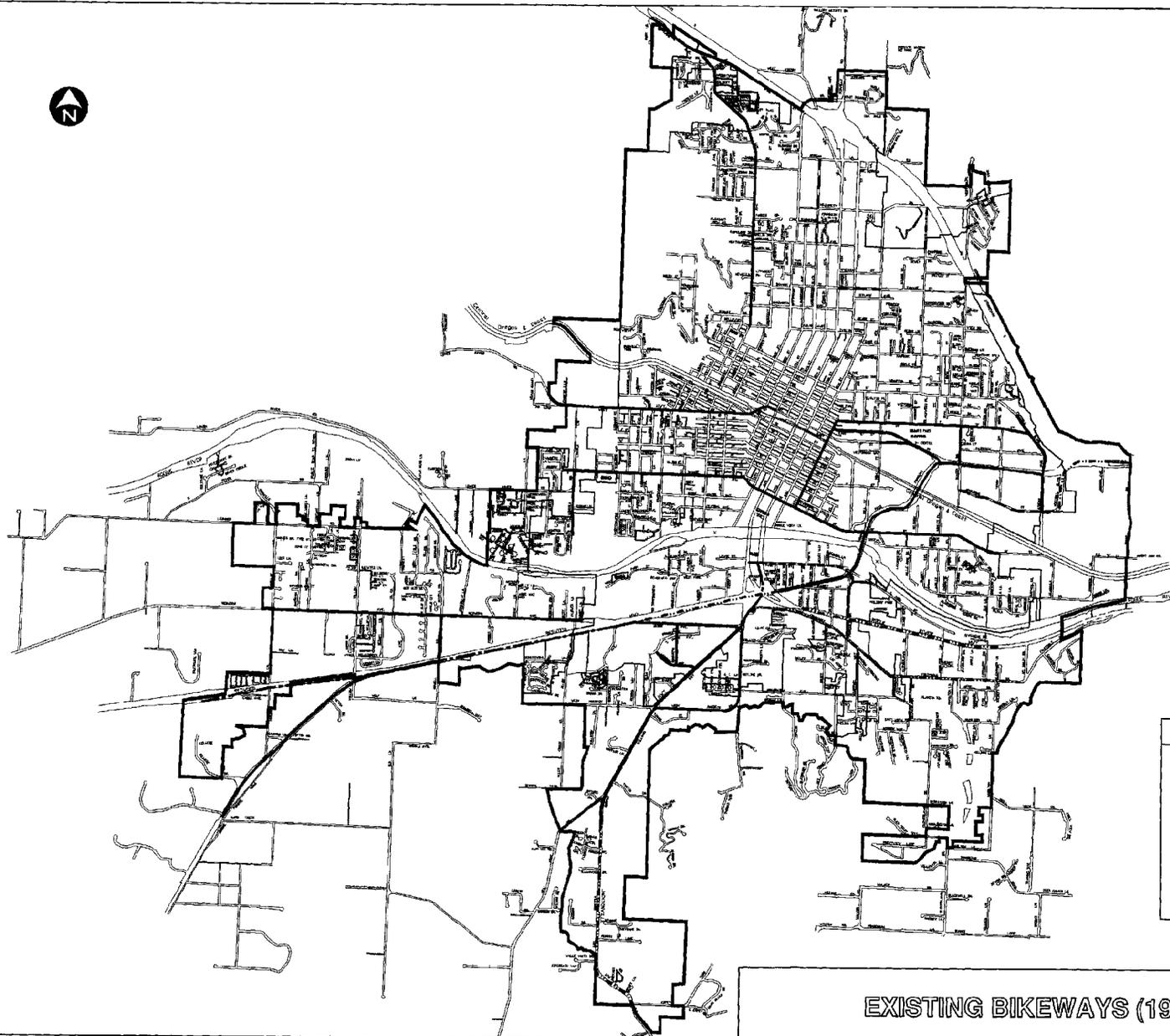
Within the Grants Pass Urban Area there are two natural gas pipelines. One natural gas transmission line is operated by the Northwest Pipeline Corporation and originates in Eugene, Oregon. This line is used to transport natural gas over long distances to local utilities and distributors.

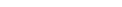
The second pipeline is classified as a natural gas distribution utility line and is operated by W. P. Natural. It runs between Grants Pass and Ashland, Oregon, providing for distribution of natural gas to these local communities.

Aviation

Grants Pass Airport is located six miles northwest of Grants Pass, located on approximately 200 acres. Access to the airport is via Merlin Road, Monument Drive and Brookside Boulevard, which connect to I-5. The airport is classified by the Federal Aviation Administration at a "General Utility" general aviation airport, serving business, commercial, instructional and personal aircraft uses. The airport, owned and operated by Josephine County, has one paved runway (75 feet by 4000 feet). There are no scheduled commercial air services at the Grants Pass Airport. The closest airport providing commercial passenger service is located in Medford, about 30 miles south/east of Grants Pass.

In 1990-91 there were approximately 100 aircraft based at the Grants Pass Airport. These aircraft are generally small, single-engine, and multi-engine, fixed-wing aircraft. Aircraft activity was last recorded during the calendar year 1986, when there was an estimated 24,500 "aircraft operations." Of this, single engine aircraft operations activity accounted for around 97 percent of total operations, with multi-engine aircraft accounting for the balance.

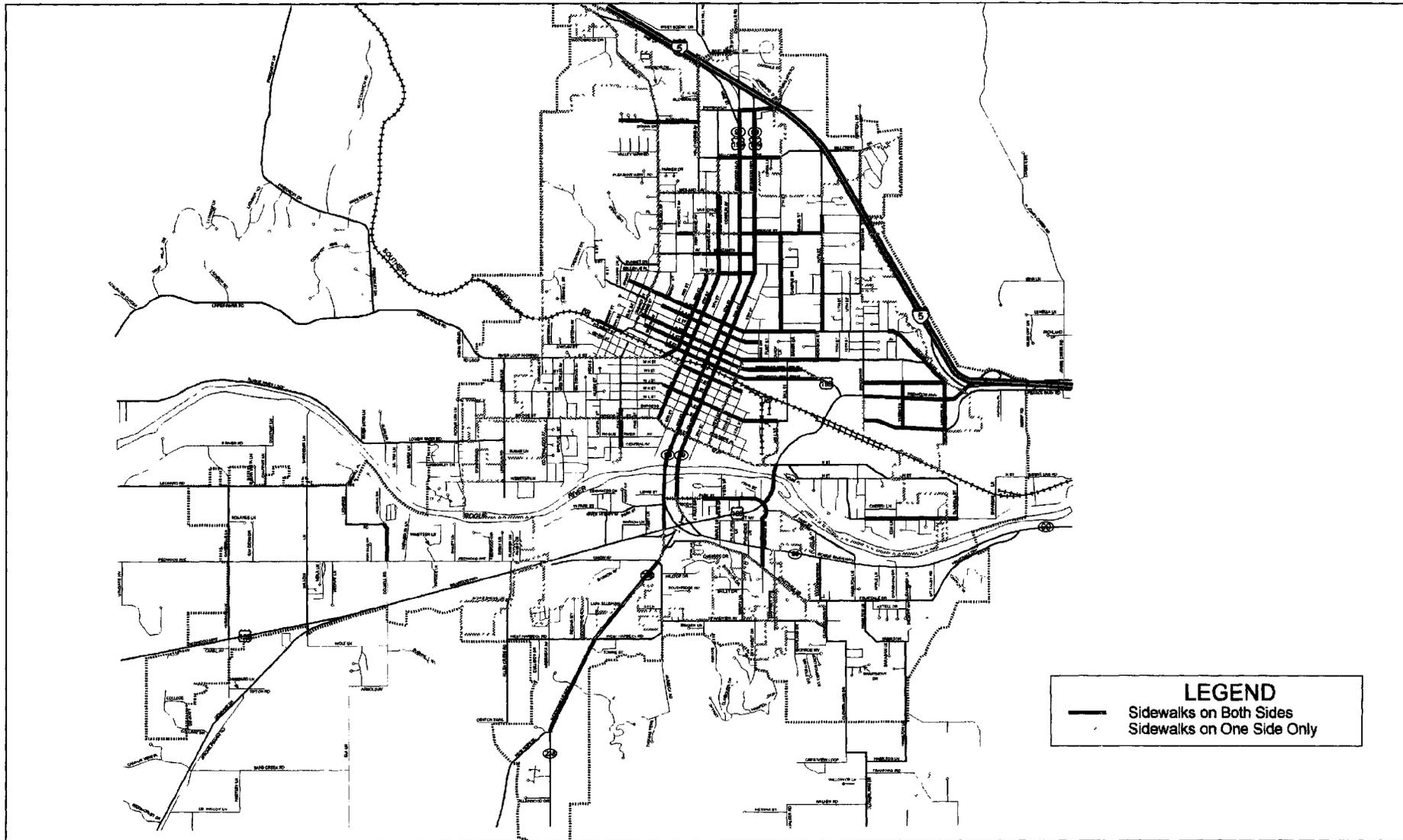


Bikeway Classifications	
Existing	
	Bike Lane
	Multi-Use Path
	Shoulder Bikeway
	Wide Outside Lane
	Bicycle Route

EXISTING BIKEWAYS (1995)

Figure
2-4

Grants Pass
Urban Area
Transportation Plan



Current Sidewalk Locations

**Figure
2-5**

**Grants Pass
Urban Area
Transportation Plan**

Rail

Since 1994 rail transportation in the Grants Pass Urban Area has been operated by RailTex, and is limited to the movement of freight. Runs originating in Grants Pass serve destinations between Eugene and Medford. There is one run per day (Monday through Saturday) from: Eugene to Medford, Medford to Eugene, and Grants Pass to White City; there is one run per day (Monday through Friday) from Grants Pass to Merlin and Glendale.

