Circulation Element

(City Council Adoption – June 14, 2005)
CE1 (City Council Amendment (GPA 08-07-0010) – August 26, 2008)
CE2 (City Council Amendment (GPA 12-11-0005) – February 12, 2013)
CE3 (City Council Amendment (GPA20-01577) – December 8, 2020
CE4 (City Council Amendment (North Truck Route GPA) – 11, 2022)
CE5 (City Council Amendment(GPA22-05068) _____)

only change to Circulation Element is CE 9 Exhibit (pg.30)

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Introduction

The transportation system of a community is vital to its prosperity. Efficient traffic circulation is important to economic viability and the creation and preservation of a quality living environment. The transportation system is also multi-modal, meaning that it provides numerous alternatives to the automobile, such as transit, pedestrian systems, and bicycle facilities so that City of Perris citizens and visitors can access the region by a number of transportation options.

Authority and Purpose

The purpose of the Circulation Element of the General Plan is to provide for a safe, convenient and efficient transportation system for the city. In order to meet this objective, the Circulation Element has been designed to accommodate the anticipated transportation needs based on the estimated intensities of various land uses within the region. This Element describes the extent of physical improvements needed to accommodate anticipated population growth and introduces other techniques (e.g., restricted street parking, transportation systems management plans and congestion management plans), which can be used to improve and maintain an acceptable level of service for the City's circulation system.

In compliance with state law, all city and county general plans must contain a circulation element that designates future road improvements and extensions, addresses non-motorized transportation alternatives, and identifies funding options. This Circulation Element also identifies transportation routes, terminals, and facilities. The intent of the Element is to:

- identify the transportation needs and issues within the City, as well as regional relationships that affect the City's transportation system;
- describe the proposed circulation system in terms of design elements, operating characteristics, and limits of operation, including current standards, guidelines, and accepted criteria for the location, design, and operation of the transportation system;
- consider alternatives other than the single-occupant vehicle as essential in providing services and access to facilities;
- establish policies that coordinate the circulation system with General Plan land use maps and provide direction for future decision-making in the realization of the Circulation Element goals; and
- develop implementation strategies and identify funding sources to provide for the timely application of the Circulation Element goals and policies.

Regional and Local Setting

The City of Perris is located within Riverside County, California (Exhibits CE-1 and CE-2). The transportation system within the City of Perris and its Sphere of Influence is composed of two State highways [the Interstate 215 (I-215) freeway and State Route (SR) 74, an arterial highway], as well as numerous County and City routes (Exhibit CE-4). The public transit system within Perris and within the County includes Riverside Transit Agency (RTA) public transit service, common bus carriers, AMTRAK (intercity rail service), and

Metrolink (commuter rail service). In addition, the City and County transportation systems include general aviation facilities, extensive air passenger facilities in the Southern California and San Diego regions, freight rail service, bicycle facilities, and other services for non-motorized forms of transportation (pedestrian and equestrian trails).

Relationship to Other Technical and Planning Documents

The City of Perris is directly impacted by urban development and growth in the area surrounding the City. In addition to the General Plan, the City of Perris supports several transportation plans and programs that are necessary to manage current traffic demands in addition to planning for the City's future transportation needs.

Regional Transportation Planning

SCAG Regional Transportation Plan
The Regional Transportation Plan (RTP) is a multi-modal, long-range planning document prepared by the Southern California Association of Governments (SCAG), in coordination with federal, state, and other regional, sub regional, and local agencies in southern California. The RTP includes programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight, and finances for the Southern California region (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties). The RTP is prepared every three years and reflects the current future horizon based on a 25-year projection of needs.

The RTP's primary use is as a regional long-range plan for federally funded transportation projects. It also serves as a comprehensive, coordinated transportation plan for all governmental jurisdictions within the region. Each agency responsible for transportation, such as local cities, the County, and Caltrans, has different transportation implementation responsibilities under the RTP. The RTP relies on the plans and policies governing circulation and transportation in each County to identify the region's future multi-modal transportation system. The RTP contains a listing of projects that are believed to be financially feasible within the 25-year time frame. Federally funded projects must be consistent with the RTP.

Copies of the RTP may be obtained from SCAG and can be downloaded from their WEB site at www.scag.ca.gov.

South Coast Air Quality Management Plan
The South Coast Air Quality Management District (SCAQMD), the agency responsible for monitoring air quality in the south coast region, has prepared the Draft 2003 Air Quality Management Plan (AQMP). The Plan identifies how the Air District will attain the federal and State air quality standards through the use of control measures and strategies, including mobile source controls. Mobile source control measures contained in the Plan include High Occupancy Vehicle (HOV) improvements, transit and systems management, information based measures, off-road and on-road emission control measures.

Inland Empire Intelligent Transportation System Strategic Plan
The Inland Empire Intelligent Transportation System (ITS) Strategic Plan was approved by the Riverside County Transportation Commission in 1997. The Strategic Plan contains a list of goals and policies to be followed by responsible agencies within the County to achieve a viable Intelligent Transportation System infrastructure that improves mobility and enhances safety within the region. Nine core ITS components have

been identified by the Riverside County Transportation Commission that are needed to deploy a comprehensive set of Intelligent Transportation System services throughout the metropolitan areas. These components are:

- Freeway Management;
- Transit Management;
- Incident Management;
- Electronic Fare Payment;
- Electronic Toll Collection;
- Railroad Grade Crossings;
- Emergency Management Services; and
- Regional Multimodal Traveler Information.

The City of Perris can benefit from the Plan by identifying appropriate ITS projects that will improve mobility and traveler safety. The Plan includes a process to evaluate the most effective Intelligent Transportation System projects and the benefits of those projects on the transportation system. The Plan can also be used to assist the City with applications for federal or State funding for specific types of Intelligent Transportation System projects.

Exhibit CE-1: Project Location

Exhibit CE-2: City of Perris and Surrounding Communities

Exhibit CE-3: City of Perris

The Riverside County Transportation Commission and the Western Riverside Council of Governments are currently in the process of preparing the Inland Empire Intelligent Transportation System Architecture Plan which identifies how its components should be implemented to attain maximum capability.

County Transportation Planning

Measure A ½ Cent Sales Tax for Transportation

Measure "A" is the half-percent sales tax measure for transportation improvements originally passed by the voters of Riverside County in 1988 for a twenty year period and managed by the Riverside County Transportation Commission (RCTC). The Measure provides funding for transportation projects (highway, transit, and ridesharing) and voters in Riverside County extended Measure A on November 5, 2002 for an additional thirty years. This extension will give the City of Perris and all jurisdictions within Riverside County a significant advantage in the availability of future funding through 2038.

Funding derived from the Measure may be used in combination with other sources of funding. Currently, all the Measure funds available over the 30-year duration are committed to projects.

At the present time, the Measure A Program is having a direct positive impact on the City of Perris's transportation system. Measure A funds are used by Perris on an equal basis with the City's Redevelopment Agency funds.

WRCOG "TUMF" Program

The Western Riverside Council of Governments (WRCOG) has developed a "Transportation Unified Mitigation Fee (TUMF)" Program for Western Riverside County to provide funding for transportation infrastructure and improvements that will be necessary to address congestion and traveler safety. Given the significant funding shortfall anticipated from federal, State, regional, and local funding sources for transportation improvements over the next several years, the TUMF Program is intended to "make whole" the funding gap so that improvements can be accommodated.

A Regional System of Highways and Arterials was identified for TUMF funding based on several transportation network and performance guidelines, including: arterial highway facilities proposed to have a minimum of four lanes at ultimate build-out (not including freeways), facilities that serve multiple jurisdictions and/or provide connectivity between communities both within and adjoining Western Riverside County, facilities with forecast traffic volumes in excess of 20,000 vehicles per day by 2025, facilities with forecast volume to capacity ratio of 0.82 (LOS E) or greater in 2025, facilities that accommodate regional fixed route transit services, and facilities that provide direct access to major commercial, industrial, institutional, recreational or tourist activity centers, and multi-modal transportation facilities (such as airports, railway terminals and transit centers).

Based on the criteria described above the following roadways in the City of Perris have been identified on the regional system of highways and arterials: Oleander, Ramona, Placentia, Evans, Nuevo, Ellis, SR 74, Ethanac and Goetz.

Congestion Management Program

Each urbanized county in California is required to have a Congestion Management Program (CMP). The Riverside County Transportation Commission (RCTC) prepares and implements the CMP for Riverside County. The CMP was originally prepared and

approved by RCTC in 1991 and is updated biennially in accordance with Proposition 111 and other recent legislation.

The CMP was established in the State of California to more directly link land use, transportation, and air quality and to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds, alleviate traffic congestion and related impacts, and improve air quality. In addition, the CMP defines a roadway network and level of service to be maintained on that network. The target level of service for CMP roadways in Riverside County is E, except that the target is LOS F for roadways that were already at F at the inception of the program (1991). The CMP in Riverside County focuses mainly on the monitoring of traffic and level of service.

The Circulation Element describes how the future transportation system will function. This is important for congestion management, since deficiencies along the CMP system must be mitigated when they occur. The ability to anticipate such deficiencies is critical. Understanding the reason for these deficiencies and identifying ways to reduce the impact of future growth and development along a critical CMP corridor will conserve scarce funding resources and help target those resources appropriately.

CMP facilities within the City of Perris include I-215 and SR 74. There are currently no local roadways identified as CMP facilities within the City of Perris. Copies of the CMP may be obtained from RCTC.

Riverside County Integrated Project / CETAP

Riverside County has recognized the potential impacts of population growth and the need to secure necessary infrastructure improvements through extensive land-use planning and the mitigation of potential habitat impacts. One of the most extensive planning initiatives in the country, the Riverside County Integrated Plan (RCIP) seeks to accommodate Riverside County's growing population in a comprehensive plan that addresses conservation, transportation and land use needs for the next several decades. Due to the importance of the circulation and mobility systems in the County, the Community Environmental Transportation Acceptability Process (CETAP) was created as one of three planning efforts of the RCIP in addition to the Multi Species Habitat Conservation Plan, the Coachella Valley Multi Species Habitat Conservation Plan and the General Plan.

The CETAP committee served as an advisory body to the County staff during the development of the Integrated Plan, and made recommendations relating to transportation issues for the County to consider during the General Plan development and review process. The CETAP incorporated three levels of effort:

- identification of transportation corridors;
- development of the General Plan Circulation Element; and
- exploration of options for transit system development in the County.

The transportation corridors that were identified will serve as multi-modal facilities and be an integral part of the long-term strategy to keep Riverside County moving. Thirteen corridors were initially identified and were reduced to four, including: Winchester to Temecula, Hemet to the Corona/Lake Elsinore area, Moreno Valley to San Bernardino County, and Riverside County to Orange County. Within each corridor several alignment alternatives were identified, evaluation

criteria developed, and draft EIS/EIRs for each corridor were prepared. Within the City of Perris, the Ramona/Cajalco Expressway is the designated alignment for the Hemet to Corona/Lake Elsinore corridor.

The County's General Plan is meant to express the community's goals with respect to both human-made and natural environments and sets forth the policies and implementation measures to achieve them for the welfare of those who live, work, and do business in the County.

March Joint Powers Authority General Plan

Referencing Exhibit 2, the City of Moreno Valley, which adjoins the northerly boundary of Perris east of Interstate 215, is a rapidly growing industrial and residential development area. In addition, plans for significant business park, industrial, and residential growth and development are currently being implemented within the Plan Area of the March Air Reserve Base. Significant traffic volumes from this area outside the City will utilize the north-south arterials and the Ramona/Cajalco corridor as well as I-215. Further, residential growth in Southern Riverside County is significant, particularly in and around the I-215 and I-15 junction. The City of Perris has potential to be greatly affected by this regional growth given the availability of land and growing employment base within the City limits. It is therefore important to relate the City of Perris' Circulation system to other County and Regional plans.

Metrolink

"Metrolink" commuter rail system provides service to five Southern California counties: Los Angeles, Ventura, Orange, San Bernardino and Riverside. The rail system is operated by the Southern California Regional Rail Authority (SCRRA) and plans to extend service between the Cities of Riverside and Perris by 2008 - 2010.

Existing Conditions

This section of the Element describes the existing transportation system within the City's General Plan study area. A number of transportation systems are described including:

- Streets and Highways;
- Public/Mass Transportation;
- Non-Motorized Systems;
- Aviation;
- Goods Movement;
- Transportation Systems Management; and
- Intelligent Transportation Systems.

Street and Highway System

Referencing Exhibit CE-4, the northern portion of the City of Perris is mainly bordered by the I-215 Freeway on the west and Oleander Avenue to the north, while the central and southern portion of the City straddles I-215. The only other state maintained roadway in the City is SR 74, which joins Ethanac Road in the east to 4th Street via I-215. The local network is comprised of a variety of roadways that are defined below.

Functional Roadway Classification System

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the type of service they are intended to provide. Fundamental to this process is the recognition that most travel involves movement through a network of roads.
Streets and highways shown on the Circulation Roadway Plan are described and classified according to their primary functions. This current hierarchal system of roadways consists of five basic classifications as follows:

- Freeways and Expressways;
- Primary arterials;
- Secondary arterials;
- Collector streets; and
- Local streets.

Exhibit CE-4 depicts the current roadway network and classification system for the City of Perris.

Roadway Standards

The City of Perris has adopted roadway standards for its local street network. A description of the lane requirements for the various types of roadways within the City of Perris is provided below and typical cross-sections are provided in Exhibit CE-5.

Freeways and Expressways
Interstate 215 runs north to south through the City of Perris and is designated as a freeway. The freeway is 4 lanes south of Redlands Avenue and 6 lanes north of Redlands Avenue. State Route 74 generally runs east-west, connecting Ethanac Road east of Perris with the downtown area and continuing to Navajo Road. Between Case Road and 4th Street, State Route 74 and I-215 are the same roadway. SR 74 is 4 lanes from I-215 west through downtown Perris and is 2 lanes west of Navajo Road and east of I-215. Both roads are owned and maintained by Caltrans. Ramona Expressway is a four-lane expressway providing major east-west travel in northern Perris.

Secondary and Primary Arterial Streets
Arterial streets in general vary from a curb-to-curb width of 64 feet to 86 feet in accordance with the cross sections shown in Exhibit CE-5.

Collector Streets

The width of collector streets can range from 40 feet to 64 feet curb-to-curb with six feet of sidewalk on both sides depending on the particular design and traffic volumes to be served. Collector streets should have adequate capacity at their intersections with arterial streets in order to provide adequate numbers of traffic lanes to serve anticipated volumes within the prescribed level of service standard. This may mean that the curb-to-curb width may be wider for portions of the collector street at the approach to a particular intersection depending on the requirements based on a traffic study.

Local Streets

As general policy, local streets have a 60 feet right-of-way and a curb-to-curb width of 40 feet. Six-foot wide sidewalks are generally included in general on both sides of local streets. In industrial areas, the curb-to-curb width may be widened from 44 feet to 56 feet.

Exhibit CE-4: City of Perris Existing Roadway Network

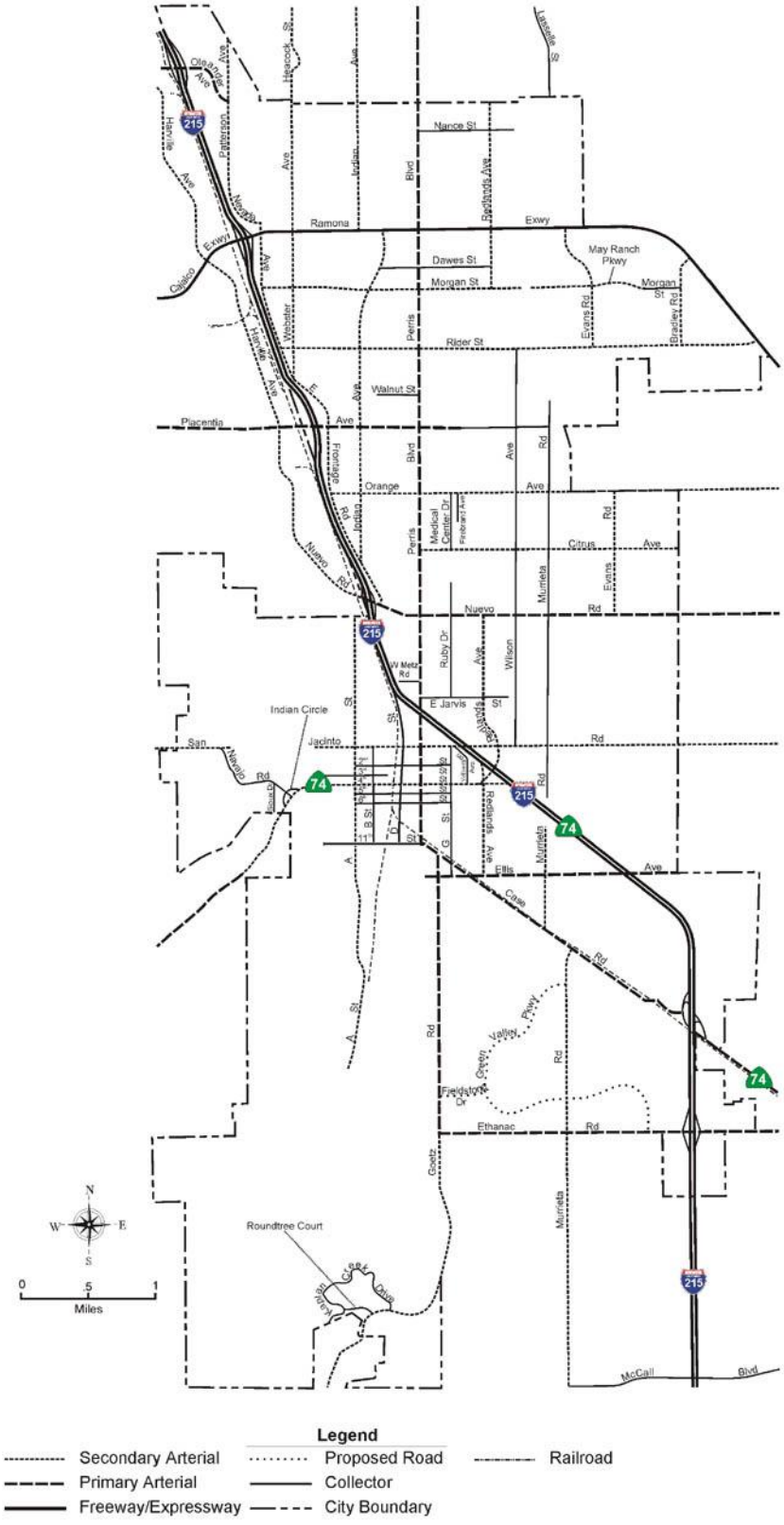
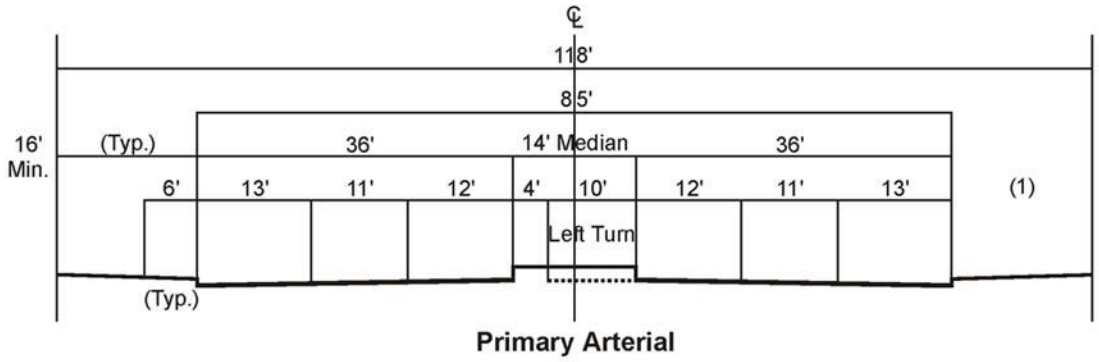
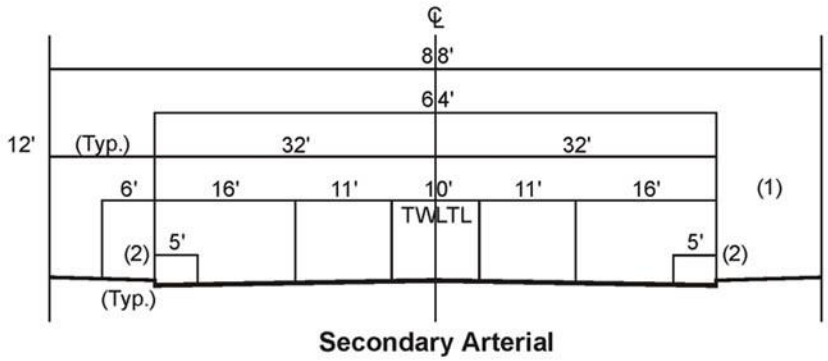


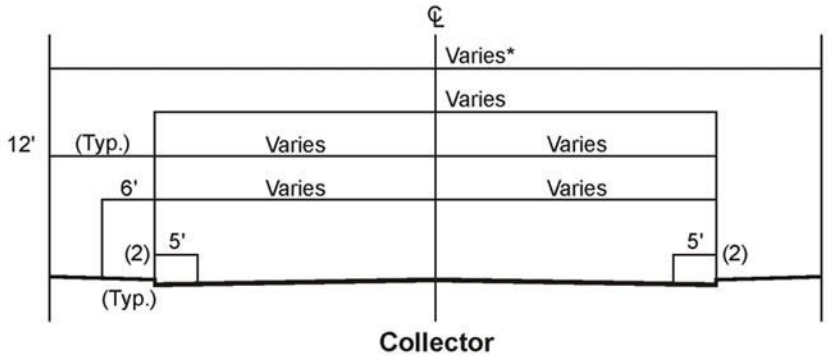
Exhibit CE-5: Typical Roadway Cross-Sections



Primary Arterial



Secondary Arterial



Collector

Legend

(1) No stopping any time both sides.

(2) Bike lane where designated.

* The width of the collector street can range from 40 feet to 64 feet curb-to-curb.

TWLTL = Two Way Left Turn Lane

Level of Service Analysis:
The Circulation Element has been developed in recognition of the need to relieve existing congestion and to provide a circulation system that can accommodate future anticipated growth. Levels of Service (LOS) standards are used to assess the performance of a street or highway system and the capacity of a roadway. An important goal when planning the transportation system is to maintain acceptable levels of service along the federal and state highways and the local roadway network. To accomplish this, the California Department of Transportation (Caltrans), City of Perris, the County of Riverside, and other local agencies adopt minimum levels of service to determine future infrastructure needs.

According to Caltrans policy, roadways maintained by Caltrans (I-215 and SR 74 in the City of Perris) must maintain a minimum LOS of "D". The City of Perris currently has an adopted minimum LOS of "E" (based on the 1991 General Plan Circulation Element) along its local roads. The process of evaluating roadways can be accomplished by applying this minimum LOS method to both segments and intersections.

Segment Analysis:
Segment LOS is important in order to understand whether the capacity of the entire roadway can accommodate future traffic volumes. Table CE-1 provides a definition of segment LOS. The performance criteria used for evaluating volumes and capacities on the City street system for this Element were estimated using the Modified Highway Capacity Manual (HCM)-Based LOS Tables (Table CE-2 and Appendix A). These LOS Tables were also used to calculate segment LOS during development of the Riverside County General Plan Circulation Element. The Tables indicate the capacity of individual street and highway segments based on numerous roadway variables (design speed, signalized intersections per mile, number of lanes, etc.). These variables were identified and applied to reflect existing traffic LOS conditions in the City of Perris.

Traffic volumes used to develop these LOS calculations were obtained through a count program conducted for this Circulation Element and from various relevant studies conducted by the City of Perris within the past year. Table CE-3 and Exhibit CE-6 document the existing Average Daily Traffic (ADT) for segments within the City and the corresponding LOS, based on Table CE-2.

Referencing Table CE-3 and Exhibit CE-6 the LOS of roadways in Perris ranges from LOS "A" through "C". On I-215 the range is LOS "A" through "D". Since the current city adopted minimum LOS is "E" there are no deficiencies at this time on any City streets and the number of through lanes is currently adequate for capacity.

Table CE-1: Segment Level of Service Definitions (2000 Highway Capacity Manual)

Level of Service	Definition
A	Represents free flow. Individual vehicles are virtually unaffected by the presence of others in the traffic stream.
B	Is in the range of stable flow, but the presence of other vehicles in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
C	Is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual vehicles becomes significantly affected by interactions with other vehicles in the traffic stream.
D	Is a crowded segment of roadway with a large number of vehicles restricting mobility and a stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
E	Represents operating conditions at or near the level capacity. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
F	Is used to define forced or breakdown flow (stop-and-go gridlock). This condition exists when the amount of traffic approaches a point that exceeds the amount that can travel to a destination. Operations within the queues are characterized by stop and go waves, and they are extremely unstable.

Table CE-2: Perris Roadway Capacity / Level of Service [1]

Roadway Classification	*Number of Lanes*	*Maximum Two-Way Average Daily Traffic (ADT)* [2]				
		LOS A	*LOS B*	*LOS C*	*LOS D*	*LOS E*
Collector	2	7,800	9,100	10,400	11,700	13,000
Collector	4	15,540	18,130	20,700	23,300	25,900
Arterial	2	10,800	12,600	14,400	16,200	18,000
Arterial	4	21,540	25,130	28,700	32,300	35,900
Arterial	6	32,340	37,730	43,100	48,500	53,900
Expressway	4	24,540	28,630	32,700	36,800	40,900
Expressway	6	36,780	42,910	49,000	55,200	61,300
Expressway	8	49,020	57,190	65,400	73,500	81,700
Freeway	4	45,900	53,550	61,200	68,900	76,500
Freeway	6	70,500	82,250	94,000	105,800	117,500
Freeway	8	96,300	112,350	128,400	144,500	160,500
Freeway	10	120,360	140,420	160,500	180,500	200,600

[1] All Capacity Exhibits are based on optimum conditions and are intended as guidelines for planning purposes only.
[2] Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual Level of Service Tables.

Intersection Analysis:
The circulation system of the City of Perris is primarily composed of a system of signalized and unsignalized arterial and collector facilities. The vast majority of system vehicle delay occurs at the signalized intersections because vehicles are stopped to allow cross traffic to clear. In addition to evaluating the LOS for roadway segments, some major intersections within the City of Perris were evaluated to determine current LOS. The level of service standards applied to calculate intersection LOS are in accordance with the current edition of the Highway Capacity Manual (HCM) which includes the input of truck percentages at each intersection.

