

4.1 ROADWAY AND HIGHWAY SYSTEM

Environmental Setting

This section presents an operational analysis of the roadways, and more importantly, the City of Fortuna intersections that provide primary access throughout the City, with connections to regional and interregional roadways.

Fortuna's circulation system is comprised of US Highway 101, city streets, sidewalks, bikeways, trails and informal paths. According to published 2000 U.S. Census information, the predominant transportation mode for city residents is the personal automobile with 75 percent of all commuter trips being in single-occupant vehicles. Carpooling accounts for 13 percent of the trips, working at home and walking make up another 7 percent, transit makes up 3 percent, and bicycling and "other" comprises the last 2 percent of all trips.

Census data provides information relative to where people work and live, including both the employment location of residents and the residency of persons employed in Fortuna. Almost half (44.4 percent) of Fortuna residents work in the city and 46.0 percent of all jobs held in Fortuna are by the city's residents. Of those working but not living in Fortuna, most live in the unincorporated areas of Humboldt County or in the City of Rio Dell to the south.

Highway and Roadway System

Trips in and around the City of Fortuna are completed on a circulation system identified by its hierarchal structure. The greatest capacity is provided on the Caltrans-maintained freeway, with lower capacities and slower speeds on city-maintained streets. The following classifications apply to the transportation network.

Freeways. Freeways carry high volumes of traffic, much of which is regional and travels through the community without stopping. Where it intersects with the City, US 101 has two travel lanes in each direction separated by a median and center divider. The city is served by three full interchanges with US 101 at Main Street, 12th Street and Kenmar Road.

Highways. Regional highways connect outlying communities with the freeway system. State Highway 36 is within the Planning Area but outside the city limits and connects US 101 with rural communities of Alton, Hydesville, Carlotta and Bridgeville.

Principal Arterials. Principal arterials carry the majority of trips within the city and are intended to be 64 to 100 feet wide with at least four travel lanes plus turn lanes. Access to adjacent properties is limited. Within the City of Fortuna, Fortuna Boulevard is the only Principal Arterial.

Minor Arterials. Minor Arterials are intended to carry substantial traffic loads. Minor Arterials are 64 to 100 feet wide, with at least two travel lanes either under current conditions, or planned for the future. These roadways have more direct connections to adjacent properties than

Principal Arterials. Examples of Minor Arterials in the City of Fortuna: Main Street, Rohnerville Road, Ross Hill Road, School Street, and 12th Street.

Collectors. Collector roads link local streets to the arterials system. These streets typically consist of two to three lanes within a 40 to 64 foot width. Examples of Collectors include Riverwalk Drive, Newburg Road, Redwood Way, Drake Hill Road, Ronald Avenue, Kenmar Road and Smith Lane.

Local Roads. The sole function of local roads is to provide access to adjacent properties. Because of a lack of connectivity, local roads sometimes experience volumes more typical of a collector.

Methodology

Level of Service (LOS) Concept

Level of Service is a quantitative measure that characterizes operation of transportation facilities. Using data relative to volumes, right-of-way controls, and lane configurations, the relative experience of drivers using the transportation system can be evaluated. It “grades” the operation of the facility similar to a report card; a level of service "A" is representative of generally free-flowing conditions while a level of service F is representative of long delays. The “study intersections” were analyzed using methodologies from the *Highway Capacity Manual 2000* (HCM), Transportation Research Board, 2000. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle. A summary of the thresholds is presented in Table 4.1-1.

The City’s 1993 General Plan utilized a LOS methodology as well. The method emphasizes traffic flow conditions measuring speed and volume to determine level of service, rather than vehicular delay. The draft General Plan will use delay factors at the measurement standard, based on the HCM.

Level of Service (LOS) Methodology. The study intersections, that are or will be signalized, are analyzed using the Operations Method contained in the HCM. The signalized intersection methodology is based on factors including traffic volumes, green-light time for each movement, phasing, whether or not the signals are coordinated, truck traffic, and pedestrian activity. “Average stopped delay per vehicle in seconds” is used as the basis for evaluation in the LOS methodology. It should be noted that the levels of service for this study were calculated using optimized signal timing.

Evaluation of signalized intersection capacity and operation utilizes two criteria standardized in the transportation engineering industry. The first measurement of operational acceptability for roadways and intersections is the ratio of traffic volume to capacity of the roadway or intersection. This ratio is referred to as the volume-to-capacity ratio (v/c). The second measurement of operation is LOS. LOS for a signalized intersection is based upon average delay incurred by all vehicles utilizing the intersection during the peak 15 minutes of the design hour.

**Table 4.1-1
Intersection Level of Service Criteria**

LOS	Two-Way Stop-Controlled	All-Way Stop-Controlled	Signalized
A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.	Delay of 0 to 10 seconds. Upon stopping, drivers are immediately able to proceed.	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
B	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.	Delay of 10 to 15 seconds. Drivers may wait for one or two vehicles to clear the intersection before proceeding from a stop.	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
C	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.	Delay of 15 to 25 seconds. Drivers will enter a queue of one or two vehicles on the same approach, and wait for vehicle to clear from one or more approaches prior to entering the intersection.	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.	Delay of 25 to 35 seconds. Queues of more than two vehicles are encountered on one or more approaches.	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.	Delay of 35 to 50 seconds. Longer queues are encountered on more than one approach to the intersection.	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.	Delay of more than 50 seconds. Drivers enter long queues on all approaches.	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Source: Highway Capacity Manual, Transportation Research Board, 2000.

Unsignalized Two-Way stop controlled intersections are evaluated based on the delay experienced by individual lanes or lane groups rather than the intersection average because the intersection average is significantly impacted by nearly unimpeded major street traffic and does not always reflect the delays experienced by side street traffic. The delay experienced by each lane or lane approach corresponds to the reserve capacity that is a measure of the capacity of a movement which is unused. The lane or lane group that experiences the highest delay, generally the side street, will be reported for the intersection as a whole, along with the corresponding reserve capacity and LOS.

Unsignalized All-way stop controlled intersections are evaluated on the average intersection delay as well as the delay experienced by each lane. The delay corresponds to the approach reserve capacity, similar to the two-way stop controlled intersection. The average intersection delay that translates to the LOS is reported in the analysis with additional commentary if a single lane has significant delays or queues.

Roundabout intersection analysis is based on Federal Highway Administration (FHWA) techniques. Roundabouts are evaluated primarily on the ratio of traffic volume to capacity of the roadway or intersection. This ratio is referred to as the volume-to-capacity ratio (v/c). Typically a 0.85 v/c ratio is the maximum acceptable for a single lane roundabout. A second measure of operation that can be evaluated is LOS based on average control delay incurred by all vehicles utilizing the intersection during the peak 15 minutes of the design hour.

Peak Periods. Traffic analyses focus on morning and evening peak periods when demand, and therefore congestion, is at its highest. The a.m. peak hour is the highest volume hour between 7 a.m. and 9 a.m., and captures the outbound commute to work or school. The p.m. peak hour between 4 p.m. and 6 p.m. represents the highest traffic volumes of the day, as drivers travel home or to other destinations such as shopping, restaurants, school, or recreation areas.

Traffic Signal Warrants. The *Manual on Uniform Traffic Control Devices* (MUTCD), Federal Highway Administration, 2003, has been adopted by the State of California as a replacement for the Caltrans *Traffic Manual*. Section 4C of the MUTCD provides guidelines, or warrants, that help identify the need for traffic signals at non-signalized intersections. As indicated in the MUTCD, a traffic signal should not be installed unless one or more of the warrants are met; however, the satisfaction of a warrant or warrants shall not in itself require the installation of a traffic control signal. The MUTCD also states that a traffic control signals should only be installed when an engineering study indicates that the signal will improve the overall safety and/or operation of the intersection. A traffic control signal should not be installed if it will seriously disrupt progressive traffic flow. The potential benefit of traffic signals at non-signalized intersections exhibiting unacceptable operation was evaluated using Warrant #3, Peak Hour Volume.

Existing Conditions

Street System. Regional access to the City of Fortuna is provided by US 101, a grade-separated four-lane freeway that traverses the western edge of the City of Fortuna in a north-south alignment and by State Highway 36, a two-lane highway that connects US 101 at Alton, south of the City limits, eastward to Interstate 5 in Red Bluff. There are four interchanges along US 101 serving the city. Palmer Boulevard and Main Street on the north, 12th Street at the mid-point, and at Kenmar Road near the southern city limits. The following roadways have been identified as providing primary access throughout the community:

- 12th Street
- Fortuna Boulevard
- Kenmar Road
- Main Street
- Newburg Road
- Redwood Way
- Riverwalk Drive
- Rohnerville Road
- Ross Hill Road
- School Street

With the exception of Fortuna Boulevard and Ross Hill Road, median-divided four-lane roadways, all of the roads in Fortuna have one travel lane in each direction. Left-turn pockets or two-way left-turn lanes exist on sections of some of these roadways, primarily at the critical intersections.

Critical Intersections. An analysis of 26 critical intersections in the Planning Area was conducted. These intersections are shown in Figure 4-1. Existing lane configurations for the intersections are shown in Figure 4-2.

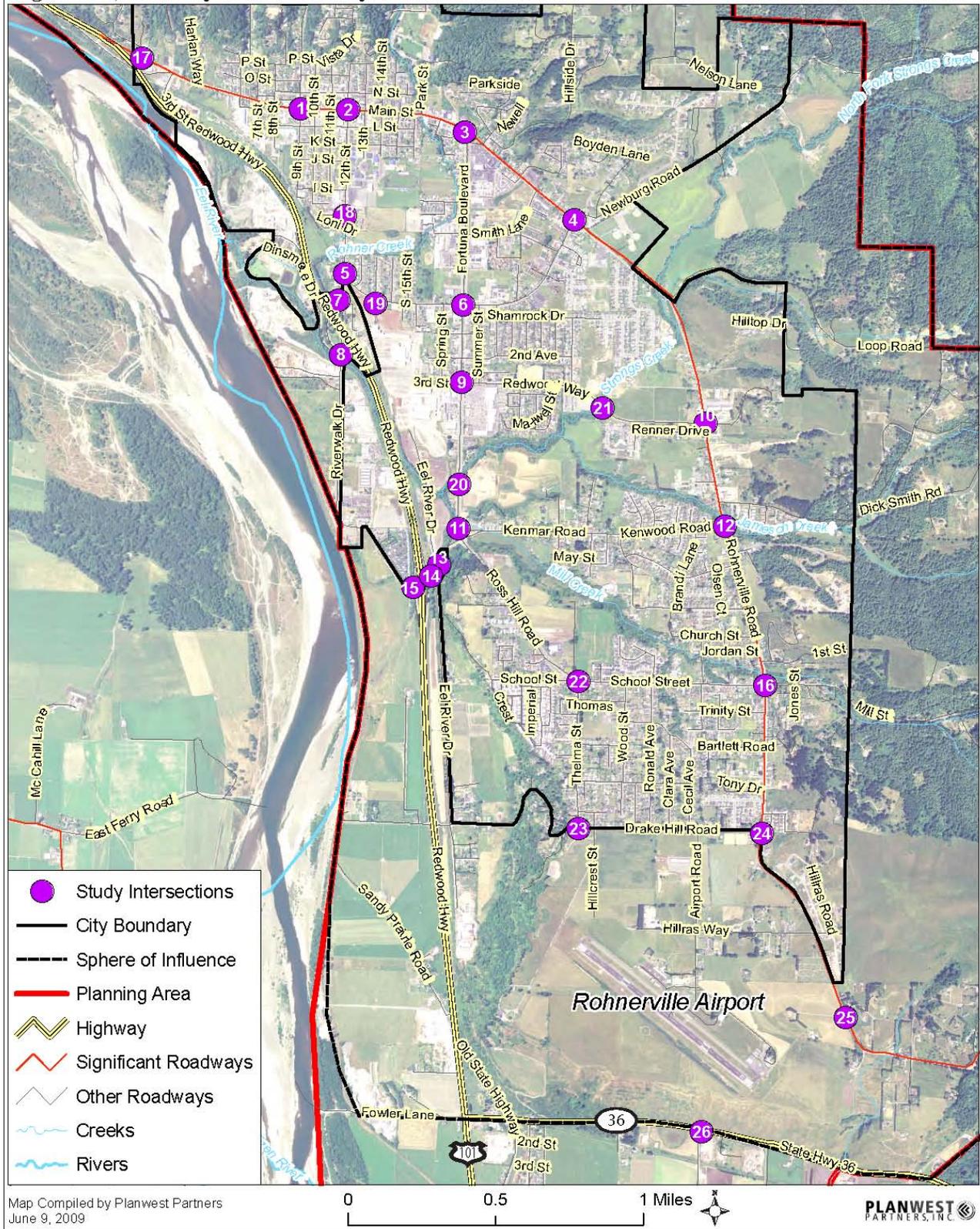
1. 9th Street/Main Street (all-way stop-controlled);
2. 12th Street/Main Street (signalized);
3. North Fortuna Boulevard/Main Street-Rohnerville Road (two-way stop-controlled);
4. Rohnerville Road/Newburg Road (two-way stop-controlled);
5. 12th Street/Newburg Road (two-way stop-controlled);
6. Fortuna Boulevard/Newburg Road (signalized);
7. 12th St/Highway 101 NB Ramps (two-way stop-controlled);
8. 12th Street-Riverwalk Drive/Highway 101 SB Ramps (two-way stop-controlled);
9. South Fortuna Boulevard/Redwood Way (signalized);
10. Rohnerville Road/Redwood Way (two-way stop-controlled);
11. South Fortuna Boulevard-Ross Hill Road/Kenmar Road (signalized);
12. Rohnerville Road/Kenwood Drive (two-way stop-controlled);
13. Kenmar Road/Eel River Drive (two-way stop-controlled);
14. Kenmar Road/Highway 101 NB Ramps (two-way stop-controlled);
15. Kenmar Road/Highway 101 SB Ramps (two-way stop-controlled);
16. Rohnerville Road/School Street-Mill Street (two-way stop-controlled);
17. Main Street/Bryant Lane (T-intersection);
18. Proposed Smith Lane Extension/12th Street (two-way stop-controlled);
19. Proposed Newberg Road Realignment/Proposed Redwood Way extension through the Mill District (T-intersection);
20. Proposed Strongs Creek Blvd./S. Fortuna Blvd. (signalized);
21. Proposed Redwood Way/Strongs Creek Blvd. (two-way stop controlled);
22. Ross Hill Road-School Street/Thelma Street (two-way stop controlled);
23. Drake Hill Road/Airport Road Connector at Thelma (controlled);
24. Drake Hill Road/Rhonerville Road (T-intersection);
25. Proposed Highway 36 Connector/Rhonerville Road (T-intersection); and
26. Proposed State Highway 36/Highway 36 Connector (T-intersection).