Passenger rail service to the area has not operated since 1953, when Southern Pacific (the operator at that time) terminated its passenger service operations between Roseburg, Oregon and Dunsmuir, California. The only passenger service in Southern Oregon is operated by Amtrak via its Coast Starlight service; however the closest station is in Klamath Falls. This service operates on a daily basis with a single northbound and southbound train, and is oriented towards long distance travel.

Existing Operating Conditions

This section provides information on the existing operating conditions for the transportation system in the study area. It includes information on roadway and intersection "levels of service" (a measure of the degree of congestion), safety, accessibility, and system connectivity.

Roadway and Intersection Level of Service

Level of service (LOS) provides an indication of the quality of traffic operations at an intersection or roadway segment. It measures the degree of congestion and/or delay experienced by vehicles at that location. LOS ranges from "A" (excellent operating condition) to "F" (severe congestion). LOS analysis is done for either daily or peak hour periods. Daily LOS was used for the analysis of roadway sections; and peak hour LOS was used for the intersection analysis. For planning purposes, LOS of "A", "B", or "C", is regarded as acceptable, with only minor and/or occasional delays being experienced by motorists. LOS "D" represents fair roadway operations, with moderate levels of congestion. LOS "D" is often used as the minimum acceptable standard to identify when congestion related problems exist, and is used for the planning and design of transportation facilities. Facilities or intersections operating at LOS "E" or "F" represent unstable traffic flow conditions where improvements will be needed.

In addition to LOS, another measure of operating conditions for traffic is the V/C Ratio which measures the volume of traffic on a given roadway segment against the "design capacity" of that roadway. The capacity of a roadway is measured by the number of travel lanes, posted speed limit, and operating characteristics (e.g. presence/absence of traffic signals, turn lanes, driveways, etc.). A V/C ratio of .70 means that the roadway is carrying 70 percent of its maximum design capacity, and is operating at LOS "C".

Roadway Level of Service

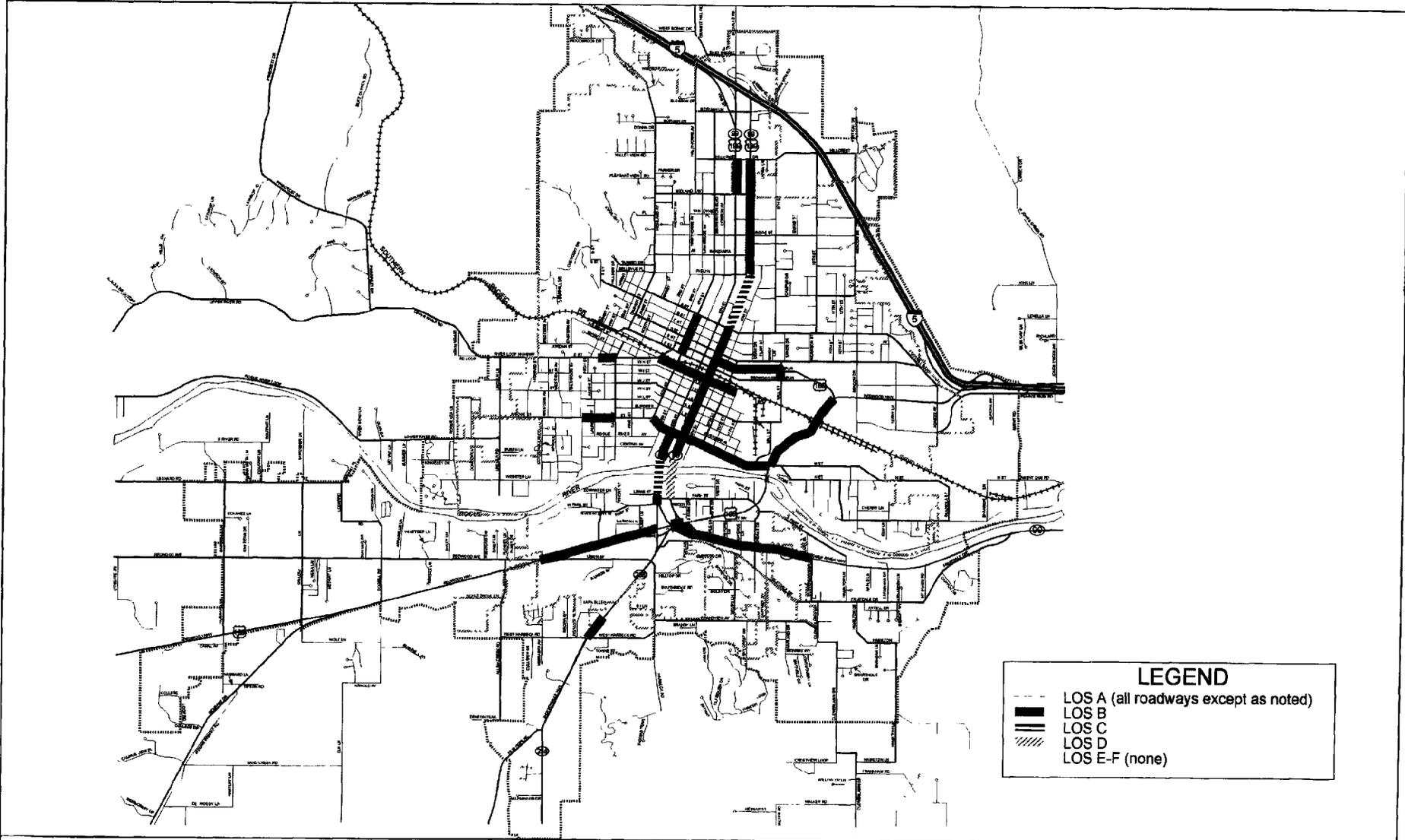
Table 2-2 summarizes the general operating characteristics and volume to capacity ratio associated with each level of service for roadways. Figure 2-6 shows the existing LOS for roadways in the study area. As can be seen, the majority of the roadways operate at LOS "B" or better. Segments operating at LOS "C" include 7th Street between A Street and Evelyn Street, and the Rogue River Highway from Redwood Highway to Florence Lane. Currently only one road is operating at LOS "D", 7th Street between Voorhies Avenue and Lewis Street, which is the bridge crossing the Rogue River.

Table 2-2: Level of Service Definitions

LOS	Description of Conditions	Ratio of Traffic Volume to Roadway Capacity
A	Free flowing traffic conditions with no delays for motorists	less than 0.40
B	Acceptable traffic conditions with minor and/or infrequent delays for motorists	0.41-0.66
C	Moderate traffic flow, acceptable conditions with relatively minor and/or short term delays for motorists	0.67-0.80
D	Generally stable traffic conditions with moderate and/or occasional delays for motorists - Standard used for the Grants Pass Urban Area MTP	0.81-0.90
E	Moderate to serious traffic congestion with frequent delays for motorists	0.91-0.99
F	Serious traffic congestion, unstable traffic flow, and lengthy delays for motorists	Greater than 1.00

Intersection Level of Service

The intersection analysis used for this study was based on the methodologies described in *the Highway Capacity Manual (HCM) Special Report 209*. The common measure of effectiveness for signalized intersections is "average stopped delay", which is the total time vehicles are stopped at an intersection approach, during a specified time period, divided by the number of vehicles departing from the approach in the same time period. Table 2-3 provides information on the traffic conditions and vehicle delay for each LOS.



LEGEND

- LOS A (all roadways except as noted)
- LOS B
- LOS C
- /// LOS D
- LOS E-F (none)

1994 Roadway Levels of Service - Daily

Figure 2-6

Grants Pass Urban Area Transportation Plan

Table 2-3: Intersection Level of Service Descriptions - Signalized Intersections

LOS	Vehicle Delay Range (seconds/vehicle)	Description of Conditions
A	0.0-4.9	Traffic is light - most vehicles arrive when light is green and don't stop at all
B	5.0-14.9	Conditions are similar to A, but more vehicles are forced to slow and/or stop for the light
C	15.0-24.9	Significant number of vehicles must stop, but intersection clears for most signal cycles
D	25.0-39.9	Longer delay, poor traffic progression, intersection may not clear with signal cycles forcing motorists to wait through multiple cycles
E	40.0-59.9	Cycle failures become frequent with motorists having to wait through multiple signal cycles
F	60.0 or Greater	Lengthy delays at signals with motorists waiting through several cycles to get through intersection

For the analysis of unsignalized intersections, *the 1985 Highway Capacity Manual* procedures were used. This procedure involves a sequential analysis based on "gaps" in the major traffic stream that would allow for movement through the intersection. Once all of the traffic impedance and gap utilization have been subtracted from the potential capacity for the approach, the remainder is termed "reserved capacity", i.e. an indication of the number of additional vehicles that could get through the intersection. Table 2-4 provides information on characteristics of the LOS for unsignalized intersections; Figure 2-6 illustrates the existing LOS for roadways, and Figure 2-7 shows LOS for intersections in the study area.

Table 2-4: Unsignalized Intersections

LOS	Reserve Capacity	Expected Delay for Minor Street Traffic
A	> 400	Little or no delays
B	300-399	Short traffic delays through intersection
C	200-299	Average delays for traffic through the intersection
D	100-199	Moderate to long delays for traffic through the intersection
E	0-99	Long delays for traffic through the intersection
F	0	Extreme delays for traffic with severe congestion or backup at the intersection, this may warrant consideration of a signal for the intersection

Twenty six intersections were selected for evaluation for this study. Of these, 24 are signalized and two are controlled by stop signs. Table 2-6 shows the 1994 existing LOS and future year 2015 LOS at each of these intersections. As shown in the table, most of the signalized intersections operate at LOS "C" or better during the evening peak hour. The only exceptions are the intersection of Grants Pass Parkway/Beacon Drive and Redwood Highway/Jacksonville Highway (LOS "F"). All of the unsignalized intersections operate at LOS "F". Table 2-7 shows the turning movement level of service for existing and future conditions at all of the twenty six intersections analyzed.