Tables CE-4 and CE-5 indicate the ranges of average stop time delay for a vehicle at signalized and unsignalized intersections for the various levels of service ranging from "A" through "F". Intersection turning movements were counted, roadway geometrics identified and various studies conducted by the City of Perris were reviewed in calculating LOS. Appendix B contains the Highway Capacity Manual LOS analysis at the seven major intersections counted for this study. Table CE-6 and Exhibit CE-7 show the existing LOS at major intersections in the City of Perris. Appendix "B" contains the actual counts and calculations used in determining these current Levels of Service.

Referencing Table CE-6 and Exhibit CE-7, the intersection LOS in the City ranges from "C" through "F". Based on the current City adopted minimum LOS of "E" the following intersections are deficient within the City:

- I-215 SB and Cajalco Expressway – PM
- I-215 NB and Ramona Expressway – PM
- Nuevo Road and Ruby Drive – AM and PM (unsignalized)
- I-215 NB and Redlands Avenue – PM

In the case of existing conditions in the City of Perris, the segment analysis indicated favorable levels of service while the intersection analysis indicated several deficiencies. This indicates that the number of through lanes currently provided for city streets is appropriate for existing conditions and that some intersection improvements are needed.

Table CE-3: Existing Segment Average Daily Traffic (ADT) & Level of Service (LOS)

Count Taken 9/02	Street	Segment	Classification	Number of Lanes	ADT	LOS
23	11th Street	A Street - B Street	Collector	2	4,631	A
24	11th Street	D Street - Perris Boulevard	Collector	2	6,041	A
	2nd Street	B Street - C Street	Collector	2	1,800	A
	2nd Street	D Street - Perris Boulevard	Collector	2	900	A
	5th Street	B Street - C Street	Collector	2	1,100	A
	5th Street	D Street - Perris Boulevard	Collector	2	2,200	A
	6th Street	B Street - C Street	Collector	2	800	A
	6th Street	D Street - Perris Boulevard	Collector	2	600	A
20	A Street	5th Street - 6th Street	Secondary Arterial	2	5,625	A
14	A Street	South of Nuevo Road	Secondary Arterial	2	5,348	A
	C Street	2nd Street - San Jacinto Road	Collector	2	5,000	A
	C Street	3rd Street - 2nd Street	Collector	2	8,700	B
	C Street	5th Street - 4th Street	Collector	2	100	A
	Cajalco Expressway	Harville Avenue - I-215	Freeway	4	14,500	A
25	Case Road	G Street - Ellis Avenue	Primary Arterial	2	1,975	A
28	Case Road	West of I-215	Primary Arterial	2	2,958	A
	D Street	11th Street - 6th Street	Collector	2	5,400	A
	D Street	2nd Street - San Jacinto Road	Collector	4	12,500	A
	D Street	3rd Street - 2nd Street	Collector	4	2,800	A
	D Street	5th Street - 4th Street	Collector	2	7,389	A
21	D Street	5th Street - 6th Street	Collector	2	7,389	A
4	D Street	San Jacinto Road - I-215	Collector	4	14,710	A
	Ethanac Road	Goetz Road - Murrieta Road	Primary Arterial	2	2,200	A
	Ethanac Road	I-215 - SR-74	Primary Arterial	2	4,400	A
29	Ethanac Road	Murrieta Road - I-215	Primary Arterial	2	4,133	A
	Goetz Road	Kaplan Creek Drive - Ethanac Road	Secondary Arterial	2	1,900	A
27	Goetz Road	North of Fieldstone Drive	Primary Arterial	2	2,127	A
30	Goetz Road	Roundtree Court - Kaplan Creek Drive	Secondary Arterial	2	3,001	A
	I-215	Case Road - Redlands Avenue	Freeway	4	63,000	D
	I-215	Ethanac Road - Case Road	Freeway	4	51,000	B
	I-215	North of Oleander Avenue	Freeway	6	84,000	C
	I-215	Nuevo Road - Placentia Avenue	Freeway	6	70,000	A
	I-215	Perris Boulevard - Nuevo Road	Freeway	6	67,000	A
	I-215	Ramona Expressway - Oleander Avenue	Freeway	6	81,000	B
	I-215	Redlands Avenue - Perris Boulevard	Freeway	4	57,000	C
	Indian Avenue	Dawes Street - Ramona Expressway	Secondary Arterial	2	1,800	A
2	Lasselle Street	At City Boundary, North of Murrietta Road	Collector	2	8,393	B
	May Ranch Parkway	Morgan Street - Ryder Street	Secondary Arterial	2	1,500	A
	Murrieta Road	Ethanac Road - Case Road	Secondary Arterial	2	1,300	A
	Murrieta Road	McCall Boulevard - Ethanac Road	Secondary Arterial	2	3,600	A
18	Navajo Road	Sioux Drive - 4th Street	Collector	2	9,811	C
	Navajo Road	Sioux Drive - Indian Circle	Collector	2	9,811	C
10	Nuevo Road	I-215 - Perris Boulevard	Primary Arterial	4	23,486	B
12	Nuevo Road	Wilson Avenue - Murrietta Road	Primary Arterial	4	6,950	A
9	Orange Avenue	Firebrand Avenue - Wilson Avenue	Secondary Arterial	4	6,584	A
8	Orange Avenue	Frontage Road - Indian Avenue	Secondary Arterial	4	3,956	A
	Orange Avenue	Perris Boulevard - Wilson Avenue	Secondary Arterial	4	6,584	A
17	Perris Boulevard	2nd Street - 4th Street	Primary Arterial	4	12,544	A
	Perris Boulevard	3rd Street - 2nd Street	Primary Arterial	4	12,544	A
19	Perris Boulevard	4th Street - 5th Street	Primary Arterial	2	7,229	A

Count Taken 9/02	Street	Segment	Classification	Number of Lanes	ADT	LOS
22	Perris Boulevard	6th Street - 11th Street	Primary Arterial	2	6,707	A
11	Perris Boulevard	Citrus Avenue - Nuevo Road	Primary Arterial	6	22,754	A
5	Perris Boulevard	Dawes Street - Morgan Street	Primary Arterial	4	16,765	A
	Perris Boulevard	E Jarvis Street - W Metz Road	Primary Arterial	4	18,581	A
	Perris Boulevard	Morgan Street - Dawes Street	Primary Arterial	4	16,765	A
1	Perris Boulevard	North of Nance Street	Primary Arterial	4	17,464	A
	Perris Boulevard	North of Nance Street	Primary Arterial	4	17,464	A
	Perris Boulevard	Placentia Avenue - Walnut Street	Primary Arterial	4	17,974	A
13	Perris Boulevard	W. Metz Road - E. Jarvis Street	Primary Arterial	4	18,581	A
6	Perris Boulevard	Walnut Street - Placentia Avenue	Primary Arterial	4	17,974	A
	Placentia Avenue	East of Perris Boulevard	Primary Arterial	2	2,700	A
7	Placentia Avenue	Indian Avenue - Perris Boulevard	Primary Arterial	2	1,076	A
	Placentia Avenue	Indian Avenue - Perris Boulevard	Primary Arterial	2	1,076	A
	Ramona Expressway	Bradley Road - Ryder Street	Expressway	4	10,500	A
	Ramona Expressway	Evans Road - Bradley Road	Expressway	4	11,700	A
	Ramona Expressway	I-215 - Nevada Avenue	Expressway	4	29,400	C
	Ramona Expressway	Indian Avenue - Perris Boulevard	Expressway	4	19,600	A
	Ramona Expressway	Nevada Avenue - Webster Avenue	Expressway	4	24,000	A
3	Ramona Expressway	Perris Boulevard - Redlands Avenue	Expressway	4	23,577	A
	Ramona Expressway	Redlands Avenue - Evans Road	Expressway	4	13,500	A
	Ramona Expressway	Webster Avenue - Indian Avenue	Expressway	4	19,000	A
	Redlands Avenue	I-215 - San Jacinto Road	Secondary Arterial	2	13,418	C
16	Redlands Avenue	San Jacinto Road - I-215	Secondary Arterial	2	13,418	C
	Ryder Street	Bradley Road - Ramona Expressway	Secondary Arterial	2	1,700	A
	Ryder Street	Indian Avenue - Perris Boulevard	Secondary Arterial	2	2,100	A
	Ryder Street	Wilson Avenue - May Ranch Parkway	Secondary Arterial	2	3,700	A
15	San Jacinto Road	Wilson Avenue - Murrieta Road	Secondary Arterial	4	3,750	A
	San Jacinto Road	Wilson Avenue - Murrieta Road	Secondary Arterial	4	3,750	A
	SR-74	B Street - C Street	Secondary Arterial	2	24,300	F
	SR-74	C Street - D Street	Secondary Arterial	2	23,600	F
	SR-74	D Street - Perris Boulevard	Secondary Arterial	2	19,100	F
26	SR-74	East of I-215	Primary Arterial	2	Future Count	
	SR-74	Indian Circle - Navajo Road	Secondary Arterial	2	17,200	E
	SR-74	Wilkerson Avenue - Redlands Avenue	Secondary Arterial	2	19,800	F
	Webster Avenue	Ramona Expressway - Oleander Avenue	Secondary Arterial	2	14,400	C

Exhibit CE-6: Existing Segment Average Daily Traffic (ADT) Counts and Level of Service (LOS)

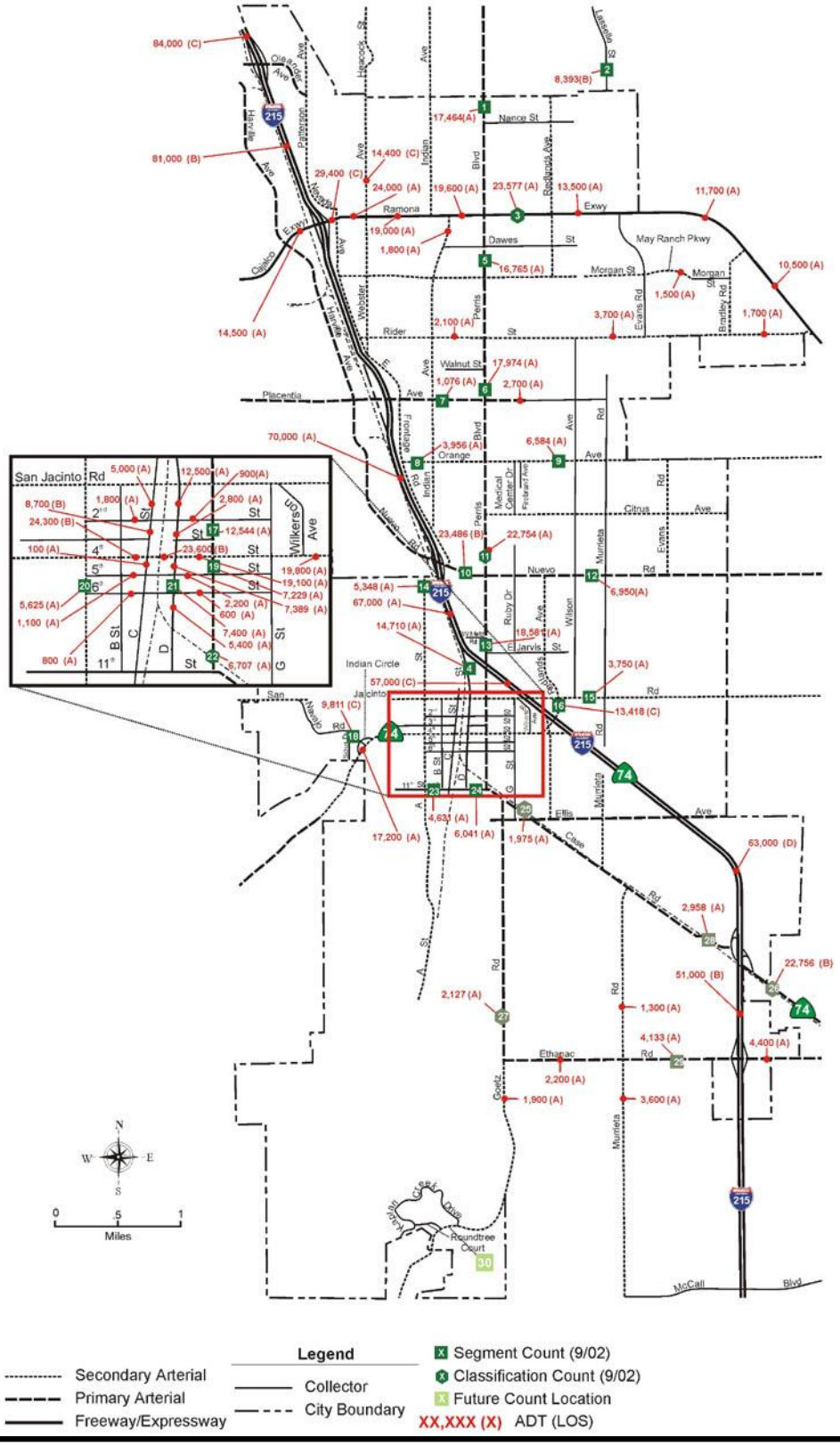


Table CE-4: Unsignalized Intersection Level of Service Definitions (2000 Highway Capacity Manual)

Level of Service	Definition	Average Delay (sec/veh)
A	Describes operations with very low delay. This level of service occurs when there is no conflicting traffic for minor street.	‹10
B	Describes operations with moderately low delay. This level generally occurs with a small amount of conflicting traffic causing higher levels of average delay.	›10 to 15
C	Describes operations with average delays. These higher delays may result from a moderate amount of minor street traffic. Queues begin to get longer.	›15 to 25
D	Describes a crowded operation, with below average delays. At level D, the influence of congestion becomes more noticeable. Longer delays may result from shorter gaps on the mainline and an increase of minor street traffic. The queues of vehicles are increasing.	›25 to 35
E	Describes operations at or near capacity. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor gaps for the minor street to cross and large queues.	›35 to 50
F	Describes operations that are at the failure point. This level, considered unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. Insufficient gaps of suitable size exist therefore not allowing minor traffic to cross safely.	›50

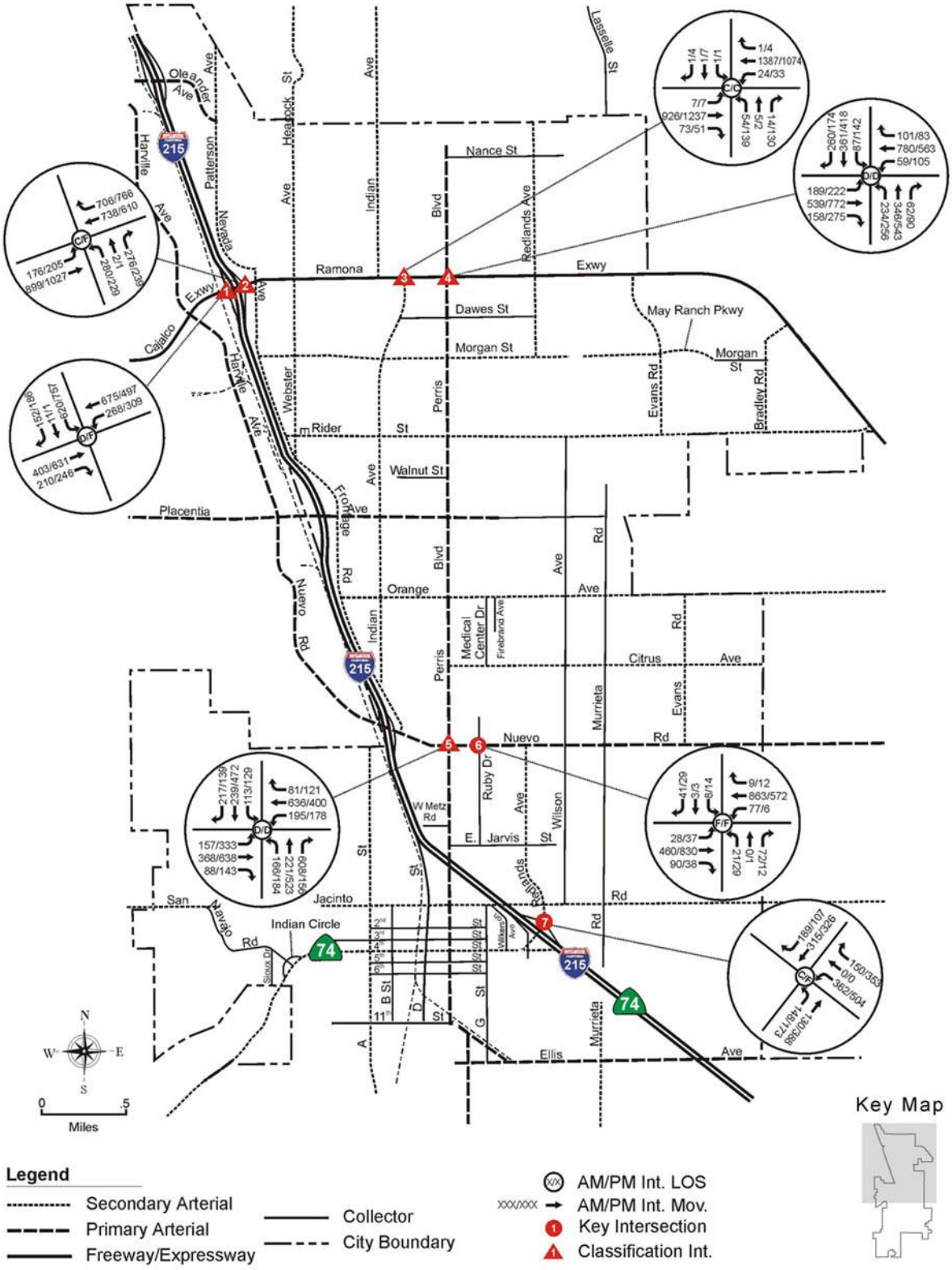
Table CE-5: Signalized Intersections Level of Service Definitions (2000 Highway Capacity Manual)

Level of Service	Definition	Average Delay (sec/veh)
A	Describes operations with very low delay.	<10.0
B	Describes operations with moderately low delay. This level occurs with good progression, short cycle lengths, or both.	› 10.0 and <20.0
C	Describes operations with average delays. These higher delays may result from fair progression, longer cycle lengths, or both.	› 20.0 and <35.0
D	Describes a crowded operation, with below average delays. At level D, the influence of congestion becomes more noticeable. Many vehicles stop, and the proportion of vehicles not stopping declines.	› 35.0 and <50.0
E	Describes operations at or near capacity. This level is considered by many agencies to be the limit of acceptable delay.	› 55.0 and <80.0
F	Describes operations that are at the failure point. This level, considered unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection.	› 80.0

Table CE-6: Existing Intersection Delay and Level of Service (LOS)

Intersection Number	*Intersection*	*AM Average Delay*	*AM LOS*	*PM Average Delay*	*PM LOS*
1	*I-215 SB and Cajalco Expressway*	*46.2*	*D*	*›80.0*	*F*
2	*I-215 NB and Ramona Expressway*	*32.0*	*C*	*›80.0*	*F*
3	*Ramona Expressway and Indian Avenue*	*21.9*	*C*	*34.9*	*C*
4	*Ramona Expressway and Perris Boulevard*	*43.8*	*D*	*47.1*	*D*
5	*Nuevo Road and Perris Boulevard*	*38.8*	*D*	*43.0*	*D*
6	*Nuevo Road and Ruby Drive*[1]	*›50*	*F*	*›50*	*F*
7	*I-215 NB and Redlands Avenue*[1]	*15.9*	*C*	*›50*	*F*

Exhibit CE-7: Existing Intersection Counts and Level of Service (LOS)



Public/Mass Transportation System

The City of Perris understands the need to promote development of a safe, efficient, and economical community, intercommunity and countywide public transportation system. Due to the interrelationship of urban and rural activities (employment, housing and services), and the low average density of existing land uses, the private automobile is the dominant mode of travel within the City of Perris. As the population grows, City roads will become increasingly congested by the automobile.

As a result, it is important to encourage increased ridership on public transit systems and increased use of alternative modes of transportation, including bicycles and walking. The public transit system alternatives for City of Perris include: fixed route public transit systems, common bus carriers, and other local agency transit and paratransit services.

The Riverside Transit Agency (RTA)

The Riverside Transit Agency (RTA) was formed in March of 1977 through a joint-powers agreement between the County of Riverside and the incorporated cities within its service area.

Fixed Route Transit Service

Currently, RTA operates 29 fixed bus routes providing public transit service throughout a 2,500 square mile area of Western Riverside County. RTA's fixed routes have been designed to establish transportation connections between all the cities and unincorporated communities in Western Riverside County, including the City of Perris. A Riverside Transit Agency System Map brochure has been included in Appendix C, which shows all the fixed routes, route connection and transfer locations, and demand response system service areas. The brochure also includes helpful hints for using the system, an explanation of rider fares, and instructions on the use of bike racks. RTA also participates with OmniTrans in San Bernardino County to provide express bus service between downtown Riverside and downtown San Bernardino, connecting with express service to Ontario.

RTA is currently operating 76 full size buses, 67 mini-buses and vans, and two trolleys. The system carries approximately 6.4 million passengers annually, which are about 18,000 passengers per day. All of the RTA s vehicles are wheelchair accessible and all full size buses include bike racks. RTA was the nation's first transit agency to own and operate EPA-approved, methanol-powered buses, and has recently added several buses that operate on Compressed Natural Gas (CNG). Overall, the rolling stock fleet now includes 20 buses operating on alternative fuels. To provide the necessary fuel services, RTA has recently purchased an on-site CNG fueling station.

RTA currently utilizes several types of media and methods to share or distribute information about the transit services. The agency prints a Ride Guide, which includes fare schedules, route maps, and other rider information, as well as a multi-color RTA System Map.

The map is stapled into the center of the Ride Guide and can be easily separated from the rest of the document. RTA has developed an Internet Web Site (www.rrta.com) that includes a variety of information about fares, routes, schedules, and other transit user information.

RTA is committed to increasing its use of advanced technologies for its monitoring and service delivery systems to improve

operating efficiency and insure proper and effective use of taxpayer dollars. The agency is moving toward the implementation of a Geo-Synchronous Positioning Satellite System, for both fixed route and dial-a-ride services, which will provide real-time information related to bus location, farebox collection, and vehicle management systems. RTA has earned an impressive safety record. While accumulating over 4.9 million miles per year, over 85 percent of the system's operators have been accident free for more than five years.

Within the City of Perris, RTA operates five (5) fixed route services that link the City with various Riverside County destinations such as Riverside, Woodcrest, Mead Valley, Moreno Valley, Hemet and Sun City. In addition, RTA maintains one fixed-route service within the City of Perris linking the Wal-Mart shopping center located at Orange Avenue and Perris Boulevard with Goetz and Ellis Roads in the south and Weston and Lamore Roads in the west. The route encompasses the downtown area via A Street, 11th Street, and D Street and makes a stop near the Civic Center and library.

All routes operate on regular schedules and the overall network serviced in Perris is depicted in Exhibit CE-8.

Community Systems
In addition to fixed route and demand-responsive services provided by RTA, specialized public transportation services are also available. Additionally, RCTC supports a number of specialized transportation programs, including shared-ride car and vanpool services, social service dial-a-ride, and specialized services for seniors and persons with disabilities.

ParaTransit Service.
The City supports reliable, efficient, and effective paratransit service by encouraging development of service systems that satisfy the transit needs of the elderly and physically handicapped. paratransit services are transportation services such as carpooling, vanpooling, taxi service, and dial-a-ride programs.

Dial-A-Ride
Dial-A-Ride is a general public, advance reservation service designed to provide curb to curb transportation. Anyone may use the Perris Dial-A-Ride if the beginning and ending points of their trip fall within the Dial-A-Ride service area (see Exhibit 3.5). Dial-A-Ride service hours are: Mon-Fri, 6:00 AM – 9:00 PM; Sat, 7:00 AM – 8:00 PM; and Sun, 7:00 AM – 9:00 PM. Dial-A-Ride fares range from: General $2.00; Senior/Disabled $1.00; and Child Free (first two 5 and under – additional child 50¢).
In order to become certified under the Americans with Disabilities Act (ADA) for priority service, an in-person functional assessment interview of 25 to 30 minutes is provided at no cost. The RTA fixed route transit system requires that the interviewee complete various tasks that involve cognitive and physical achievements in order to determine eligibility.

Common Carriers

Greyhound Bus Lines provides private transportation services that link the principal population centers of the County with other regions. This includes east-west service connecting Blythe, Indio, Palm Springs, Banning/Beaumont, and Riverside (via San Bernardino). The service continues westward to downtown Los Angeles and intermediate stops. North-south service connects Riverside with Temecula, continuing southward to San Diego. The number of bus trips in each direction ranges from five to eight per day.

AMTRAK Passenger Rail Service

AMTRAK does not currently directly service the City of Perris although a rail line does exist. The passenger rail station located along the rail line in Perris at D Street between San Jacinto Avenue and 4th Street in downtown is currently inactive. The only AMTRAK station located in Riverside County is in the City of Palm Springs. This station provides connecting AMTRAK service to points west including Los Angeles and to points east including Tucson, Arizona and El Paso, Texas. AMTRAK does provide bus connections to and from other Riverside County areas to the San Bernardino AMTRAK station on a daily basis. RTA Bus service is provided from downtown Riverside to downtown San Bernardino; however, a transfer will be needed to get to the AMTRAK station. There is also an Amtrak stop in Palm Springs at Indian Canyon Drive (extension of Indian Avenue South) at Amado Road.

Metrolink

Commuter rail in the Southern California Region has grown significantly along the Metrolink system from 940,000 riders per year in Fiscal Year (FY) 92-93 (with four operating commuter rail lines) to 4.2 million passengers per year in FY 94-95. In FY 96-97 almost 6 million riders chose Metrolink with six major commuter rail corridors in service. During that same period, the Riverside Line increased from 133,000 passengers in FY 92-93 to 927,000 passengers in FY 96-97.

Over the next 20 years, Metrolink is expected to increase to 169 daily trains and 50,400 daily riders on all lines to maximize use of commuter rail in the southern California region. The increased service may be supported by the introduction of demand response feeder systems. The long-term plan calls for extension of the Riverside Transit Corridor, in accordance with performance standards, along the San Jacinto branch line to the City of Hemet. The 2001 Southern California Association of Governments' Regional Transportation Plan indicates that the commuter rail segment between 12th and Vine in the City of Riverside to 4th and D Street in Perris will be completed by 2010.