These intersections were selected because they have the greatest potential to be impacted by increased trip generation associated with future planned growth projected in the Fortuna General Plan. In several cases, they represent future intersections and future street connections to existing streets where development will likely warrant improvement to meet level of service standards.

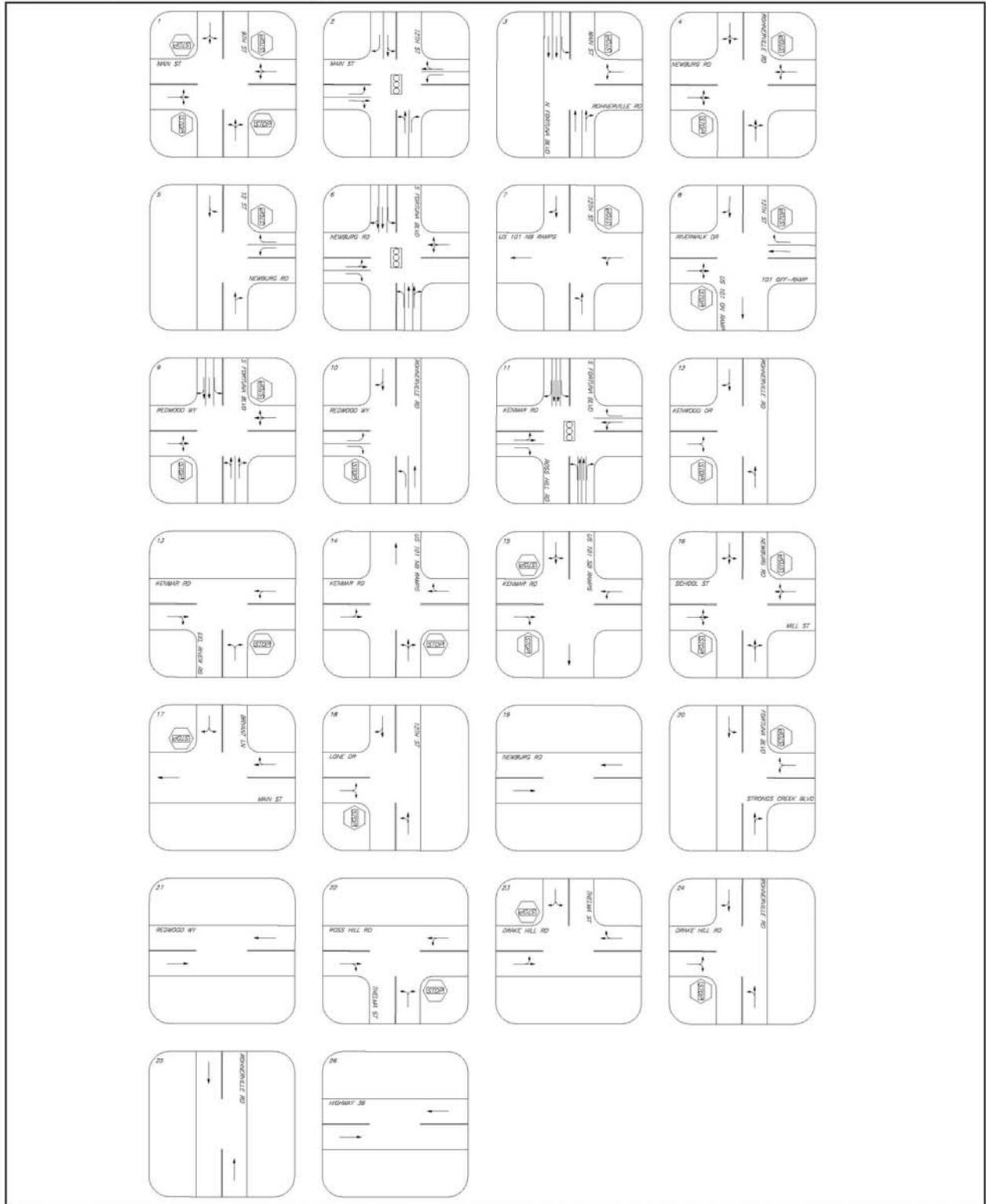
Traffic Assessment Methodology

Transportation Forecasting. For transportation forecasting, the land use data is stratified into geographical areas called Traffic Assignment Zones (TAZ) that represent the source of vehicle trip generation data. There are 26 TAZ within the City of Fortuna draft 2010-2030 General Plan study area. Figure 4-3 indicates the TAZ used for analysis. TAZ are determined by the survey area size, population density, desired datum, study purposes, and modeling techniques to be employed. TAZ are usually delineated to include homogeneous socioeconomic characteristics and to minimize intra-zonal trips. They should also generate and attract approximately equal trip numbers representing similar households, population, or area. For this analysis, the TAZ were developed by analyzing

Fortuna General Plan 2030
Figure 4-1, Street System and Study Intersections



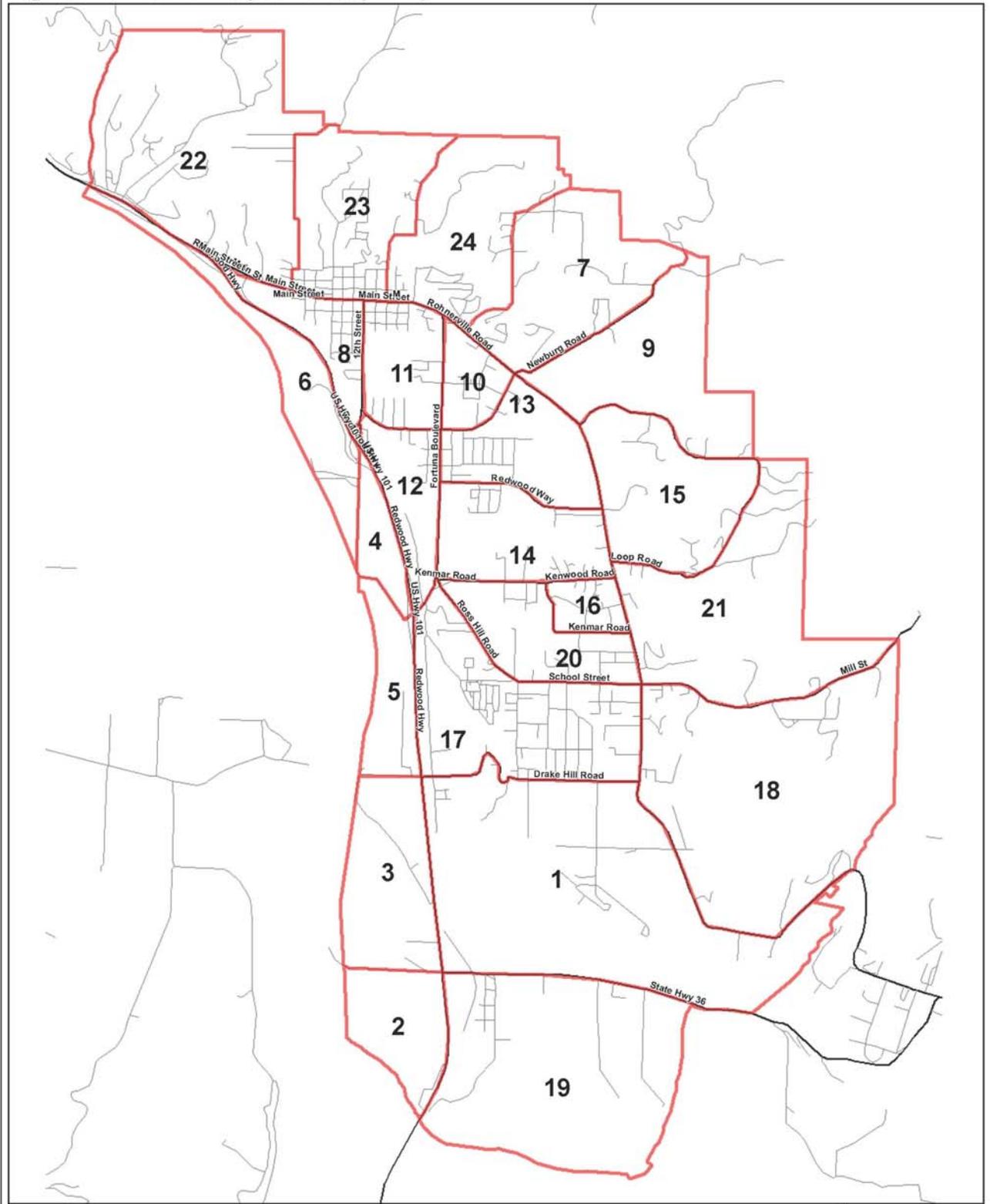
Fortuna General Plan 2030 Figure 4-2, Intersection Configurations



Source: SHN, December 2009



Fortuna General Plan 2030
Figure 4-3, Traffic Analysis Zones (TAZs)



Source: Mintier & Associates, April 2008



future development levels for land use and population, as shown in the PEIR Chapter 3 Land Use Table 3.1-4. The trip generation by TAZ worksheets for the proposed plan are included as Appendix C of this PEIR.

Traffic forecasting can be divided into several distinct but integrated components that represent the logical sequence of travel behavior. The components in their general order in the traffic forecasting process are as follows:

- Trip Generation
- Trip Distribution
- Mode Choice
- Traffic Assignment

A determination of traffic impacts based on buildout of the general plan requires the ability to accurately forecast travel demand resulting from the land use estimates of the draft General Plan. The objective of the transportation planning process is to provide information necessary for making decisions on when and where improvements should be made to the transportation system in order to meet changes in travel demand.

Transportation Modeling. Intersection capacity calculations were made using the methodologies described in the Transportation Research Board (TRB) *Highway Capacity Manual, 2000 Edition* (HCM). Traffix© software was used to prepare the capacity and Levels of Service (LOS) calculations.

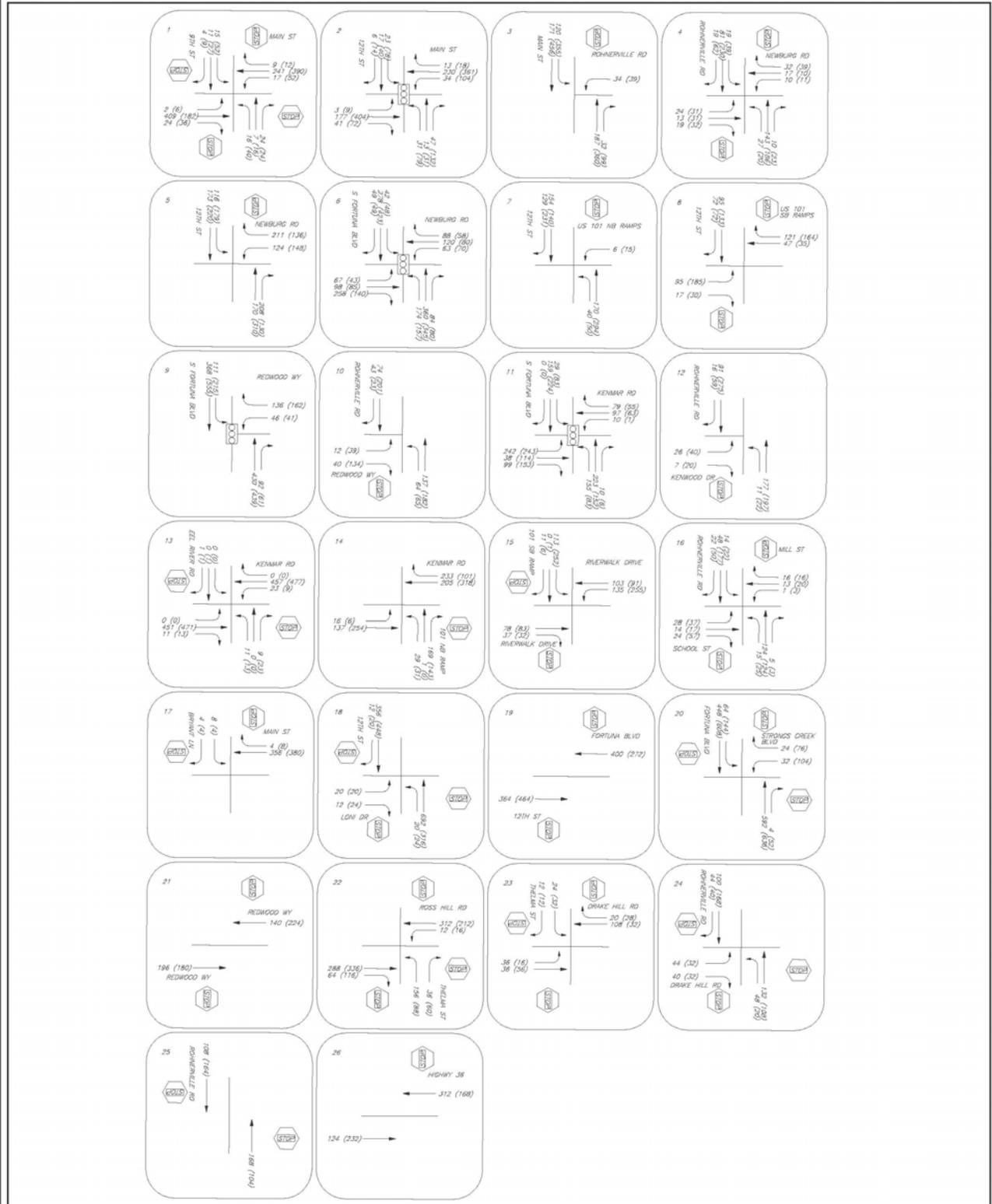
The initial roadway network used in the traffic model represents the existing streets and roadways. Future land use scenarios roadway improvements were modeled to determine LOS standards for existing conditions and at projected General Plan buildout. Forecasts of morning and evening peak period traffic flows were produced for the critical intersections.