Safety

Equally important to the movement of people is the safety of the transportation system they are using. The City of Grants Pass, Josephine County, and ODOT keep extensive accident records for the roadways within their respective jurisdictions. Two standard "measures" of traffic safety includes vehicular accidents per million vehicles entering intersections (MEV) for intersections, and accidents per million vehicle miles traveled (MVM) for roadway segments. Using data supplied by the local agencies, annualized accident rates were determined for intersections and roadways in the study area. Figure 2-8 illustrates the high accident locations in the study area.

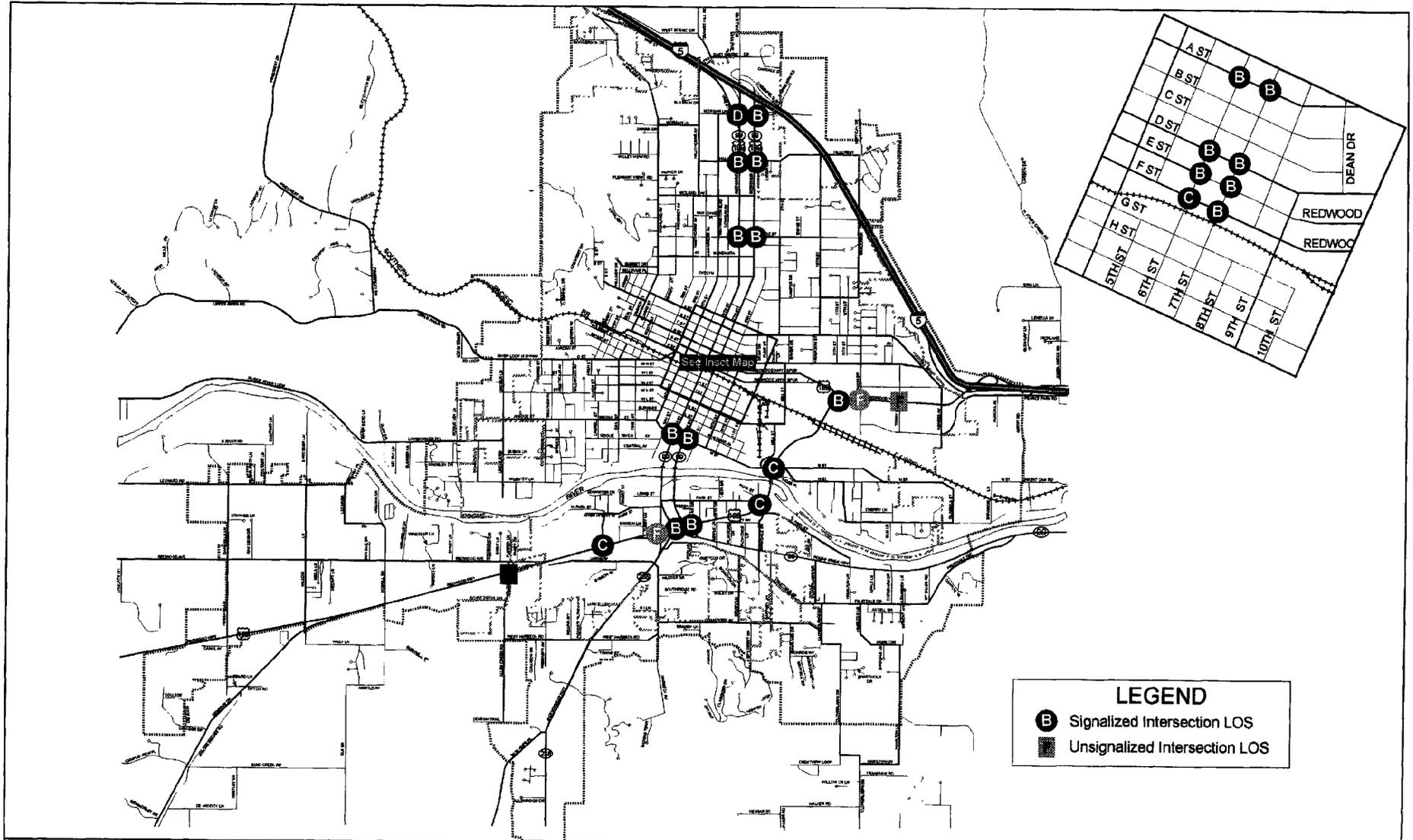
The highest accident locations were identified based on locations with accident rates one standard deviation above the average for the urban area. The highest annual accident rate for roadway segments occurs on F Street between 6th and 7th Streets, followed by J Street from 7th to 9th Streets. Redwood Highway from Ringuette to Willow had the highest number of actual accidents per year, but the higher traffic volumes resulted in lower accident rates. Intersections with the highest accident rate and largest number of accidents occurs at the intersection of 6th Street and D Street.

Transportation Needs and Deficiencies

A complete list of transportation needs and deficiencies was prepared at the beginning of this project. This provided the basis for the identification of potential transportation improvements to be included in the Master Transportation Plan. The results of the needs analysis are summarized in this section according to: congestion and capacity, safety, accessibility, system connectivity, functional classification and sub-standard facilities, public transportation, nonmotorized transportation, aviation, rail, and truck.

Congestion and Capacity Needs and Deficiencies

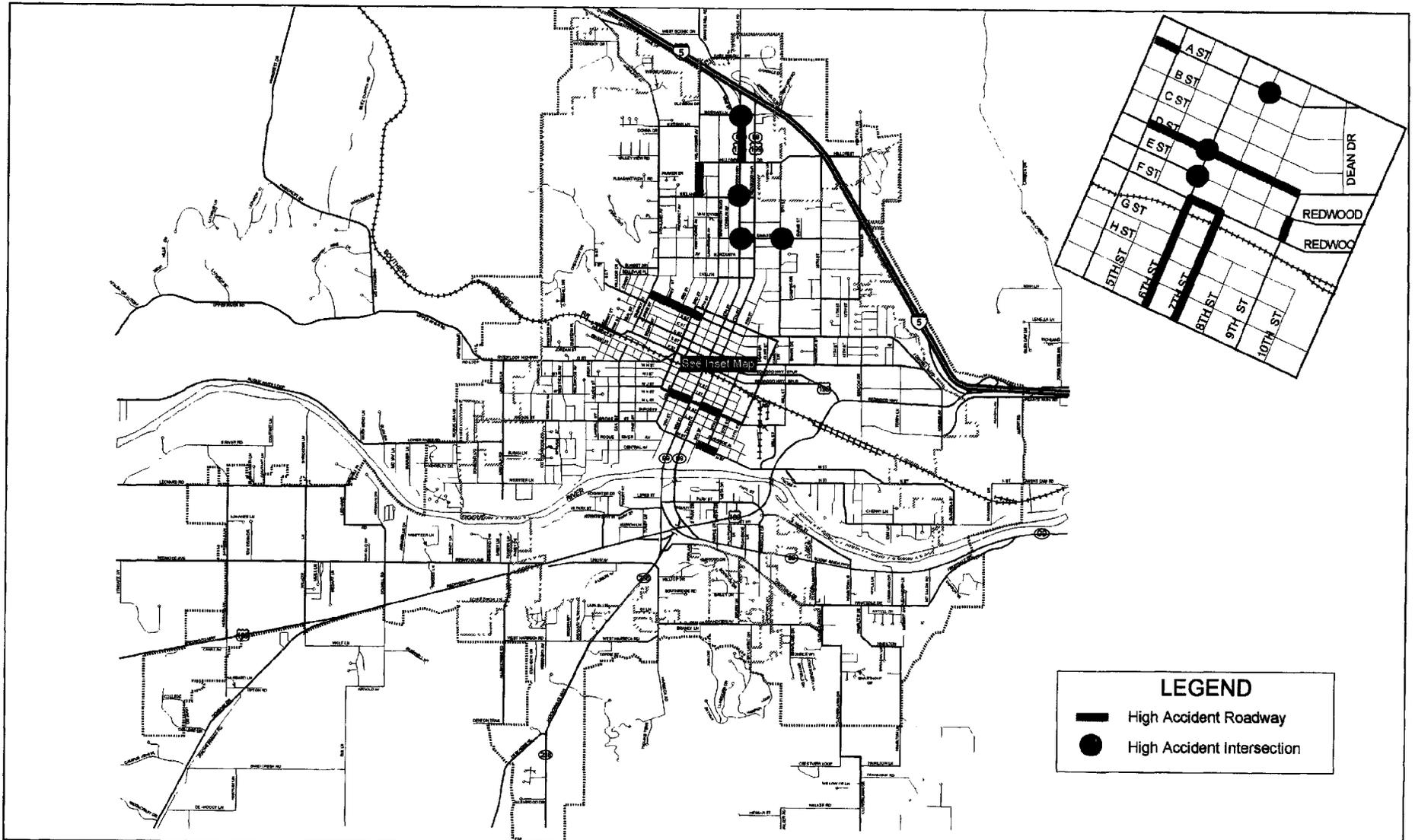
The Grants Pass Urban Area roadway system is currently operating at a good level of service with the majority of roadway segments operating at LOS "B" or better. Two roadway segments operate as LOS "C" (7th Street between A Street and Savage Street and the Rogue



1994 Intersection Level of Service - Peak Hour

**Figure
2-7**

**Grants Pass
Urban Area
Transportation Plan**



Existing High Accident Locations

**Figure
2-8**

**Grants Pass
Urban Area
Transportation Plan**

River Highway from Redwood Highway to Florence Lane.) Only one roadway segment operates at LOS "D", the bridge crossing the Rogue River on 7th Street.

Of the 32 intersections evaluated for this study, the majority operate at LOS "C" or better. The only exceptions are the Redwood Highway southbound at Morgan Lane intersection (LOS "D"), and the intersection of 7th Street and Redwood Highway (LOS "E"). All unsignalized intersections are operating at LOS "A".

Travel Demand Forecast - 2015

As the area grows travel demand will increase and congestion will become worse in some locations. To assess future congestion and capacity deficiencies travel demand forecasts were prepared. The year 2015 was chosen as the planning horizon for the master plan to identify future demographic trends from which the travel forecasts were derived. A 20 year time span was chosen because beyond this time line population, employment and future travel patterns become much more difficult to predict and subsequently generate less reliable travel demand forecasts.