High Speed Rail Concepts

A regional high speed rail system is proposed that will connect major regional activity centers and significant inter-/multi-modal transportation facilities in Los Angeles, Orange, Riverside and San Bernardino Counties by year 2020. This system would also provide connection to the San Diego Region, and connect with the proposed high-speed rail system in Northern California. On July 21, 1999, the California High Speed Rail Authority adopted a plan for an Inland route for the system. This would include stops at Ontario Airport, Riverside, and Temecula. However, the Authority indicated that it would continue to consider an alternative route through Orange County. Cost and ridership estimates will be prepared to further investigate the system's feasibility.

Non-Motorized Transportation

The City of Perris accommodates non-motorized modes of transportation that enhance the future livability and character of the City through the provision of wide City streets and shoulders along the designated street and highway system. The City's non-motorized transportation systems connect parks, schools, community facilities, Metrolink stations, community centers, residential neighborhoods, recreational amenities, employment centers, shopping areas, and activity areas. To satisfy the need for mobility within the activity centers and throughout the City, alternatives to the automobile and public transit have been developed.

Exhibit CE-8: Existing Public Transit Service Center Network

Aviation

There are five major commercial airports in southern California used for passenger service by residents of the City of Perris, including: Palm Springs International Airport, Ontario International Airport (San Bernardino County), Orange County - John Wayne Airport, Los Angeles International Airport, and Lindbergh Field (San Diego County). Of these, only Palm Springs International Airport is located in Riverside County.

Nine public-use general aviation airports are also located in the County of Riverside including: Flabob Airport, French Valley Airport, Hemet-Ryan Airport, Bermuda Dunes Airport, Desert Resorts Regional Airport, Chiriaco Summit Airport, Desert Center Airport, Riverside Municipal Airport, and Blythe Airport.

In addition to the regional air passenger airport facilities, the March Inland Port/Air Reserve Base is located along Interstate 215 north of Perris. This airport provides regional air cargo service and also continues to function as the Air Reserve Base in Riverside County. In 1997, there were 51,546 military aircraft operations and 2,252 civilian aircraft operations.

Also located within Perris City limits is the Perris Valley Airport located near the corner of Ethanac Road and Goetz Road in southern Perris. Perris Valley Airport is a privately owned public use airport with a 5100-foot runway and approximately 68 aircraft operations per day. In addition, the airport serves as home to ultralight plane rides and the Perris Valley Skydiving Company, the largest Skydiving Center in North America. The Center is home to several national skydiving competitions and its facilities include a school, restaurant and two cabins for overnight stay. The Center is currently building a wind tunnel for skydiving simulation.

Goods Movement

The efficient movement of goods in and through City of Perris is vital to the City and the Inland Empire's economy and improves traveler safety. The ability of the County to compete domestically and internationally on an economic basis requires an efficient and cost-effective method for distributing and receiving products. The City of Perris provides a key link in this system within its proximity to I-215, the rail line and March Air Reserve Base.

Truck Routes

Primary generators of truck traffic in the City of Perris are agricultural, commercial, and industrial uses. Since agriculture is a relatively mature industry throughout the County, overall truck traffic volume generated by agricultural uses should remain stable in the future. However, relocation and replacement of individual agricultural processing plants and other new industries can significantly alter both regional and localized patterns and concentrations of truck traffic in the City. As healthy industrial growth is expected within the City, related truck traffic will continue to increase particularly in northern Perris. In addition, similar growth just north of Perris in Moreno Valley will exacerbate traffic conditions. The City also expects truck traffic to remain constant or increase around the Perris Valley Airport.

While port capacity is expected to remain adequate due to present expansion plans, airport and highway capacity will be under severe constraint in the region due to the lack of capacity-enhancing project capital investment. Currently, trucks comprise at

least 15 percent of the daily traffic volume on some of the primary goods movement corridors in Riverside County. In the City of Perris, the daily truck volume along I-215 is 7,500 trucks.

Because of the operational characteristics of trucks, their net effect on traffic flow is two to three times that of an equal number of passenger cars on level terrain, and could be considerably more on long upgrades. Traffic engineers relate the effect of trucks to passenger car equivalents or PCEs. Thus, a roadway with 15 percent of the traffic as trucks could be regarded as having 30 to 40 percent of its capacity consumed by trucks in terms of PCEs. In most cases, the truck percentage in the peak commuting periods is lower (usually no more than 4 to 6 percent), as the passenger car volume is higher and some trucks tend to avoid those hours because of the slow speeds.

For the State of California, approximately 76 percent of all in-and outbound freight is shipped by truck. In addition, trucks transport 98 percent of all finished goods to the final retail and wholesale destinations, according to the California Trucking Association (CTA). A steady increase in heavy-duty trucks is expected in the future. It is anticipated that the region's truck volumes will increase by 40 percent through Year 2020. Current economies dictate that trucking will be used for the majority of surface traffic less than 800 miles, which encompasses most or all of California, Arizona, and Nevada.

Exhibit CE-9 shows the designated truck routes within the study area. The designated truck routes are intended to indicate arterial streets, which may be used by trucks, tractors, trailers, and other vehicles exceeding a maximum gross weight limit of five tons. In accordance with both local and State law, trucks or other vehicles with a maximum weight of five tons or more may use restricted streets when necessary for the purpose of making pickups and deliveries of goods, wares or merchandise from or to any building or structure located on a restricted street or for delivering materials or equipment to be used in repair, alteration, remodeling or construction of any building or structure on a restricted street.

The City's Truck Route Enabling Ordinance is the specific legal vehicle by which truck routes, shown in the General Plan as a policy issue, are translated into specific legal routes when adopted by the City Council and the routes have been posted.

Air Cargo

Air cargo is the fastest growing method of transporting goods in and out of the Southern California Region, and is expected to continue to increase at a faster rate than passenger air service. The Los Angeles (LAX) and Ontario International Airports are the major cargo handling airports in Southern California. Both of these airports handle about 96 percent of all the air cargo movement, with LAX alone accounting for 79 percent of the air cargo traffic. The trucking, rail, and air cargo operations in this area make it one of the larger multi-modal freight management and distribution complexes in the nation. Land development is occurring in support of these functions, extending into the Mira Loma and Norco areas of Riverside County.

The March Air Reserve Base is currently a joint use status development. The Air Reserve Base will gradually reduce the military use of this facility and begin to increase the amount of goods and cargo that can be accommodated at this site. As the amount of goods transported into this area via the March Air Reserve Base increases, the potential to establish viable land uses that can make use of this facility

increases. This area can be used to accommodate the increased growth in goods movement, with the potential to become a passenger airport.

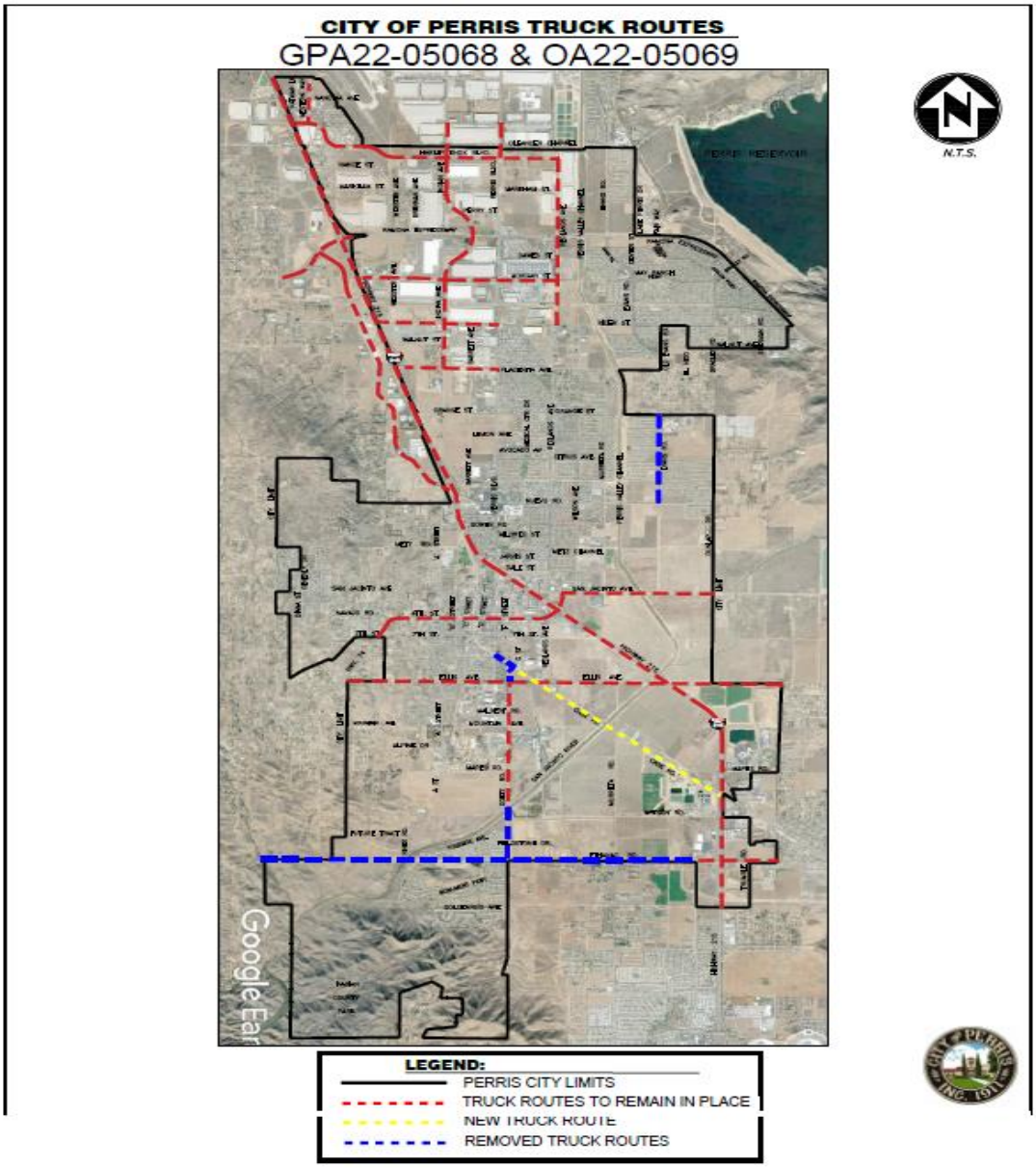
Freight Rail

The Union Pacific (UP) and the Burlington Northern Santa Fe (BNSF) Railroads provide freight service in Riverside County, connecting the County with major markets within California and other destinations north and east. Freight terminals and service to specific industries are located throughout the County. The SCAG Regional Transportation Plan estimates train volume on the UP line between Colton and Indio to be 26 daily. Every day an estimated 28 to 50 trains move on the BNSF line from Riverside to Atwood. Though the railroads are reluctant to provide information on the amount of freight originating in the County, it is likely that the predominant mode for freight movements in the County will continue to be by truck in the foreseeable future. This is certainly the trend expected for raw agricultural commodities moving to packing and processing facilities. For long distance trips (i.e., outside the 800-mile threshold), SCAG has estimated that trains will carry approximately 50 percent of the freight into the region, by tonnage.

The BNSF Southern line from Riverside traverses through the City of Perris along I-215 in the north and transitions southeast along Case Road. Currently the rail line provides significant movement to the northern Perris distribution centers.

An emerging trend in goods movement is containerized cargo, in which containers are transferred from ship to rail to truck. Containerized cargo movement has helped rail lines to compete with trucks for medium to long haul goods movement. To assist in moving containerized cargo, railroad companies are proposing "multi-modal" facilities in various locations throughout the nation. Containerized cargo is shipped long haul to the metropolitan area by rail to facilities typically located within or adjacent to major metropolitan areas and are unloaded onto trucks at the "multi-modal" facility for local deliveries. BNSF has been investigating potential sites for a multi-modal facility along its line, which parallels the I-10 freeway from Fontana to Beaumont. March Inland Air Reserve Base is also a potential location or site for a "multi-model" facility.

Exhibit CE-9: Existing Designated Truck Routes



Transportation Management

Systems Management

Transportation Systems Management (TSM) strategies can enhance traffic flow and reduce travel delay along the County roadway system. A more efficient use of the road network can be implemented by the utilization of TSM strategies such as: computerized traffic signals, metered freeway ramps, and one-way streets. Priority should be given to TSM strategies that improve level of service, especially in areas that are currently fully developed, before more costs and capacity increasing strategies are used.

High Occupancy Vehicle (HOV) lanes are a significant part of the southern California region's strategy to provide incentives for carpooling. HOV lanes were installed along State Route 91 as part of the Measure A program and are planned along Interstate 215/State Route 60 through Box Springs. To facilitate further increases in carpooling, the SCAG 2001 Regional Transportation Plan (RTP) identifies new carpool lanes along Interstate 215 connecting the City of Perris to the I-15 in the south and SR 60 in the north.

Transportation Demand Management

Transportation Demand Management (TDM) strategies reduce dependence on the single-occupant vehicle, increase the ability of the existing transportation system to carry more people, and enhance mobility along congested corridors. A reduction in peak hour trips, overall roadway congestion, and a decrease in non-attainment pollutants can be achieved through the implementation of TDM strategies. Examples of these strategies include: telecommuting, flexible work hours, and electronic commerce that enable people to work and shop from home. According to the Southern California Association of Governments (SCAG), vanpools will become more prevalent for short-to-medium range commute trips, and will supplement the traditional long-distance usage. Park-n-ride facilities and carpooling will also continue to be a significant link between highway and transit modes.

In the last decade, the region's number of trips and amount of travel has grown at a much faster rate than the population growth. TDM strategies are designed to counter this trend. The region cannot build its way out of congestion; it has neither the financial resources nor the willingness to bear the environmental impacts of such a strategy. TDM is one of the many approaches that will be used to maintain mobility and access as the region continues to grow and prosper.

Agencies in Riverside County, including the City of Perris, have participated extensively in TDM efforts over the years. The County is a participant in the regional rideshare program through SCAG (1-800-COMMUTE). To ensure efficient use of the transportation system, RCTC also helps commuters find better ways to get to work. RCTC's free commuter assistance programs include Advantage Ridershare, Club Ride, Commuter Exchange, and the Inland Empire Commuter Services.

The County has established TDM Guidelines to reduce single occupant motor vehicle trips during peak hours and modify the vehicular demand for travel to increase the ability of the existing system to carry more people. Further, RCTC prepared a Model TDM Ordinance in accordance with requirements of the County's Congestion Management Program.

Future Conditions

This section of the Element describes the future transportation system within the City and its Sphere of Influence. A number of transportation systems are described including:

- Street and Highway System;
- Public/Mass Transportation System;
- Non-Motorized Transportation;
- Aviation;
- Goods Movement;
- Transportation Systems Management; and
- ITS.

Street and Highway System

Projected Future Transportation and Circulation Conditions

The purpose of this section is to provide a firm understanding of future transportation/circulation conditions in the City of Perris considering each primary mode of transportation. It is important to define the future transportation/circulation system and any deficiencies. Such deficiencies will be addressed during development of the implementation program.

Future Year Street Classification System

The City of Perris has identified the following street and highway classifications to define the future year (2030) planned system within the City of Perris. The proposed classifications and cross-sections are provided in Table CE-7 and Exhibit CE-11. Exhibit CE-12 provides the future transportation road network for the City of Perris.

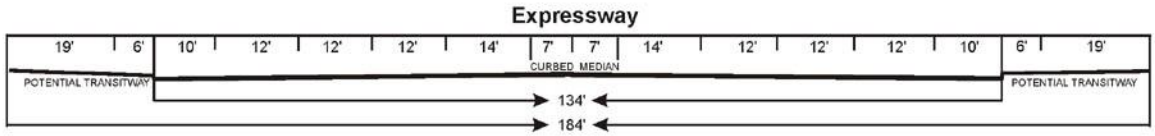
The City considered designations and cross-sections as identified in the County General Plan. The City of Perris determined that, as an urbanized area its adopted standards must address the urban characteristics of the City and reflect current right-of-way constraints and existing development. The City, whenever feasible, has attempted to maintain lane geometrics consistent with those of the County. The City has also identified several safety measures to be incorporated in cross-section configurations, e.g. arterials no longer include parking lanes and 14 foot lanes are indicated whenever adjacent to a raised curb. The revised cross-section configurations provide for landscaped medians and parkways wherever possible.

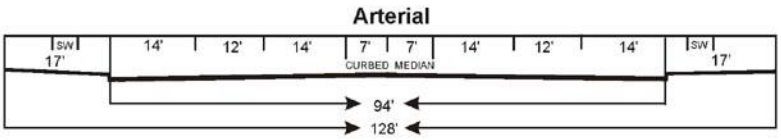
Roadway improvements identified in the 2001 Transportation Plan (RTP) were included in the Year 2030-circulation system network. In addition, projects to be included in the most recent State Transportation Improvement Program (STIP) were considered. Table CE-8 and Exhibit CE-12 identify those significant projects that are expected to be complete and in place by 2030 and the justification for the project.

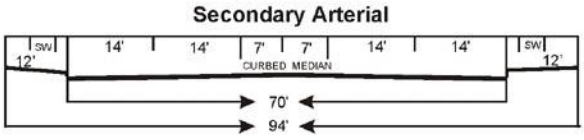
Table CE-7: City of Perris Future Street Classifications

Classification	Right-of-Way	Lanes	Median
Local	60 feet	2	None
Collector	66 feet	2	None
Major Collector	78 feet	2	Painted
Secondary Arterial	94 feet	4	Raised or Painted
Arterial	128 feet	6	Raised
Expressway	184 feet	6 – 8	Raised
Freeway	Varies	Varies	Varies

Exhibit CE-11: City of Perris Future Cross-Sections







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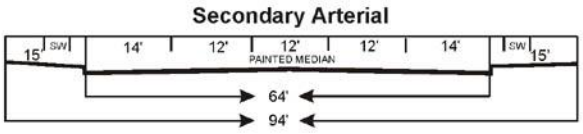
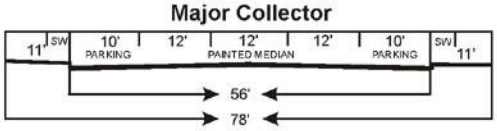
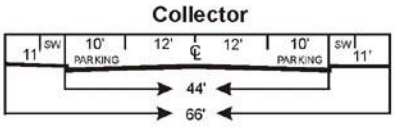
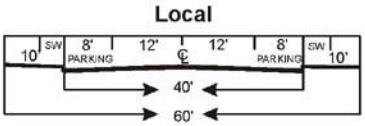








Specific details for each cross-section follow in Figures 4.1 A - 4.1 F

Legend

SW	Sidewalk or Trail (at least 4 feet)	CURBED MEDIAN	Landscaped Center Median
PARKING	Parking or Bike Lane		
PAINTED MEDIAN	Center Median and/or Continuous Left Turning Lane		

Exhibit CE-11A: City of Perris Future Cross-Sections

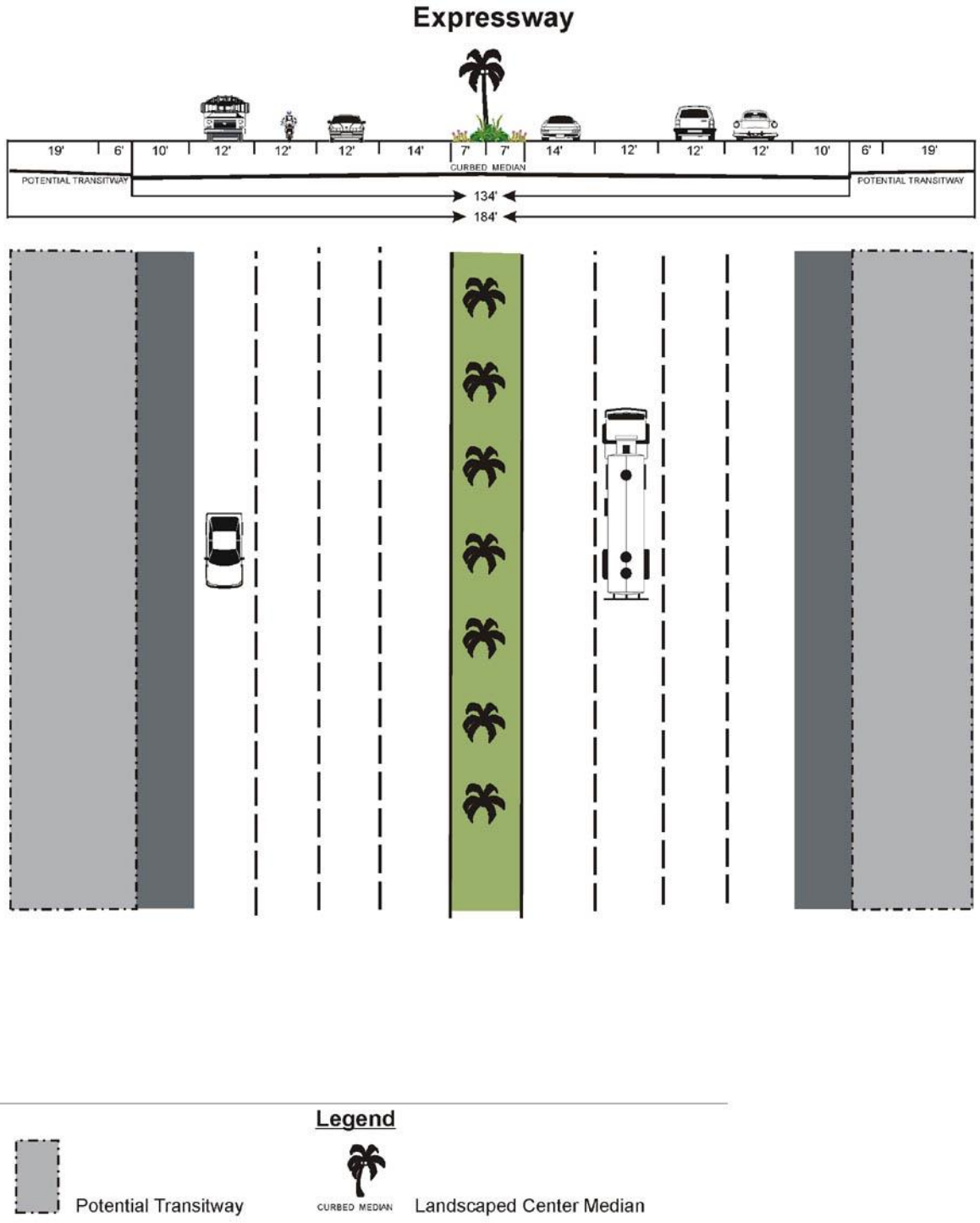
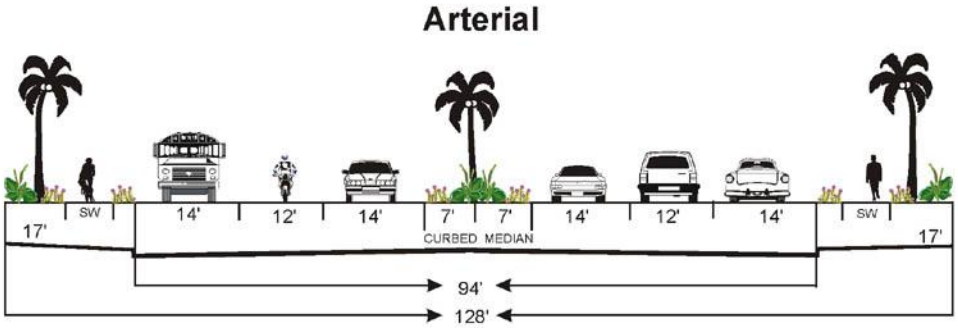
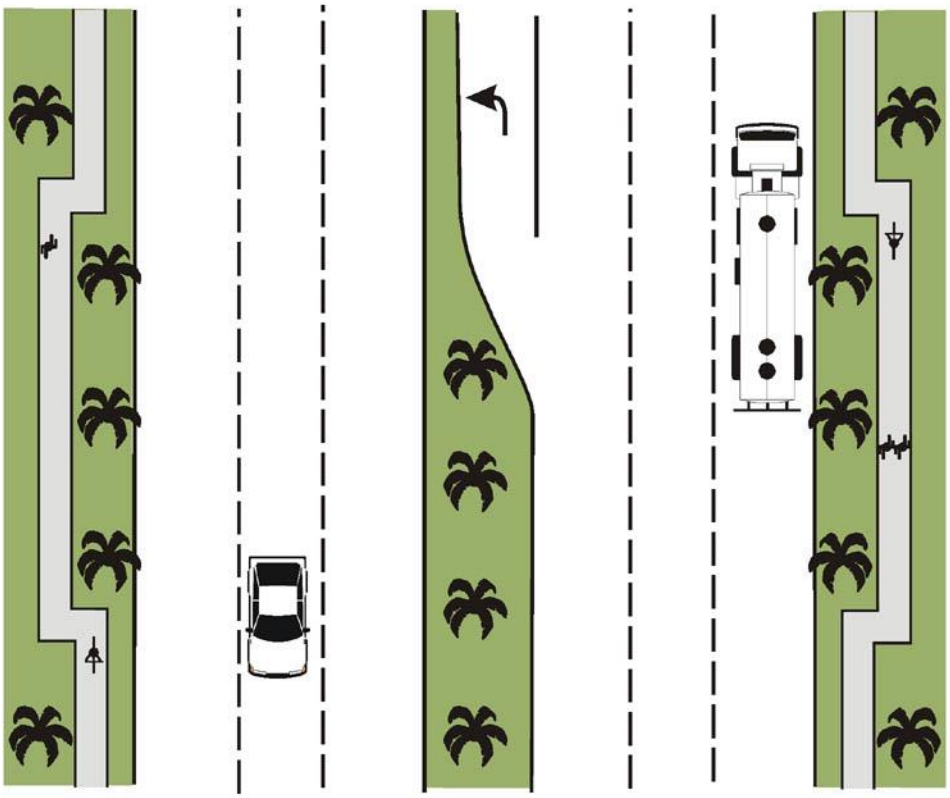