Traffic Volumes. Traffic counts were obtained during the morning and evening peak periods in November 2004, November 2005, and April 2009. In addition, traffic counts were obtained at previously collected intersection during the morning and evening peak periods in April 2009 for verification of previous data collected. Existing traffic volumes are shown in Figure 4-4.

Intersection Levels of Service. Based on the count data collected and the standards applied, 22 of the 26 study intersections are currently operating at LOS C or better during morning and evening peak hours. The exceptions are Intersection #3, the westbound left-turn at North Fortuna Boulevard/Main Street-Rohnerville Road, which is operating at LOS F during the evening peak hour, Intersection #15, the southbound approach at Kenmar Road/Highway 101 South Ramps, which is at LOS E during the evening peak hour, and Intersection # 20, the Fortuna/Blvd./Strongs Creek which is LOS F during the evening peak hour. Intersections #19, #20 and #21 were not evaluated because they do not exist yet.

Level of Service calculations for existing conditions is summarized in Table 4.1-2. Intersection capacity calculations were conducted using the methodologies described in the Transportation Research Board (TRB) *Highway Capacity Manual, 2000 Edition* (HCM). Traffix© software was used to prepare the capacity and Levels of Service (LOS) calculations.

Fortuna General Plan 2030
Figure 4-4, Existing Traffic Volumes



Source: SHN, December 2009



**Table 4.1-2
Summary of Existing Level of Service Calculations***

	<i>Approach</i>	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	9th Street/Main Street	9.1	A	16.4	C
2	12th Street/Main Street	17.1	B	24.1	C
3	North Fortuna Boulevard/Main Street-Rohnerville Rd				
	<i>Westbound (Rohnerville Road) Left-Turn</i>	14.7	B	92.0	F
4	Rohnerville Road/Newburg Road				
	<i>Eastbound (Newburg Road) Approach</i>	11.7	B	15.0	C
	<i>Westbound (Newburg Road) Approach</i>	11.0	B	12.0	B
5	12th St/Newburg Rd				
	<i>Westbound (Newburg Road) Approach</i>	16.1	C	20.6	C
6	South Fortuna Blvd/Newburg Rd	31.6	C	31.9	C
7	12th St/US 101 NB Ramps				
	<i>Westbound (US 101 NB Off-ramp)</i>	4.9	A	4.2	A
8	12th Street-Riverwalk Drive/U.S. 101 SB Ramps				
	<i>Eastbound (Riverwalk Drive) Approach</i>	7.3	A	9.3	A
	<i>Westbound (US 101 SB Off-ramp)</i>	9.2	A	9.3	A
9	South Fortuna Boulevard/Redwood Way	18.3	B	19.4	B
10	Rohnerville Road/Redwood Way				
	<i>Eastbound (Redwood Way) Approach</i>	9.7	A	11.0	B
11	So Fortuna Blvd-Ross Hill Rd/Kenmar Rd	30.5	C	28.1	C
12	Rohnerville Road/Kenwood Drive				
	<i>Eastbound (Kenwood Drive) Approach</i>	7.5	A	8.0	A
13	Kenmar Rd/Eel River Dr				
	<i>Northbound (Eel River Drive) Approach</i>	18.9	C	15.6	C
	<i>Southbound (Eel River Drive) Approach</i>	11.1	B	15.9	C
14	Kenmar Rd/US 101 NB Ramps				
	<i>Northbound Approach</i>	10.3	B	11.3	B
15	Kenmar Rd/US 101 SB Ramps				
	<i>Southbound (US 101 SB Off-ramp)</i>	15.0	B	46.5	E
	<i>Westbound (Kenmar Road) Approach</i>	7.7	A	8.0	A
16	Rohnerville Road/School Street-Mill Street				
	<i>Eastbound (School Street) Approach</i>	6.9	A	7.5	A
	<i>Westbound (Mill Street) Approach</i>	7.1	A	7.6	A
17	Bryant Lane/Main Street				
	<i>Southbound (Bryant Lane) Approach</i>	10.5	B	10.6	B
18	12 th Street/Loni Drive				
	<i>Eastbound (Loni Drive) Approach</i>	17.8	C	13.9	B
19	Future extension of Redwood Way through the Mill District to Newburg Rd.				
	<i>Northbound (Fortuna Blvd)</i>	n/a	n/a	n/a	n/a

	<i>Approach</i>	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
20	Fortuna Blvd/Strong's Creek				
	<i>Westbound (Strong's Creek) Approach</i>	n/a	n/a	n/a	n/a
21	Redwood Way/Proposed Strong's Creek				
	<i>Southbound (Strong's Creek) Approach</i>	n/a	n/a	n/a	n/a
22	Ross Hill Road/ Thelma Street				
	<i>Northbound (Thelma Street) Approach</i>	15.9	C	12.8	B
23	Thelma Street/Drake Hill Road				
	<i>Southbound (Thelma Street) Approach</i>	9.7	A	9.2	A
24	Rohnerville Road/Drake Hill Road				
	<i>Eastbound (Drake Hill Road) Approach</i>	10.1	B	10.1	B
25	Highway 36 Connector/Rohnerville Road				
	<i>Northbound (Rohnerville Rd) Approach</i>	9.9	A	9.9	A
	<i>Southbound (Rohnerville Rd) Approach</i>	9.5	A	9.5	A
26	Highway 36/Highway 36 Connector	n/a	n/a	n/a	n/a
<i>Source: Whitlock & Weinberger Transportation, Inc.</i>					
<i>Notes: Delay is measured in average seconds per vehicle, LOS = Level of Service</i>					

Note: Delay and LOS for future intersections and future road connections (Intersections 19, 20, 21) are indicated as not applicable (n/a)

Applicable Plans, Policies, Codes and Regulations

City Regulations

Most local streets and roads are the responsibility of the City of Fortuna, and are subject to the city's adopted policies and standards. Funding for improvements comes from a number of sources, including the city's Capital Improvement Program (CIP) as well as various federal, state or local funding programs.

The 1993 Fortuna General Plan Policy requires a LOS "C" as the minimum acceptable level, requiring mitigation when the LOS is expected to drop below the standard. The standard to be employed by the draft 2010-2030 General Plan is LOS "C" per the HCM, the minimum acceptable on all City streets. The exception is Main Street where LOS "D" is the minimum. Mitigation will be required in locations where the LOS is expected to drop below the standard.

County Regulations

Several streets that serve the City are within its sphere of influence. For the most part, these roads are owned and operated by the County of Humboldt. The City has been asked to annex and take responsibility for several roadways adjacent to the city limits, including Eel River Drive, Drake Hill Road, and Newburg Road (east of Rohnerville Rd).

The County of Humboldt designates HCM LOS “C” for the overall intersection operation and LOS “D” for an individual movement of an intersection as the minimum acceptable, thus requiring mitigation when the LOS is expected to drop below the standard. The City will be required to maintain this standard.

State Regulations

The California Department of Transportation (Caltrans) owns and operates US 101, which passes through the City of Fortuna, as well as State Route (SR) 36 to the south of the city. Improvements to these facilities must meet Caltrans standards.

Caltrans Guide for the Preparation of Traffic Impact Studies indicates the LOS for operating State Highways is based upon Measures of Effectiveness (MOE). MOE for LOS definitions are located in the most recent versions of the HCM. Caltrans desires a minimum HCM LOS “C” for its highways. Caltrans recognizes this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing facility is operating at less than the appropriate target LOS, the existing MOE shall be maintained. Mitigation is required if the project traffic impacts cause the MOE to drop below this standard.

Policy Background

The following policy background is used to assess the transportation and circulation impacts of the proposed plan.

- About half of the jobs in Fortuna will continue to be held by its residents.
- The mode split between vehicle trips and those assigned to other modes (pedestrian, bicycle and transit) will remain essentially the same as it is today.
- Planned buildout is presumed to occur in 2030; a conservative assumption. Buildout may occur after this planning horizon.
- Traffic volume projections for future traffic are based on proposed general plan buildout calculations.

Thresholds of Significance

General Plan implementation could have a significant impact on traffic and circulation if it:

- Causes an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (including exceeding, either individually or cumulatively, established LOS standards);
- Substantially increases hazards due to a design feature or incompatible uses;
- Results in inadequate emergency response; or
- Results in inadequate parking capacity.

Implications of the Draft Land Use Diagram

New residential and non-residential development associated with the General Plan implementation will generate increased traffic. This will necessitate new or enhanced facilities to increase capacity, particularly at critical intersections providing access to regional facilities such as US 101 and multi-modal transit.

General Plan Policy Response

The proposed General Plan includes the following goals, policies and programs relevant to transportation and circulation.

Roadways and Highways

Policy TC-1.1 Reducing Mode Conflicts. The City shall seek to minimize conflicts between pedestrians, automobiles, and bicycles.

Policy TC-1.2 New Roadway Improvements. The City shall design and phase roadway improvements so that a level of service (LOS) C or better is maintained on all City streets, except that LOS D or better shall be maintained on Main Street.

Policy TC-1.3 Balanced Transportation System. The City shall strive to meet the level of service standard through a balanced transportation system that provides alternatives to the automobile and by promoting pedestrian, bicycle, and transit connections between employment areas and major residential and commercial areas.

Policy TC-1.4 Improved LOS. The City shall identify economic, design, and planning solutions to improve levels of service currently below LOS C. Where physical mitigation is infeasible, the City shall consider developing programs that enhance alternative access or otherwise reduce automobile travel demand.

Policy TC-1.5 Traffic Signal Management. The City shall interconnect, properly space, and minimize the number of traffic signals to maximize progression and minimize the acceleration/deceleration that produces significantly higher vehicle emissions and noise levels.

Policy TC-1.6 Major Roadway Linkages. The City shall delineate major roadways to improve linkages with key destination points and protect residential neighborhoods from through traffic.

Policy TC-1.7 Private Access Points. The City shall encourage consolidation of private access points on arterial and collector streets to facilitate the free flow of traffic and improve safety.

Policy TC-1.8 Truck Routes. The City shall maintain designated truck routes on major roadways and discourage non-local and commercial traffic from using and parking on local residential streets.

Policy TC-1.9 Functional Classification System. The City shall plan, design, and regulate development of the City's street system in accordance with the functional classification system described in this element, the zoning code, and reflected in the Circulation Diagram and the City's Improvement Standards and Specifications.

Policy TC-1.10 Connectivity. The City shall exercise its responsibility to ensure that new residential roads and streets connect with existing (or will connect with future) roads and streets to insure convenient traffic flow and improved emergency access.

Policy TC-1.11 Rights-of-Way Dedication. The City shall require dedication by affected property owners of rights-of-way for all streets and interchanges as part of project approval.

Policy TC-1.12 Transportation System Financing. The City, through the Humboldt County Association of Governments (HCAOG) and other agencies, shall proactively pursue financing in a timely manner for all components of the transportation system, including securing right of way to achieve/maintain adopted level of service standards.

Policy TC-1.13 Development Impacts. The City shall consider the effects of new development on local streets in residential areas and require new development to mitigate significant traffic impacts.

Policy TC-1.14 Street Maintenance. The City shall strive to maintain existing streets, alleys, and sidewalks, and require that new streets and sidewalks be built to City and other governing standards.

Policy TC-1.15 Interchange Improvements. The City, through HCAOG in cooperation with Caltrans, shall allocate the costs for funding interchange improvements to areas of benefit and assign proportionate share costs to individual projects.