Future year (2015) traffic conditions were determined by adding the estimated number of vehicle trips generated by future land uses within the Grants Pass Urban Area to the existing traffic volumes. New trips generated by future land uses were distributed to destinations within and outside the Grants Pass Urban Area. They were then assigned to the street and highway system. This was done through the use of the RVCOG travel forecasting model for the Grants Pass Urban Area. The travel forecasts were calculated for daily trips, and all travel model data was summarized by traffic analysis zone.

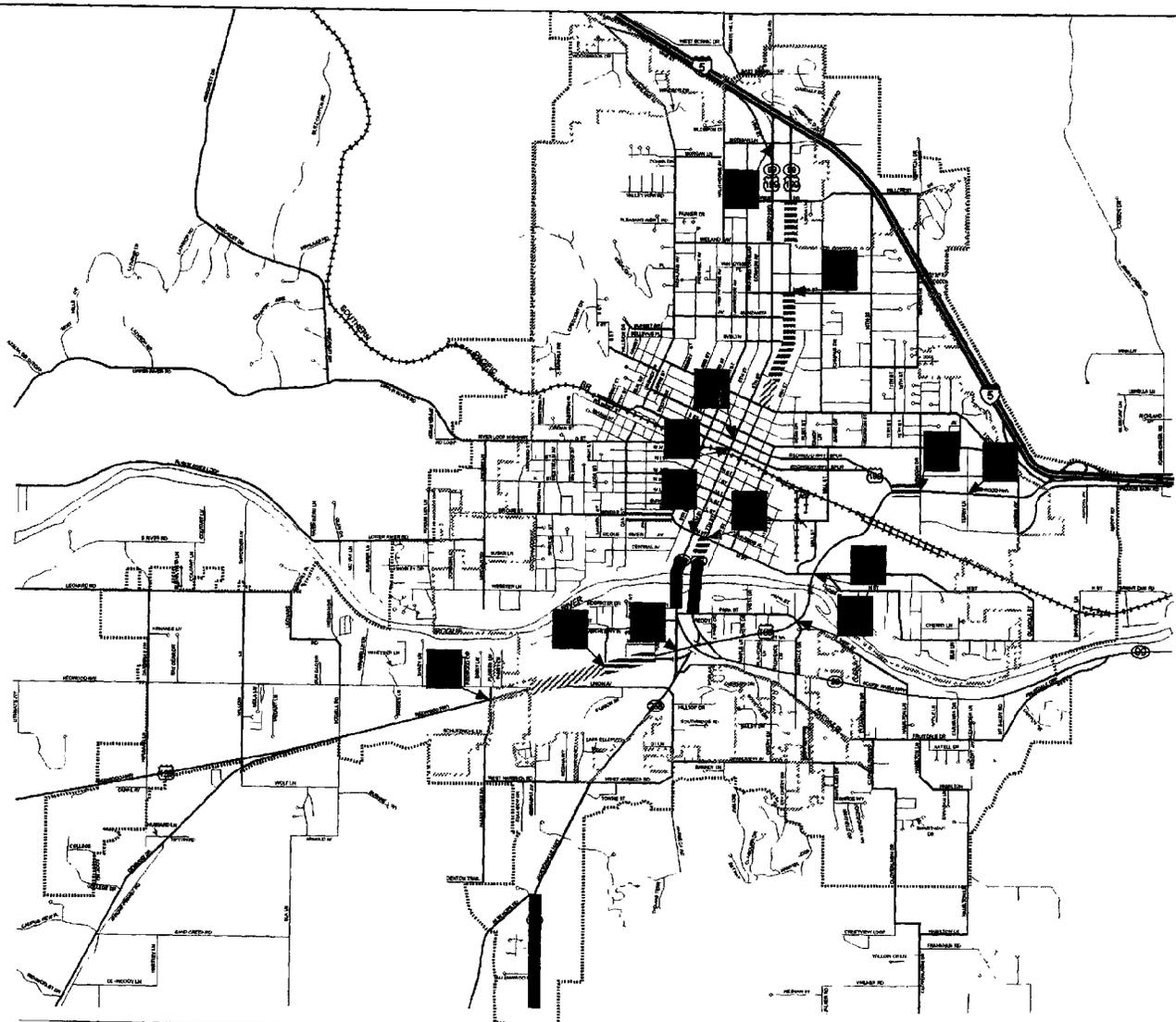
The future daily traffic forecasts were assigned to the "no-build" alternative to identify future congestion. The "no-build" alternative includes the existing transportation system, plus any additions or improvements that are funded at this time. The "no-build" provides a base to be used to assess future conditions and a point of comparison for the evaluation of proposed action alternatives. After a check of the initial assignments for "reasonableness" the level of service was calculated for the area roadway network, and changes in the LOS between existing conditions and the forecast conditions in 2015 were identified.

Figure 2-9 illustrates the levels of service associated with the no-build alternative. Under this alternative several roadway segments will operate at LOS "C" or worse by 2015. These locations have been summarized in Table 2-5. Traffic conditions in the future show a heavy orientation of east-west traffic on Redwood Highway and the Grants Pass Parkway for east-west travel; and on 6th Street and 7th Street for north-south travel. Because of the limited capacity of these facilities (and the resulting heavy congestion on the 6th and 7th Street bridges across the Rogue River) much of the traffic that might have been destined to the downtown area, or traveling beyond it via 6th and 7th Streets, appears to be diverted to I-5 and the Grants Pass Parkway. The traffic congestion on the Jacksonville Highway south of New Hope Road is caused by a roadway capacity reduction as the roadway narrows from four lanes to two lanes at this point.

Table 2-5: "No Build" Alternative - Roadway LOS in the Year 2015

Location	Level of Service (LOS)
Redwood Highway - Fairgrounds Road to Ringuette Street	D
Bridge Street - Oak Street to 4 th Street	C
Grants Pass Parkway - Highway 199 Spur to Beacon Drive	C
7th Street - Hillcrest Lane to Midland Avenue	C
7th Street - Savage Street to Jackson Street	C
7th Street - "M" Street to Voorhies Avenue	C
Redwood Highway - Redwood Avenue to Ringuette Street	D
7th Street - Jackson Street to "A" Street	D
Jacksonville Highway - New Hope Road to Study Area Boundary	F
6th Street - Voorhies Avenue to Lewis Avenue	F
7th Street - Voorhies Avenue to Park Street	F

Of the twenty-six intersections evaluated in this analysis, eleven would have a degradation in the LOS. These include: 6th Street/"M" Street, 6th Street/Redwood Highway, 7th Street/"M" Street, and Jacksonville Highway/Redwood Highway. Table 2-6 includes a summary of existing intersection LOS and forecasted LOS in the year 2015.



LEGEND

	LOS C
	LOS D
	LOS E
	LOS F
	Intersection LOS Average Delay

Future Congestion 2015 - No Build Scenario

Figure 2-9

Grants Pass Urban Area Transportation Plan

Table 2-6: "No Build Alternative" - LOS at Intersections - Existing & Year 2015

Location	Existing LOS	2015 LOS
6th/Morgan Lane	D	F
7th/Morgan Lane	B	B
6th Street/"E" Street	B	C
7th Street/"E" Street	B	B
7th Street/"F" Street	B	B
6th Street/"M" Street	B	C
7th Street/"M" Street	B	F
6th Street/Redwood Highway	B	C
7th Street/Redwood Highway	B	B
Grants Pass Parkway/Redwood Highway Spur	B	B
Jacksonville Highway/Redwood Highway	B	F
Redwood Highway/Allen Creek Road	A	E
Redwood Highway/Ringuette	C	F
Grants Pass Parkway/E. Park Street	C	D
Grants Pass Parkway/"M" Street	C	C
Grants Pass Parkway/Beacon	F*	F
Grants Pass Parkway/Terry	F*	F
6th Street/"F" Street	C	D
7th Street/Savage	B	C

* (Unsignalized condition)

Safety Needs and Deficiencies

In terms of traffic safety, the majority of high accident locations are at intersections along Redwood Highway and the Rogue River Highway. This is due to the relatively high volumes of traffic and the variety of activities occurring in these areas which result in conflicts between through traffic, turning traffic, and various travel modes.

Table 2-8 summarizes the high accident locations. Accidents rates for roadways are expressed in MVM (accidents per million vehicle miles); accident rates for intersections are expressed in MEV (accidents per million entering vehicles). Collisions per MEV is a measure that reflects the number of vehicles traveling through an intersection. In general, intersections with an accident rate below 2.0 accidents per MEV are not considered high accident locations.