Exhibit CE-11B: City of Perris Future Cross-Sections





Legend

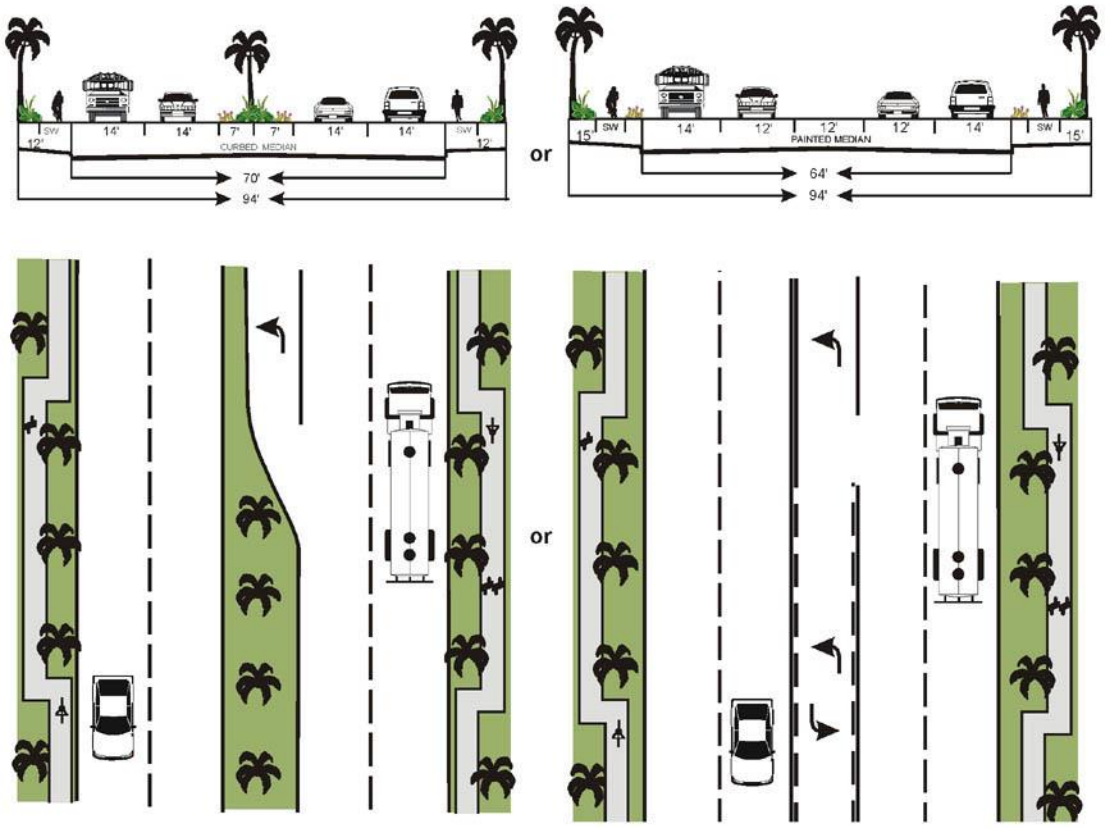
Landscaped Parkway

SW Sidewalk or Urban Trail

CURBED MEDIAN Landscaped Center Median

Exhibit CE-11C: City of Perris Future Cross-Sections

Secondary Arterials



Legend

Landscaped Parkway

SW Sidewalk or Urban Trail

CURBED MEDIAN Landscaped Center Median

PAINTED MEDIAN Center Median and/or Continuous Left Turning Lane

Exhibit CE-11D: City of Perris Future Cross-Sections

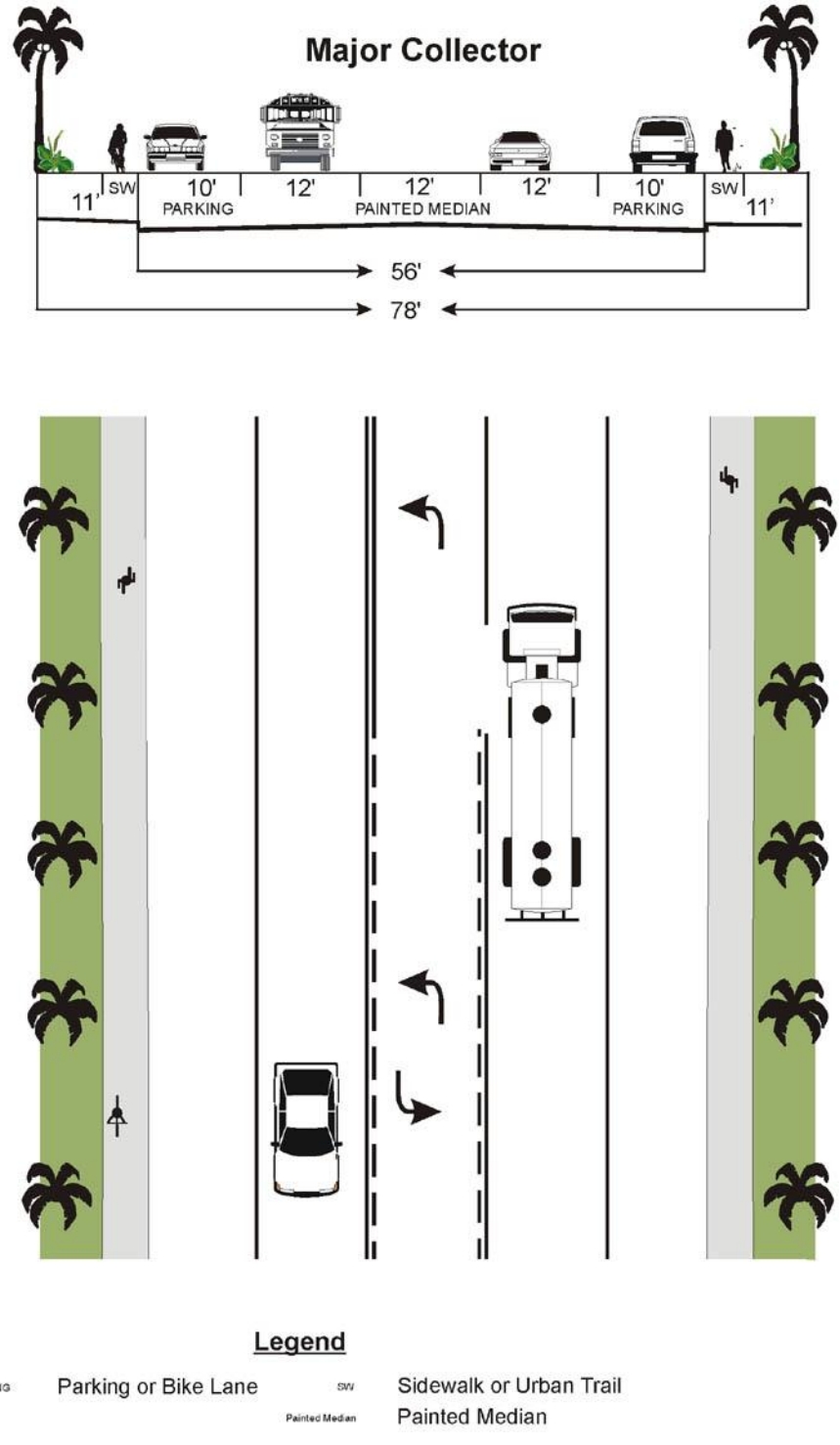


Exhibit CE-11E: City of Perris Future Cross-Sections

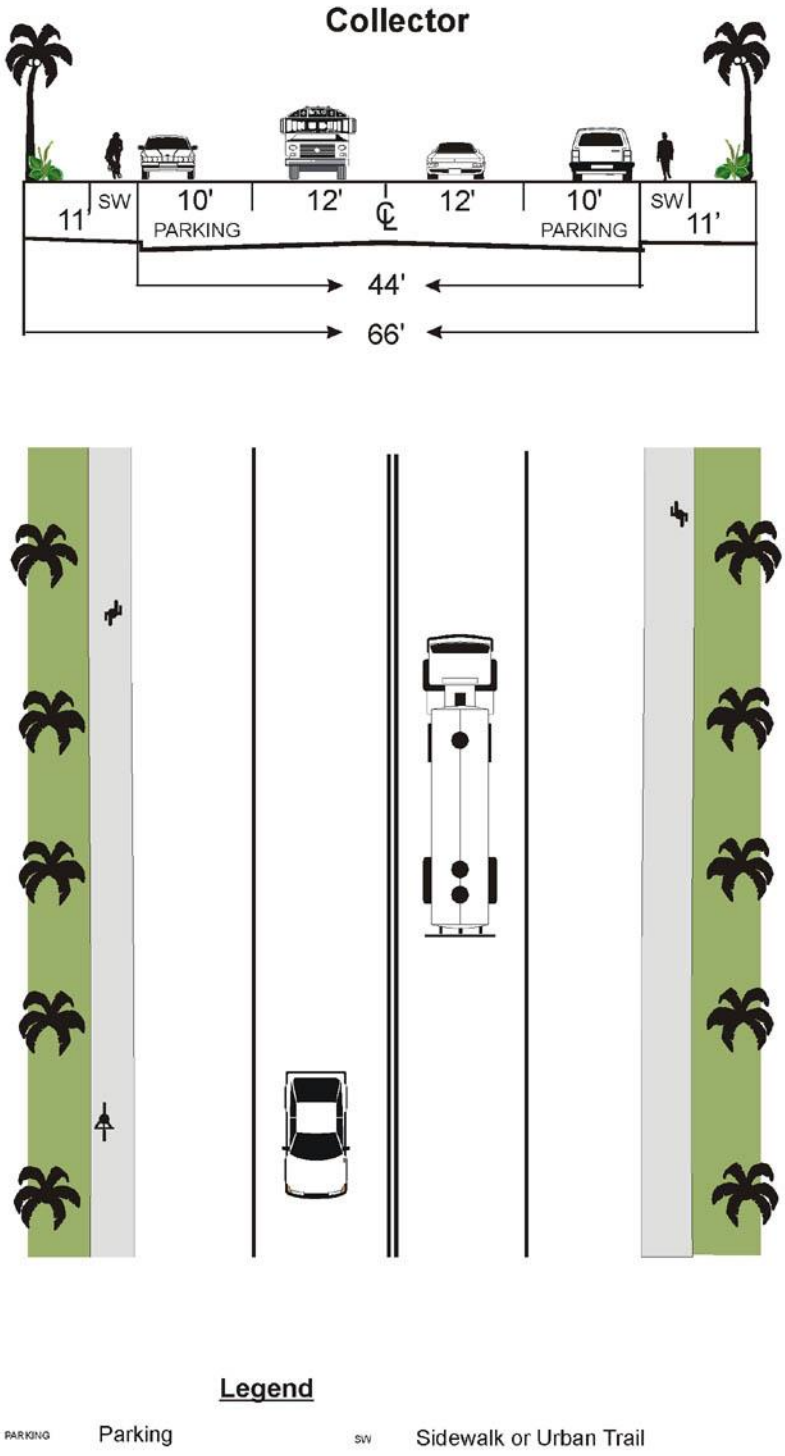


Exhibit CE-11F: City of Perris Future Cross-Sections

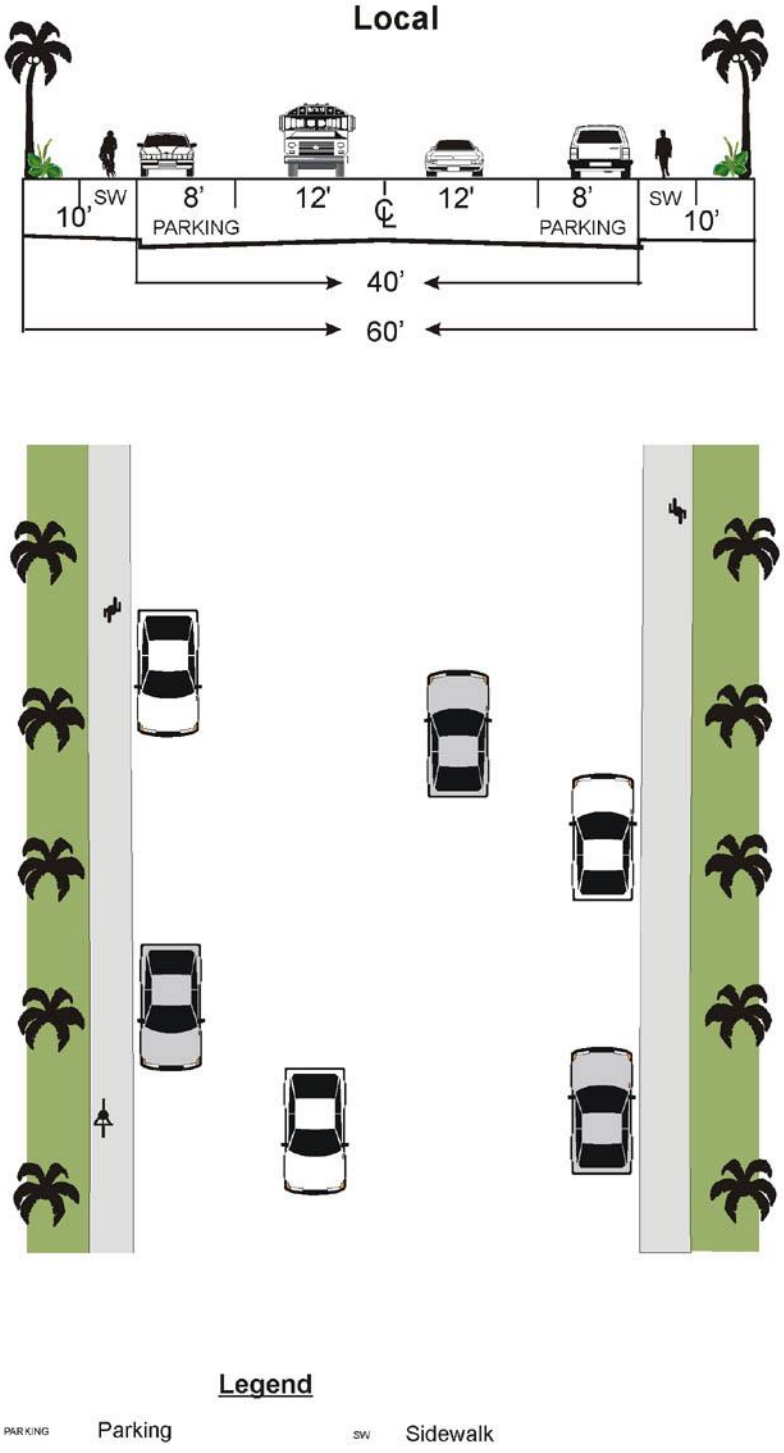
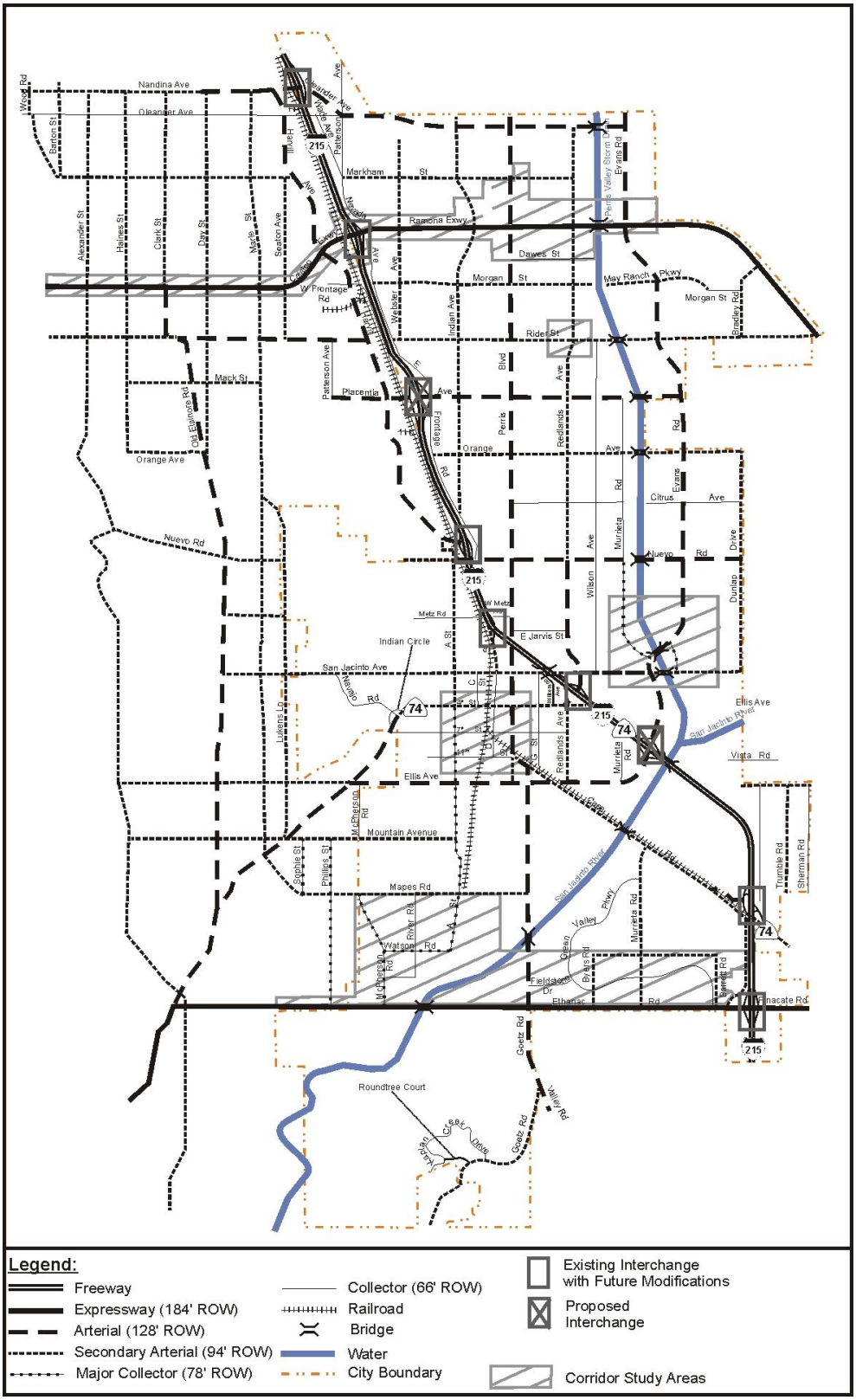


Exhibit CE-12: City of Perris Future Roadway Network



Projected Travel Demand

The Southern California Association of Governments (SCAG) traffic model was used to estimate average daily highway travel demand. SCAG's travel forecast model includes land use data applied to traffic analysis zones (TAZs) within the plan area. The model also incorporates a detailed street and highway network.

Travel demand, measured in vehicle-trips for each of several trip purposes, has been estimated for Year 2030. Travel demand was estimated considering: (1) projected land use consistent with the Land Use Plan in the Land Use Element in each of the TAZs; (2) the planned transportation network; and, (3) household behavior. Year 2030 socioeconomic data was developed for each TAZ by the City of Perris and is composed of the following information: the number of single family and multiple family households; population; and the number of retail, service, education, government and other employment types. Since most traffic congestion and capacity deficiencies are experienced during peak commute periods, forecasts of home-based work trips (home to work, work to home) are especially important.

Table CE-8: City of Perris Existing vs. Future Classification System

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
7th Street	Redlands - SR 74	2	Collector	2		
11th Street	West of "A"	2	Collector	2		
11th Street	A Street - D Street	2	Collector	2		
11th Street	D Street - G Street	2	Collector	2		
A Street	North of San Jacinto	2	Secondary Arterial	4	Widen to 4 lanes	Safety concerns - public park and schools.
A Street	San Jacinto - 4th (SR 74)	2	Secondary Arterial	4		
A Street	4th Street - 11th Street	2	Major Collector	2		ROW Constraints, may remain at 60' ROW but be striped as Major Collector w/ continuous left turn lane.
A Street	11th Street - Ellis Avenue	2	Major Collector	2		
A Street	Ellis Avenue - Mountain	2	Major Collector	2		
A Street	Mountain - Mapes	2	Major Collector	2		
A Street	Mapes - Watson	2	Major Collector	2		
Bradley	Ramona Expressway - Rider Street	2	Secondary Arterial	4	Widen to 4 lanes	Major link to Ramona.
Cajalco Expressway	West of Haines	4	Expressway	6	Widen to 6 lanes	(Potential CETAP Corridor.)
Cajalco Expressway	Haines - Old Elsinore	4	Expressway	6		
Cajalco Expressway	Old Elsinore - Day	4	Expressway	6		
Cajalco Expressway	Day - Seaton	4	Expressway	6		
Cajalco Expressway	Seaton - Harvill	4	Expressway	6		
Cajalco Expressway	Harvill Avenue - I-215	4	Expressway	6		
Case Road	Perris - Goetz	2	Secondary Arterial	4	Widen to 4 lanes	
Case Road	Goetz - Ellis	2	Secondary Arterial	4		
Case Road	Ellis - Murietta	2	Secondary Arterial	4		
Case Road	Murietta - I-215	2	Secondary Arterial	4		
Citrus	Perris - Redlands	2	Collector	2		

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
Citrus	Redlands - Wilson	2	Collector	2		
Citrus	Wilson - Murrieta	2	Collector	2		
Citrus	West of Evans	2	Collector	2		
D Street	I-215 - 4th Street	2	Secondary Arterial	4	Widen to 4 lanes	
D Street	4th Street - 11th	2	Collector	2		
Dunlap	Orange - Citrus	2	Secondary Arterial	4	Widen to 4 lanes	Intensive residential growth.
Dunlap	Citrus - Nuevo	2	Secondary Arterial	4		
Dunlap	Nuevo - San Jacinto Road	2	Secondary Arterial	4		
Dunlap	San Jacinto - Ellis	2	Secondary Arterial	4		
East Frontage Rd	Rider - Placentia	2	Collector	2		
East Frontage Rd	Placentia - Orange	2	Collector	2		
East Frontage Rd	Orange - Indian	2	Collector	2		
East Frontage Rd	Indian - Nuevo Rd.	2	Collector	2		
Ellis Avenue	West of SR 74	2	Secondary Arterial	4	Widen to 4 lanes	County Designation.
Ellis Avenue	SR 74 - A Street	2	Arterial	6	Widen to 6 lanes	Evans Interchange not modeled in CETAP, volumes will be higher in Full Build conditions.
Ellis Avenue	A Street - Goetz Road	2	Arterial	6		
Ellis Avenue	Goetz Road - Case Road	2	Arterial	6		
Ellis Avenue	Case Road - Redlands	2	Arterial	6		
Ellis Avenue	Redlands - Murietta	2	Arterial	6		
Ellis Avenue	Murietta - Evans	2	Arterial	6		
Ethanac Road	West of Sophie	2	Expressway	6	Widen to 6 lanes	Major E-W movement in Southern Perris/Excess from SR74.
Ethanac Road	Sophie - River Rd.	2	Expressway	6		
Ethanac Road	River Rd. - Goetz Road	2	Expressway	6		
Ethanac Road	Goetz Road - Murrieta Road	2	Expressway	6		
Ethanac Road	Murrieta Road - Green Valley Pkwy	2	Expressway	6		

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
Ethanac Road	Green Valley Pkwy - I-215	2	Expressway	6		
Ethanac Road	I-215 - SR-74	2	Expressway	6		
Ethanac Road	East of SR 74	2	Expressway	6		
Evans Road	Oleander - Ramona Parkway	2	Arterial	6	Widen to 6 lanes	Major N-S movement/Excess from Perris.
Evans Road	Ramona Parkway - Morgan	2	Arterial	6		
Evans Road	Morgan - Rider	2	Arterial	6		
Evans Road	Rider Street - Placentia	4	Arterial	6		
Evans Road	Placentia - Orange	6	Arterial	6		
Evans Road	Orange - Citrus	2	Arterial	6	Widen to 6 lanes	
Evans Road	Citrus - Nuevo	2	Arterial	6		
Evans Road	Nuevo Road - Murietta	2	Arterial	6		
Evans Road	Murietta - San Jacinto	2	Arterial	6		
Evans Road	San Jacinto Road - I-215	2	Arterial	6		
Evans Road	I-215 - Ellis Avenue	2	Arterial	6		
Fieldstone	Goetz - Green River Parkway	2	Collector	2		
"G" Street	San Jacinto - 4th (SR 74)	2	Collector	2		
"G" Street	4th - Case	2	Collector	2		
Goetz Road	Case - Ellis	2	Arterial	6	Widen to 6 lanes	Major connector to Sun City/Excess from I-215.
Goetz Road	Ellis - Mountain	2	Arterial	6		
Goetz Road	Mountain - Mapes	2	Arterial	6		
Goetz Road	Mapes - Fieldstone Dr.	2	Arterial	6		
Goetz Road	Fieldstone Dr. - Ethanac	2	Arterial	6		
Goetz Road	Ethanac - Valley Road	2	Arterial	6		
Goetz Road	South of Valley Road	2	Secondary Arterial	4	Widen to 4 lanes	
Green River Parkway	Murietta - Ethanac	2	Collector	2		

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
Green River Parkway	Murietta - Fieldstone	2	Collector	2		
Green River Parkway	Fieldstone Dr. - Murietta	2	Collector	2		
Harvill	Oleander - Markham	2	Arterial	6		Major N-S movements/Excess from I-215. Intensive industrial use.
Harvill	Markham - Ramona Expressway	2	Arterial	6		
Harvill	Ramona Expressway - Placentia	2	Arterial	6		
I-215	North of Oleander	6	Freeway	6	Widen to 6 lanes	Measure A funds targeted to widen to 8 lane facility by 2038.
I-215	Oleander - Ramona Expressway	6	Freeway	6		
I-215	Ramona Expressway - Placentia	6	Freeway	6		
I-215	Placentia Avenue - Nuevo	6	Freeway	6		
I-215	Nuevo Road - SR 74 (4th St.)	6	Freeway	6		
I-215	SR 74 - Evans	4	Freeway	6		
I-215	Evans - Case	4	Freeway	6		
I-215	Case - Ethanac	4	Freeway	6		
I-215	South of Ethanac	4	Freeway	6		
Indian Avenue	North of Oleander Avenue	2	Secondary Arterial	4	Build to 4 lanes	Major N-S movement/Excess from I-215. Intensive industrial use.
Indian Avenue	Oleander - Markham		Secondary Arterial	4		
Indian Avenue	Markham - Ramona		Secondary Arterial	4		
Indian Avenue	Ramona Expressway - Rider Street	4	Secondary Arterial	4		
Indian Avenue	Rider - Placentia	4	Secondary Arterial	4		
Indian Avenue	Placentia - Orange	4	Secondary Arterial	4		
Indian Avenue	Orange - E. Frontage Rd.	4	Secondary Arterial	4		
Jarvis	Perris - Redlands	2	Collector	2		
Mapes	Goetz - "A"	2	Secondary Arterial	4	Widen to 4 lanes	Intensive residential growth beyond 2030.
Mapes	"A" - McPherson	2	Secondary Arterial	4		
Mapes	McPherson - Sophie	2	Secondary Arterial	4		