Policy TC-1.16 Capital Improvements. The City shall implement street widening, narrowing, and other circulation improvements that are related to both improved circulation on existing streets and new development in conjunction with the City's capital improvements program.

Policy TC-1.17 Rights-of-Way Dedication. The City shall require dedication of rights-of-way for planned arterial and collector streets as a condition of any subdivision or use permit approval.

Policy TC-1.18 Inhibited Street Expansion. The City shall restrict, to the extent possible, the construction of buildings and improvements in areas needed for future street expansions and extensions.

Policy TC-1.19 Private Roads. The City shall not provide any maintenance to private roads until they are accepted into the City Street Maintained System.

Policy TC-1.20 Interchange Improvements. The City shall encourage the realignment of the Highway 101 southbound on- and off-ramps, together with Riverwalk Drive and Dinsmore Drive at the 12th Street interchange as new development increases the level of traffic.

Policy TC-1.21 Development Fees. The City shall assess fees on new development sufficient to cover the fair share portion of that development's impacts on the local and regional transportation system.

Policy TC-1.22 City Street Maintenance. The City shall pave, resurface, and maintain all public roads within city limits, to promote and maintain the highest level of mobility for drivers, cyclists, and pedestrians.

Policy TC-1.23 Traffic Calming. The City shall integrate traffic-calming measures with input from public safety officials to promote adherence to established speed limits.

Policy TC-7.2 Commercial Truck Traffic. The City shall work closely with Humboldt County to investigate ways to enhance road access between Drake Hill Road and the interchange of Highways 101 and 36 for improved commercial truck traffic.

Policy TC-7.3 Future Roadways. The City shall ensure that alignments for future roadways on the fringe of the city are prepared in coordination with the County and/or Caltrans, as appropriate.

Policy TC-7.4 SR 36/US 101. The City shall coordinate with Caltrans in developing transportation policies pertaining to Highways 36 and 101 that reflect the City's transportation policies for these roadways.

Program TC-1. The City shall develop, establish, and maintain the Street Master Plan consistent with the updated General Plan.

Program TC-2. The City shall identify and monitor operations of critical intersections on a periodic basis and construct needed improvements in a timely manner, based upon available resources, if operation drops below LOS C.

Program TC-3. The City shall monitor traffic volumes on an ongoing basis to ensure that planned improvements remain necessary and relevant based on actual volumes.

Program TC-4. The City shall implement the intersections improvements required by mitigation measures in the General Plan Update EIR.

Program TC-5. The City shall require proposed new development projects with greater than 30 residential units or 10,000 square feet of commercial, office or industrial uses to have a traffic study to: (1) quantify existing traffic volumes on area streets; (2) quantify project trip generation; (3) evaluate traffic LOS/delay and pedestrian/traffic safety; and (4) identify mitigation measures to avoid significant impacts.

Program TC-6. The City shall solicit comments from Caltrans for projects that may alter or have a measurable traffic impact on HWY 101 and its on/off ramps.

Program TC-7. The City shall require that proposed new development provide circulation improvements that may include new roadways, islands, traffic controls, dedicated turn lanes, sidewalks, pedestrian/bicycle lanes/paths, transit stops, and signage.

Program TC-8. The City shall require that new development provide its fair share of City-wide roadway and traffic improvements.

Program TC-9. The City shall develop road standards for Traditional Neighborhood Designed residential areas and for use with Form Based Codes.

Parking

Policy TC-2.1 Future Parking Facilities. The City shall work cooperatively with developers and the business community to develop funding mechanisms for the construction of planned future parking facilities.

Policy TC-2.2 Minimum Parking Requirements. The City shall enforce and periodically update the Zoning Ordinance standards for minimum parking requirements for various types of land uses.

Policy TC-2.3 Intersection Parking. The City shall limit on-street parking near intersections to increase visibility and traffic safety.

Policy TC-2.4 Parking Lot Accessibility. The City shall require that parking lots be designed to maximize pedestrian and motorist convenience and ensure disabled access.

Policy TC-2.5 Visual Impacts. The City shall require new parking lot designs that minimize visual impacts on public roadways and neighboring areas while maintaining safe ingress/egress sight distance.

Policy TC-2.6 Shared Parking. The City shall encourage adjacent land uses to apply principles of shared parking where different adjacent uses generate peak parking demand at different times.

Program TC-10. The City shall ensure that proposed parking lots of 10 spaces or more are visually buffered from any existing or proposed residential uses by trees and vegetation, and that proposed parking lots of 20 spaces or more include islands with tree plantings (at least one for every 20 spaces) to reduce visual impacts and solar radiation.

Program TC-11. Parking lot lighting past 10:00 p.m. shall be limited to no more than 20% of the total lot lighting for security, with no sodium-vapor bulbs, and a maximum height of 15 feet

Impacts and Mitigation

Impact 4.1-1: Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (including exceeding, either individually or cumulative, LOS standards).

Implementation of the General Plan could cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system, including exceeding LOS standards.

Discussion

To analyze impacts associated with the General Plan, it was necessary to determine the remaining anticipated development within the City of Fortuna. Planned future development as shown in the PEIR Chapter 3 Land Use Table 3.1-4, formed the basis of this work. Figure 4-4 indicates the Traffic Assignment Zones (TAZ) used for analysis purposes.

Future Traffic Projections

Traffic engineers and transportation planners use trip generation rates as an established tool to estimate traffic activity of a future project. Rate tables are used to evaluate the potential impacts of a single project or, when incorporated into a citywide analysis such as in a general plan, to evaluate a range of transportation facility improvements.

To estimate the number of trips anticipated by future development a software program, *Trip Generation* (7th Edition, 2003), by the Institute of Transportation Engineers (ITE) is used. This is a standard reference for jurisdictions throughout the country, and is based on actual trip-generation studies performed at numerous locations within a variety of conditions (e.g. population and existing road conditions).

For this analysis, several ITE rates were applied to the different land use categories, including Single Family Detached Dwelling (LU #210), Apartment (LU #220), Specialty Retail (LU #814), Shopping Center (LU #820) and), General Office Building (LU #710) and General Light Industrial (LU #110). Existing land uses within the Planning Area currently generate an estimated average of 77,505 trip ends per day. Based on the applied assumptions, projected future development within the Planning Area will generate an average of 79,002 additional trip ends per day; 3,743 during the morning peak hour and 6,731 during the evening peak hour. The land use assumptions, trip generation rates, and resulting trip ends are summarized in Table 4.1-3. Trip generation calculations for the proposed plan by TAZ are included as Appendix C of this PEIR.

Table 4.1-3

Trip Generation Summary

Land Use	Units	Daily		A.M. Peak Hour				P.M. Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Residential Rural	1672	9.57	16,001	.75	1254	314	941	1.01	1689	1064	625
Residential Very Low	1291	9.57	12,355	.75	968	242	726	1.01	1304	821	482
Residential Low	4409	9.57	42,194	.75	3,307	827	2480	1.01	4453	2805	1648
Residential Medium	1412	6.72	9,489	.51	720	144	576	.62	875	569	306
Residential High	1200	6.72	8,064	.51	612	122	490	.62	744	484	260
Commercial	238.636 ksf	44.32	10,576	1.03	246	150	96	2.71	647	285	362
Riverwalk District	180.000 ksf	33.34	6,001	2.05	369	273	96	2.64	475	185	290
Office	202.134 ksf	21.16	4,277	4.6	930	818	205	1.49	301	51	250
Central Buisness District	120.848 ksf	21.16	2,557	4.6	556	489	122	1.49	180	31	149
Mill District	300 ksf	44.32	13,296	1.03	309	188	121	2.71	813	358	455
Corridor Mixed Use	216.842 ksf	127.15	27,571	13.53	2,934	1526	1408	18.8	4077	2242	1834
Industrial	591.900 ksf	6.97	4,126	1.01	4,126	538	60	1.08	639	89	550

Notes: sfd = single family dwelling, du = dwelling unit, ksf = 1000 square feet.

Pass-by Trips

Some traffic associated with retail and shopping center land uses is drawn from existing traffic on nearby streets. These vehicle trips are not considered "new", but result from drivers choosing to make an interim stop. These are "pass-by" trips. Information provided in the *Trip Generation Handbook* by ITE is used to establish pass-by percentages for various land use categories included in this analysis. Pass-by trips are eliminated from the analysis by routing these trips directly from a point of origin to a receiving "gate" established specifically for this purpose. This permits a trip count for each land use without overstating new impacts. For this analysis, pass-by rates of between 15 and 30 percent are applied to the retail and shopping center land uses.

Trip Distribution and Assignment

Residential and Commercial trip distribution assumptions are based upon existing traffic patterns and locations of potential trip origins throughout the City of Fortuna. The applied trip distribution percentages are shown in Table 4.1-4.

Table 4.1-4

Trip Distribution

Route	Residential Distribution	Commercial Distribution
U.S. 101 North	35%	35%
U.S. 101 South	7%	8%
Main Street West	2.5%	5%
Rohnerville Road South	5%	3%
Downtown South	12%	0%
High school	12%	0%
Ray's Shopping Center	12%	0%
Redwood Village	12%	0%
Strongs Creek Shopping Center	2.5%	0%
Downtown North	0%	7%
Newburg Road	0%	7%
Shamrock Drive	0%	7%
Riverwalk Drive	0%	7%
Lee Court	0%	7%
School Street	0%	7%
Drake Hill Road	0%	7%
TOTAL	100%	100%
<i>Source: SHN, 2010.</i>		

Future Operating Conditions

Development of the Mill District will include the realignment of Newburg Road between Randolph Way and 12th Street. It is assumed that the relocated 12th Street/Newburg Road intersection will have a signal with protected left-turn phasing on all approaches. This intersection will be modified to include a left-turn lane, two through lanes and a right-turn lane with overlap phasing on the northbound 12th Street approach, while the southbound approach will consist of a left-turn lane, a through lane and a shared through-right lane. The new westbound leg of Newburg Road will have a left-turn lane, a shared through/left-turn lane and a right-turn lane with overlap phasing.

At buildout, based on projected traffic volumes (see Figure 4-5) and with anticipated improvements at 12th Street/Newburg Road, 18 of the 26 study intersections are expected to operate at an unacceptable LOS, thus will require improvement. The operational results for the General Plan conditions are summarized in Table 4.1-5, including conditions with the improvements detailed above.

Table 4.1-5

Summary of Future LOS Calculations

Intersection Approach		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	9th Street/Main Street	105.7	F	**	F
2	12th Street/Main Street	32.6	C	**	F
3	North Fortuna Boulevard/Main Street-Rohnerville Rd				
	<i>Westbound (Rohnerville Road) Left-Turn</i>	56.7	F	**	F
4	Rohnerville Road/Newburg Road				
	<i>Eastbound (Newburg Road) Approach</i>	21.6	C	**	F
	<i>Westbound (Newburg Road) Approach</i>	26.0	D	51.8	F
5	12th St/Newburg Rd				
	<i>Westbound (Newburg Road) Approach</i>	n/a	n/a	n/a	n/a
6	South Fortuna Blvd/Newburg Rd	97.4	F	**	F
7	12th St/US 101 NB Ramps	12.6	B	17.8	C
8	12th Street-Riverwalk Drive/U.S. 101 SB Ramps				
	<i>Eastbound (Riverwalk Drive) Approach</i>	15.3	C	**	F
	<i>Westbound (US 101 SB Off-ramp)</i>	11.6	B	13.5	B
9	South Fortuna Boulevard/Redwood Way	23.1	C	25.4	C
10	Rohnerville Road/Redwood Way				
	<i>Eastbound (Redwood Way) Approach</i>	15.8	C	37.0	E
11	S Fortuna Blvd-Ross Hill Rd/Kenmar Rd	42.6	D	45.2	D
12	Rohnerville Road/Kenwood Drive				
	<i>Eastbound (Kenwood Drive) Approach</i>	8.2	A	16.6	C
13	Kenmar Rd/Eel River Dr				
	<i>Northbound (Eel River Drive) Approach</i>	55.7	F	83.0	F
14	Kenmar Rd/US 101 NB Ramps				
	<i>Northbound Approach</i>	14.9	B	40.6	E
15	Kenmar Rd/US 101 SB Ramps				
	<i>Southbound (US 101 SB Off-ramp)</i>	**	F	**	F
	<i>Westbound (Kenmar Road) Approach</i>	7.9	A	8.5	A
16	Rohnerville Road/School Street-Mill Street				
	<i>Eastbound (School Street) Approach</i>	12.9	B	**	F
	<i>Westbound (Mill Street) Approach</i>	8.6	A	16.3	C
17	Bryant Lane/Main Street				
	<i>Southbound (Bryant Lane) Approach</i>	60.1	F	**	F
18	12th Street/Loni Drive	54.0	F	60.4	F
19	Future extension of Redwood Way through the Mill District / Newburg Rd.				
	<i>Northbound (Fortuna Blvd)</i>	**	F	**	F
20	Fortuna Blvd/Strongs Creek				
	<i>Westbound (Strongs Creek) Approach</i>	117.7	F	**	F
	<i>Eastbound (Strongs Creek) Approach</i>	61.3	F	**	F
21	Redwood Way/Proposed Strongs Creek				
	<i>Northbound (Strongs Creek) Approach</i>	10.0	B	12.5	B
22	Ross Hill Road/ Thelma Street				
	<i>Northbound (Thelma Street) Approach</i>	56.8	F	77.1	F
23	Thelma Street/Drake Hill Road				

Intersection Approach		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
	Northbound (Thelma Street) Approach	8.5	A	8.6	A
	Southbound (Thelma Street) Approach	10.0	B	9.5	A
24	Rohnerville Road/Drake Hill Road				
	Eastbound (Drake Hill Road) Approach	10.9	B	11.5	B
25	Highway 36 Connector/Rohnerville Road				
	Northbound (Rohnerville Rd) Approach	9.9	B	9.5	A
	Southbound (Rohnerville Rd) Approach	9.5	A	9.9	B
26	Highway 36/Highway 36 Connector	10.0	A	9.1	A
Source: Whitlock & Weinberger Transportation, Inc.					
Notes: Delay is measured in average seconds per vehicle, LOS = Level of Service, Bold = Deficient Levels of service, ** = Delay is greater than 120 seconds.					