Table 2-7: Turning Movement LOS

INTERSECTION	Approach	V/C Ratio	Existing		2015 NO BUILD			2015 BUILD		
			Delay	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS
6th at Morgan Lane	EB TR	0.242	27.5	D	0.274	22.6	C	0.247	22.3	C
	WB LT	0.712	35.6	D	2.04			0.564	26.4	D
	NB DFL	0.032	15.9	C						
	NB LTR				0.666	32.3	D	1.061	*	
	NB TR	0.521	20.6	C						
	SB DFL	0.038	26	D				1.055	*	
	SB TR	0.57	31.4	D	0.753	29.2	D			
7th at Morgan Lane	EB LT	0.199	12	B	0.704	17.5	C	0.196	12	B
	NB DFL	0.294	5.6	B						
	NB TR	0.605	7.5	B						
	NB LTR				0.741	8.6	B	0.732	8.5	B
6th at Hillcrest Avenue	EB T	0.032	10.9	B	0.092	11.2	B	0.054	11	B
	EB R	0.116	11.3	B	0.327	12.5	B	0.189	11.7	B
	WB L	0.171	11.6	B	0.369	12.8	B	0.311	12.4	B
	WB T	0.057	11	B	0.397	11.3	B	0.1	11.2	B
	SB DFL	0.092	5.1	B						
	SB TR	0.532	7.1	B						
	SB LTR				0.539	6.9	B	0.467	6.5	B
7th at Hillcrest Avenue	EB L	0.23	11.9	B	0.32	12.4	B	0.3	12.3	B
	EB T	0.03	10.9	B	0.19	11.7	B	0.17	11.6	B
	WB T	0.04	10.9	B	0.08	11.1	B	0.09	11.2	B
	WB R	0.06	11	B	0.07	11.1	B	0.08	11.1	B
	NB LT	0.77	10.3	B	0.86	13.5	B	0.81	12.2	B
	NB R	0.02	0	A	0.05	0	A	0.05	0	A
6th at Savage Street	EB TR	0.166	11.5	B	0.18	11.6	B	0.25	12	B
	WB LT	0.553	14.7	B	0.57	14.8	B	0.16	11.5	B
	SB DFL	0.077	5	A						
	SB TR	0.525	6.8	B						
	SB LTR				0.53	6.7	B	0.5	6.6	B
7th at Savage Street	EB LT	0.25	12	B	0.28	12.2	B	0.25	12	B
	WB TR	0.3	12.3	B	0.28	12.1	B	0.17	11.6	B
	NB LT	0.79	10.6	B	1	27.1	D	1.01	29.6	D
	NB R	0.03	0	A	0.04	0	A	0.04	0	A
6th at A Street	EB T	0.288	12.2	B	0.3	12.3	B	0.22	11.8	B
	EB R	0.296	12.3	B	0.31	12.4	B	0.22	11.8	B
	WB L	0.473	14	B	1.02	63.2	F	0.41	13.3	B
	WB T	0.424	13.2	B	0.75	18.3	C	0.4	13	B
	SB DFL	0.139	5.2	B						
	SB TR	0.774	8.9	B						
	SB LTR				0.75	9.5	B	0.71	9.1	B
7th at A Street	EB L	0.19	11.7	B	0.36	12.9	B	0.17	11.6	B
	EB T	0.44	13.4	B	0.79	19.8	C	0.43	13.2	B
	WB T	0.41	13.1	B	0.44	13.3	B	0.39	12.9	B
	WB R	0.08	0	A	0.08	0	A	0.08	0	A
	NB LTR	0.71	9.2	B	0.82	11.8	B	0.74	9.5	B

**GRANTS PASS URBAN AREA
MASTER TRANSPORTATION PLAN**

INTERSECTION	Approach	Existing			2015 NO BUILD			2015 BUILD		
		V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS
6th at D Street	EB TR	0.224	11.8	B	0.26	12.1	B	0.25	12	B
	WB LT	0.293	12.3	B	0.32	12.4	B	0.31	12.3	B
	SB DFL	0.098	5.1	B						
	SB TR	0.715	8.2	B						
	SB LTR				0.64	8.5	B	0.62	8.3	B
7th at D Street	EB LT	0.366	12.8	B	0.41	13.1	B	0.36	12.7	B
	WB TR	0.326	12.5	B	0.38	12.8	B	0.34	12.6	B
	NB DFL	0.057	5	A						
	NB TR	0.807	9.8	B						
	NB LTR				0.067	8.8	B	0.6	8.2	B
6th Street at E Street	WB L	0.538	11.8	B	0.83	17.8	C	0.85	19.1	C
	WB LT	0.54	11.8	B	0.55	9.1	B	0.56	9.2	B
	SB TR	0.592	4.8	A	0.69	6.4	B	0.62	5.9	B
7th Street at E Street	WB TR	0.762	13.9	B	1.01	32.9	D	0.95	23.1	C
	NB DFL	0.212	3.6	A						
	NB T	0.759	6.3	B						
	NB LT				0.65	6.2	B	0.6	5.1	B
6th Street at F Street	EB T	0.146	6.6	B	0.159	6.7	B	0.171	6.7	B
	EB R	0.382	18.2	C	0.418	18.6	C	0.447	18.9	C
	SB TR	0.956	24.6	C						
	SB LT				1.204	*	*	1.066	*	*
7th Street at F Street	EB DFL	0.166	7.9	B						
	EB LT				0.42	7.2	B	0.422	8.9	B
	EB T	0.604	10.4	B						
	NB TR	0.651	6.8	B	0.73	7.9	B	0.684	7	B
6th Street at M Street	EB T	0.209	11.8	B	0.22	11.8	B	0.16	11.5	B
	EB R	0.606	15.4	C	0.62	15.6	C	0.45	13.5	B
	WB L	0.332	12.6	B	1.13	120.2	F	0.72	20.3	C
	WB T	0.709	17.2	C	1.15	105.5	F	1.13	91.1	F
	SB DFL	0.095	5.1	B						
	SB TR	0.597	7.2	B						
	SB LTR				0.59	7.1	B	0.53	6.07	B
7th Street at M Street	EB T	0.32	12.4	B	0.53	14.2	B	0.52	14.1	B
	EB L				2.74	0.4	*	3.07	*	*
	WB T	0.47	13.6	B	0.48	13.7	B	0.52	14.1	B
	WB R	0.1	0	A	0.1	0	A	0.11	0	A
	NB LTR	0.72	9.4	B	0.79	10.3	B	0.8	10.4	B
6th Street at Redwood Highway	EB TR	0.46	12.3	B	0.51	12.7	B	0.65	14.4	B
	WB T	0.619	13.9	B	0.73	15.5	C	0.91	22.1	C
	SB DFL	0.053	9.8	B						
	SB T	0.743	17	C						
	SB LTR				0.54	13	B	0.47	12.4	B
7th Street at Redwood Highway	EB T	0.37	11.16	B	0.44	12.2	B	0.56	13.2	B
	WB T	0.46	12.2	B	0.61	13.8	B	0.6	13.7	B
	WB R	0	0	A	0	0	A	0	0	A
	NB L	0.35	11.5	B	0.34	11.4	B	0.3	11.1	B
	NB TR	0.29	11.1	B	0.3	11.1	B	0.25	10.8	B

**GRANTS PASS URBAN AREA
MASTER TRANSPORTATION PLAN**

INTERSECTION	Approach	V/C Ratio	Existing			2015 NO BUILD			2015 BUILD		
			Delay	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS	
Beacon at Grants Pass Parkway	EB T	0.466	20.4	C	0.97	37.1	D	0.36	19.5	C	
	EB R	0.169	2.2	A	0.17	2.2	A	0.13	2.1	A	
	WB L	0.486	28.3	D	0.63	36	D	0.56	34.3	D	
	WB T	0.914	32.1	D	0.73	14.5	B	0.64	13.2	B	
	NB L	0.077	25.4	D	0.08	29.9	D	0.08	29.9	D	
	NB T	0.821	35.4	D	0.82	33.8	D	0.83	34.6	D	
	NB R	0.042	2.5	A	0.04	2.5	A	0.04	2.5	A	
	SB L	0.142	25.7	D	0.14	30.2	D	0.14	30.2	D	
	SB T	1.518	*	*	1.51	*	*	1.54	*	*	
SB R	0.075	2.5	A	0.07	2.5	A	0.08	2.5	A		
Grants Pass Parkway at Redwood Hwy. Spur	EB L	0.403	13.4	B	0.63	20.5	C	0.62	20.3	C	
	EB R	0.331	13	B	0.5	16.5	C	0.49	16.4	C	
	NB L	0.44	18.7	C	0.49	22.5	C	0.42	21.7	C	
	NB T	0.285	6.2	B	0.29	4.7	A	0.24	4.5	A	
	SB T	0.701	18.5	C	0.8	18.2	C	0.63	15.3	C	
	SB R	0.452	3.9	A	0.62	5.1	B	0.49	4.1	A	
Grants Pass Parkway at M Street	EB L	0.295	31.4	D	0.38	37.7	D	0.32	37.1	D	
	EB T	0.389	26.8	D	0.5	28	D	0.43	27.1	D	
	EB R	0.079	1.8	A	0.1	1.8	A	0.09	1.8	A	
	WB L	0.532	34	D	0.7	44.3	E	0.58	40.8	E	
	WB T	0.541	28.7	D	0.71	31.9	D	0.59	29.3	D	
	WB R	0.033	1.7	A	0.04	1.8	A	0.04	1.7	A	
	NB L	0.39	32.1	D	0.53	39.6	D	0.51	39.3	D	
	NB T	0.385	20.1	C	0.52	21.4	C	0.5	21.2	C	
	NB R	0.085	2.3	A	0.11	2.3	A	0.11	2.3	A	
	SB L	0.361	31.9	D	0.4	37.9	D	0.34	37.3	D	
	SB T	0.444	20.7	C	0.5	21.2	C	0.42	20.4	C	
	SB R	0.079	2.2	A	0.09	2.3	A	0.08	2.2	A	
Grants Pass Parkway at Park Street	EB LT	0.142	17.9	C	0.2	18.2	C	0.218	24.8	C	
	EB R	0.01	0	A	0.013	0	A	0.015	0.8	A	
	WB LT	0.106	17.7	C	0.14	17.9	C	0.152	24.3	C	
	WB R	0.118	0	A	0.156	0	A	0.179	0.9	A	
	NB L	0.063	22.8	C	0.081	22.9	C	0.195	37.8	D	
	NB T	0.303	12.7	B	0.4	13.4	B	0.444	19.7	C	
	NB R	0.009	2.1	A	0.012	2.1	A	0.013	4.3	A	
	SB L	0.871	41.8	E	1.147	*	*	0.829	38.8	D	
	SB T	0.3	12.6	B	0.395	13.3	B	0.298	9.6	B	
	SB R	0.026	2.1	A	0.033	2.1	A	0.029	0.8	A	
Fairgrounds Road at Grants Pass Parkway	EB L	0.021	18.3	C	0.03	21.6	C	0.03	21.5	C	
	EB T	0.556	12.1	B	0.77	14.9	B	0.67	13.3	B	
	EB R	0.131	2.6	A	0.18	2.7	A	0.16	2.7	A	
	WB L	0.117	18.7	C	0.14	22.1	C	0.12	22	C	
	WB TR	0.984	29.5	D	1.19	106.8	F	1.06	46.6	E	
	NB LT	0.732	26.5	D	0.87	33.4	D	0.75	26.2	D	
	NB R	0.149	18.3	C	0.18	18.5	C	0.16	18.4	C	
	SB LT	0.102	18.1	C	0.42	21.2	C	0.37	20.4	C	
	SB R	0.022	17.8	C	0.03	17.8	C	0.02	17.8	C	