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
Mapes	Sophie - Mountain	2	Secondary Arterial	4		
Mapes	Mountain - Marie	2	Secondary Arterial	4		
Markham	West of Harvill	2	Secondary Arterial	4	Widen to 4 lanes	Intensive industrial use. Limited access along Ramona will draw E-W movement including trucks.
Markham	I-215 - Harvill	2	Secondary Arterial	4		
Markham	Wade - Patterson	2	Secondary Arterial	4		
Markham	Patterson - Webster	2	Secondary Arterial	4		
Markham	Webster - Indian	4	Secondary Arterial	4		
Markham	Indian - Perris	2	Secondary Arterial	4		
Markham	Perris - Redlands		Secondary Arterial	4		
May Ranch Parkway	Evans - Rider Street	2	Secondary Arterial	4	Widen to 4 lanes	
McPherson	North of Mountain	2	Collector	2		
McPherson	Mapes - Watson	2	Major Collector	2		
McPherson	Watson - Ethanac	2	Major Collector	2		
Morgan	Nevada - Webster	2	Secondary Arterial	4	Widen to 4 lanes	Intensive industrial use. Limited access along Ramona will draw E-W movement including trucks.
Morgan	Webster - Indian	4	Secondary Arterial	4		
Morgan	Indian - Perris	2	Secondary Arterial	4		
Morgan	Perris - Redlands	2	Secondary Arterial	4		
Morgan	East of Evans - Evans	4	Secondary Arterial	4		
Mountain	West of SR 74	2	Secondary Arterial	4	Widen to 4 lanes	Intensive residential growth beyond 2030.
Mountain	SR 74 - Sophie	2	Secondary Arterial	4		
Mountain	Sophie - McPherson	2	Secondary Arterial	4		
Mountain	McPherson - "A" Street	2	Secondary Arterial	4		
Murrieta Road	Placentia - Orange	2	Collector	2		ROW Constraints.
Murrieta Road	Nuevo Road - Evans	2	Major Collector	2		
Murrieta Road	Case Road - Green Valley Pkwy	2	Secondary Arterial	4	Widen to 4 lanes	Intensive residential growth

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
Murrieta Road	Green Valley Pkwy -Green Valley Pkwy So.	2	Secondary Arterial	4		beyond 2030.
Murrieta Road	Green Valley Pkwy So. - Ethanac	2	Secondary Arterial	4		
Murrieta Road	Ethanac - McCall	2	Secondary Arterial	4		
Navajo Road	NW of 4th	2	Collector	2		
Nevada Frontage Rd	Markham - Ramona Pkwy	2	Collector	2		
Nevada Frontage Rd	Ramona Pkwy - Morgan	2	Collector	2		
Nevada Frontage Rd	Morgan - Rider	2	Collector	2		
Nuevo Road	Webster - I-215	4	Secondary Arterial	4		
Nuevo Road	I-215 to East Frontage Road	4	Arterial	6	Widen to 6 lanes	Major E-W movement to/from I-215.
Nuevo Road	East Frontage Road - Perris Boulevard	4	Arterial	6		
Nuevo Road	Perris Boulevard - Redlands Avenue	2	Arterial	6		
Nuevo Road	Redlands Avenue - Wilson	2	Arterial	6		
Nuevo Road	Wilson Avenue - Murrietta Road	2	Arterial	6		
Nuevo Road	Murrietta Road - Evans	2	Arterial	6		
Nuevo Road	Evans - Dunlap	2	Arterial	6		
Nuevo Road	East of Dunlap	2	Arterial	6		
Old Elsinore Road	Oleander - Ramona	2	Secondary Arterial	4	Widen to 4 lanes	County designations.
Old Elsinore Road	Ramona - Rider	2	Arterial	6	Widen to 6 lanes	
Old Elsinore Road	Rider - Mack	2	Arterial	6		
Old Elsinore Road	Mack - Nuevo	2	Arterial	6		
Old Elsinore Road	Nuevo - San Jacinto	2	Arterial	6		
Oleander Avenue	West of Harvill	2	Arterial	6	Widen to 6 lanes	Major E-W movement in Northern Perris.
Oleander Avenue	Harvill - I-215	2	Arterial	6		
Oleander Avenue	I-215 - Patterson	2	Arterial	6		
Oleander Avenue	Patterson - Heacock	2	Arterial	6		

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
Oleander Avenue	Heacock - Indian	2	Arterial	6		
Oleander Avenue	Indian Avenue - Perris Boulevard		Arterial	6		
Oleander Avenue	Perris Boulevard - Laselle		Arterial	6		
Orange Avenue	West of I-215	2	Secondary Arterial	4	Widen to 4 lanes	Major E-W movement given limited access along Ramona.
Orange Avenue	E. Frontage Rd. - Indian Avenue	4	Secondary Arterial	4		
Orange Avenue	Indian Road - Perris	4	Secondary Arterial	4		
Orange Avenue	Perris Boulevard - Redlands	4	Secondary Arterial	4		
Orange Avenue	Redlands - Wilson	4	Secondary Arterial	4		
Orange Avenue	Wilson - Evans	2	Secondary Arterial	4		
Orange Avenue	Evans - Dunlap	2	Secondary Arterial	4		
Patterson	Oleander - Markham	2	Collector	2		
Perris Boulevard	North of Oleander	4	Arterial	6	Widen to 6 lanes	Major N-S movement/Excess from I-215. Intensive industrial use in the North.
Perris Boulevard	Oleander - Markham	4	Arterial	6		
Perris Boulevard	Markham - Ramona	4	Arterial	6		
Perris Boulevard	Ramona Expressway - Morgan	4	Arterial	6		
Perris Boulevard	Morgan - Rider	4	Arterial	6		
Perris Boulevard	Rider Street - Placentia Avenue	4	Arterial	6		
Perris Boulevard	Placentia Avenue - Orange	4	Arterial	6		
Perris Boulevard	Orange - Citrus	4	Arterial	6		
Perris Boulevard	Citrus - Nuevo	4	Arterial	6		
Perris Boulevard	Nuevo - E. Jarvis Avenue	4	Arterial	6		
Perris Boulevard	E. Jarvis - San Jacinto	4	Arterial	6		
Perris Boulevard	San Jacinto - 4th	4	Arterial	6		ROW Constraints. May only build to 4 lanes.
Perris Boulevard	4th Street - 11th	4	Arterial	6		
Perris Boulevard	11th - Ellis	4	Arterial	6		

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
Placentia Avenue	*West of Harvill*	*2*	*Arterial*	*6*		
Placentia Avenue	*Harvill - I-215*	*2*	*Arterial*	*6*		
Placentia Avenue	*I-215 - East Frontage Rd.*	*2*	*Arterial*	*6*		
Placentia Avenue	*East Frontage Rd. - Indian Avenue*	*2*	*Arterial*	*6*		
Placentia Avenue	*Indian Avenue - Perris Boulevard*	*2*	*Arterial*	*6*	*Widen to 6 lanes*	*New interchange and intensive residential development in Eastern Perris will increase E-W movement.*
Placentia Avenue	*Perris Boulevard - Redlands Avenue*	*2*	*Arterial*	*6*		
Placentia Avenue	*Redlands Avenue - Wilson*	*2*	*Arterial*	*6*		
Placentia Avenue	*Wilson - Murietta*	*2*	*Arterial*	*6*		
Placentia Avenue	*Murietta - Evans*	*2*	*Arterial*	*6*		
Phillips Street	*Mountain - Mapes*	*2*	*Major Collector*	*2*		
Phillips Street	*Mapes - Ethanac*	*2*	*Major Collector*	*2*		
Ramona Expressway	*I-215 - Nevada Avenue*	*4*	*Expressway*	*6*		
Ramona Expressway	*Nevada Avenue - Webster Avenue*	*4*	*Expressway*	*6*		
Ramona Expressway	*Webster Avenue - Indian Avenue*	*4*	*Expressway*	*6*		
Ramona Expressway	*Indian Avenue - Perris Boulevard*	*4*	*Expressway*	*6*		
Ramona Expressway	*Perris Boulevard - Redlands Avenue*	*4*	*Expressway*	*6*	*Widen to 6 lanes*	*(Potential CETAP Corridor.)*
Ramona Expressway	*Redlands Avenue - Evans Road*	*4*	*Expressway*	*6*		
Ramona Expressway	*Evans Road - Bradley Road*	*4*	*Expressway*	*6*		
Ramona Expressway	*Bradley Road - Rider Street*	*4*	*Expressway*	*6*		
Ramona Expressway	*East of Rider Street*	*4*	*Expressway*	*6*		
Redlands Avenue	*Oleander - Markham*	*2*	*Secondary Arterial*	*4*	*Widen to 4 lanes*	
Redlands Avenue	*Markham - Ramona*	*4*	*Secondary Arterial*	*4*		*Major N-S movement/Excess from I-215 and Perris.*
Redlands Avenue	*Ramona - Morgan*	*4*	*Secondary Arterial*	*4*		
Redlands Avenue	*Morgan - Rider*	*4*	*Secondary Arterial*	*4*		
Redlands Avenue	*Rider Street - Placentia Avenue*	*4*	*Secondary Arterial*	*4*		

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
Redlands Avenue	Placentia Avenue - Orange	4	Secondary Arterial	4		Major N-S movement/Excess from I-215 and Perris. ROW Constraints.
Redlands Avenue	Orange - Citrus	4	Secondary Arterial	4		
Redlands Avenue	Citrus - Nuevo	4	Secondary Arterial	4		
Redlands Avenue	Nuevo - E. Jarvis Avenue	2	Arterial	6	Widen to 6 lanes	Major N-S movement/Excess from I-215 and Perris.
Redlands Avenue	E. Jarvis - San Jacinto	2	Arterial	6		
Redlands Avenue	San Jacinto Road - I-215	4	Arterial	6		
Redlands Avenue	I-215 - 4th (SR 74)	4	Arterial	6		
Redlands Avenue	4th - Ellis	4	Secondary Arterial	4		
Rider Street	West of Alexander	2	Secondary Arterial	4	Widen to 4 lanes	Major E-W movement given limited access along Ramona. Safety concerns w/ 4 schools.
Rider Street	Alexander - Old Elsinore	2	Secondary Arterial	4		
Rider Street	Old Elsinore - Marie	2	Secondary Arterial	4		
Rider Street	Marie - Harvill	2	Secondary Arterial	4		
Rider Street	Nevada - Webster	2	Secondary Arterial	4		
Rider Street	Webster - Indian	4	Secondary Arterial	4		
Rider Street	Indian Avenue - Perris Boulevard	2	Secondary Arterial	4	Widen to 4 lanes	
Rider Street	Perris - Wilson	2	Secondary Arterial	4		
Rider Street	Wilson - Redlands	2	Secondary Arterial	4		
Rider Street	Redlands - Evans	2	Secondary Arterial	4		
Rider Street	Evans - May Ranch Pkwy	2	Secondary Arterial	4		
Rider Street	May Ranch Pkwy - Bradley	2	Secondary Arterial	4		
Rider Street	Bradley - Ramona	2	Secondary Arterial	4		
River Rd.	Watson - Ethanac	2	Collector	2		
San Jacinto Road	East of "A" Street	2	Secondary Arterial	4	Widen to 4 lanes	Provides capacity for diverted N-S movement or excess from I-215.
San Jacinto Road	"A" - "D"	2	Secondary Arterial	4		
San Jacinto Road	"D" - Perris	2	Secondary Arterial	4		

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
San Jacinto Road	Perris - "G"	2	Secondary Arterial	4		
San Jacinto Road	"G" - Redlands	2	Secondary Arterial	4		
San Jacinto Road	Redlands - Wilson	2	Arterial	6	Widen to 6 lanes	
San Jacinto Road	Wilson - Evans	2	Arterial	6		
San Jacinto Road	Evans - Dunlap	2	Secondary Arterial	4	Widen to 4 lanes	
Sophie	Mountain - Mapes	2	Major Collector	2		
SR-74	South of Mountain	4	Arterial	6	Widen to 6 lanes	
SR-74	Marie - Mountain	4	Arterial	6		
SR-74	Mountain - Ellis	4	Arterial	6		
SR-74	Ellis - Navajo	4	Arterial	6		
SR-74	Navajo - "A"	2	Secondary Arterial	4	Widen to 4 lanes	ROW Constraints.
SR-74	A Street - D Street	2	Secondary Arterial	4		
SR-74	D Street - Perris Boulevard	2	Secondary Arterial	4		
SR-74	Perris Boulevard - "G"	2	Secondary Arterial	4		
SR-74	"G" - Redlands	2	Secondary Arterial	4		
SR-74	East of Redlands	2	Secondary Arterial	4		
Valley Road	South of Goetz	2	Arterial	6	Widen to 6 lanes	County designation.
Wade	Oleander - Markham	2	Collector	2		
Watson	"A" Street - River Road	2	Major Collector	2		Residential development.
Watson	River Road - McPherson	2	Major Collector	2		
Webster Avenue	Oleander - Markham	2	Secondary Arterial	4	Widen to 6 lanes	Major N-S movement to/from Moreno Valley/Excess from I-215.
Webster Avenue	Markham - Ramona	2	Secondary Arterial	4		
Webster Avenue	Ramona Expressway - Morgan	2	Secondary Arterial	4	Widen to 4 lanes	Large industrial use.
Webster Avenue	Morgan - Rider	2	Secondary Arterial	4		
Wilson	Rider - Placentia	2	Collector	2		

Street	Segment	2003	2030		2003-2030 Upgrade	Designation Justification
		Number of Lanes	Future Classification	Future Number of Lanes		
Wilson	*Placentia - Orange*	*2*	*Collector*	*2*		
Wilson	*Orange - Citrus*	*2*	*Collector*	*2*		
Wilson	*Citrus - Nuevo*	*2*	*Collector*	*2*		
Wilson	*Nuevo - San Jacinto Road*	*2*	*Collector*	*2*		

Projected Traffic Volumes and Level of Service Conditions

Segment Analysis

Results of the traffic modeling process provided Year 2030 projected average daily traffic volumes on principal streets and highways in the City of Perris. Traffic volumes for each classified street and highway have been identified to project expected levels of service. To determine future LOS for each segment along the street and highway network, segment LOS was estimated using the Modified Highway Capacity Manual-Based Level of Service Tables (Appendix A). The Tables are widely used in the Inland Empire and consider the capacity of individual street and highway segments based on numerous roadway variables (freeway design speed, signalized intersections per mile, number of lanes, saturation flow, etc.). These variables were identified and applied to reflect existing traffic LOS conditions in the plan area. A complete description of the Modified Tables and the variables applied to calculate segment LOS is included in Appendix A and a summary follows as Table CE-9. Table CE-10 and Exhibit CE-13 identify the resulting Year 2030 average daily traffic volumes and LOS for each street and highway segment.

Areas designated as Corridor Study Areas in Exhibit CE-13 are expected to be studied during the planning period and are subject to change from the illustrated designations prior to 2030. Exhibit CE-13 therefore identifies future LOS for the planned regional street and highway system.

Results of the segment analysis for the Year 2030 indicate that a majority of the future year street and highway segments will be operating at LOS A through D (reference Table CE-10). Fourteen (14) segments referenced in Table CE-10 and four (4) intersections from Table CE-6 are projected to be operating at LOS E or F by the Year 2030. As a result, these street and highway segments will fall short of the City's new Minimum LOS Standard of "D" or better, as identified in the Strategy for Action Goals and Policies.

Table CE-9: Perris Roadway Future Capacity / Level of Service [1]

Roadway Classification	Number of Lanes	Maximum Two-Way Average Daily Traffic (ADT) [2]				
		LOS A	LOS B	LOS C	LOS D	LOS E
Collector/Local	2	7,800	9,100	10,400	11,700	13,000
Major Collector	2	10,800	12,600	14,400	16,200	18,000
Secondary Arterial	4	21,540	25,130	28,700	32,300	35,900
Arterial	6	32,340	37,730	43,100	48,500	53,900
Expressway	6	36,780	42,910	49,000	55,200	61,300
Expressway	8	49,020	57,190	65,400	73,500	81,700
Freeway	4	45,900	53,550	61,200	68,900	76,500
Freeway	6	70,500	82,250	94,000	105,800	117,500
Freeway	8	96,300	112,350	128,400	144,500	160,500
Freeway	10	120,360	140,420	160,500	180,500	200,600

[1] All Capacity Exhibits are based on optimum conditions and are intended as guidelines for planning purposes only.

[2] Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual Level of Service Tables.

Table CE-10: Future Segment Average Daily Traffic (ADT) and Level of Service (LOS)

Street	Segment	2030			
		Future Classification	Future Number of Lanes	Future ADT	Future LOS
7th Street	Redlands - SR 74	Collector	2	4,600	A
11th Street	West of "A"	Collector	2	3,200	A
11th Street	A Street - D Street	Collector	2	3,100	A
11th Street	D Street - G Street	Collector	2	9,600	C
A Street	North of San Jacinto	Secondary Arterial	4	7,500	A
A Street	San Jacinto - 4th (SR 74)	Secondary Arterial	4	13,300	A
A Street	4th Street - 11th Street	Major Collector	2	7,900	A
A Street	11th Street - Ellis Avenue	Major Collector	2	7,900	A
A Street	Ellis Avenue - Mountain	Major Collector	2	10,000	A
A Street	Mountain - Mapes	Major Collector	2	10,000	A
A Street	Mapes - Watson	Major Collector	2	8,500	A
Bradley	Ramona Expressway - Rider Street	Secondary Arterial	4	1,700	A
Cajalco Expressway	West of Haines	Expressway	6	22,700	A
Cajalco Expressway	Haines - Old Elsinore	Expressway	6	21,800	A
Cajalco Expressway	Old Elsinore - Day	Expressway	6	24,900	A
Cajalco Expressway	Day - Seaton	Expressway	6	24,000	A

Street	Segment	2030			
		Future Classification	Future Number of Lanes	Future ADT	Future LOS
Cajalco Expressway	Seaton - Harvill	Expressway	6	25,400	A
Cajalco Expressway	Harvill Avenue - I-215	Expressway	6	32,400	A
Case Road	Perris - Goetz	Secondary Arterial	4	10,300	A
Case Road	Goetz - Ellis	Secondary Arterial	4	10,500	A
Case Road	Ellis - Murietta	Secondary Arterial	4	17,700	A
Case Road	Murietta - I-215	Secondary Arterial	4	8,900	A
Citrus	Perris - Redlands	Collector	2	600	A
Citrus	Redlands - Wilson	Collector	2	5,800	A
Citrus	Wilson - Murrieta	Collector	2	1,900	A
Citrus	West of Evans	Collector	2	800	A
D Street	I-215 - 4th Street	Secondary Arterial	4	23,400	B
D Street	4th Street - 11th	Collector	2	8,900	B
Dunlap	Orange - Citrus	Secondary Arterial	4	15,500	A
Dunlap	Citrus - Nuevo	Secondary Arterial	4	9,200	A
Dunlap	Nuevo - San Jacinto Road	Secondary Arterial	4	12,200	A
Dunlap	San Jacinto - Ellis	Secondary Arterial	4		
East Frontage Rd	Rider - Placentia	Collector	2	3,700	A
East Frontage Rd	Placentia - Orange	Collector	2	2,200	A
East Frontage Rd	Orange - Indian	Collector	2	2,200	A
East Frontage Rd	Indian - Nuevo Rd.	Collector	2	2,100	A
Ellis Avenue	West of SR 74	Secondary Arterial	4	12,800	A
Ellis Avenue	SR 74 - A Street	Arterial	6	14,900	A
Ellis Avenue	A Street - Goetz Road	Arterial	6	17,400	A
Ellis Avenue	Goetz Road - Case Road	Arterial	6	17,800	A
Ellis Avenue	Case Road - Redlands	Arterial	6	19,400	A
Ellis Avenue	Redlands - Murietta	Arterial	6	11,200	A
Ellis Avenue	Murietta - Evans	Arterial	6	11,700	A
Ethanac Road	West of Sophie	Expressway	6	11,100	A
Ethanac Road	Sophie - River Rd.	Expressway	6	11,100	A
Ethanac Road	River Rd. - Goetz Road	Expressway	6	14,100	A
Ethanac Road	Goetz Road - Murrieta Road	Expressway	6	17,600	A
Ethanac Road	Murrieta Road - Green Valley Pkwy	Expressway	6	16,100	A
Ethanac Road	Green Valley Pkwy - I-215	Expressway	6	17,600	A
Ethanac Road	I-215 - SR-74	Expressway	6	18,700	A
Ethanac Road	East of SR 74	Expressway	6	24,100	A
Evans Road	Oleander - Ramona Parkway	Arterial	6	20,400	A
Evans Road	Ramona Parkway - Morgan	Arterial	6	22,500	A
Evans Road	Morgan - Rider	Arterial	6	14,800	A
Evans Road	Rider Street - Placentia	Arterial	6	13,500	A
Evans Road	Placentia - Orange	Arterial	6	12,800	A
Evans Road	Orange - Citrus	Arterial	6	12,400	A
Evans Road	Citrus - Nuevo	Arterial	6	12,100	A

Street	Segment	2030			
		Future Classification	Future Number of Lanes	Future ADT	Future LOS
Evans Road	Nuevo Road - Murietta	Arterial	6	10,800	A
Evans Road	Murietta - San Jacinto	Arterial	6	9,500	A
Evans Road	San Jacinto Road - I-215	Arterial	6	14,500	A
Evans Road	I-215 - Ellis Avenue	Arterial	6	12,600	A
Fieldstone	Goetz - Green River Parkway	Collector	2	700	A
"G" Street	San Jacinto - 4th (SR 74)	Collector	2	23,100	F
"G" Street	4th - Case	Collector	2	14,900	F
Goetz Road	Case - Ellis	Arterial	6	9,000	A
Goetz Road	Ellis - Mountain	Arterial	6	7,500	A
Goetz Road	Mountain - Mapes	Arterial	6	12,900	A
Goetz Road	Mapes - Fieldstone Dr.	Arterial	6	13,300	A
Goetz Road	Fieldstone Dr. - Ethanac	Arterial	6	12,500	A
Goetz Road	Ethanac - Valley Road	Arterial	6	12,900	A
Goetz Road	South of Valley Road	Secondary Arterial	4	2,500	A
Green River Parkway	Murietta - Ethanac	Collector	2	100	A
Green River Parkway	Murietta - Fieldstone	Collector	2	100	A
Green River Parkway	Fieldstone Dr. - Murietta	Collector	2	200	A
Harvill	Oleander - Markham	Arterial	6	11,100	A
Harvill	Markham - Ramona Expressway	Arterial	6	11,300	A
Harvill	Ramona Expressway - Placentia	Arterial	6	5,200	A
I-215	North of Oleander	Freeway	6	180,200	F
I-215	Oleander - Ramona Expressway	Freeway	6	176,500	F
I-215	Ramona Expressway - Placentia	Freeway	6	160,500	F
I-215	Placentia Avenue - Nuevo	Freeway	6	160,500	F
I-215	Nuevo Road - SR 74 (4th St.)	Freeway	6	159,500	F
I-215	SR 74 - Evans	Freeway	6	137,000	F
I-215	Evans - Case	Freeway	6	138,500	F
I-215	Case - Ethanac	Freeway	6	124,900	F
I-215	South of Ethanac	Freeway	6	124,500	F
Indian Avenue	North of Oleander Avenue	Secondary Arterial	4	4,100	A
Indian Avenue	Oleander - Markham	Secondary Arterial	4	4,300	A
Indian Avenue	Markham - Ramona	Secondary Arterial	4	3,000	A
Indian Avenue	Ramona Expressway - Rider Street	Secondary Arterial	4	1,900	A
Indian Avenue	Rider - Placentia	Secondary Arterial	4	5,400	A
Indian Avenue	Placentia - Orange	Secondary Arterial	4	5,500	A
Indian Avenue	Orange - E. Frontage Rd.	Secondary Arterial	4	6,300	A
Jarvis	Perris - Redlands	Collector	2	5,000	A
Mapes	Goetz - "A"	Secondary Arterial	4	6,100	A
Mapes	"A" - McPherson	Secondary Arterial	4	1,300	A
Mapes	McPherson - Sophie	Secondary Arterial	4	1,300	A
Mapes	Sophie - Mountain	Secondary Arterial	4	1,300	A