Determination of Level of Significance Before Mitigation

This impact is Potentially Significant but can be reduced to Less-Than-Significant with incorporation of mitigation.

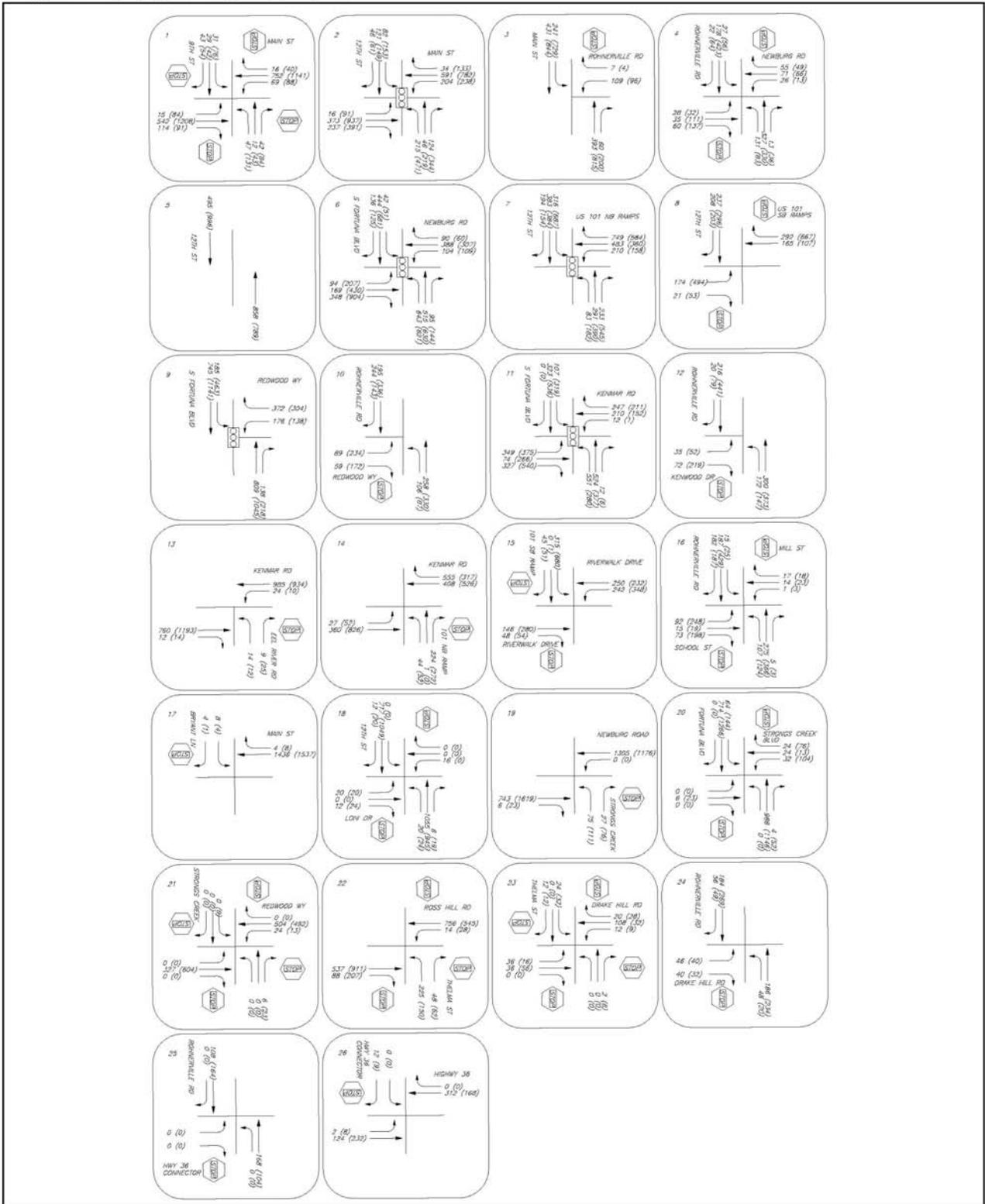
Mitigation

Mitigation Measure 4.1-1a. The City shall implement the following intersection improvements when financially feasible or as development occurs to maintain the LOS at acceptable levels:

- 9th Street/Main Street – Signalize and add left-turn lanes to the eastbound and westbound approaches.
- 12th Street/Main Street – Add a left-turn lane and thru lane to the northbound and southbound approaches. Add a thru lane to the eastbound and westbound approaches. Use permitted – overlap phasing on the northbound and southbound approaches.
- North Fortuna Boulevard—Main Street—Rohnerville Road. Install traffic signal or convert into a two-lane roundabout.
- Rohnerville Road/Newburg Road – Install all-way stop controls and add a right-turn lane on the eastbound approach.
- South Fortuna Boulevard/Newburg Road – Signalize with protected left-turn and right-turn overlap phasing on both the eastbound and westbound approaches. Add left-turn lanes and thru lanes to the eastbound and westbound approaches.
- 12th Street-Riverwalk Drive/US 101 South Ramps – Signalize and provide dual left-turn lanes on the eastbound approach.
- Rohnerville Road/Redwood Way – Install traffic signal or roundabout
- South Fortuna Boulevard – Ross Hill Road/Kenmar Road – Signalize with split phase and right-turn overlap phasing on both the eastbound and westbound approaches.
- Kenmar Road/Eel River Drive – Signalize and add right-turn lanes to the northbound approach and add a left-turn lane to the westbound approach.

- Kenmar Road/US 101 North Ramps – Signalize and operate with permitted left-turn phasing. No additional lanes would be needed.
- Kenmar Road/US 101 South Ramps – Signalize and add a right-turn lane on the eastbound approach and operate with permitted left-turn phasing.
- Rohnerville Road/School Street-Mill Street – Signalize and add left-turn lanes to the northbound, southbound, and eastbound approaches.
- 12th Street/Loni Drive – Signalize, no additional lanes are needed.
- Future extension of Redwood Way through the Mill District and intersecting with a realigned Newburg Rd. – Signalize, no additional lanes are needed.
- Fortuna Boulevard/Strongs Creek – Signalize, no additional lanes are needed.
- Ross Hill Road/Thelma Street – Install traffic signal or roundabout.
- Rohnerville and Drake Hill Road Improvements to include two traffic and parking lanes, two-way left-turn lane, bicycle lanes, and pedestrian sidewalks. These improvements not incorporated within the serpentine segment of Rohnerville Road south of Drake Hill.
- Newburg Road and 12th Street Realignment to include the northbound US 101 on-ramp and extend the northbound off-ramp from US 101 onto 12th Street.
- Dinsmore Drive Intersection Redesign, In conjunction with annexation of land between Riverwalk Drive and the Eel River redesign the five-point intersection of Dinsmore Drive, the southbound off-ramp from US 101, Riverwalk Drive, and 12th Street.
- Eel River and Kenmar Intersection Improvements, Request funding and design assistance from Caltrans to alleviate traffic congestion at the intersection of Eel River Drive and Kenmar Drive resulting from the State’s closure of Drake Hill Road in conjunction with the Highway 36 and 101 interchange.

**Fortuna General Plan 2030
Figure 4-5, Future Traffic Volume**



Source: SHN, December 2009



Determination of Significance After Mitigation

The City will monitor the critical intersections and include improvements into the Capital Improvement as necessary. The operational results under future traffic volumes upon implementation of the suggested measures included in Mitigation Measure X1 for these 18 impacted intersections are summarized in Table 4.1-6.

**Table 4.1-6
Summary of Mitigated Future LOS Calculations**

Intersection Approach		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	9th Street/Main Street	12.7	B	49.8	D
2	12th Street/Main Street	16.1	B	40.5	D
3	North Fortuna Boulevard/Main Street-Rohnerville Rd	2.1	A	4.3	A
4	Rohnerville Road/Newburg Road	13.8	B	28.1	D
6	South Fortuna Blvd/Newburg Rd	29.4	C	42.9	D
8	12th Street-Riverwalk Drive/U.S. 101 SB Ramps	14.3	B	15.7	B
9	South Fortuna Boulevard/Redwood Way	23.1	C	25.4	C
10	Rohnerville Road/Redwood Way	4.7	A	5.5	A
11	S Fortuna Blvd-Ross Hill Rd/Kenmar Rd	27.1	C	32.0	C
13	Kenmar Rd/Eel River Dr	1.8	A	2.5	C
14	Kenmar Rd/ US 101 NB Ramps	11.2	B	12.2	B
15	Kenmar Rd/ US 101 SB Ramps	13.3	B	31.0	C
16	Rohnerville Road/School Street-Mill Street	10.9	B	13.8	B
17	Bryant Lane/Main Street				
	<i>Southbound (Bryant Lane) Approach</i>	59.9	F	261.7	F
18	12th Street/Loni Drive	11.3	B	11.6	B
19	Extension of Redwood Way/Newburg Rd	4.4	A	11.2	B
20	Fortuna Blvd/Strongs Creek	3.6	A	7.1	A
22	Ross Hill Road/ Thelma Street	2.2	A	2.6	A
<p><i>Source: SHN Consulting Engineers & Geologists, Inc.</i> <i>Notes: Delay is measured in average seconds per vehicle, LOS = Level of Service, Bold = Deficient Levels of service, ** = Delay is greater than 120 seconds.</i></p>					

If and when development occurs during the General Plan planning horizon the size of the project will trigger the applicant to prepare a traffic study consistent with the General Plan Policies. This will provide a mechanism so that new development can mitigate future LOS conditions if necessary.

The future Bryant Lane/Main Street, *Southbound (Bryant Lane) Approach* mitigation is not considered economically feasible because of the high costs of Main Street improvements to accommodate a relatively small amount of residential traffic from Bryant Lane. The infeasibility is due to a limited physical area to accommodate improvements and existing development surrounding the intersection. Also, this ‘T’ intersection is at the northeasterly edge of the City,

and the area of potential development that could impact LOS is in the unincorporated area, and beyond the City purview. The amount of projected city traffic from Bryant lane is limited due to the small area residential area served within City limits and limited residential development potential using that access. The intersection currently operates at an acceptable LOS and implementation of Policies TC-1.3 and TC-1.4 may reduce traffic impacts to a less-than-significant level. Turning movement delays projected for Bryant lane southbound are associated with increased northbound trip generation on Main Street, which also serves as the northbound Highway 101 onramp.

With implementation of the mitigation measures indicated and the General Plan policies, all of the critical intersections identified are anticipated to operate at an acceptable LOS at buildout will be reduced to less-than-significant except for one, which would be Significant Unavoidable.

Impact 4.1-2: Substantially increase hazards due to a design feature or incompatible uses.

Discussion

Implementation of the transportation specific policies and programs contained in the General Plan will minimize hazards by establishing design standards for a variety of traffic, transit, and a variety of transportation modes under existing conditions and for future demand in Fortuna. Other policies including land use and circulation concepts will be designed early during the design phases of citywide development to minimize land use conflicts.

Intersection and roadway design in the future will have to meet applicable standards that include appropriate geometry for the safe movement of all types of transportation. These standards currently include: City of Fortuna zoning and development standards; Caltrans Highway Design Manual, AASHTO Geometric Design of Highways and Streets, California Building Code, California Fire Code, and Caltrans Manual of Uniform Traffic Control Devices. These requirements will be implemented by the City through the subdivision and development review process.

Determination of Level of Significance

Less-Than-Significant

Mitigation

No mitigation required

Impact 4.1-3: Result in inadequate emergency access.**Discussion**

Intersection and roadway design in the future will have to meet applicable standards that include appropriate geometry that result in adequate emergency vehicle access. These standards currently include: City design standards; Caltrans Highway Design Manual, AASHTO Geometric Design of Highways and Streets, California Building Code, California Fire Code, and Caltrans Manual of Uniform Traffic Control Devices. These requirements will be implemented by the City through the subdivision and development review process.

Determination of Level of Significance

Less-Than-Significant

Mitigation

No mitigation required

Impact 4.1-4: Result in inadequate parking capacity.**Discussion**

Implementation of the General Plan includes new development in the Planning Area that will require parking areas based upon the specific parking requirements generated by a particular land use. The City's Zoning Code contains parking standards (to be updated subsequent to General Plan adoption to comply with applicable General Plan policies) to ensure adequate levels of parking area are provided under all future development in the City. Furthermore, implementation of the parking specific policies and projects contained in the General Plan would establish design standards for improved parking access, improved visibility and promoting shared parking facilities

Determination of Level of Significance

Less-Than-Significant

Mitigation

No mitigation required

References Cited

California Department of Transportation. (2008). *Highway Design Manual*. Sacramento: Caltrans.