**GRANTS PASS URBAN AREA
MASTER TRANSPORTATION PLAN**

INTERSECTION	Approach	V/C Ratio	Existing			2015 NO BUILD			2015 BUILD		
			Delay	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS	
Jacksonville Highway at Redwood Highway	EBL	0.023	18	C	0.03	21.2	C	0.381	54.2	E	
	EBT	0.466	13.3	B	0.51	13.6	B	0.941	53.5	E	
	EBR	0.064	2.5	A	0.07	2.5	A	0.072	5	A	
	WB L	1.108	96.7	F	1.23	*	*	1.055	86.9	F	
	WB TR	0.415	13	B	0.46	13.3	B	0.402	18.5	C	
	NB L	2.049	*	*	2.36	*	*	0.93	75.4	F	
	NB TR	0.531	18.6	C	0.61	19.7	C				
	NBR							0.479	25.7	D	
	SB DFL	0.125	15.6	C							
	SB T	1.905	*	*				1.047	68	F	
	SBR	0.518	0.3	A							
	SBL							0.198	44.7	E	
SBLT					1.2	114.3	F				
Redwood Highway at Allen Creek Road	EBL		5.6	B	7.1	B		6.2	B		
	WB L		5	B	7.4	B		6.1	B		
	NB LTR		37.2	E	988.5	F		109.1	F		
	SBLTR		16.7	C	59.0	F		27.2	D		
Redwood Highway at Terry Lane	EBL		4.3	A	5.4	B		4.8	A		
	WB L		4.3	A	10.4	C		3.8	A		
	NB L		536.7	F	*	F		347.8	F		
	NB TR		7.7	B	23.6	D		6.7	B		
	SBL		27.9	D	112.5	F		24.5	D		
	SB TR		6.1	B	12.6	C		5.9	B		

Table 2-8: High Accident Locations

LOCATION	Accident Rates
Roadway Segments	
F Street - 6th to 7th	17.27 MVM
J Street 7th to 9th	12.23 MVM
J Street 4th to 7th	10.87 MVM
A Street - 7th to 9th	9.12 MVM
Willow Lane - Redwood Highway to Redwood	7.02 MVM
D Street - 6th to 9th	6.68 MVM
6th Street - F to J	6.64 MVM
6th Street - Morgan to Hillcrest	5.95 MVM
7th Street - F to J	5.95 MVM
Intersections	
6th Street/E Street	1.02 MEV
9th Street/Savage Street	0.94 MEV
6th Street/Morgan Lane	0.90 MEV
6th Street/D Street	0.68 MEV
9th Street/E Street	0.66 MEV
7th Street/A Street	0.62 MEV
6th Street/Savage Street	0.56 MEV
F Street/Mill Street	0.55 MEV
6th Street/A Street	0.52 MEV
6th Street/Midland Avenue	0.50 MEV
7th Street/Manzanita Avenue	0.41 MEV
7th Street/Hillcrest Drive	0.40 MEV
7th Street/Savage Street	0.40 MEV
6th Street/Manzanita	0.30 MEV
7th Street/E Street	0.27 MEV

(MVM) - Million vehicle miles.
 (MEV) - Million entering vehicles.

Accessibility and Transportation System Connectivity Needs and Deficiencies

In general, accessibility is good throughout Grants Pass, but in some locations access is restricted due to a lack of through connections. This results in circuitous routings, increased travel times and increased total VMT (vehicle miles traveled). As a result there may be unnecessary congestion of those facilities that do exist and delay for motorists. This impacts overall mobility and impacts air quality. The following sub areas were identified as having access problems that warrant attention:

- **West of Dowell Road and South of the Rogue River** - New development in this area, combined with an incomplete road network have increased congestion and created a need for better north/south connections.
- **Fairgrounds/Riverfront Area** - To reach the downtown area residents of this area must use the Redwood Highway and 7th Street. Increases in traffic due to the recent commercial and residential development in this area have placed additional strain on Redwood Highway, and 6th and 7th Streets.
- **West of Highland Avenue** - New development in the area has placed a strain on the limited number of connections from this area to Highland Avenue.
- **South of Fruitdale Drive** - Cloverlawn Drive and Hamilton Lane are the only through roads south of Fruitdale Drive. Both are somewhat circuitous, resulting in indirect connections to Fruitdale and the rest of the arterial network.
- **South of Jacksonville Highway and the New Hope Road Junction** - Jacksonville Highway is the only through road south of New Hope Road. Recent development adjacent to Jacksonville Highway has resulted in increased travel demand in this area.
- **North of I-5/6th and 7th Street Interchange** - the congestion at the interchange makes it difficult to access the roadways north of I-5. Currently there is no alternative roadway in the area, forcing travelers north of the freeway to negotiate their way through the interchange congestion.
- **Lincoln Road Area** - future growth is planned for the western portion of the urban area. River crossings are limited and are typically the most congested locations in the transportation system. Additional ability to cross the river west of the existing bridges is needed to serve this area.

Missing Links

Gaps (or missing links) in the street system (arterial, collector and local collector) were identified in numerous parts of the urban area. Completion of these links would provide for better local traffic circulation and help to balance out traffic flow over the entire street system.

Physical Barriers

Natural and man-made barriers inhibit travel by car, bicycle and on foot. The major barriers are the Rogue River and the RailTex Railroad tracks, which severely limit north/south movement in the study area. There are only three bridges crossing the river and eight railroad crossings. A special bridge for pedestrians and bicyclists is proposed for construction in the vicinity of the All Sports Park, which will provide better accessibility for travelers using nonmotorized modes in this area. However, the limited number of crossings results in circuitous routing for travelers and congestion on the river crossings of three bridges and eight railroad crossings.

Functional Classifications and Sub Standard Facility Needs and Deficiencies

Based on observations of traffic volumes and flow patterns and on roadway design, several local roadways were improperly classified in the previous transportation plan. These are listed below, along with recommended changes in functional classification:

- **3rd Street** - Downgrade to Local Street from "G" Street to "J" Street.
- **9th Street** - Downgrade from Collector to Local Collector from Savage Street to Madrone Street. Downgrade from Collector to Local Street from Madrone Street to "A" Street.
- **Anderson Street** - Upgrade from Local Street to Collector.
- **Drury Lane** - Downgrade from Collector to Local Collector.
- **Fairview Avenue** - Downgrade to Local Collector to match current street construction.
- **Florer Drive** - Downgrade from Local Collector to Local Street due to wetlands in area.
- **Greenfield Road** - Upgrade from Local Street to Collector in conjunction with the extension to Hillcrest Drive.
- **Madrone Street** - Upgrade to Local Collector from 9th Street to 10th Street to capture traffic diverted from the 9th Street closure.
- **Manzanita Avenue** - Downgrade from Collector to Local Collector from 7th Street to Highland due to lower traffic volumes.
- **Redwood Area Collector System** - Upgrade Raydean Drive, Kellenbeck Avenue, Angler Lane, and George Tweed Blvd. from Local Collectors to Collectors.
- **Savage Street** - Upgrade to Collector east of 10th Street as it is the only through connection between Beacon Drive and Highland Avenue in this area.

- **Scenic Drive and Scoville Road** - Upgrade to Collector Streets to reflect elimination of plan to reroute Granite Hill Road to the I-5 interchange.
- **Spruce Street and Webster Lane** - Downgrade from Local Collector to Local Street due to vacation east of Lincoln Road, and closure of road at western end.
- **Vine Street** - Downgrade from Arterial to Local Street from Morgan Lane to 6th Street to reflect change to one-way street in the area.
- **West Park Street** - Upgrade from Local Street to Local Collector to reflect plan to connect the road to Lincoln Road.

Based on existing City and County design standards for urban and rural roads several substandard facilities were identified. Their design deficiencies include one or more of the following: insufficient right of way, inadequate roadway or lane width, and lack of curbs. These facilities include:

- **10th Street** - Hillcrest Dr. to Dewey Dr.,
- **Allen Creek Road** - Redwood Ave. to Denton Trail,
- **Ament Road** - Foothill Blvd. to "N" St.,
- **Beacon Drive** - Madrone to Hillcrest Dr.,
- **Cloverlawn Drive** - Grandview Ave. to Hamilton Ln.,
- **Curtis Drive** - Jacksonville Hwy. to Coach Dr.,
- **Darneille Lane** - Redwood Ave. to Leonard Dr.,
- **Dimmick Street** - "C" St. to "G" St.,
- **Dowell Road** - Redwood Ave. to Schutzwahl Ln.,
- **Drury Lane** - Grandview Ave. to Fruitdale Dr.,
- **East Park Street** - Gold River Ln. to Hamilton Ln.,
- **Fairgrounds Road** - Redwood Hwy. to Union Ave.,
- **Flower Lane** - From north end of road to Redwood Ave.,
- **Foothill Blvd.** - Spalding Ave. to Ament Rd.,
- **Fruitdale Drive** - Jacksonville Hwy. to Rogue River Hwy.,
- **"G" Street** - Lincoln Rd. to Leonard St.,
- **G.I. Lane** - Harbeck Rd. to 450 ft. west,
- **Gladiola St.** - "N" St. to Portola Dr.,