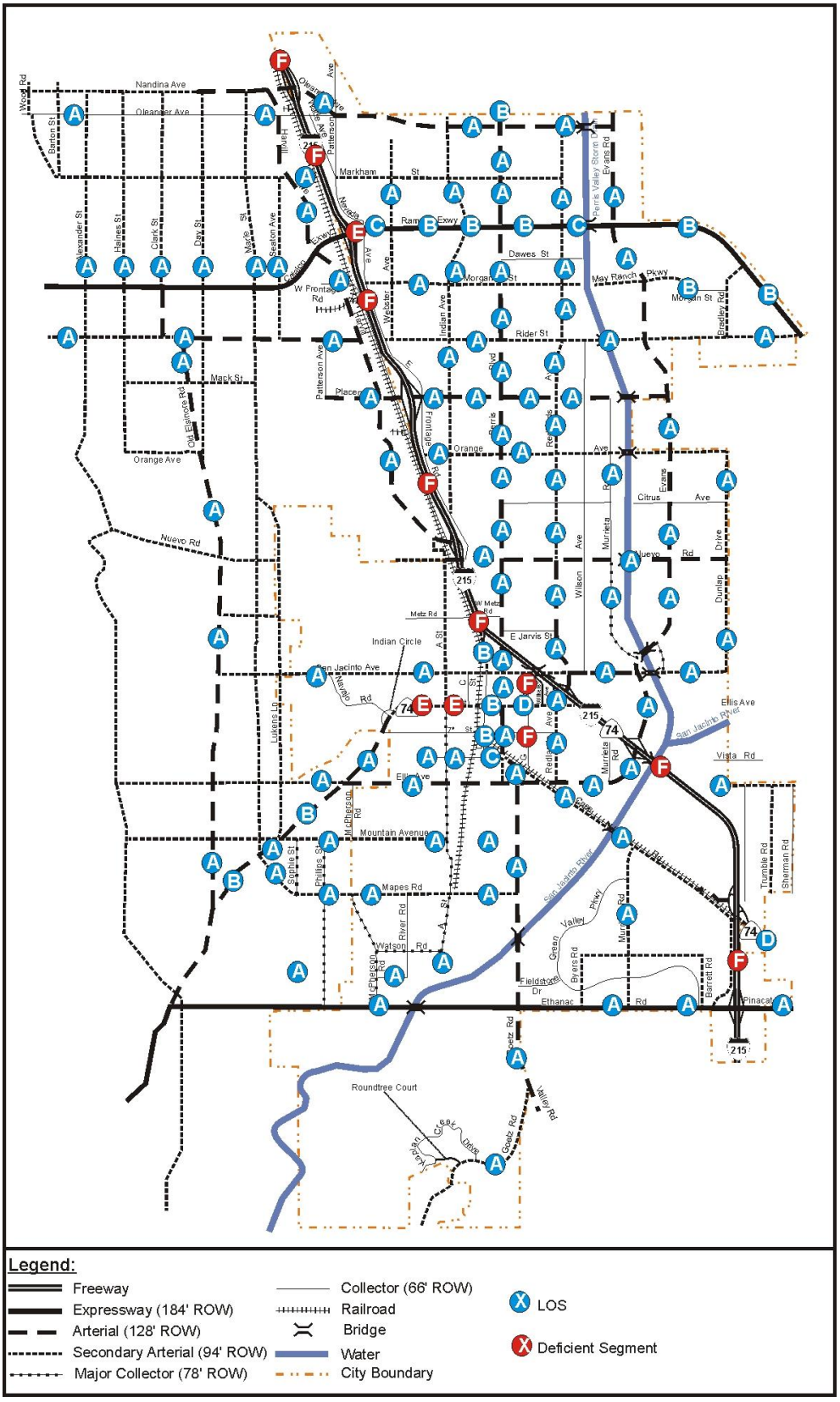
Street	Segment	2030			
		Future Classification	Future Number of Lanes	Future ADT	Future LOS
Mapes	Mountain - Marie	Secondary Arterial	4	4,300	A
Markham	West of Harvill	Secondary Arterial	4	13,700	A
Markham	I-215 - Harvill	Secondary Arterial	4	100	A
Markham	Wade - Patterson	Secondary Arterial	4	100	A
Markham	Patterson - Webster	Secondary Arterial	4	2,100	A
Markham	Webster - Indian	Secondary Arterial	4	2,900	A
Markham	Indian - Perris	Secondary Arterial	4	2,900	A
Markham	Perris - Redlands	Secondary Arterial	4	1,400	A
May Ranch Parkway	Evans - Rider Street	Secondary Arterial	4	22,500	B
McPherson	North of Mountain	Collector	2	1,700	A
McPherson	Mapes - Watson	Major Collector	2		
McPherson	Watson - Ethanac	Major Collector	2		A
Morgan	Nevada - Webster	Secondary Arterial	4	2,300	A
Morgan	Webster - Indian	Secondary Arterial	4	2,100	A
Morgan	Indian - Perris	Secondary Arterial	4	4,600	A
Morgan	Perris - Redlands	Secondary Arterial	4	6,700	A
Morgan	East of Evans - Evans	Secondary Arterial	4	800	A
Mountain	West of SR 74	Secondary Arterial	4	5,900	A
Mountain	SR 74 - Sophie	Secondary Arterial	4	4,800	A
Mountain	Sophie - McPherson	Secondary Arterial	4	4,400	A
Mountain	McPherson - "A" Street	Secondary Arterial	4	2,800	A
Murrieta Road	Placentia - Orange	Collector	2	4,600	A
Murrieta Road	Nuevo Road - Evans	Major Collector	2	7,200	A
Murrieta Road	Case Road - Green Valley Pkwy	Secondary Arterial	4	9,300	A
Murrieta Road	Green Valley Pkwy -Green Valley Pkwy So.	Secondary Arterial	4	9,700	A
Murrieta Road	Green Valley Pkwy So. - Ethanac	Secondary Arterial	4	8,900	A
Murrieta Road	Ethanac - McCall	Secondary Arterial	4	3,400	A
Navajo Road	NW of 4th	Collector	2	7,600	A
Nevada Frontage Rd	Markham - Ramona Pkwy	Collector	2	2,600	A
Nevada Frontage Rd	Ramona Pkwy - Morgan	Collector	2	4,500	A
Nevada Frontage Rd	Morgan - Rider	Collector	2	4,200	A
Nuevo Road	Webster - I-215	Secondary Arterial	4	4,300	A
Nuevo Road	I-215 to East Frontage Road	Arterial	6	17,900	A
Nuevo Road	East Frontage Road - Perris Boulevard	Arterial	6	18,200	A
Nuevo Road	Perris Boulevard - Redlands Avenue	Arterial	6	17,700	A
Nuevo Road	Redlands Avenue - Wilson	Arterial	6	18,000	A
Nuevo Road	Wilson Avenue - Murrietta Road	Arterial	6	15,400	A
Nuevo Road	Murrietta Road - Evans	Arterial	6	20,500	A
Nuevo Road	Evans - Dunlap	Arterial	6	17,500	A
Nuevo Road	East of Dunlap	Arterial	6	17,500	A
Old Elsinore Road	Oleander - Ramona	Secondary Arterial	4	8,300	A
Old Elsinore Road	Ramona - Rider	Arterial	6	13,800	A

Street	Segment	2030			
		Future Classification	Future Number of Lanes	Future ADT	Future LOS
Old Elsinore Road	Rider - Mack	Arterial	6	11,500	A
Old Elsinore Road	Mack - Nuevo	Arterial	6	12,600	A
Old Elsinore Road	Nuevo - San Jacinto	Arterial	6	11,100	A
Oleander Avenue	West of Harvill	Arterial	6	16,200	A
Oleander Avenue	Harvill - I-215	Arterial	6	25,300	A
Oleander Avenue	I-215 - Patterson	Arterial	6	16,200	A
Oleander Avenue	Patterson - Heacock	Arterial	6	13,400	A
Oleander Avenue	Heacock - Indian	Arterial	6	7,600	A
Oleander Avenue	Indian Avenue - Perris Boulevard	Arterial	6	7,300	A
Oleander Avenue	Perris Boulevard - Laselle	Arterial	6	5,500	A
Orange Avenue	West of I-215	Secondary Arterial	4	3,500	A
Orange Avenue	E. Frontage Rd. - Indian Avenue	Secondary Arterial	4	1,400	A
Orange Avenue	Indian Road - Perris	Secondary Arterial	4	4,600	A
Orange Avenue	Perris Boulevard - Redlands	Secondary Arterial	4	6,700	A
Orange Avenue	Redlands - Wilson	Secondary Arterial	4	9,100	A
Orange Avenue	Wilson - Evans	Secondary Arterial	4	9,300	A
Orange Avenue	Evans - Dunlap	Secondary Arterial	4	4,900	A
Patterson	Oleander - Markham	Collector	2	8,900	A
Perris Boulevard	North of Oleander	Arterial	6	34,600	B
Perris Boulevard	Oleander - Markham	Arterial	6	27,000	A
Perris Boulevard	Markham - Ramona	Arterial	6	26,000	A
Perris Boulevard	Ramona Expressway - Morgan	Arterial	6	24,900	A
Perris Boulevard	Morgan - Rider	Arterial	6	25,600	A
Perris Boulevard	Rider Street - Placentia Avenue	Arterial	6	25,500	A
Perris Boulevard	Placentia Avenue - Orange	Arterial	6	24,600	A
Perris Boulevard	Orange - Citrus	Arterial	6	17,200	A
Perris Boulevard	Citrus - Nuevo	Arterial	6	17,600	A
Perris Boulevard	Nuevo - E. Jarvis Avenue	Arterial	6	25,700	A
Perris Boulevard	E. Jarvis - San Jacinto	Arterial	6	27,900	A
Perris Boulevard	San Jacinto - 4th	Arterial	6	24,000	A
Perris Boulevard	4th Street - 11th	Arterial	6	7,000	A
Perris Boulevard	11th - Ellis	Arterial	6		A
Placentia Avenue	West of Harvill	Arterial	6	14,200	A
Placentia Avenue	Harvill - I-215	Arterial	6	14,600	A
Placentia Avenue	I-215 - East Frontage Rd.	Arterial	6		A
Placentia Avenue	East Frontage Rd. - Indian Avenue	Arterial	6	30,200	A
Placentia Avenue	Indian Avenue - Perris Boulevard	Arterial	6	29,600	A
Placentia Avenue	Perris Boulevard - Redlands Avenue	Arterial	6	6,100	A
Placentia Avenue	Redlands Avenue - Wilson	Arterial	6	6,100	A
Placentia Avenue	Wilson - Murietta	Arterial	6	6,300	A
Placentia Avenue	Murietta - Evans	Arterial	6	5,600	A
Phillips Street	Mountain - Mapes	Major Collector	2		A

Street	Segment	2030			
		Future Classification	Future Number of Lanes	Future ADT	Future LOS
Phillips Street	Mapes - Ethanac	Major Collector	2		A
Ramona Expressway	I-215 - Nevada Avenue	Expressway	6	55,800	E
Ramona Expressway	Nevada Avenue - Webster Avenue	Expressway	6	43,900	C
Ramona Expressway	Webster Avenue - Indian Avenue	Expressway	6	41,400	B
Ramona Expressway	Indian Avenue - Perris Boulevard	Expressway	6	37,800	B
Ramona Expressway	Perris Boulevard - Redlands Avenue	Expressway	6	41,600	B
Ramona Expressway	Redlands Avenue - Evans Road	Expressway	6	45,700	C
Ramona Expressway	Evans Road - Bradley Road	Expressway	6	39,500	B
Ramona Expressway	Bradley Road - Rider Street	Expressway	6	39,300	B
Ramona Expressway	East of Rider Street	Expressway	6	38,700	B
Redlands Avenue	Oleander - Markham	Secondary Arterial	4		
Redlands Avenue	Markham - Ramona	Secondary Arterial	4	13,600	A
Redlands Avenue	Ramona - Morgan	Secondary Arterial	4	14,700	A
Redlands Avenue	Morgan - Rider	Secondary Arterial	4	16,500	A
Redlands Avenue	Rider Street - Placentia Avenue	Secondary Arterial	4	21,400	A
Redlands Avenue	Placentia Avenue - Orange	Secondary Arterial	4	21,200	A
Redlands Avenue	Orange - Citrus	Secondary Arterial	4	15,700	A
Redlands Avenue	Citrus - Nuevo	Secondary Arterial	4	18,400	A
Redlands Avenue	Nuevo - E. Jarvis Avenue	Arterial	6	24,700	A
Redlands Avenue	E. Jarvis - San Jacinto	Arterial	6	24,400	A
Redlands Avenue	San Jacinto Road - I-215	Arterial	6	24,700	A
Redlands Avenue	I-215 - 4th (SR 74)	Arterial	6	26,400	A
Redlands Avenue	4th - Ellis	Secondary Arterial	4	18,600	A
Rider Street	West of Alexander	Secondary Arterial	4	4,300	A
Rider Street	Alexander - Old Elsinore	Secondary Arterial	4	8,300	A
Rider Street	Old Elsinore - Marie	Secondary Arterial	4	4,600	A
Rider Street	Marie - Harvill	Secondary Arterial	4	11,600	A
Rider Street	Nevada - Webster	Secondary Arterial	4	3,900	A
Rider Street	Webster - Indian	Secondary Arterial	4	3,600	A
Rider Street	Indian Avenue - Perris Boulevard	Secondary Arterial	4	4,600	A
Rider Street	Perris - Wilson	Secondary Arterial	4	4,000	A
Rider Street	Wilson - Redlands	Secondary Arterial	4	3,700	A
Rider Street	Redlands - Evans	Secondary Arterial	4	10,700	A
Rider Street	Evans - May Ranch Pkwy	Secondary Arterial	4	4,900	A
Rider Street	May Ranch Pkwy - Bradley	Secondary Arterial	4	6,100	A
Rider Street	Bradley - Ramona	Secondary Arterial	4	4,700	A
River Rd.	Watson - Ethanac	Collector	2	6,700	A
San Jacinto Road	East of "A" Street	Secondary Arterial	4	6,000	A
San Jacinto Road	"A" - "D"	Secondary Arterial	4	6,400	A
San Jacinto Road	"D" - Perris	Secondary Arterial	4	6,800	A
San Jacinto Road	Perris - "G"	Secondary Arterial	4	15,500	A
San Jacinto Road	"G" - Redlands	Secondary Arterial	4	10,500	A

Street	Segment	2030			
		Future Classification	Future Number of Lanes	Future ADT	Future LOS
San Jacinto Road	Redlands - Wilson	Arterial	6	3,300	A
San Jacinto Road	Wilson - Evans	Arterial	6	6,300	A
San Jacinto Road	Evans - Dunlap	Secondary Arterial	4	5,000	A
Sophie	Mountain - Mapes	Major Collector	2	9,000	A
SR-74	South of Mountain	Arterial	6	32,600	B
SR-74	Marie - Mountain	Arterial	6	29,600	A
SR-74	Mountain - Ellis	Arterial	6	33,400	B
SR-74	Ellis - Navajo	Arterial	6	29,000	A
SR-74	Navajo - "A"	Secondary Arterial	4	34,300	E
SR-74	A Street - D Street	Secondary Arterial	4	34,500	E
SR-74	D Street - Perris Boulevard	Secondary Arterial	4	22,100	B
SR-74	Perris Boulevard - "G"	Secondary Arterial	4	14,400	A
SR-74	"G" - Redlands	Secondary Arterial	4	14,600	A
SR-74	East of Redlands	Secondary Arterial	4	7,500	A
Valley Road	South of Goetz	Arterial	6	12,300	A
Wade	Oleander - Markham	Collector	2	3,300	A
Watson	"A" Street - River Road	Major Collector	2	5,400	A
Watson	River Road - McPherson	Major Collector	2	6,800	A
Webster Avenue	Oleander - Markham	Secondary Arterial	4	5,200	A
Webster Avenue	Markham - Ramona	Secondary Arterial	4	2,000	A
Webster Avenue	Ramona Expressway - Morgan	Secondary Arterial	4	2,000	A
Webster Avenue	Morgan - Rider	Secondary Arterial	4	1200	A
Wilson	Rider - Placentia	Collector	2	5,400	A
Wilson	Placentia - Orange	Collector	2	4,300	A
Wilson	Orange - Citrus	Collector	2	200	A
Wilson	Citrus - Nuevo	Collector	2	400	A
Wilson	Nuevo - San Jacinto Road	Collector	2	500	A

Exhibit CE-13: City of Perris Future Segment LOS



Intersection Analysis

In addition to the modeling activity for segment analysis, the seven intersections analyzed during existing conditions were re-examined for future year 2030 conditions. The intersection turning movements for future year were forecast based on model segment output and the results were analyzed using the Highway Capacity Manual (HCM) methodology to determine the intersection configuration needed to maintain a LOS 'E" or "D" at the intersection (Appendix D).

Four of the seven intersections examined were along the Ramona/Cajalco Expressway. HCM analysis indicates that in order for the intersections along Ramona to maintain a LOS of "D" or better, urban interchanges would be necessary. An urban interchange is a limited access expressway facility with at-grade intersections at minor arterials or collectors and interchanges at connections with major arterials. At the writing of this Circulation Element, the Riverside Transportation Commission was conducting a multi-phase project to prepare a Project Report and Environmental Document for the Proposed Cajalco-Ramona Corridor Project, called the Mid County Parkway Project. The study will determine future configurations/geometrics of intersections or interchanges along Ramona Expressway from State Route 74 to Interstate 15.

The remaining intersections analyzed at Perris/Nuevo and Redlands/I-215 are operating at LOS "D" in 2030.

Designated Circulation Element/ Circulation Element Improvements

Based on the assessment of current and future (Year 2030) highway needs as discussed in this Circulation Element, and the City's transportation goals, policies and issues of concern, described in the last section of this Element, a series of responsive transportation improvements have been incorporated into the Circulation Element. These projects are summarized in Table CE-11 and will achieve LOS "D" or better as the projects are implemented between Year 2003 and 2030. Referencing Table CE-11, designated segments contained in the improvement program have been classified to accommodate growth and development as anticipated in the Land Use Element. Level of Service analysis has been conducted as referenced previously to ensure that minimum level of service standard recommended in this element (LOS "D") will be maintained through the Year 2030.

Several ongoing studies will address a number of these deficiencies. Interstate 215 is expected to be upgraded to 8 lanes with Measure A funding before expiration of the 30-year tax measure and therefore will not be included in the cost estimate for improvements. SR 74 falls within the City limits and therefore due to right-of-way constraints can serve at LOS "E" as indicated in the policy section under Goal 2 which identifies the downtown area as an urban development area, where transit and pedestrian activity should be encouraged. G Street should be upgraded to a 4 lane secondary arterial wherever feasible and where right-of-way constraints prevent upgrade, TDM measures should be considered to improve intersection and operations. In addition, the City has identified as an implementation measure of Goal 1 to revise the Downtown Specific Plan and should include G Street in the study if possible. The Mid County Parkway Project previously described will identify improvements to be made to the interchange at Interstate 215 and Ramona Expressway and surrounding roadway segments. This study will address the deficient intersections at the off-ramps as

identified in Existing Conditions Table CE-6. Table CE-6 also identifies the Redlands Avenue and I-215 intersection as operating at LOS F. This intersection is also part of an ongoing Caltrans study and solutions such as installation of a roundabout are currently being discussed. Further the intersection at Nuevo and Ruby Drive has been warranted for a signal as indicated in Table CE-6 and the associated costs have been included above.

Table CE-11: Future Improvements

Street	Segment	Future Street Class.	Future # of Lanes	Future ADT	Future LOS	Req'd # of Lanes/Class.	Result LOS	Segment Length (Miles)	Planning Level Cost (Includes Signals)
I-215	*North of Oleander*	*Freeway*	*6*	*180200*	*F*	*N/A*			
I-215	*Oleander - Ramona Expressway*	*Freeway*	*6*	*176500*	*F*	*N/A*			
I-215	*Ramona Expressway - Placentia*	*Freeway*	*6*	*160500*	*F*	*N/A*			
I-215	*Placentia Avenue - Nuevo*	*Freeway*	*6*	*160500*	*F*	*N/A*			
I-215	*Nuevo Road - SR 74 (4th St.)*	*Freeway*	*6*	*159500*	*F*	*N/A*			
I-215	*SR 74 - Evans*	*Freeway*	*6*	*137000*	*F*	*N/A*			
I-215	*Evans - Case*	*Freeway*	*6*	*138500*	*F*	*N/A*			
I-215	*Case - Ethanac*	*Freeway*	*6*	*124900*	*F*	*N/A*			
I-215	*South of Ethanac*	*Freeway*	*6*	*124500*	*F*	*N/A*			
I-215 Northbound off-ramp and Ramona Expressway Intersection (as identified in Table 3.6)						*N/A*			
I-215 Southbound off-ramp and Cajalco Expressway Intersection (as identified in Table 3.6)						*N/A*			

Street	Segment	Future Street Class.	Future # of Lanes	Future ADT	Future LOS	Req'd # of Lanes/Class.	Result LOS	Segment Length (Miles)	Planning Level Cost (Includes Signals)
G Street	*San Jacinto - 4th (SR74)*	*Collector*	*2*	*23100*	*F*	*4 Lane Secondary Arterial*	*B*	*0.25*	*$375,000*
G Street	*4th - Case*	*Collector*	*2*	*14900*	*F*	*4 Lane Secondary Arterial*	*A*	*0.5*	*$750,000*
*Ramona Express.**	*I-215 - Nevada Avenue*	*Expressway*	*6*	*55800*	*E*	*8 Lanes*	*C*	*0.2*	*$1,500,000*
SR 74	*Navajo - "A" Street*	*Secondary Arterial*	*4*	*34300*	*E*	*N/A*			
SR 74	*"A" Street - "D" Street*	*Secondary Arterial*	*4*	*34500*	*E*	*N/A*			
I-215 off-ramp and Redlands Intersection (as identified in Table 3.6)						*N/A*			
Nuevo Road/Ruby Drive Intersection (as identified in Table 3.6)									*$200,000*
TOTAL COST:									*$2,825,000*

Public/Mass Transportation System

Fixed Route Transit Service

As indicated in the Existing Conditions analysis, the Riverside Transit Agency (RTA) currently operates five (5) fixed-route bus services that connect Perris to other areas of Riverside County including Riverside, Woodcrest, Mead Valley, Moreno Valley, Hemet, and Sun City.

The RTA's "Short Range Transit Plan (2003-2007 Update)" indicates that the agency will focus on increased commuter services over the next several years, including Regional Flyers (rapid bus) between Riverside County and San Diego and increased services to Metrolink stations.

RTA has identified the addition of ten (10) vehicles to service American with Disabilities Act services in FY 2002/2003 and an additional 31 new vehicles to the main fleet in FY 2003, many of which will operate from the Hemet facility opened in 2000. This expansion will contribute to improved peak hour services and additional routes. An Express Route on I-215 will link Perris to Sun City, Perris, Moreno Valley, and Riverside, beginning in May 2003. RTA is currently conducting a demonstration project of Bus Rapid Transit (BRT) that combines buses, stations, services, running way, and Intelligent Transportation System (ITS) elements into a fully integrated system to provide flexible service, improve system reliability and customer convenience. Specific elements of a BRT system include cleaner fuel vehicles and rapid fare collection. If successful and additional funding can be secured, the Bus Rapid Transit service will be expanded.

In addition to the above goals and objectives, RTA has developed a "Ten Year Strategic Plan" and SCAG has identified new transit service for the 2004 RTP Update. The SCAG RTP Update includes building a transit center for Perris/Moreno Valley and improving bus stop amenities if funding is secured. The transit center would link several transit services to HOV lanes for buses and make other commuter linkages.

The RTA "Ten Year Strategic Plan" identifies 15 arterials within the County for potential Primary Transit Network (PTN) service, high frequency bus service of approximately every 15 minutes. Route 19 connecting Moreno Valley/Perris via Perris Boulevard is one such arterial. Additionally it is anticipated that CETAP corridors will be appropriate for PTN service.

Finally, RTA will consider use of the following technologies to increase service throughout the region:

- signal preemption – an electronic device allows a traffic control signal to respond uniquely to the approach of a particular type of vehicle.
- queue bypasses – provide additional lane to speed preferred traffic through congested areas.
- bus-only lanes – dedicated lanes to give priority service to busses.

Common Carriers

There are no anticipated changes in the current services provided to the City of Perris.

ParaTransit Service

The 1991 Americans with Disabilities Act requires complimentary paratransit for

people with disabilities within ¾ mile of any fixed route during the times that the fixed route is running. RTA provides ADA paratransit service for anyone in the service area, regardless of distance from a fixed route. This will likely change within the next ten-years given financial constraints. Existing riders would experience no suspension of service, but no additional riders outside of the ¾ mile distance from a fixed route would be added.

AMTRAK Passenger Rail Service

No additional AMTRAK services are planned for Riverside County.

Metrolink

Over the next 20 years, Metrolink is expected to increase service to 169 daily trains and 50,400 daily riders (on all lines to maximize use of commuter rail in the southern California Region. The increased service may be supported by the introduction of demand response feeder systems that provide service when and where the service is needed. System improvements are consistent with the Southern California Regional Rail Authority's long-term plan to extend the Riverside Transit Corridor, along the San Jacinto branch line to the City of Hemet. The 2001 RTP indicates that that the commuter rail segment between 4th and D Street in Perris will be completed between 2008 - 2010. This new rail project would include significant upgrade of the downtown station, downtown street closures, and parking structures on D Street.

High Speed Rail Concepts

A regional high speed rail system is proposed that will connect major regional activity centers and significant inter-/multi-modal transportation facilities in Los Angeles, Orange, Riverside and San Bernardino Counties by year 2020. This system would also provide connection to the San Diego Region and the proposed high-speed rail system in Northern California. On July 21, 1999, the California High Speed Rail Authority adopted a plan for an Inland route for the system. This would include stops at Ontario Airport, Riverside, and Temecula. However, the Authority indicated that it would continue to consider an alternative route through Orange County. Cost and ridership estimates will be prepared to further investigate the system's feasibility.

Maglev System

The 2001 SCAG RTP identifies an Intra-Regional High Speed Rail Maglev (Magnetic Levitation Train Technology) system that would connect LAX to the March Inland Port and Palmdale via four lines by 2010. By 2025 two additional lines would be added to connect Palmdale to Los Angeles Union Passenger Terminal (LAUPT) and LAUPT to Orange County and San Bernardino. The program envisions connections to San Diego County, San Bernardino and Palmdale connecting with the proposed Calfornia High Speed Rail System. The Maglev system would provide high speed train service at 200 miles per hour.

Non-Motorized Transportation

The City of Perris will enhance and provide non-motorized transportation facilities to major activity centers such as parks, schools, community facilities and Metrolink stations within the City and connecting to regional facilities. The City intends to maintain a safe system by separating these facilities from vehicle traffic whenever possible. The anticipated non-motorized trail system, also referred to as a Class 1 Shared-Use Path, will be

determined by the City of Perris but will generally follow the design standards and trail system designated in the Perris Trail Master Plan, whenever possible. The Perris Trail Master Plan's designations are explained below and the bikeway systems for the City of Perris is depicted in Exhibit CE-14 and the pedestrian facilities are depicted in Exhibit CE-15.

Multipurpose Trails

The Multipurpose trails as defined by the Perris Trail Master Plan provide connect, provide linkages, and access to parks, schools, community facilities, and Metrolink stations. They also interconnect with other trails systems created by State, County, federal parks and recreation agencies. A variety of trail experiences are provided by locating the trails in varied terrain, scenic areas and interpretive points of interest. The Perris Trail Master Plan includes the following classifications of multipurpose-trails:

A **Multipurpose Trail** is an off-street path or trail for the use of non-motorized transporation (pedestrians, equestrians, bicyclists), which which may or may not be paved.

Greenways are an off-street path or tail located within a larger landscape corridor. This type of facility may have associated amenities such as seating areas or recreational facilities.