---. (September 26, 2006). *California Manual on Uniform Traffic Control Devices*. Sacramento: Caltrans.

Dowling Associates, Inc. (accessed 2008). "Traffix" < <http://www.traffixonline.com/>>. Oakland: Dowling.

Institute of Transportation Engineers (July 2004) Trip Generation. Washington, D.C.: ITE Journal.

Transportation Research Board. (2000). *Highway Capacity Manual, 2000 Edition*. NR: TRB.

4.2 BICYCLE AND PEDESTRIAN FACILITIES

Environmental Setting

The purpose of this section is to summarize existing information regarding the City of Fortuna's bicycle and pedestrian network. A safe, convenient, comfortable, accessible and comprehensive bicycle and pedestrian network is a vital component of Fortuna's infrastructure to ensure mobility throughout the city and to ensure that Fortuna is an attractive and vibrant community. Bicycle and pedestrian facilities provide a low-cost mobility to the non-driving public, and are excellent forms of recreation, offering potential health benefits to the entire community.

Pedestrian Facilities

Pedestrian facilities (sidewalks on public streets) are provided in varying coverage throughout Fortuna. While historic downtown Fortuna has nearly complete sidewalk coverage, areas outside of downtown have varying coverage and/or are missing pedestrian facilities altogether. In particular, existing and proposed subdivision developments in Fortuna's southern and eastern quadrants are served by rural roadways that lack pedestrian infrastructure altogether. Several arterial and collector roadways such as Fortuna Boulevard, Redwood Way, Rohnerville Road, Ross Hill Road, and others have significant sidewalk gaps, driveway interruptions, missing curb cuts, and crossing facilities.

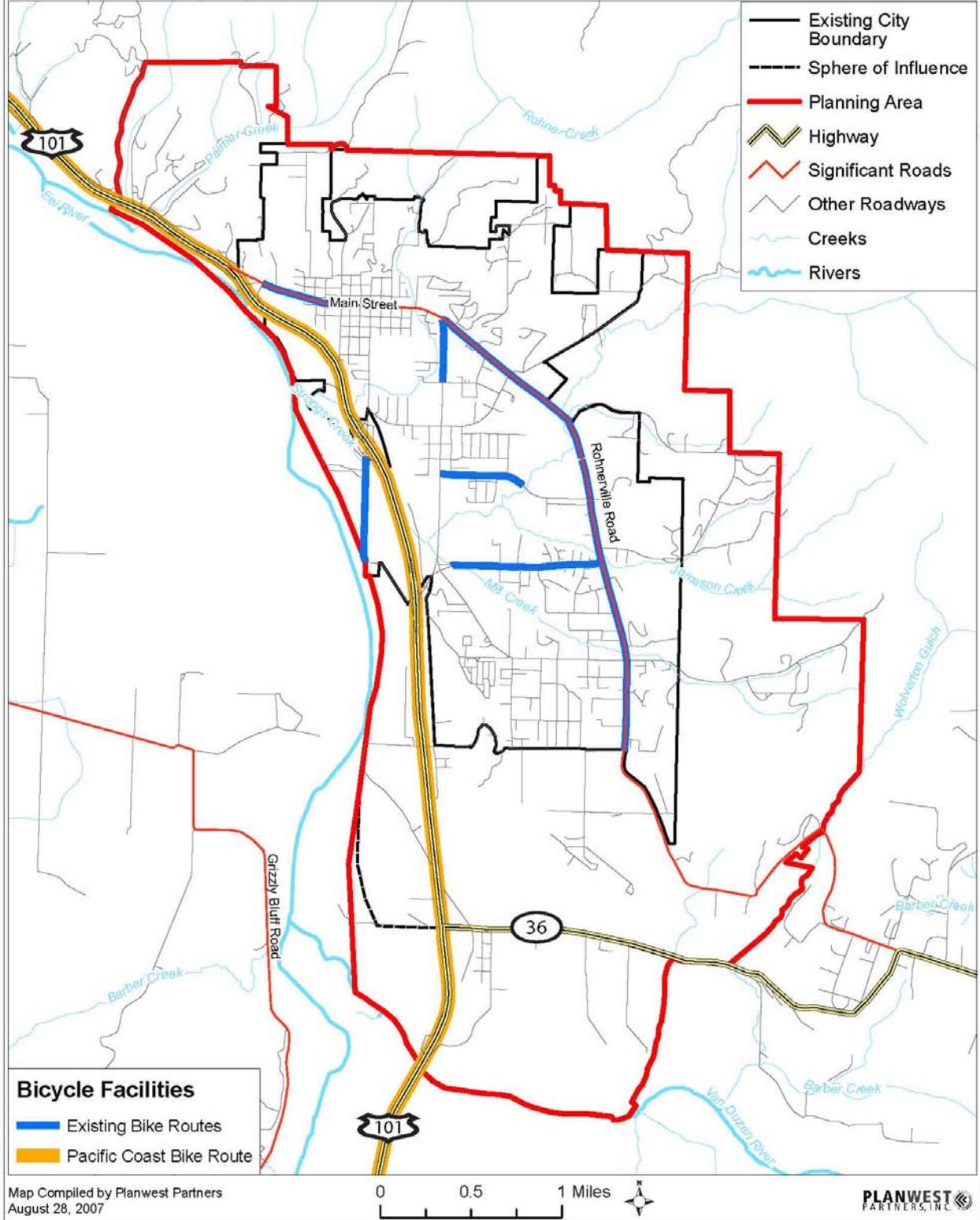
Bicycle Facilities

Fortuna's existing bicycle transportation system consists of bike lanes on Main Street, 12th Street and Rohnerville Road, along with a limited number of bicycle racks for short term parking at area of elementary schools and a handful of other locations. A comprehensive network of bicycle paths, lanes, and routes (see Figure 4-6 for existing bicycle routes) along with long and short term parking supplies are needed to adequately serve Fortuna residents and to meet regional demand for bicycle access.

Applicable Plans, Policies, Codes and Regulations

Americans with Disabilities Act (ADA). Enacted on July 26, 1990, the ADA provides comprehensive rights and protections to individuals with disabilities in the areas of employment, public accommodations, state and local government services, and telecommunications. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency. To implement this goal, the U.S. Access Board has created accessibility guidelines for public rights-of-way. The guidelines address various issues, including roadway design practices, slope and terrain issues, and pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

Fortuna General Plan 2030
Figure 4-6, Existing Bicycle Facilities



Assembly Concurrent Resolution 211 (ACR 211) (May 2002). Assembly Concurrent Resolution acknowledges the importance of bicycling and walking to the State of California and encourages all cities and counties to “implement the policies of [Deputy Directive 64] and the United States Department of Transportation’s design guidance document on integrating bicycling and walking when building their transportation infrastructure.”

Project Development Procedures Manual (Chapter 31: Non-motorized Transportation Facilities). The manual outlines pertinent statutory requirements, planning policies, and implementing procedures regarding non-motorized transportation facilities.
<http://www.dot.ca.gov/hq/oppd/pdpm/pdpm.htm>

Deputy Directive 64 (DD-64), “Accommodating Non-Motorized Travel” (March 26, 2001). The Department fully considers the needs of non-motorized travelers (including pedestrians, bicyclists and persons with disabilities) in all programming, planning, maintenance, construction, operations and project development activities and products. This includes incorporation of the best available standards in all of the Department’s practices. The Department adopts the best practice concepts in the U.S. DOT Policy Statement on Integrating Bicycling and Walking into Transportation Infrastructure.

Director’s Policy 22 (DP-22), “Director’s Policy on Context Sensitive Solutions” (November 2001). The Department supports an approach to managing the transportation system that balances transportation needs with community goals. Solutions involve and integrate community goals in the planning, design, construction, maintenance and operations processes, including accommodating the needs of bicyclists and pedestrians. Context Sensitive Solutions is a collaborative approach that considers the needs and concerns of all stakeholders.

Humboldt County Regional Pedestrian Needs Assessment Study Update (2003). The Regional Pedestrian Needs Assessment Study is a long-range planning document that inventories pedestrian transportation needs in Humboldt County, including the City of Fortuna. The study includes goals, policies, and objectives; documents existing conditions; and provides recommendations for physical improvements.

Federal Statutes and Policies. Federal transportation policy is to increase non-motorized transportation to at least 15 percent of all trips and to simultaneously reduce the number of non-motorized travelers killed or injured in traffic collisions by at least 10 percent (TEA-21, 1998). This policy, which was adopted in 1994 as part of the National Bicycling and Walking Study, remains a high priority for the U.S. Department of Transportation (USDOT). Federal Transportation Legislation provides the funding opportunities, planning processes, and policy language by which states and metropolitan areas can achieve these ambitious national goals.

Accommodating Bicycle and Pedestrian Travel: A Recommended Approach.

“Accommodating Bicycle and Pedestrian Travel: A Recommended Approach” is a policy statement that was adopted by the U. S. Department of Transportation (USDOT) in response to TEA-21. USDOT encourages public agencies, professional organizations, advocacy groups, and any other groups involved in transportation issues to adopt this policy to further promote

bicycling and walking as viable components of the transportation system. The four directives issued in this policy statement address measures to improve bicycle and pedestrian access, convenience, and safety in transportation projects. This policy statement notes that:

“The challenge for transportation planners, highway engineers, and bicycle and pedestrian user groups, therefore is to balance their competing interest in a limited amount of right-of-way, and to develop a transportation infrastructure that provides access for all, a real choice of modes, and safety in equal measure for each mode of travel.”

California Bicycle Transportation Act, Streets and Highways Code 890-894 (1994). The California Bicycle Transportation Act, Streets and Highways Code 890-894 is legislation that seeks "to establish a bicycle transportation system designed and developed to achieve the functional commuting needs of the employee, student, business person, and shopper as the foremost consideration in route selection, to have the physical safety of the bicyclist and bicyclist's property as a major planning component, and to have the capacity to accommodate bicyclists of all ages and skills." A city or county may complete a bicycle transportation plan pursuant to Section 891.2 in order for their project to be considered by the Department for funding. Section 890.6 states the Department, in cooperation with county and city governments, shall establish minimum safety design criteria for the planning and construction of bikeways and roadways where bicycle travel is permitted. Section 890.8 states the Department shall establish uniform specifications and symbols for signs, markers, and traffic control devices to designate bikeways, regulate traffic, and improve safety and convenience for bicyclists, and alert pedestrians and motorists of the presence of bicyclists on bikeways and on roadways where bicycle travel is permitted. Section 891 also states, "All city, county, regional, and other local agencies responsible for the development or operation of bikeways or roadways where bicycle travel is permitted shall utilize all minimum safety design criteria and uniform specifications and symbols for signs, markers, and traffic control devices established pursuant to Sections 890.6 and 890.8."

Highway Design Manual, Chapter 1000, "Bikeway Planning and Design. The Highway Design Manual, Chapter 1000, "Bikeway Planning and Design," provides design standards and guidelines for on- and off-street bikeways. State and local transportation agencies are required to comply with Chapter 1000 mandatory standards as a minimum when implementing new bikeways. Chapter 1000 differs from the rest of the Highway Design Manual in that it also applies to facilities off the State Highway System (California Streets and Highways Code, Sections 890.8 and 891). www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm

Humboldt County Regional Bicycle Transportation Plan (2004). The Regional Bicycle Transportation Plan provides guidance on the development of the regional bicycle transportation system including goals, policies, objectives, and recommendations for physical improvements. The Plan identifies regional bicycle routes through Fortuna.

Methodology

Project and plan impacts are assessed based upon a comparison between existing conditions (baseline), as described in the General Plan Background Report, June 2007, and the future year (2030) conditions. For the purpose of this analysis, the future year conditions are based on the forecasted Plan Horizon Year 2030, and the land uses and transportation improvements described in the General Plan.

Assumptions

- Downtown Fortuna, with its grid street pattern has a developed network of sidewalks, crosswalks, and pedestrian amenities.
- While downtown Fortuna has nearly complete sidewalk coverage, areas outside of downtown have varying coverage and/or are missing pedestrian facilities altogether.
- Several arterial and collector roadways such as Fortuna Boulevard, Redwood Way, Rohnerville Road, Ross Hill Road, and others have significant sidewalk gaps, driveway interruptions, missing curb cuts, and crossing facilities in the pedestrian facility network that impede pedestrian travel to destinations such as shopping, work, schools, and transit.
- Limited pedestrian access across US 101 restricts pedestrian travel between Fortuna's east and west sides. Since several overnight lodging destinations are located west of US 101, this condition restricts visitor access on foot to restaurants and services.
- Recently developed and proposed residential subdivisions lack adequate pedestrian access on the rural roadways that serve them.
- The 2003 Humboldt County Regional Pedestrian Needs Assessment Study contains pedestrian goals, policies, and objectives along with a well developed list of recommended pedestrian facility improvement projects in Fortuna.
- Fortuna's existing bicycle transportation system consists of bike lanes on Main Street, 12th Street and Rohnerville Road, along with a limited number of bicycle racks for short term parking at area elementary schools and a handful of other locations. A comprehensive network of bicycle paths, lanes, and routes along with long and short term parking supplies are needed to adequately serve Fortuna residents and to meet regional demand for bicycle access.
- The 2004 Humboldt County Association of Governments Regional Bicycle Transportation Plan meets the requirements of the Bicycle Transportation Act and contains a well developed list of recommended bikeway and bicycle support facility improvements for Fortuna.
- Existing bike lanes on Main Street and Rohnerville Road are in need of repair in order to meet Caltrans minimum standards.
- Bicycle access over and/or under US 101 is difficult.
- Bicycle parking is needed at schools, shopping centers, along Main Street, at transit stops, parks, and Redwood Memorial Hospital, among others destinations.