- **Grandview Ave.**- Cloverlawn Dr. to Harbeck Rd.,
- **Greenfield Road.** - Scoville Rd. to Spring Mountain Dr.,
- **Hamilton Lane** - East Park St. to Rogue River Hwy., and Overland Dr. to Cloverlawn Dr.,
- **Harbeck Road** - Jacksonville Hwy. to West Harbeck Rd.,
- **Haviland Drive** - Grandview Ave. to Highline Canal,
- **Highland Avenue** - UGB to Carol Dr.,
- **Hillcrest Drive** - 9th St. to Beacon Dr.,
- **Hubbard Lane** - Redwood Ave. to Redwood Hwy.,
- **Jacksonville Highway** - New Hope Rd. to UGB,
- **Leonard Road** - UGB to Mesman Dr.,
- **Lincoln Road** - "G" St. to Webster Ln.,
- **Lower River Road** - UGB to Lincoln Rd.,
- **Morgan Lane** - Highland Ave. to Hawthorne Ave.,
- **"N" Street** - Camelot Dr. to Gladiola St.,
- **Nebraska Avenue** - Ramsey Ave. to McCarter Dr.,
- **Portola Drive** - Harvey Dr. to Gladiola St.,
- **Raydean Drive** - Redwood Avenue to end,
- **Redwood Avenue** - UGB to Redwood Cir.,
- **Ringuette Street** - West Park St. to canal,
- **Rogue River Highway** - Redwood Hwy. to Fruitdale Dr.,
- **Savage Street** - 10th St. to Beacon Dr.,
- **Scenic Drive** - UGB to Scoville Rd.,
- **Schutzwohl Lane** - West Harbeck Rd. to Allen Creek Rd.,
- **Union Avenue** - Nebraska Ave. to Jacksonville Hwy.,
- **Upper River Road** - Upper River Road Lp. to Lincoln Rd.,
- **Vine Street** - Highland Ave. to Morgan Ln.,

- **West Harbeck Road** - Allen Creek Rd. to Harbeck Rd.,
- **West Park Street** - Lincoln Rd. to 6th St.,
- **Willow Lane** - Leonard Rd. to Redwood Hwy.

Public Transportation and Special Transportation Services Needs and Deficiencies

Rogue Transit (a privately owned and operated transit service) is currently providing service on one transit route, using one bus service operated on a continuous loop with one hour headways. The circuitous routes and long time between buses make the use of transit inconvenient for passengers. Existing ridership on the system is about 100 passengers per day, which averages eight passengers per trip and per revenue hour.

Although current ridership is small, the community has expressed a strong desire to have public transit service. In addition to serving the transportation needs of the "transit dependent" (those people who have no other means of transportation), public transit will be called on to serve "transit choice" riders in order to reduce the use and impacts of private automobiles. Based on the analysis done for the RVCOG in 1993, it is estimated that about 24 percent of the Rogue Valley's population is considered to be transit dependent. (*Rogue Valley Community Transportation Needs Survey - Eagle Point, Gold Hill, Grants Pass, and Rogue River*, 1993, RVCOG.)

As the population increases, and as it ages, the demand for alternatives to private automobiles is likely to increase. This presents a dilemma for the community. Financial resources to support public transit are very limited. Without a stable financial base it will be very difficult to expand (or possibly maintain) public transit service levels in the community.

Nonmotorized Transportation Needs and Deficiencies

Bicycles

Unlike some of the motorized travel modes, it is difficult to clearly identify where deficiencies exist for bicyclists because precise measures for demand and deficiencies have not been developed. The kinds of issues identified for the study area related to bicycle deficiencies include:

- Inadequate roadway shoulders, especially on higher volume, higher speed roadways,
- Obstructions such as signs, driveways and/or parked vehicles on roadway shoulders,
- Drainage grates along the curb or edge of the roadway that are not aligned perpendicular to the direction of bicycle travel,
- Inaccessibility to many destinations due to heavy traffic volumes and inadequate facilities,

- Inadequate facilities for bicycle storage at commercial establishments, businesses and other destinations, and
- Lack of shower facilities at places of employment.

Two of the major types of destinations for bicyclists are schools and parks. With the exception of Rogue Community College, none of the schools in the area is served by dedicated bicycle lanes or off road bike paths. The following schools are partially served by paved roads with minimal shoulders: Highland, North Middle, Lincoln, Grants Pass High, Riverside, Fruitdale, South Middle, Allen Dale and Brighton.

There are a number of parks in the Grants Pass Urban Area where access via bike routes is limited in length or coverage, or access by bicycle is simply impractical. Parks served by bike routes on paved roads with narrow or no shoulders include: Gilbert, Ogle, Riverside, Lathrop, Westholm and All Sports. Four parks not directly served by any bike routes (i.e. designated bike routes are several blocks away) include Memorial, Portola, Tussing and Schroeder.

In addition to schools and parks, bicycling can be a viable form of transportation for work and shopping trips along flat terrain and in good weather. However, as currently configured, the local bike route system does not serve the major commercial corridors adequately, or the many other business sites in the study area. Due to the lack of bicycle facilities and improvements (on the transportation network and at destinations) this mode of transportation is less attractive as an alternative means of transportation. This is an important issue given the emphasis at the federal and state levels on providing for, and encouraging alternatives to the private automobile for travel. In addition to the need for physical improvements, there is a need to educate the traveling public about the benefits for them and their community of travel by nonmotorized travel modes. There is also a need for policies and programs to encourage the use of bicycles and walking as viable means of transportation, as well as recreation.

Specific locations where bicycle improvements are needed (e.g., signage, pavement striping, traffic control, and/or separated lanes or paths) include:

- **Bike Pedestrian Bridge over Rogue River** - Construct bike/pedestrian bridge from the All Sports Park to Tussing Park. Include bike connections on West Park Street, through the Fairgrounds and the All Sports Park, and on Cottonwood Street.
- **North Middle School/Gilbert Creek Park** - Construct new multi-use path through the park and school
- **Riverside School** - Construct new multi-use path from "N" St. to Harvey Dr. through the school.
- **Rogue Community College** - Construct new multi-use path from Redwood Hwy. to Demaray Dr. through the school.
- **Midland Avenue** - Include multi-use path from 7th St. to 9th St.
- **3rd Street** - "E" St. to "F" St.

- **4th Street** - "A" St. to Bridge St.
- **6th Street** - Morgan Ln. to "A" St.
- **7th Street** - Park St. to Morgan Ln.
- **10th Street** - Hillcrest Dr. to "A" St.
- **"A" Street** - Dimmick St. to Foothill Blvd.
- **Allen Creek Road** - Redwood Ave. to Jacksonville Hwy.
- **Ament Road** - Agness Avenue east toward Tom Pierce Park.
- **Beacon Drive** - Hillcrest Dr. to "D" St.
- **Cloverlawn Drive** - Fruitdale Dr. to Hamilton Ln.
- **Darneille Lane** - Redwood Ave. to Leonard Dr.
- **Dimmick Street** - Bellevue to "G" St.
- **Dowell Road** - Redwood Hwy. to Schutzwahl Ln.
- **"E" Street** - 3rd St. to 9th St.
- **"F" Street** - "G" St. to Mill St.
- **Fairgrounds Rd.** - Redwood Hwy. to Union Ave.
- **Foothill Blvd.** - I-5 to Ament Rd.
- **Fruitdale Drive** - Jacksonville Hwy. to Rogue River Hwy.
- **"G" Street** - Lincoln Rd. to Leonard Road.
- **G.I. Lane** - Jacksonville Hwy. to Harbeck Rd.
- **Grandview Ave.** - Harbeck Rd. to Cloverlawn Dr.
- **Grants Pass Parkway** - Agness Ave. to east with connection to Foothill Blvd.
- **Greenfield Road** - Scoville Rd. to Hillcrest Dr.
- **Hawthorne Avenue** - Morgan Ln. to Hillcrest Dr.
- **Hillcrest Drive** - Hawthorne Ave. to Beacon Dr.
- **Hubbard Lane** - Redwood Ave. to Redwood Hwy.
- **Jacksonville Highway** - New Hope Road to UGB.
- **Leonard Road** - UGB to Willow Ln.
- **Lincoln Road** - "G" St. to Redwood Hwy., including the Fourth Bridge
- **Lower River Road** - UGB to Lincoln Rd.
- **Midland Avenue** - Highland Ave. to 7th St.
- **Morgan Lane** - Candler Ave. to 7th St.

- **"N" Street** - Riverwood Apts. to Gladiola St.
- **Oak Street** - "G" St. to Bridge St.
- **Redwood Area Collector Streets** - Improvements to Angler Lane, Raydean Drive, George Tweed Blvd., and Kellenbeck Ave.
- **Redwood Avenue** - UGB to Raydean Dr.
- **Redwood Highway** - Redwood Ave. to South "Y"
- **Ringuette Street** - West Park St. to Union Ave.
- **Rogue River Highway** - Park St. to Fruitdale Dr.
- **Savage Street** - Highland Ave. to Beacon Dr.
- **Scenic Drive/Scoville Road.** - I-5 to UGB
- **Schutzwohl Lane** - Allen Creek Rd. to Dowell Rd.
- **Spalding Avenue** - Grants Pass Parkway to Agness Ave.
- **Vine Street** - Highland Ave. to Morgan Ln.
- **Washington Blvd.** - Midland Ave. to Evelyn St.
- **West Harbeck Road** - Allen Creek Rd. to Jacksonville Hwy.
- **Willow Lane** - Leonard Dr. to Redwood Hwy.

Pedestrian

The primary pedestrian system deficiency identified for the area is the general lack of sidewalks within the city of Grants Pass and the rest of the urban area. While the downtown core is well served by sidewalks, the areas outside the core (particularly southwest and southeast Grants Pass) have little, if any, sidewalks. This is a particular problem in the commercial areas near the fairgrounds, and west of the South "Y" intersection. With the recent residential and commercial growth in these areas, the availability of sidewalks has grown in importance.

In addition to the importance of sidewalks in the business community, sidewalks provide a vital community linkage to schools and recreation facilities. Some of the local schools are only partially served with sidewalks, and others have no sidewalks at all. Another issue is related to barriers for pedestrians that limit accessibility. These barriers may be natural (such as the Rogue River), or man-made (such as major arterials with high traffic volumes and limited pedestrian crossings, or developments that encroach or cut off pedestrian routes.)