Exhibit CE-14: Bikeway Systems

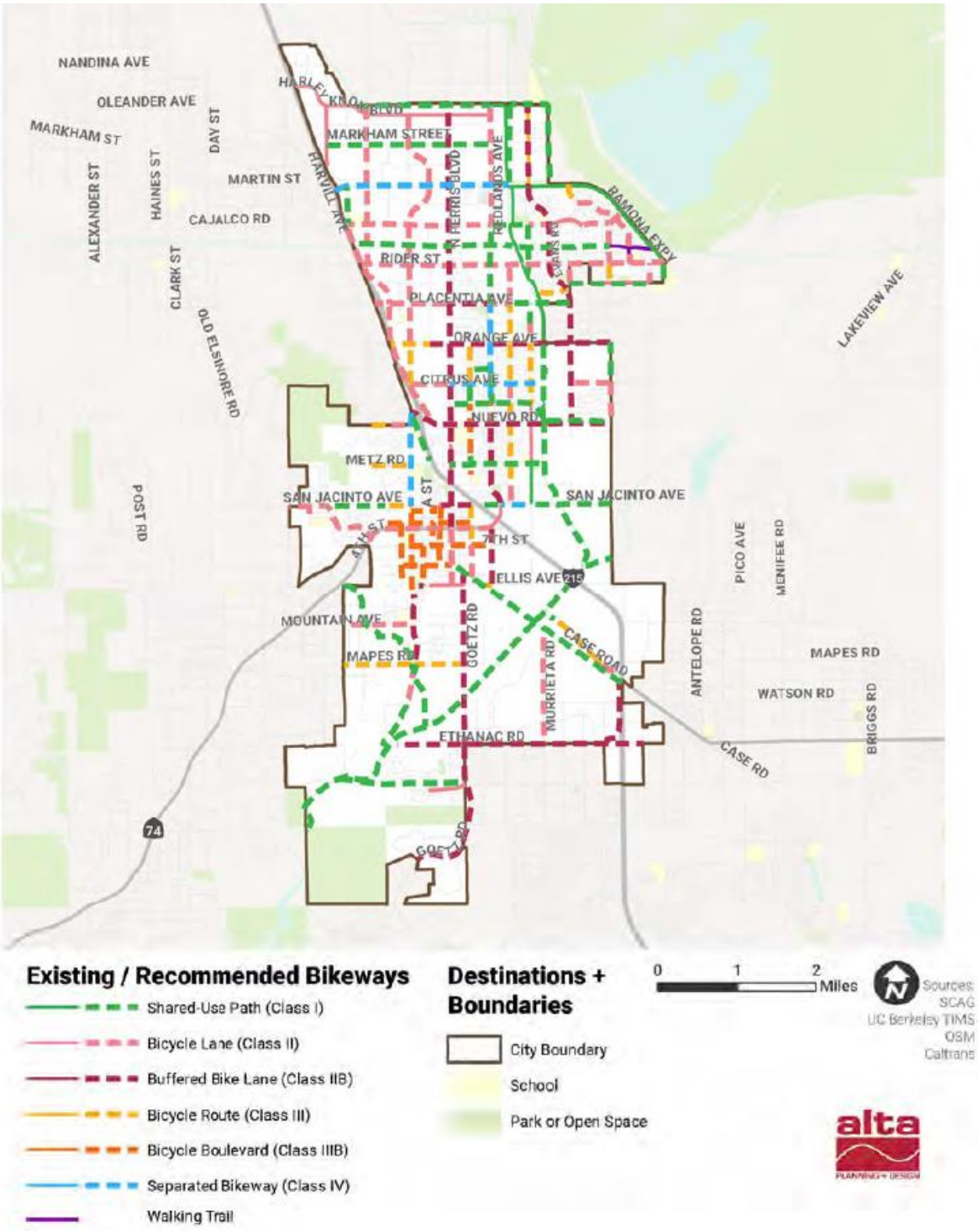
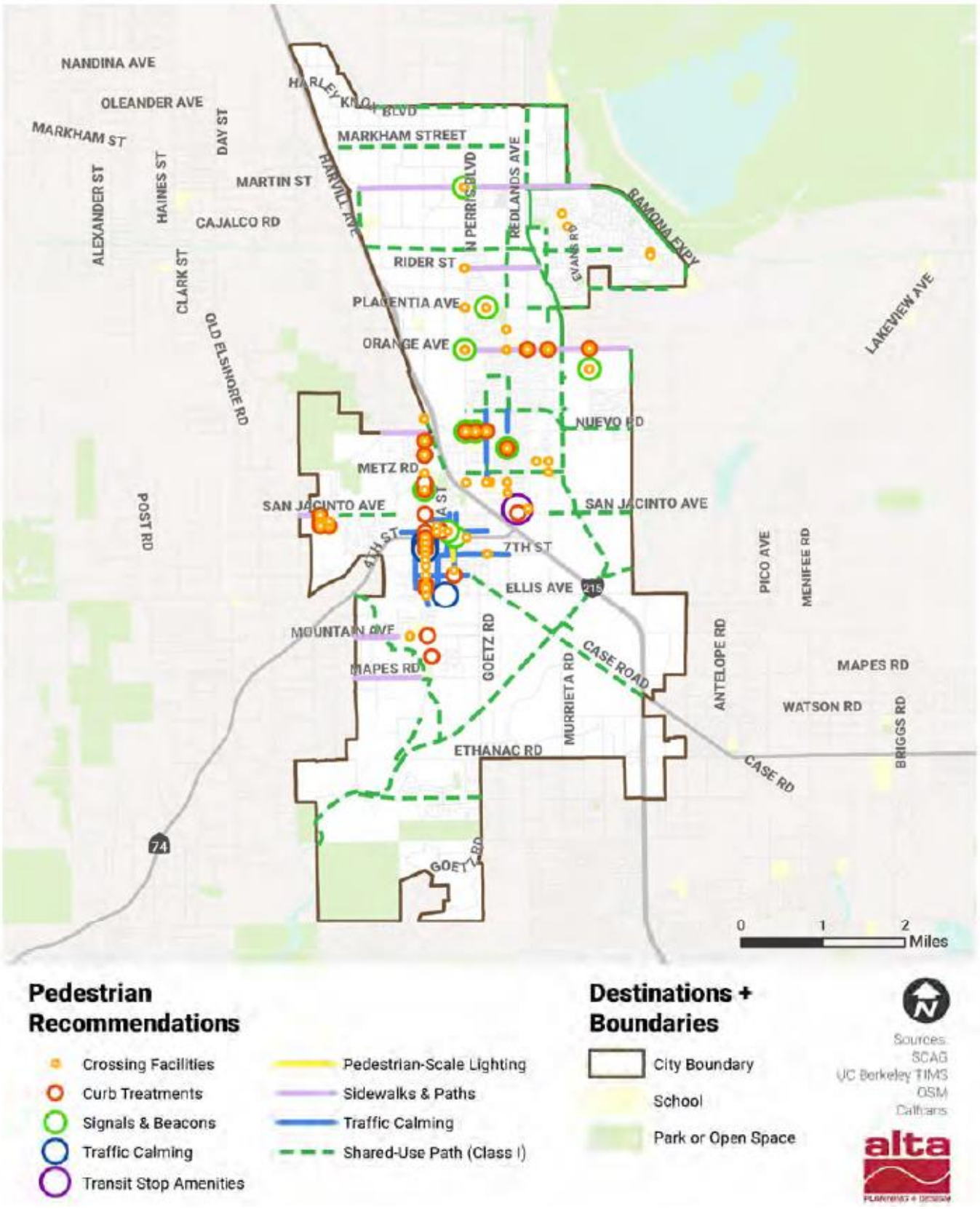


Exhibit CE-15: Pedestrian Facilities



Bikeways

The City of Perris's bikeway system is included as a part of the Active Tansportation Plan and County's circulation system. The development of the bikeway system will be guided through the application of the General Plan's policies, programs, and standards, in conjunction with adopted bicycle routes as shown on the Bikeways and Trails Plan.

California Vehicle Code (Section 21200[a]) states that every person riding a bicycle upon a highway has all the rights and is subject to all the provisions applicable to the driver of a vehicle. While bicycles are permitted on all roads except the I-215 freeway in the City of Perris, many people will not consider a bicycle as a means of transportation unless some accommodation has been made for their safety and convenience. In order to entice these prospective bicycle riders, a variety of bicycle facility types are necessary.

Investment in bikeways provides an environmental-friendly transportation opportunity. Bicycle usage will continue to offer important relief to congested roadways, provide air quality benefits, and reduce energy consumption. Bicycling is considered an effective alternative mode of transportation that can help to improve air quality and reduce the number of vehicles traveling along existing highways, especially within the cities and unincorporated communities. However, the numbers of cyclists is small in comparison to the amount of auto traffic.

A number of barriers currently impede the increased usage of bicycles as an alternative non-motorized mode of travel. These barriers include negative perceptions about non-motorized commuting: unsafe, insufficient, and inconvenient bikeways; and crime, including personal safety and security of property. Given the favorable climate for cycling most of the year, overcoming these institutional barriers would help increase bicyclist ridership throughout the City of Perris.

The term "Bikeway" describes all facilities that provide for bicycle travel. The Active Transportation Plan identifies six types of bike path classifications: Class I Shared-Use Path, Class II Bicycle Lane, Class IIB Buffered Bicycle Lane, Class III Bicycle Route, Class IIIB Bicycle Boulevard, and Class IV Separated Bikeway and is further described below. These six types of trails consist of a greater interconnected network of trails across the County. Reducing redundancy and maximizing connectivity among the six trail types will allow the system to be implemented faster and more efficiently over time, allowing greater use by residents in the future.

Class I Shared-Use Path provides paths completely separated from motor vehicle traffic used by people walking and biking. Comfortable for people of all ages and abilities. Typically located immediately adjacent and parallel to roadway or in its own independent right-of-way, such as within a park or along a body of water.

Class II (Bike Lane) provides a dedicated lane for bicycle travel adjacent to traffic. A painted white line separates the bicycle lane from motor vehicle traffic.

Class IIB Buffered Bicycle Lane provides a dedicatd lane for bicycle travel separated from vehicle traffic by a painted buffer.

Class III Bicycle Route provides a signed bike route that people biking shared with motor vehicles. Can include pavement marking. Comfortable facility for more confident bicyclist. Recommended when space for a bike lane may not be feasible.

Class IIIB Bicycle Boulevard provides calm local streets where bicyclist have priority but share roadway space with motor vehicles. Shared roadway bicycle markings on the pavement as well as traffic calming features such as speed humps and traffic diverters to keep these streets more comfortable for bicyclists. Comfortable facility for bicyclists with a wide range of abilities.

Class IV Separated Bikeway provides an on-street bikeway separated from motor vehicle traffic by a curb, median, planters, parking delineators, or other physical barriers.

Pedestrian Facilities

Pedestrian facilities include sidewalks, paths, crossing facilities, curb treatments, walkways, bridges, crosswalks, beacons, traffic calming, signals, pedestrian-scale lighting, illumination, and benches, among other items. These facilities are an important part of the City of Perris non-motorized transportation network. Pedestrian facilities provide a vital link between many other modes of travel and can make up a considerable portion of short-range trips made in the community. Where such facilities exist, people will be much more likely to make shorter trips by walking rather than by vehicle. Pedestrian facilities also provide a vital link for commuters who use other transportation facilities such as rail, bus, and park-n-rides. Without adequate pedestrian facilities, many commuters may be forced to utilize an automobile because of difficult or unsafe conditions that exist at their origin or destination. To promote walking in a safe and comfortable atmosphere, pedestrian facilities will follow the guidelines promulgated in the Active Transportation Plan whenever possible.

Pedestrian facilities within the immediate vicinity of schools and recreational facilities are important components of the non-motorized transportation system. Such facilities, typically in the form of sidewalks, are provided where they are appropriate and enhance the safety of those who choose to walk to and from their destination.

Pedestrian facilities may be warranted when any one or combination of the following conditions is present: any type of residential development; any type of activity center; any type of commercial center; downtown business districts; any type or combination of parks and recreation facilities; along or near transit routes and/or facilities; any type of business or office center; and, along or near any type of watercourse or body.

For the most part, sidewalks are installed in most urban environments when the roadway frontage is developed. Because development occurs in stages, numerous missing links can occur in the sidewalk system. Eventually these are filled in, but this can take many years.

Aviation

The 2001 SCAG RTP analyzed four airport scenarios for the region. It was further identified that a regional aviation plan needed to be completed as a component of the RTP. Specific to Perris is the possibility of March Air Reserve Base being converted to a civilian airport.

The March Inland Port Authority (MIPAA) was formed by the March JPA in 1996 for the purpose of creating a new civilian airport. This airport is being created as a joint use facility in cooperation with the U.S. Air Force Reserve Command at March Air Reserve Base in Riverside County, California.

MIPAA is responsible for the development and operation of the March Inland Port (MIP), a joint use aviation facility targeted for air cargo operations.

Approximately 600 acres east and west of the main runway are available for "airport related uses" as a result of the re-alignment and change of function of March Air Force Base in 1996. Under the agreement, the civilian (JPA) and the military (AFRC) entities share essential aviation facilities such as the control towers and runways, as well as maintenance of facilities, under this joint use arrangement.

Goods Movement

The efficient movement of goods in and through the City of Perris is vital to the City and the Inland Empire's economy and improves traveler safety. The ability of the County to compete domestically and internationally on an economic basis requires an efficient and cost-effective method for distributing and receiving products. The City of Perris provides a key link in this system with its proximity to I-215, the rail line and March Air Reserve Base.

Air Cargo

The March Air Reserve Base is currently a joint use status development. The Air Reserve Base will gradually reduce the military use of this facility and begin to increase the amount of goods and cargo that can be accommodated at this site. As the amount of goods transported into this area via the March Air Reserve Base increases, so does the potential to establish viable land uses that can make use of this facility. This area can be used to accommodate the increased growth in goods movement, with the potential to become a passenger airport.

Freight Rail

The City of Perris rail line will continue to be used for freight activity along the BNSF line and will share the line with future Metrolink service. The 2001 SCAG RTP identifies the need for a comprehensive study of the east-west main line infrastructure. The study would look at enhancing capacity and reliability of rail freight operations to connect the Los Angeles and Long Beach ports and downtown rail yards with the Inland Empire and the rest of the country.

Transportation Management

Systems Management

Transportation Systems Management provides for short-range transportation strategies designed to improve both the movement of people and goods and the operational efficiency of the existing transportation system at minimal cost. The types of transportation systems management strategies that should be considered on an ongoing basis include traffic signal synchronization, provision of left-turn pockets, parking and access management and similar traffic engineering treatments that maximize the use of existing streets and roads without major construction.

High Occupancy Vehicle (HOV) lanes are a significant part of the southern California region's strategy to provide incentives for carpooling. HOV lanes were installed along State Route 91 as part of the Measure A program and are planned along Interstate 215/State Route 60 through Box Springs. To facilitate further increases in carpooling, the SCAG 2001 Regional Transportation Plan (RTP) identifies new carpool lanes along several major roadways in Southern California, including Interstate 215 Interstate 10 to

Ramona Expressway and from Nuevo Road Exit south to Interstate 15, providing Perris a direct link between Riverside and San Diego Counties.

Transportation Demand Management

The 2001 SCAG RTP identifies the need to maintain the current transportation demand management (TDM) strategies that are being conducted throughout the region. It is further identified that efforts should be made to further educate the general public and dedicate funds for carpooling, telecommuting, and park-n-ride facilities.

Intelligent Transportation Systems (ITS)

Southern California (the SCAG Region and San Diego County) has been identified by Congress under the Intermodal Surface Transportation Efficiency Act (ISTEA) as one of four national significant areas for early Intelligent Transportation System (ITS) deployment. Currently ITS has been used to monitor traffic conditions, adjust traffic signals, automate collection of tolls, and advanced detection and television cameras to detect traffic accidents and incidents. In the future, the Southern California ITS Priority Corridor will use ITS technologies to automate transit fare collection and parking payments, use vehicle location systems to track trains and buses to give users "real time" arrival and departure information, as well as onboard systems to detect and avoid collisions.

As part of the ITS plan for the region local elements were developed by three public-private committees, one of which was in the Inland Empire. The SCAG Intelligent Transportation System hopes to encourage cities throughout the region to encourage signal prioritization for buses through partnerships such as the RTA and SunLine Transit initiative.

Implementation Program

It will be the responsibility of the City to insure that the transportation improvement projects identified in Table CE-10 will be implemented by the Year 2025 in order to maintain adequate levels of service. Further, it will be the City's responsibility to insure that potential revenue sources are identified and programmed to provide for a balanced financing plan.

The section below provides a summary of the estimated costs of planned State highway and local street and road improvements identified in the future conditions analysis. This section also provides a description of existing sources of revenue and a comparison of project costs and existing revenues. A description of potential sources of financing is also included. Finally, a proposed financing plan considering existing and potential funding options has been prepared.

The focus of the implementation program will be on the planned street and highway system and on other modes of transportation. Technical plans and studies, other General Plan elements, and the Southern California Regional Transportation Plan (RTP) also address measures to implement other modes of transportation.

Required Transportation Improvements

A review of major improvements is provided referencing information contained in the previous sections. Referencing Table CE-11, approximately four (4) street and highway projects will be required between years 2003 and 2030 to achieve LOS "D" conditions within the City of Perris, including the Ramona Expressway segment from I-215 to Nevada. In addition to the Ramona PSR, Caltrans will be addressing the widening of I-215 to 8 –10 lanes throughout the sphere of influence, the I-215 and the I-215 and Redlands Interchange. Finally, other modal projects will be required including transit service and nonmotorized (pedestrian and bikeway/trail) improvements. Most of these projects will be implemented through development fees or conditions of approval.

Existing Transportation Funding Sources

An overview of existing transportation funding sources can be found in Appendix E. The funding sources described in the Appendix will provide adequate funding for financing necessary street and highway improvements as well as other transportation system improvements including transit and non-motorized transportation improvement projects referenced previously.

The City currently implements transportation improvement projects from several revenue sources including the City's general fund, Federal and State funds, and the current Local Measure "A" Sales Tax Program. A brief description of these and other funding sources is also provided in Appendix E.

Potential Funding Sources

Appendix E provides a synopsis of potential revenue options that may be used to implement the City's Circulation Element. Included are the programming of vehicle in-lieu fees, and the extension of the Measure "A" sales tax funding, which was passed by the voters in Riverside

County in November 2002. Also, included are funds from the State/Local Transportation Partnership Program and local City contributions. A description of other potential funding options is also provided including traffic impact fees, community service/special assessment district fees, public/private joint venture revenues and redevelopment district funds.

As described above, revenues projected from existing transportation sources result in a shortfall of funds available to maintain the City's street system. However, there are several opportunities for the City of Perris to increase its sources of revenue toward implementation of its Circulation Element.

The Circulation Element identifies those transportation improvements that are desirable to adequately serve estimated travel demand in the Year 2025. Sources of funding are constantly being developed, eliminated or significantly changed. While all major capacity improvement projects are anticipated to be funded by using existing funding sources, any changes to the planned financing plan that could result in a shortfall of available funding should be identified. In addition, the City will likely experience a "shortfall" of funds available to adequately maintain its road system, therefore additional funding sources for this purpose must be identified.

Financing Plan

The preceding sections identified the existing funding sources that can be used to implement the City's Circulation Element; specifically those projects that will require mitigation referenced in Table CE-11 and other modal projects previously referenced. In addition, a variety of potential funding sources have been identified for use in implementing the Element. Exactly how much (if any) each source would contribute to the implementation of this Element is dependent on the availability of funds from outside sources (State and federal), and on the desire of Perris residents to bear the financial burden of an improved circulation system.

The financing plan for the City should, therefore, be flexible, and consider the following concepts:

- Existing State and federal programs should be utilized to the maximum extent possible to finance circulation improvements and maintenance activities in the City of Perris' Sphere of Influence (SOI);
- The City should continue to participate in the STIP process through development of the RTIP and review of the STIP developed by Caltrans. The City should also continue to support "minimums" used to derive funding estimates toward implementation of the STIP;
- The City should coordinate the implementation of this Circulation Element with the County of Riverside's Element Update and review and comment on proposals to implement regional and local street and highway projects located within the SOI including the identification of City funding contributions from various sources;
- Improvements to local arterial and collector street facilities that provide access to the City's circulation system, as well as some intra-regional routes, should be financed either by fronting development or through creation

of a local benefit assessment district. Formation of such districts would provide funding to finance street and highway improvement projects within the SOI; and,

- The City should consider the implementation and financing of street and highway improvements through the application of tax increment funds provided through the City's redevelopment process. Redevelopment District Area Plans prepared by the City should identify street and highway improvements required to support new or improved development.

Appendix E and F provide a review of the existing and potential funding sources expected over the twenty-two year period of the Element to finance the needed improvements identified in Table CE-11 and other modal improvements referenced in Section 4 to insure delivery of a balanced transportation system. While a number of existing and potential sources are anticipated to fund improvements over time, actions by the City of Perris may be necessary to address periodic shortfalls in revenue. Such actions that the City should consider when developing the balanced program to address a foreseen shortfall include:

- Generate funds/improvements necessary to meet needs through a combination of existing and potential funding sources (existing and extended Measure "A" Program, State and Federal funds and grant proceeds, development fees and conditions of approval, City contributions, etc.);
- Reduce the list of new construction projects (reference Table 4-5); and/or Review the City's General Plan land use and urban form element land use policies and identify ways to minimize growth inducing impacts of land use and development on the City's future transportation system.

Strategy for Action

The intent of the Circulation Element is to establish a comprehensive multi-modal transportation system that is safe, achievable, efficient, environmentally and financially sound, accessible, and coordinated with the Land Use Element.

The Circulation Element *Strategy for Action* reflects the community's expectations and ambitions for positive changes in the transportation system of the City and how these are to be achieved. *Strategy for Action* "Goals" represent a synthesis of input from those who live and work in the City of Perris and define desired General Plan outcomes. Outcomes consistent with these Goals will coalesce into an environment of the highest quality and livability possible for the City of Perris in the year 2022.

"Policies" included in the *Strategy for Action* provide the overall direction for choosing among alternative courses of action necessary to achieve the Goals set forth in the *Strategy for* Action. Policies provide a measure of flexibility needed to adapt the course of action to changes in the circumstances occurring during the estimated thirty-year time span of the General Plan.

"Implementation Measures" are specific, discreet actions the City may take to achieve the future conditions reflected in the Circulation Element. Implementation Measures define the municipal work program for providing transportation improvements needed to meet Goals identified in the Circulation Element, consistent with Circulation Element Policies.

Goals, Policies and Implementation Measures

Goal I

A comprehensive transportation system that will serve projected future travel demand, minimize congestion, achieve the shortest feasible travel times and distances, and address future growth and development in the City

Policy I.A

Design and develop the transportation system to respond to concentrations of population and employment activities, as designated by the Land Use Element and in accordance with the designated Transportation System, Exhibit 4.2 Future Roadway Network

Implementation Measures

I.A.1 Revise the downtown Specific Plan to address the planned Metrolink station and other modes of transportation.

I.A.2 Identify incentives for development in the Downtown Specific Plan area.

I.A.3 Support higher mixed-use (residential and commercial) densities near the planned Metrolink Station within the Downtown Specific Plan.

I.A.4 Plan off-street parking facilities in downtown Perris to support and enhance the concept of walkable and transit-oriented communities.

I.A.5 Consider ancillary parking facilities with transit connections to activity centers such as downtown.

I.A.6 Require parking facility design that minimizes visual and physical impacts while maintaining pedestrian and motorist safety and supporting adjacent activities.

Policy I.B

Support development of a variety of transportation options for major employment and activity centers including direct access to commuter facilities, primary arterial highways, bikeways, park-n-ride facilities, and pedestrian facilities.

I.B.1 Require on-site improvements that accommodate public transit vehicles (i.e. bus pullouts and transit stops and cueing lanes, bus turnarounds and other improvements) at major trip attractions (i.e. community centers, tourist and employment centers, etc.).

Policy I.C

Cooperate with local, regional, State and federal agencies to establish an efficient multi-modal circulation system.

Policy I.D

Encourage and support the development of projects that facilitate and enhance the use of alternative modes of transportation.

Goal II

A well planned, designed, constructed and maintained street and highway system that facilitates the movement of vehicles and provides safe and convenient access to surrounding developments.

Policy II.A

Maintain the following target Levels of Service:

- LOS "D" along all City maintained roads (including intersections) and LOS "D" along I-215 and SR 74 (including intersections with local streets and roads). An exception to the local road standard is LOS "E", at intersections of any Arterials and Expressways with SR 74, the Ramona-Cajalco Expressway or at I-215 freeway ramps.
- LOS "E" may be allowed within the boundaries of the Downtown Specific Plan Area to the extent that it would support transit-oriented development and walkable communities. Increased congestion in this area will facilitate an increase in transit ridership and encourage development of a complementary mix of land uses within a comfortable walking distance from light rail stations.

Implementation Measures

II.A.1 Utilize existing infrastructure (lanes, median islands, turn lanes, available right-of-way) and rights-of-way to the maximum extent practicable.

Policy II.B

Maintain the existing transportation network while providing for future expansion and improvement based on travel demand, and the development of alternative travel modes.

Implementation Measures

II.B.1 Develop Standard Specifications for the City of Perris that include the following:

- Cross sections and classifications identified in Exhibit CE-11;
- Facilities that accommodate bus operations, including bus turn outs, and other design features;
- Design guidelines that define the minimum design and technical criteria for the analysis and design of roadway facilities. Such design guidelines shall identify intersection improvements consistent with the lane geometrics referenced in Table CE-7;
- Limiting access points and intersections of streets and highways based upon the road's General Plan classification and function to reduce motorist conflicts and enhance continual traffic flow. Access points must be located a sufficient distance away from major intersections and from access points on adjoining parcels to allow for safe, efficient operation; and
- Roadway pavement cross-section to accommodate large trucks where extensive truck travel involving regional movement of bulk goods is anticipated.

II.B.2 Allow roundabouts or other innovative design solutions when a thorough traffic impact assessment has been conducted demonstrating that such an intersection design alternative would manage traffic flow, and improve safety.

II.B.3 Restrict on-street parking to reduce traffic congestion and improve safety in appropriate locations such as expressways and arterials, and require all new development to provide adequate off-street parking based on expected parking needs.