Thresholds of Significance

General Plan implementation could impact bicycle and pedestrian facilities if it:

- Disrupts existing pedestrian or bicycle facilities;
- Interferes with planned pedestrian or bicycle facilities; or
- Conflicts with adopted policies, plans, or programs supporting pedestrian and bicycle and transportation.

Implications of the Draft Land Use Diagram

Both residential and non-residential development resulting from the proposed project will generate increased demand for safe and convenient pedestrian facilities, including new facilities and enhancements to existing infrastructure. New residential development in outlying areas of Fortuna will generate the need for sidewalks, pedestrian crossing improvements, and possibly transit stops in new neighborhoods. Similarly, commercial development along existing roadways and in new areas will generate the need for pedestrian access via sidewalks, pathways, crossing enhancements and transit facilities. Additionally, as build out continues, there will be an increasing need to connect pedestrians between the east and west sides of Fortuna, which are divided by US 101, including improvements to the South 12th Street Overpass and the Kenmar Road underpass.

Residential and non-residential development including tourism will generate increased demand for safe and convenient bicycle facilities, including new bicycle paths, lanes and routes, short- and long-term bicycle parking and storage facilities, additional bicycle capacity on transit, and enhancements to existing bicycle infrastructure.

General Plan Policy Response

The proposed General Plan includes the following goals, policies and programs relevant to bicycle and pedestrian facilities.

Bicycle and Trail Facilities

Policy TC-5.1 Fortuna Bike Plan. The City shall strive to fully implement Fortuna's Bike Plan on public streets, both major and minor, to fill in gaps in the existing bicycle network. The City shall also strive to develop the Ultimate Bikeway System identified on the Circulation Diagram, particularly making sure Class II facilities require striping will be coordinated with resurfacing of city streets.

Policy TC-5.2 Bicycle System. The City shall develop and maintain a safe, convenient, and effective bicycle system that encourages increased bicycle use.

Policy TC-5.3 TDA Funds. The City shall urge HCAOG to reserve a minimum of two percent of the Transportation Development Act Funds annually for allocations to pedestrian and bicycle projects.

Policy TC-5.4 Bicyclists' Needs. The City shall consider the needs of bicyclists in new roadways construction and in existing roadway upgrades.

Policy TC-5.5 Rails-to-Trails. The City shall explore the concept of converting any abandoned railroad rights-of-way into multi-use bike and pedestrian paths for local and regional use per Sections 2540 through 2549 of the Streets and Highways Code.

Policy TC-5.6 Bicycle and Pedestrian Linkages. The City shall seek opportunities to strengthen and expand bicycle and pedestrian linkages across Highway 101.

Policy TC-5.7 Bike Facilities. The City shall develop, establish, and maintain adequate bike facilities throughout Fortuna to encourage bicycling as a form of local transportation between residential and non-residential (i.e., commercial, industrial, public/institutional) areas.

Policy TC-5.8 Trail System. The City shall strive to create a system of interconnected trails and pathways that connect districts and neighborhoods throughout the city.

Policy TC-5.9 New Trails. The City shall identify and acquire pedestrian and bicycle trail rights-of-way for from developments that are interlinked and tie significant areas of the city and the surrounding areas together (e.g., Riverwalk District to the Headwaters Forest along the Strong Creek corridor).

Policy TC-5.10 Bicycle Parking. The City shall encourage the development of adequate, convenient, and secure bicycle parking at employment centers, recreational facilities, key transit stops, commercial businesses, Downtown, and other locations where people congregate.

Policy TC-5.11 Retail Bike Parking. The City shall require that large retail developments, such as shopping centers, provide bicycle parking facilities in highly visible areas such as near storefronts.

Policy TC-5.12 Bikeway Standards. The City shall ensure that all bikeways will be developed in compliance with standards adopted by Caltrans and as required by Sections 890 through 894.2 of the Streets and Highways Code.

Policy TC-5.13 Existing Railroad Lines. The City shall view the Northwestern Pacific Railroad (NWPRR) right-of-way as a community asset and design accordingly for the future.

Policy TC-5.14 Future Rail Options. The City shall require that new development adjacent to the NWPRR right-of-way, where appropriate, be designed for future bicycle/pedestrian trail or light rail station access.

Policy TC-5.15 Bicycle and Pedestrian Paths. The City shall develop, establish, and maintain a system of bicycle and pedestrian paths on suitable transportation corridors with trail linkages to park facilities and existing bicycle and pedestrian paths.

Policy TC-5.16 Pedestrian and Bicycle Path Linkages. The City shall investigate possible pedestrian and bicycle path linkages between Rohner Park, Main Street, 12th Street and the Eel River via creekside paths established during flood mitigation projects.

Policy TC-5.17 Riverwalk District Access. The City shall work with Caltrans to identify solutions for both reconnecting Fortuna with the Riverwalk District and for improving pedestrian and bicycle travel options affected by State Highway 101.

Policy TC-5.18 Multi-Use Access. The City shall develop, establish, and maintain additional multi-use public access point to the Eel River.

Program TC-16. The City shall update its Bicycle Transportation Plan to reflect changes in the General Plan.

Program TC-17. The City shall revise the Zoning Ordinance to incorporate bicycle parking standards into its parking requirements.

Program TC-18. The City shall work with local school districts to develop a bicycle education for all bicyclists, especially those people five to 12 years of age, and to have an active law enforcement program pertaining to bicycle safety which is compatible with other law enforcement priorities.

Pedestrian Facilities

Policy TC-4.1 Accessibility. The City shall ensure sidewalks are wide enough for pedestrian convenience and conform to American with Disabilities Act standards.

Policy TC-4.2 New Developments. The City shall continue to require new development to finance and install sidewalks and pedestrian pathways connecting them to existing sidewalks or widening the right-of-way fronting the development to accommodate new sidewalks.

Policy TC-4.3 Specific Plans. The City shall encourage specific development plans to include design continuity of pedestrian access that enables residents to walk from their homes to places of work, recreation, and shopping.

Policy TC-4.4 Regional Pedestrian Needs Assessment Update. The City shall implement the projects identified in the Humboldt County Association of Governments (HCAOG) Regional Pedestrian Needs Assessment study.

Policy TC-4.5 Assessment Districts. The City shall consider using assessment districts to complete the sidewalk system when 75 percent of the lots in a given area have sidewalks.

Policy TC-4.6 Pedestrian Convenience. The City shall promote pedestrian convenience and safety by connecting sidewalks in residential areas with commercial, shopping, and employment centers.

Policy TC-4.7 Pedestrian Trails Interconnection. Where feasible, the City shall loop and interconnect pedestrian trails.

Policy TC-4.8 Pedestrian Crossings. The City shall provide pedestrian crossings at appropriate intervals along new roadways that will adequately serve new retail, office, and industrial development, residential development, parks, and schools.

Policy TC-4.9 Strongs Creek Parkway. The City shall work with surrounding landowners and pursue funding and design assistance to provide the future development of Strongs Creek Parkway.

Policy TC-4.10 Seasonal Pedestrian Undercrossing. The City, in conjunction with Caltrans and the NCRA, will construct a seasonal pedestrian undercrossing within the Strongs Creek channel as part of the proposed River to the Headwaters trail system along Strongs Creek.

Program TC-13. The City shall create and maintain a comprehensive list of specific corridors throughout Fortuna in need of sidewalks. This list should include, but not be limited to:

- Rohnerville Road between existing improvements;
- Redwood Way between existing improvements to Rohnerville Road;
- New arterial and collector streets not yet developed;
- Drake Hill Road from Rohnerville Road to Thelma Road;
- Fortuna Blvd from existing improvements south to Kenmar Road;
- Ross Hill Road from existing improvements north to Kenmar Road;
- Kenmar Road from Fortuna Boulevard westerly to Riverwalk Drive;
- Riverwalk Drive easterly from existing improvements to Kenmar Road;
- Fortuna Boulevard sidewalk-mainline separation with landscaping;
- Widened bike-lanes through vehicular lane width reductions on Main Street;
- Enhanced pedestrian safety devices on 12th Street; and
- Main Street between Sixth Street and U.S. 101, and Thelma Street between Drake Hill Road and School Street.

Program TC-14. The City shall cooperate with local schools to create a Safe Routes to School program.

Program TC-15. The City shall prepare a master plan for the Strongs Creek Parkway connecting the Riverwalk District to the eastern City Limits.

Additional Relevant Policies and Programs

Policy TC-1.1 Reducing Mode Conflicts. The City shall seek to minimize conflicts between pedestrians, automobiles, and bicycles.

Policy TC-1.3 Balanced Transportation System. The City shall strive to meet the LOS standard through a balanced transportation system that provides alternatives to the automobile and by promoting pedestrian, bicycle, and transit connections between employment areas and major residential and commercial areas.

Policy TC-1.4 Improved LOS. The City shall identify economic, design, and planning solutions to improve levels of service currently below LOS C. Where physical mitigation is infeasible, the City shall consider developing programs that enhance alternative access or other otherwise reduce automobile travel demand.

Policy TC-1.14 Street Maintenance. The City shall strive to maintain existing streets, alleys, and sidewalks, and require that new streets and sidewalks be built to City and other standards.

Policy TC-1.22 City Street Maintenance. The City shall pave, resurface, and maintain all public roads within city limits, to promote and maintain the highest level of mobility for drivers, cyclists, and pedestrians.

Policy TC-1.24 Rohnerville and Drake Hill Road Improvements. The City shall support future improvements to Rohnerville Road and Drake Hill Road. Improved roads will provide two traffic and parking lanes, two-way left-turn lane, bicycle lanes, and pedestrian sidewalks. These improvements will not be incorporated within the serpentine segment of Rohnerville Road south of Drake Hill.

Policy TC-1.28 Seasonal Pedestrian Undercrossing. The City, in conjunction with Caltrans and the NCRA will construct a seasonal pedestrian undercrossing within the Strongs Creek channel as part of the proposed River to the Headwaters trail system along Strongs Creek.

Policy TC-3.4 Alternative Transportation Linkages. The City shall link other modes of transportation (e.g., pedestrian and bike routes) with public transportation to facilitate their use.

Program TC-7. The City shall require that proposed new development provide circulation improvements that may include new roadways, islands, traffic controls, dedicated turn lanes, sidewalks, pedestrian and bicycle lanes or paths, transit stops, and signage.

Impacts and Mitigation

Impact 4.2-1: Discourage or interfere with pedestrian circulation.

General Plan implementation could discourage or interfere with pedestrian circulation if appropriate measures to facilitate safe and convenient pedestrian travel are not provided.

Discussion

Increased residential units and commercial development resulting from General Plan implementation could generate a substantial demand for safe and convenient pedestrian facilities. Implementation of the pedestrian specific policies and projects contained in the General Plan will result in new pedestrian connections, sidewalks, crossing enhancements, amenities, and pedestrian programs to serve both existing and future demand in Fortuna. Furthermore, implementation of the General Plan will support implementation of the Humboldt County Association of Government's 2003 Regional Pedestrian Needs Assessment Study including the policies it sets forth and the projects proposed within the City of Fortuna.

Determination of Level of Significance

Less-than-significant.

Mitigation

None necessary.

Impact 4.2-2: Increased need for new pedestrian facilities.

General Plan implementation could generate the need for new pedestrian facilities including sidewalks, pathways, street furniture, transit shelters and safety enhancements such as high visibility crosswalks and crossing control devices.

Discussion

Increased residential units and commercial development resulting from General Plan implementation could generate a substantial demand for new safe and convenient pedestrian facilities. Implementation of the pedestrian specific policies, projects, and programs contained in the General Plan will result in the development of new pedestrian connections, sidewalks along new streets as well as sidewalk infill projects, pedestrian crossing enhancements, and amenities for pedestrians as a component of new development to serve both existing and future needs in Fortuna. Furthermore, implementation of the General Plan will support implementation of the Humboldt County Association of Government's 2003 Regional Pedestrian Needs Assessment Study including the policies it sets forth and the projects it proposes within the city of Fortuna.

Determination of Level of Significance

Less-than-significant.

Mitigation

None necessary.

Impact 4.2-3: Discourage or interfere with bicycle circulation.

General Plan implementation could discourage or interfere with bicycle circulation if appropriate measures to facilitate safe and convenient bicycle travel are not provided.

Discussion

General Plan implementation could generate a substantial demand for safe and convenient bicycle facilities. Implementation of the bicycle specific policies and projects contained in the General Plan will result in new bikeways, bicycle parking, and bicycle programs to serve existing and future demand in Fortuna. Furthermore, implementation of the General Plan will support implementation of the Humboldt County Association of Government's 2004 Regional Bicycle Transportation Plan Update including the policies it sets forth and the projects it proposes within the City of Fortuna.

Determination of Level of Significance

Less-than-significant.