Aviation Needs and Deficiencies

The Grants Pass airport, located six miles northwest of Grants Pass, is a general utility airport serving private aircraft. There is no scheduled passenger service from this airport. An airport master plan for the Grants Pass airport, completed in 1992, concluded the following:

- The existing length of Runway 12-30 is adequate to accommodate the majority of general aviation aircraft under most conditions; however, providing additional runway length has been identified as a requirement to accommodate the business aviation segment of the general aviation fleet.
- The runway and taxiway system has adequate capacity to accommodate forecast activity through the 20 year master plan period and beyond.
- The existing parallel taxiway located to the west side of Runway 12-30 does not meet FAA design standards for runway separation. The current separation of 150 feet does not meet the Airplane Design Group II standard of 240 feet.
- The length of runway 12-30 and the absence of an instrument approach to the airport are constraints towards allowing the operation of larger twin-turbine aircraft.

The presence of a full service airport in Medford (only 30 miles away), in combination with the local general aviation airport, appear to meet the needs and demand for aviation for the Grants Pass Urban Area.

Rail Needs and Deficiencies

Rail service in the study area is limited to freight operations, operating on a limited schedule. The low frequency of service through the area does not create any adverse impacts on traffic operations, and appears to meet local needs. Intercity passenger service is available through Trailways/Greyhound bus service, and through privately provided taxi and shuttle services. Goods movement is accommodated through existing rail service and trucking.

Truck Traffic Needs and Deficiencies

A summary of truck traffic on key facilities in the Grants Pass Urban Area was presented earlier in this Chapter. Trucks account for somewhere between two and four percent of total traffic on roadways within the study area. The analysis of general operating characteristics showed that almost all of the roadway segments in the study area are operating at good levels of service. They appear to be adequate in terms of roadway design, turning movements, sight distance and grade. As such, there do not appear to be any significant needs or deficiencies for trucks operating within the study area. There are a few isolated locations where there is some concern regarding the use of curb space for trucks loading and unloading.

However, there are issues associated with the impacts of trucks operating on local streets. The biggest issue currently is related to large trucks passing through the downtown core. The lanes are narrow on 6th and 7th Streets, and there are many competing uses for the roadway, including: through traffic in automobiles, local traffic destined for businesses along the roadway, pedestrians and bicyclists, and on street parking. Through truck traffic needs to be routed around the business and residential neighborhoods in the downtown area to reduce negative impacts such as noise, air pollution, damage to pavement, and conflicts with other transportation needs in this area.

However, as the commercial/industrial base of the area grows in the future, an increased

amount of truck traffic can be expected. As congestion develops on the arterial system, trucks may detour through local neighborhoods resulting in negative impacts on these neighborhoods and the local streets. In order to minimize neighborhood disruption and impacts on the roadway surface it may be desirable to designate a truck route system for the area.

Summary of Needs and Deficiencies

Table 2-9 includes a comprehensive summary of the needs and deficiencies described above. Specific locations are listed, and the nature of the deficiencies at these locations is indicated.

Table 2-9: Summary of Deficiencies

Location	Congestion (LOS)	Safety (Accidents)	Connectivity & Accessibility	Functional Classification	Roadway Design	Non-motorized
3rd Street				X		X
4th Street: A St. to Bridge St.						X
6th Street/A Street		X				
6th Street/D Street		X				
6th Street/E Street		X				
6th Street/Manzanita Avenue		X				
6th Street/Midland Avenue		X				
6th Street/Morgan Lane		X				
6th Street/Savage Street		X				
6th Street: Morgan Ln. to Hillcrest Dr.		X				X
6th Street: Hillcrest Dr. to A St.						X
6th Street: F St. to J St.		X				
6th Street: Voorhies Ave. to Lewis Ave.	X					X
7th Street/A Street		X				
7th Street/E Street		X				
7th Street/Hillcrest Drive		X				
7th Street/Manzanita Avenue		X				
7th Street/Savage Street		X				

Table 2-9: Summary of Deficiencies

Location	Congestion (LOS)	Safety (Accidents)	Connectivity & Accessibility	Functional Classification	Roadway Design	Non-motorized
7th Street: Park St. to Voorhies Ave.	X					X
7th Street: Voorhies Ave. to M St.	X					X
7th Street: M St. to J St.						X
7th Street: J St. to F St.		X				X
7th Street: F St. to A St.						X
7th Street: A St. to Savage St.	X					X
7th Street: Savage St. to Midland Ave.						X
7th Street: Midland Ave. to Hillcrest Dr.	X					X
7th Street: Hillcrest Drive to Morgan Ln.						X
9th Street/E Street		X				
9th Street/Savage Street		X				
9th Street: Savage St. to A St.				X		
9th Street: F St. to M St.						X
10th Street					X	X
A Street						X
A Street: 7th St. to 9th St.		X				
Agness Avenue			X			
Allen Creek Road			X		X	X
Ament Road			X		X	X
Anderson Street				X		
Angler Lane			X			X
B Street			X			X

Table 2-9: Summary of Deficiencies

Location	Congestion (LOS)	Safety (Accidents)	Connectivity & Accessibility	Functional Classification	Roadway Design	Non-motorized
Beacon Drive: Olson Dr. to Spalding Ave.						X
Bridge Street						X
Bridge Street: Oak St. to Division St.	X					
Cloverlawn Drive: Rogue River Hwy. to East View						X
Cloverlawn Drive: East View to Hamilton Ln.					X	X
Cottonwood Street						X
Curtis Drive					X	X
D Street: 6th St. to 9th St.		X				
D Street: 11th St. to Foothill Blvd.						X
Darneille Lane					X	X
Dimmick Street			X		X	X
Dowell Road: Leonard Dr. to Redwood Ave.						X
Dowell Road: Redwood Hwy. to Schutzwohl Ln.					X	X
Drury Lane				X	X	X
E Street						X
East Park Street: Gold River Ln. to Hamilton Ln.					X	X
F Street/Mill Street						
F Street: G St. to Elm St.			X		X	X
F Street: Elm St. to Mill St.						X
F Street: 6th St. to 7th St.		X				
Fairgrounds Road					X	X
Fairgrounds/Riverfront Area			X			

Table 2-9: Summary of Deficiencies

Location	Congestion (LOS)	Safety (Accidents)	Connectivity & Accessibility	Functional Classification	Roadway Design	Non-motorized
Fairview Avenue				X		
Flower Lane: North end of road to Redwood Ave.					X	X
Florer Drive				X		
Foothill Blvd.: A St. to 760 ft. SE						X
Foothill Blvd.: Spalding Ave. to Ament Rd.					X	X
Fruitdale Area			X			
Fruitdale Drive					X	X
G Street: Leonard Rd. to Lincoln Rd.					X	X
G.I. Lane			X		X	X
Gladiola Street					X	X
Grandview Avenue			X		X	X
Grants Pass Parkway: Agness to I-5						X
Grants Pass Parkway: F Street to Beacon Dr.	X					
Greenfield Road			X	X	X	X
Hamilton Lane					X	X
Harbeck Road					X	X
Haviland Drive			X		X	X
Hawthorne Avenue						X
Highland Avenue: UGB to Carol Dr.					X	X
Highland Avenue: Carol Dr. to Bellevue Ave.						X
Hillcrest Drive: Hawthorne to 9th St.						X

Table 2-9: Summary of Deficiencies

Location	Congestion (LOS)	Safety (Accidents)	Connectivity & Accessibility	Functional Classification	Roadway Design	Non-motorized
Hillcrest Drive: 9th St. to Beacon Dr.					X	X
Hubbard Lane					X	X
J Street: 4th St. to 7th St.		X				
J Street: 7th St. to 9th St.		X				
J Street: 11th St. to Mill St.						X
Jacksonville Highway: New Hope Rd. to UGB	X				X	X
Jacksonville Highway Area			X			
Leonard Road					X	X
Lincoln Road			X		X	X
Lincoln Road Area			X			
Lower River Road					X	X
M Street: 11th St. to M St.						X
Madrone Street				X		X
Manzanita Avenue			X	X		X
Midland Avenue						X
Mill Street						X
Morgan Lane						X
Morgan Lane: Highland Ave. to Hawthorne Ave.					X	X
N Street: M St. to Camelot Dr.						X
N Street: Camelot Dr. to Gladiola St.					X	X
Nebraska Avenue			X			X
North of I-5/6th and 7th Street Interchange Area			X			
Oak Street						X
Overland Drive			X			

Table 2-9: Summary of Deficiencies

Location	Congestion (LOS)	Safety (Accidents)	Connectivity & Accessibility	Functional Classification	Roadway Design	Non-motorized
Parkdale Drive						
Portola Drive: Harvey Dr. to Gladiola St.					X	X
Ramsey Avenue			X			
Raydean Drive			X		X	X
Redwood Area			X	X	X	X
Redwood Avenue					X	X
Redwood Highway						X
Redwood Hwy.: Fairgrounds Rd. to Tussy Ln.	X					
Redwood Hwy.: Redwood Ave. to Fairgrounds Rd.	X					
Redwood Hwy.: South "Y" Interchange						X
Ringuette Street			X		X	X
Rogue Drive						X
Rogue River Highway					X	X
Savage Street: Highland Ave. to Washington Blvd.				X		X
Savage Street: Washington Blvd. to 10th St.						X
Savage Street: 10th St. to Beacon Drive				X	X	X
Scenic Drive				X	X	X
Schutzwohl Lane			X		X	X
Scoville Road				X	X	X
Spalding Avenue			X			X
Spruce Street				X		
Union Avenue					X	X

Table 2-9: Summary of Deficiencies

Location	Congestion (LOS)	Safety (Accidents)	Connectivity & Accessibility	Functional Classification	Roadway Design	Non-motorized
Upland Drive			X			
Upper River Road					X	X
Vine Street					X	X
Vine Street: Morgan Ln. to 6th St.				X		
Washington Blvd.						X
Webster Lane				X		
West Harbeck Road			X		X	X
West Park Street			X	X	X	X
Willow Lane		X			X	X