Mitigation

None necessary.

Impact 4.2-4: Increased need for new bicycle facilities.

General Plan implementation could generate the need for new bicycle facilities and safety enhancements.

Discussion

General Plan implementation could generate a substantial demand for new bicycle facilities and enhancements including Class I bikeways, Class II bike lanes, Class III bike routes, short and long-term bicycle parking, and storage facilities and changing amenities, as well as programmatic needs such as education and enforcement activities. Implementation of the bicycle specific policies, projects, and programs contained in the General Plan will result in the development of new bikeways, bicycle parking, and bicycle programs as a component of new development and a function of the City to serve both existing and future bicycling needs in Fortuna. Furthermore, implementation of the General Plan will support implementation of the Humboldt County Association of Government's 2004 Regional Bicycle Transportation Plan Update including the policies it sets forth and the projects it proposes within the City of Fortuna.

Determination of Level of Significance

Less-than-significant.

Mitigation

None necessary.

4.3 PUBLIC TRANSPORTATION

Environmental Setting

The purpose of this section is to summarize existing information regarding the City of Fortuna's public transportation system, an increasing component of Fortuna's transportation network. Public transportation provides an option to private automobile travel and increases mobility options for Fortuna's youth, elderly, and mobility impaired residents and workers.

Redwood Transit Service (RTS) is the principal transit service within Fortuna, providing local and intercity service. Operated by the Humboldt Transit Authority (HTA), RTS provides fixed route service along the US 101 corridor between Trinidad and Garberville. The County of Humboldt and the Cities of Arcata, Eureka, Fortuna, Trinidad and Rio Dell contribute funds to operate Redwood Transit Service under a joint powers agreement. The RTS fleet consists of ten large transit vehicles and one smaller vehicle equipped with wheelchair lifts and accessible to disabled persons. All RTS busses are also equipped with front-loading bicycle racks that accommodate two bicycles. In the event that the racks are full and space permits, bicycles are allowed inside the bus.

Fortuna Senior Transit serves senior citizens (50 and older) and persons with disabilities within the Fortuna city limits. The service operates on a call-in basis Monday through Saturday. Figure 4-7 illustrates the transit routes in the City of Fortuna.

Applicable Plans, Policies, Codes and Regulations

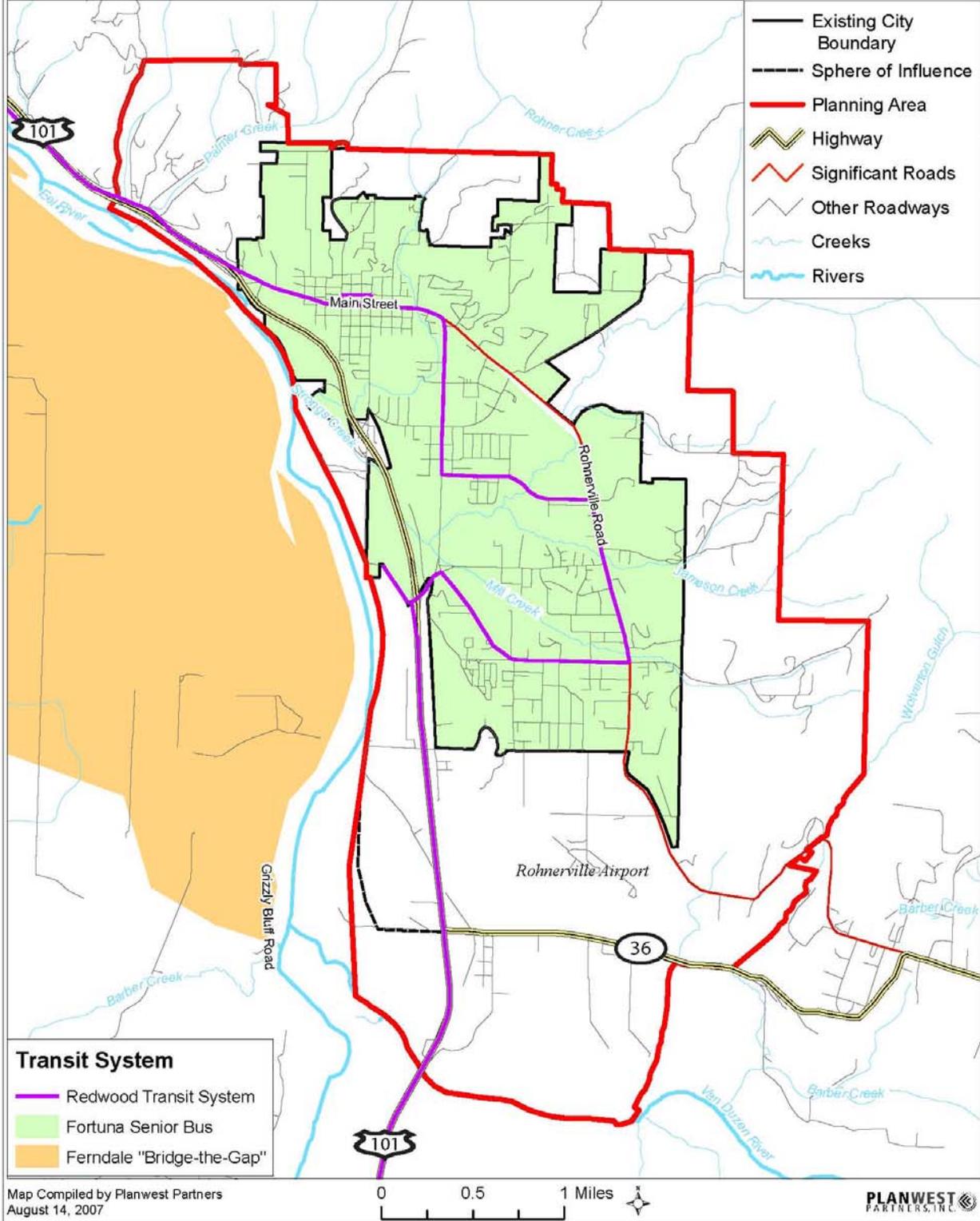
Federal and State. The Federal Transit Act, approved in 1976, is the governing Federal legislation for transit related issues. The California Transportation Plan (CTP) provides guidance on inter-regional transit issues including rail. The California Transportation Development Act provides guidance on local and regional programming of transit funds.

Regional. Regional transit service is addressed in the Humboldt County Regional Transportation Plan. The Humboldt County Association of Governments has formally pledged its support for public transportation programs, including their continued funding as a necessary public service.

Methodology

Project impacts were assessed based upon a comparison between existing conditions (baseline), as described in the General Plan Background Report, June 2007, and the future year (2030) conditions. For the purpose of this analysis, the future year conditions are based on the forecasted Plan Horizon Year 2030, and the land uses and transportation improvements described in the proposed General Plan. According to the Humboldt County 2006 Regional Transportation Plan Update short and long-term action plans for transit consist of the expansion or replacement of the existing transit vehicle fleet and a bus shelter improvement program.

Fortuna General Plan 2030
Figure 4-7, Existing Transit System



Assumptions

- Handicap access and frontloading bicycle racks are provided on all RTS transit vehicles.
- All weather bus shelters are provided for transit riders at the following locations in Fortuna: Kenmar Road/Riverwalk Drive, Smith Lane/Fortuna Boulevard, Fortuna Boulevard/ Redwood Village Shopping Center, and N Street/11th Street.
- RTS is the principal transit service within Fortuna, providing local and intercity service.
- Existing fixed route transit provides limited access to residential areas in Fortuna.
- Fortuna Senior Transit serves senior citizens (50 and older) and persons with disabilities within the Fortuna city limits.

Thresholds of Significance

General Plan implementation could result in significant impacts to public transportation if it:

- Conflicts with adopted policies, plans, or programs supporting active transportation (i.e. pedestrian and bicycle); or
- Results in a reduction of bus service, diminish access to transit facilities, or otherwise fail to meet demand for transit services.

Implications of the Draft Land Use Diagram

Residential and non-residential development from General Plan implementation will generate increased demand for transit service and for new facilities and enhancements to existing infrastructure. New residential development in the northern and eastern outlying areas of the Planning Area will also generate the need for expanded fixed transit service to and within these areas.

General Plan Policy Response

The proposed General Plan includes the following goals, policies and programs relevant to public transportation.

Public Transportation

Goal TC-3. To provide and maintain viable public transportation services, with convenient and efficient access to workplaces, shopping and other destinations that improve mobility, relieve congestion, and address environmental conditions.

Policy TC-3.1 Regional Coordination. The City shall work with HCAOG, the Humboldt Transit Authority, and the Redwood Transit Service to promote and support public transit services that meet the local and regional needs of residents and visitors.

Policy TC-3.2 Fixed-Route Transit. The City shall work with HCAOG, the Humboldt Transit Authority, and Redwood Transit Service to expand fixed-route transit service to serve new development areas, including direct connections to employment, residential, and commercial areas.

Policy TC-3.3 Transit Funding. The City, with assistance from HCAOG, shall continue to provide funding mechanisms for community transit services and require that new developments generating large-scale commercial, office, and/or residential uses be adequately served by transit.

Policy TC-3.4 Alternative Transportation Linkages. The City shall link other modes of transportation (e.g., pedestrian and bike routes) with public transportation to further facilitate their use.

Policy TC-3.5 Bus Transit. The City shall work with the Humboldt Transit Authority and the Redwood Transit Service to implement bus transit services that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.

Policy TC-3.6 Special Needs Transit Users. The City shall consider the transit needs of senior, disabled, minority, low-income, and transit-dependent persons in making decisions regarding transit services, in compliance with the Americans with Disabilities Act.

Policy TC-3.7 Family-Friendly Transit. The City shall consider family transportation needs and shall promote safe transit services between school, home, shopping, and child care.

Policy TC-3.8 Bus Turnouts and Shelters. The City shall work with Humboldt Transit Authority to locate bus turnouts on arterial streets.

Policy TC-3.9 Express Bus Service. The City shall encourage the development of express bus lines that link Fortuna with the Eureka, Arcata and greater North Coast area.

Program TC-12. The City shall require applicants of proposed new subdivisions, planned unit developments, and other large development projects (e.g., residential projects over 20 units, commercial/office/industrial projects over 10,000 sq. ft.) to work with Redwood Transit Service to extend transit service and transit stop facilities, if requested.

Regional Transportation Coordination

Goal TC-7. To coordinate City-planned transportation and circulation improvements through HCAOG with county, State, and Federal transportation systems.

Policy TC-7.1 Local Funding. The City shall continue to work with the County, HCAOG, Caltrans, and other jurisdictions and agencies to maximize additional funding for local transportation facilities and provide supplementary local bus service to residents of Fortuna.

Program TC-20. The City, in concert with the Humboldt Transit Authority (HTA), shall review the City’s current funding contribution for Redwood Transit Service bus service under the HTA Joint Powers Agreement to ensure that the City is paying its fair share of regional transit service costs.

Program TC-21. The City shall coordinate with other local transit providers to develop a transit network providing access to regional transit.

Additional Relevant Policies and Programs

Policy TC-1.3 Balanced Transportation System. The City shall strive to meet the LOS standard through a balanced transportation system that provides alternatives to the automobile and by promoting pedestrian, bicycle, and transit connections between employment areas and major residential and commercial areas.

Policy TC-1.4 Improved LOS. The City shall identify economic, design, and planning solutions to improve levels of service currently below LOS C. Where physical mitigation is infeasible, the City shall consider developing programs that enhance alternative access or Other wise reduce automobile travel demand.

Policy TC-5.10 Bicycle Parking. The City shall encourage the development of adequate, convenient, and secure bicycle parking at employment centers, recreational facilities, key transit stops, commercial businesses, Downtown, and other locations where people congregate.

Policy TC-7.1 Local Funding. The City shall continue to work with the County, HCAOG, Caltrans, and other jurisdictions and agencies to maximize additional funding for local transportation facilities and provide supplementary local bus service to residents of Fortuna.

Impacts and Mitigation

Impact 4.3-1: Discourage or interfere with fixed route transit service.

General Plan implementation could impact public transportation when new land uses create an increase in transit ridership, and when new development occurs in areas that are not currently served by the fixed route bus system.

Discussion

Impacts could occur if there is development in areas not currently served by the fixed route bus system. The impact would require mitigation through the implementation of Policies TC-3.2 Fixed-Route Transit requiring fixed route transit service to expand to serve new development areas, TC-3.3 Transit Funding, that requires adequate funding to provide transit expansion into new areas, and TC-3.5 Bus Transit, that requires the city to coordinate with local transit agencies to implement transit service that is responsive to growth patterns.

Determination of Level of Impact

Less-than-significant.

Mitigation

None necessary.

Impact 4.3-2: Generate an increase in transit ridership.

General Plan implementation could impact public transportation if a demand for transit services exceeds the available capacity.

Discussion

Impacts could occur due to an increase in transit ridership. This impact would be associated with new development. The impact will be mitigated through the application of General Plan Policies TC-3.1 requiring coordination with local transit agencies to “promote and support public transit services that meet the local and regional needs of residents and visitors” and TC-3.5 that that the city coordinate with the Humboldt Transit Authority (HTA) and the Redwood Transit Service (RTS) to implement bus transit services that meets existing and future transit demand.

Determination of Level of Impact

Less-than-significant.

Mitigation

None necessary.