II.B.4 Require traffic calming improvements in areas zoned for residential use, areas zoned for single-family use, along streets adjacent to school sites, and in the downtown area where such techniques will improve safety and manage traffic flow.

Goal III

To financially support a transportation system that is adequately maintained.

Policy III.A

Implement a transportation system that accommodates and is integrated with new and existing development and is consistent with financing capabilities.

Implementation Measures

III.A.1 Distribute the costs of transportation system improvements for new development equitably among beneficiaries through the City's Traffic Impact Fee Program.

III.A.2 Use redevelopment agreements, revenue sharing agreements, tax allocation agreements and the CEQA process as tools to ensure that new development pays a fair share of costs to provide local and regional transportation improvements and to mitigate cumulative traffic impacts.

III.A.3 Prepare, review, and update annually a multi-year Transportation Improvement Program (TIP) that establishes improvement priorities and scheduling for transportation project construction over a period of 5 to 7 years.

III.A.4 Require developers to be primarily responsible for the improvement of streets and highways to developing commercial, industrial, and residential areas. These may include road construction or widening, installation of turning lanes and traffic signals, and the improvement of any drainage facility or other auxiliary facility necessary for the safe and efficient movement of traffic or the protection of road facilities.

Goal IV

Safe and convenient pedestrian access and non-motorized facilities between residential neighborhoods, parks, open space and schools that service those neighborhoods.

Policy IV.A

Provide non-motorized alternatives for commuter travel as well as recreational opportunities that maximize safety and minimize potential conflicts with pedestrians and motor vehicles.

Implementation Measures

IV.A.1 Develop a multi-purpose recreational bikeway plan for the City of Perris based on standards in the Caltrans Highway Design Manual and in the Riverside County General Plan as identified in Chapter 4.

IV.A.2 Consider the use of future abandoned rail lines as multipurpose "rail-trails" for activities such as equestrian use, bicycling, hiking, and walking.

IV.A.3 Comply with Americans with Disabilities Act requirements for pedestrian movement along sidewalks, paths, trails and pedestrian crossings within City rights-of-way.

IV.A.4 Maximize access for pedestrians and encourage the removal of barriers in public rights-of-way (walls, easements, and fences) for safe and convenient movement of pedestrians.

IV.A.5 Incorporate pedestrian paths or sidewalks in road design standards and provide tree easements between curbs and paths or sidewalks except within the Downtown Specific Plan Area.

IV.A.6 Regularly review traffic signal timing plans to allow for safe pedestrian street crossing.

IV.A.7 Contact school districts to annually review safe routes to schools.

Goal V

Efficient goods movement.

Policy V.A

Provide for safe movement of goods along the street and highway system.

Implementation Measure

V.A.1 Construct new grade separations or reconstruct existing grade separations as necessary for the smooth flow of traffic within the City.

V.A.2 Designate truck routes identifiedin Exhibit CE-9 and distribute the maps to the California Truck Association and to major truck operators.

V.A.3 Monitor commercial truck movements and operations in the City and establish new truck routes away from noise-sensitive areas where feasible.

V.A.4 Limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery, and truck through-traffic to designated routes; and distribute maps of approved truck routes to City traffic officers.

V.A.5 Designate truck staging areas within the public right-of-way where short- and long-term parking can be accommodated.

V.A.6 Encourage development of alternative fueling stations to accommodate truck and transit vehicles.

V.A.7 Require streets abutting properties in Light Industrial and General Industrial zones to conform to standard specifications for industrial collector streets to accommodate the movement of heavy trucks.

V.A.8 Provide adequate off-street loading areas for all commercial and manufacturing land uses.

Goal VI

An efficient and convenient aviation system to accommodate the traveling needs of the people and move selected goods quickly in the highly competitive international marketplace.

Policy VI.A

Recognize and support policies contained in the March Air Cargo Port General Plan.

Implementation Measures

VI.A.1 Identify the location and design of adequate ground access to the Perris Valley Airport and the March Air Cargo Port during the review and update of Airport Plans and Studies.

Policy VI.B

Continue to support aviation services available at the Perris Valley Airport including the expansion of skydiving facilities.

Implementation Measures

VI.B.1 Identify the location and design of adequate ground access to the Perris Valley Airport and the March Air Cargo Port during the review and update of Airport Plans and Studies.

VI.B.2 Consider the recommendations of the Airport Land Use Commission regarding potential land uses or projects affecting the Perris Valley Airport Environs Area.

Policy VI.C

Support multi-modal transportation connections to Southern California Airports providing air passenger services.

Goal VII

A transportation system that maintains a high level of environmental quality.

Policy VII.A

Implement the Transportation System in a manner consistent with federal, State, and local environmental quality standards and regulations.

Implementation Measures

VII.A.1 Incorporate the specific requirements of the Riverside County Multi-Species Habitat Conservation Plan into transportation plans and development proposals.

VII.A.2 Require noise mitigation measures (i.e. wall treatments, landscape berms or building and window enhancements) along freeways, expressways, and four-lane highways in order to protect adjacent noise-sensitive land uses from traffic-generated noise impacts consistent with requirements of Title 24 of the California Codes and Regulations.

VII.A.3 Identify adequate flood control measures along roadways located within identified flood areas.

VII.A.4 Control dust and mitigate other environmental impacts during all stages of roadway construction consistent with air quality regulations and mitigation measures established in environmental documents.

VII.A.5 Avoid, where practicable, disturbance of existing neighborhoods and biotic resource areas when identifying alignments for new roadways or for improvements to existing roadways and other transportation system improvements.

VII.A.6 Encourage the use of drought-tolerant native plants and the use of recycled water for roadway landscaping.

VII.A.7 Implement NPDES Best Management Practices relating to construction of roadways to control runoff contamination from affecting the groundwater supply.

VII.A.8 Encourage the use of alternative fuel vehicles in and around the City of Perris.

Goal VIII

Enhanced traffic flow, reduced travel delay, reduced reliance on single-occupant vehicles, and improved safety along the City and State roadway system.

Policy VIII.A

Encourage the use of Transportation Demand Management (TDM)/ Transportation Control Measure (TCM) strategies and programs that provide attractive, competitive alternatives to the single-occupant vehicle.

Policy VIII.B

Identify Transportation Systems Management (TSM) strategies that will assist in mitigating traffic impacts and that will maintain the desired level of service along the street and highway system.

Implementation Measures

VIII.B.1 Consider roadway expansion to relieve congestion only after the determination has been made that TSM measures will not be effective.

Policy VIII.C

Consider the strategies and programs outlined in the Inland Empire Intelligent Transportation System (ITS) Strategic Plan to reduce congestion levels and improve safety along the transportation system.

Implementation Measures

VIII.C.1 Encourage incorporation of Intelligent Transportation Systems (ITS) consistent with the principles and recommendations referenced in the Inland Empire ITS Strategic Plan as the transportation system is implemented.

Policy VIII.D

Support Riverside County Transporta-tion Commission and Riverside Transit Authority educational efforts related to Transportation Demand Management (TDM) measures and transit benefits.

Implementation Measures

VIII.D.1 Implement the City's Transportation Control Measure (TCM) Ordinance to comply with federal, State, regional and local requirements.

VIII.D.2 Coordinate with Caltrans, the Riverside County Transportation Commission, transit agencies and other responsible agencies to identify the need for additional park-n-ride facilities along major commuter travel corridors and at major activity centers.

VIII.D.3 Construct traffic signals at intersections where signal warrants have been met.

VIII.D.4 To optimize traffic operation by maintaining spacing and operation of traffic signals as a coordinated system

Appendix A – Florida Table LOS Methodology

Florida Department of Transportation (DOT) Level of Service (LOS) Tables have been utilized to analyze street and highway segments along the City of Perris Street and Highway System. The Tables (referred to as "Modified Highway Capacity Manual LOS Tables") have been used to specifically evaluate the impacts of existing and planned growth and development on the existing and proposed traffic circulation system.

The Florida LOS Tables were developed in 1988 by Florida FDOT in response to the passage of significant growth management legislation during the mid-1980s, as well as to the need to comply to standards published in the revised 1985 Highway Capacity Manual (HCM). The Tables were established to:

- provide a grade LOS (A thru F) for future transportation corridor segment analysis. Such analysis is not available from HCM applications;
- to provide a better estimate of segment LOS versus reliance on the volume to capacity (V/C) ratio methodology which is not HCM-based, since it does not consider the effects of delay and congestion, especially at signalized intersections along rural facilities where passing opportunities are limited; and
- to provide a consistent process to measure LOS.

The Tables were recently updated in 2002 to reflect methodologies contained in the 1997 HCM. Because the Tables consider the effects that cause congestion and delay, they are considered HCM-based and in accordance with the 1997 HCM wherein delay is the primary factor used to measure LOS.

The standards incorporated in the Modified HCM-Based LOS Tables include the correlation between urban size and highway congestion, urban infill, the different roles provided by state facilities, the impact of development and the provision of necessary infrastructure, flexibility in assessing special transportation areas, consideration of the relationship between highways and exclusive transit systems servicing commuters, and recognition that numerous state facilities are constrained and backlogged with no potential for expansion due to physical or policy barriers. Furthermore, the LOS Tables are applicable in determining street and highway system needs and deficiencies; directing development of long-range transportation activities within urban areas; assessing project priorities; evaluating additional access points such as interchanges, roads and driveways; analyzing regional and local government transportation/circulation plans; and determining impacts from proposed developments.

Information provided in the LOS Tables includes three different types of area analysis including: urbanized areas; areas transitioning into urbanized areas or non-urbanized areas with a population of over 5,000; and rural undeveloped areas or developed areas with a population of less than 5,000. The Tables are representative of peak hour and peak direction conditions with daily volumes encompassing directional, subhourly, hourly, daily, monthly, and seasonal peaking characteristics of traffic. Traffic conditions are evaluated considering 1) service flow rates (considered as the maximum hourly rate at which vehicles can safely pass

through an intersection during a 15-minute interval under current traffic signalization conditions), and 2) a specified LOS.

Data provided by the LOS Tables are based upon methodologies provided from the 1997 HCM, as well as from actual traffic and signalization conditions. It should be noted that the Tables are considered measurement guidelines for street and highway LOS estimations, and are not to be considered as statewide standards. The use of LOS Tables is recommended for general planning applications necessary to evaluate street and highway LOS and through lane requirements. The Tables are directly applicable for use within more comprehensive planning activities in which less field data is available when planning takes longer to implement.

When dealing with the LOS Tables, default variables can be applied and include a variety of street and highway characteristics such as number of lanes, number of signalized intersections per mile, saturation flow rate, etc. The default variables referenced by street and highway types above, were only applied to calculate LOS when actual known data (existing and future) was not available. To the extent possible, actual or planned street and highway geometrics, speeds, saturation flow, etc., were applied to calculate LOS. This information was gathered from the County of Riverside, the cities, and the Riverside County Transportation Commission (RCTC).

Given the extensive application of LOS Tables to various types of projects and analysis, the Tables are considered extremely applicable to the goal of segment LOS. This conclusion is based upon detailed comparative analysis considering various other HCM and delay-based methodologies referenced in the HCM.

Appendix B – LOS Worksheets

HCS2000: Signalized Intersections Release 4.1

Analyst: VRPA Technologies — Inter.: I-215 SB Ramps & Cajalco Expwy
Agency: Perris — Area Type: All other areas
Date: 09/30/02 — Jurisd:
Period: Existing AM — Year : 2002
Project ID: Perris Circ. Element
E/W St: Cajalco Expressway — N/S St: I-215 SB Ramps

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	1	2	0	0	0	0	0	1	1
LGConfig		TR		L	T						LT	R
Volume		403	210	268	675					620	11	152
Lane Width		12.0		12.0	12.0						12.0	12.0
RTOR Vol			53									38

Duration 1.00 — Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		A			Thru			
Right		A			Right			
Peds					Peds			
WB Left	A				SB Left	A		
Thru	A	A			Thru	A		
Right					Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	23.0	27.0			55.0			
Yellow	4.0	4.0			4.0			
All Red	1.0	1.0			1.0			

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
TR	714	3173	0.87	0.22	57.7	E	57.7	E
Westbound								
L	317	1656	0.94	0.19	101.7	F		
T	1518	3312	0.49	0.46	19.0	B	42.5	D
Northbound								
Southbound								
LT	761	1661	0.92	0.46	46.3	D	42.1	D
R	679	1482	0.19	0.46	19.4	B		

Intersection Delay = 46.2 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1

Analyst:
Agency: Perris
Date: 09/30/02
Period: Existing PM
Project ID: Perris Circ. Element
E/W St: Cajalco Expressway

Inter.: I-215 SB Ramps & Cajalco Expwy
Area Type: All other areas
Jurisd:
Year : 2002

N/S St: I-215 SB Ramps

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	1	2	0	0	0	0	0	1	1
LGConfig		TR		L	T						LT	R
Volume		631	246	309	497					757	1	186
Lane Width		12.0		12.0	12.0						12.0	12.0
RTOR Vol			62									47

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		A			Thru			
Right		A			Right			
Peds					Peds			
WB Left	A				SB Left	A		
Thru	A	A			Thru	A		
Right					Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	9.0	22.0			25.0			
Yellow	3.0	5.0			4.0			
All Red	0.0	1.0			1.0			

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
TR	1044	3322	0.87	0.31	30.6	C	30.6	C
Westbound								
L	221	1719	1.55	0.13		F		
T	1670	3438	0.33	0.49	8.8	A	406.5	F
Northbound								
Southbound								
LT	615	1723	1.37	0.36	696.2	F	590.9	F
R	549	1538	0.28	0.36	15.3	B		

Intersection Delay = 350.5 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1

Analyst: VRPA Technologies
Agency: Perris
Date: 09/30/02
Period: Existing AM
Project ID: Perris Circ. Element
E/W St: Nuevo Road

Inter.: Perris Blvd & Nuevo Road
Area Type: All other areas
Jurisd:
Year : 2002
N/S St: Perris Blvd

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	1	3	0	2	2	1
LGConfig	L	T	R	L	TR		L	TR		L	T	R
Volume	157	368	88	195	636	81	166	221	608	113	239	217
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			22			20			152			54

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right	A				WB Right			
Green	12.0	43.0				16.0	29.0	
Yellow	4.0	4.0				4.0	4.0	
All Red	1.0	1.0				1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	347	3467	0.50	0.10	52.3	D		
T	1281	3574	0.32	0.36	26.3	C	33.1	C
R	573	1599	0.13	0.36	26.0	C		
Westbound								
L	347	3467	0.63	0.10	55.4	E		
TR	1264	3527	0.61	0.36	30.5	C	36.0	D
Northbound								
L	238	1787	0.77	0.13	66.3	E		
TR	1116	4617	0.67	0.24	42.9	D	47.5	D
Southbound								
L	462	3467	0.27	0.13	47.1	D		
T	864	3574	0.31	0.24	37.5	D	36.0	D
R	613	1599	0.30	0.38	26.0	C		

Intersection Delay = 38.8 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1

Analyst: Inter.: Perris Blvd & Nuevo Road
Agency: Perris Area Type: All other areas
Date: 09/30/02 Jurisd:
Period: Existing PM Year : 2002
Project ID: Perris Circ. Element
E/W St: Nuevo Road N/S St: Perris Blvd

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	1	3	0	2	2	1
LGConfig	L	T	R	L	TR		L	TR		L	T	R
Volume	333	638	143	178	400	121	184	523	156	129	472	139
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			36			30			39			35

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru		A	
Right		A			Right		A	
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru		A	
Right		A			Right		A	
Peds					Peds			
NB Right					EB Right			
SB Right	A				WB Right			
Green	20.0	35.0				20.0	25.0	
Yellow	4.0	4.0				4.0	4.0	
All Red	1.0	1.0				1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	567	3400	0.65	0.17	49.5	D		
T	1022	3505	0.69	0.29	39.5	D	41.9	D
R	457	1568	0.26	0.29	32.9	C		
Westbound								
L	567	3400	0.35	0.17	44.6	D		
TR	994	3407	0.55	0.29	36.2	D	38.4	D
Northbound								
L	292	1752	0.70	0.17	54.6	D		
TR	1020	4898	0.70	0.21	46.1	D	48.0	D
Southbound								
L	567	3400	0.25	0.17	43.7	D		
T	730	3505	0.72	0.21	47.7	D	43.2	D
R	653	1568	0.18	0.42	22.2	C		

Intersection Delay = 43.0 (sec/veh) Intersection LOS = D

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HCS2000: Signalized Intersections Release 4.1

Analyst: VRPA Technologies              Inter.: I-215 NB Ramps & Ramona Expwy
Agency: Perris                          Area Type: All other areas
Date:   09/30/02                        Jurisd:
Period: Existing AM                     Year  : 2002
Project ID: Perris Circ. Element
E/W St: Ramona Expressway               N/S St: I-215 NB Ramps

                          SIGNALIZED INTERSECTION SUMMARY
            |  Eastbound    |  Westbound    |  Northbound   |  Southbound   |
            | L    T    R  | L    T    R   | L    T    R   | L    T    R   |
            |_______________|_______________|_______________|_______________|
No. Lanes   |   1   2   0   |   0   2   0   |   1   1   0   |   0   0   0   |
LGConfig    |   L  T        |      TR       |   L  TR       |               |
Volume      |176  899       |     738  706  |280  1    276  |               |
Lane Width  |12.0 12.0      |     12.0      |12.0 12.0      |               |
RTOR Vol    |               |          192  |          60   |               |
_____________________________________________________________________________
Duration    1.00      Area Type: All other areas
                               Signal Operations
_____________________________________________________________________________
Phase Combination 1     2     3     4 |            5     6     7     8
EB  Left          A                     | NB  Left   A
    Thru          A     A               |     Thru   A
    Right                               |     Right  A
    Peds                                |     Peds
WB  Left                                | SB  Left
    Thru                A               |     Thru
    Right               A               |     Right
    Peds                                |     Peds
NB  Right                               | EB  Right
SB  Right                               | WB  Right
Green             20.0  55.0                    30.0
Yellow            4.0   4.0                     4.0
All Red           1.0   1.0                     1.0
                                                Cycle Length: 120.0   secs
                      Intersection Performance Summary
Appr/   Lane       Adj Sat     Ratios       Lane Group   Approach
Lane    Group     Flow Rate  __________     __________  __________
Grp     Capacity     (s)     v/c    g/C     Delay LOS   Delay LOS
_____________________________________________________________________________
Eastbound
L        284       1703      0.69   0.17    54.3   D
T        2271      3406      0.44   0.67    3.8    A    12.0   B

Westbound

TR       1465      3196      0.95   0.46    43.5   D    43.5   D

Northbound
L        426       1703      0.73   0.25    47.8   D
TR       381       1525      0.63   0.25    43.5   D    45.9   D

Southbound


         Intersection Delay = 32.0  (sec/veh)   Intersection LOS = C
_____________________________________________________________________________
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HCS2000: Signalized Intersections Release 4.1

Analyst:                                  Inter.: I-215 NB Ramps & Ramona Expwy
Agency: Perris                            Area Type: All other areas
Date:   12/12/02                          Jurisd:
Period: Existing PM                       Year  : 2002
Project ID: Perris Circ. Element
E/W St: Ramona Expressway                 N/S St: I-215 NB Ramps

                          SIGNALIZED INTERSECTION SUMMARY
            |  Eastbound    |  Westbound    |  Northbound   |  Southbound   |
            | L    T    R  | L    T    R  | L    T    R  | L    T    R  |
            |_______________|_______________|_______________|_______________|
No. Lanes   |   1   2   0  |   0   2   0  |   1   1   0  |   0   0   0  |
LGConfig    |   L  T       |      TR      |   L  TR      |              |
Volume      |205  1027     |     610  766 |229  1    239 |              |
Lane Width  |12.0 12.0     |     12.0     |12.0 12.0     |              |
RTOR Vol    |              |          192 |          60  |              |
_____________________________________________________________________________
Duration    1.00      Area Type: All other areas
                                 Signal Operations
_____________________________________________________________________________
Phase Combination 1     2     3     4 |            5     6     7     8
EB  Left          A                     | NB  Left   A
    Thru          A     A               |     Thru   A
    Right                               |     Right  A
    Peds                                |     Peds
WB  Left                                | SB  Left
    Thru                A               |     Thru
    Right               A               |     Right
    Peds                                |     Peds
NB  Right                               | EB  Right
SB  Right                               | WB  Right
Green           12.5  35.0                    10.0
Yellow          3.0   5.0                     3.5
All Red         0.5   0.0                     0.5
                                               Cycle Length: 70.0    secs
                      Intersection Performance Summary
_____________________________________________________________________________
Appr/   Lane       Adj Sat     Ratios        Lane Group   Approach
Lane    Group     Flow Rate   __________     __________  __________
Grp     Capacity     (s)     v/c    g/C     Delay LOS   Delay LOS
_____________________________________________________________________________
Eastbound
L        304       1703      0.75   0.18    37.9   D
T        2482      3406      0.46   0.73    0.6    A    6.8    A

Westbound

TR       1579      3158      0.83   0.50    15.7   B    15.7   B

Northbound
L        243       1703      1.05   0.14    195.6  F
TR       218       1525      0.92   0.14    87.2   F    147.9  F

Southbound


         Intersection Delay = 30.9  (sec/veh)   Intersection LOS = C
_____________________________________________________________________________
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HCS2000: Signalized Intersections Release 4.1

Analyst: VRPA Technologies              Inter.: Indian Ave & Ramona Expressway
Agency: Perris                          Area Type: All other areas
Date:   09/30/02                        Jurisd:
Period: Existing AM                     Year  : 2002
Project ID: Perris Circ. Element
E/W St: Ramona Expressway               N/S St: Indian Ave

_____________________________SIGNALIZED INTERSECTION SUMMARY_____________________________
            |  Eastbound    |  Westbound    |  Northbound   |  Southbound   |
            | L    T    R  | L    T    R   | L    T    R   | L    T    R   |
            |_______________|_______________|_______________|_______________|
No. Lanes   |   1   2   1   |   1   2   0   |   1   1   1   |   1   2   0   |
LGConfig    |   L  T    R   |   L  TR       |   L  T    R   |   L  TR       |
Volume      |7    926  73   |24   1387 1    |54   5    14   |1    1    1    |
Lane Width  |12.0 12.0 12.0 |12.0 12.0      |12.0 12.0 12.0 |12.0 12.0      |
RTOR Vol    |          18   |          0    |          3    |          0    |
_____________________________________________________________________________________
Duration    1.00      Area Type: All other areas
                                 Signal Operations
_____________________________________________________________________________________
Phase Combination 1     2     3     4 |            5     6     7     8
EB  Left          A                     | NB  Left   A
    Thru                A               |     Thru         A
    Right               A               |     Right        A
    Peds                                |     Peds
WB  Left          A                     | SB  Left   A
    Thru                A               |     Thru         A
    Right               A               |     Right        A
    Peds                                |     Peds
NB  Right                               | EB  Right
SB  Right                               | WB  Right
Green           13.0  63.0                    12.0  12.0
Yellow          4.0   4.0                     4.0   4.0
All Red         1.0   1.0                     1.0   1.0
                                               Cycle Length: 120.0   secs
_____________________Intersection Performance Summary_____________________________
Appr/   Lane       Adj Sat     Ratios       Lane Group   Approach
Lane    Group     Flow Rate  __________     __________  __________
Grp     Capacity     (s)     v/c    g/C     Delay LOS   Delay LOS
_____________________________________________________________________________________
Eastbound
L        179       1656      0.04   0.11    48.0   D
T        1739      3312      0.59   0.52    14.8   B    15.0   B
R        778       1482      0.08   0.52    14.2   B
Westbound
L        179       1656      0.15   0.11    48.9   D
TR       1739      3312      0.89   0.52    24.9   C    25.3   C

Northbound
L        166       1656      0.36   0.10    51.8   D
T        174       1743      0.03   0.10    48.8   D    51.2   D
R        148       1482      0.08   0.10    49.2   D
Southbound
L        166       1656      0.01   0.10    48.6   D
TR       306       3064      0.01   0.10    48.6   D    48.6   D

         Intersection Delay = 21.9  (sec/veh)   Intersection LOS = C
_____________________________________________________________________________________
```

HCS2000: Signalized Intersections Release 4.1

Analyst: Inter.: Indian Ave & Ramona Expressway
Agency: Perris Area Type: All other areas
Date: 09/30/02 Jurisd:
Period: Existing PM Year : 2002
Project ID: Perris Circ. Element
E/W St: Ramona Expressway N/S St: Indian Ave

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	0	1	1	1	1	2	0
LGConfig	L	T	R	L	TR		L	T	R	L	TR	
Volume	7	1237	51	33	1074	4	139	2	130	1	7	4
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vol			13			1			33			1

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
WB Left	A				SB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	13.0	52.0				20.0	15.0		
Yellow	4.0	4.0				4.0	4.0		
All Red	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	188	1736	0.04	0.11	48.0	D		
T	1504	3471	0.91	0.43	37.6	D	37.1	D
R	673	1553	0.06	0.43	19.8	B		
Westbound								
L	188	1736	0.20	0.11	49.3	D		
TR	1504	3470	0.80	0.43	28.3	C	29.0	C
Northbound								
L	289	1736	0.53	0.17	47.7	D		
T	228	1827	0.01	0.13	46.0	D	49.8	D
R	194	1553	0.56	0.13	53.0	D		
Southbound								
L	289	1736	0.00	0.17	41.7	D		
TR	416	3329	0.03	0.13	46.1	D	45.7	D

Intersection Delay = 34.9 (sec/veh) Intersection LOS = C

```
HCS2000: Signalized Intersections Release 4.1

Analyst: VRPA Technologies              Inter.: Perris Blvd & Ramona Expwy
Agency: Perris                          Area Type: All other areas
Date:   09/30/02                        Jurisd:
Period: Existing AM                     Year  : 2002
Project ID: Perris Circ. Element
E/W St: Ramona Expressway               N/S St: Perris Blvd
```

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	2	1	1	2	1	1	2	1
LGConfig	L	TR		L	T	R	L	T	R	L	T	R
Volume	189	539	158	59	780	101	234	346	62	87	361	260
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			40			25			16			65

```
Duration    1.00      Area Type: All other areas
```

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right	A				WB Right	A		
Green	20.0	35.0			21.0	24.0		
Yellow	4.0	4.0			4.0	4.0		
All Red	1.0	1.0			1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	292	1752	0.72	0.17	56.1	E		
TR	1429	4900	0.51	0.29	35.4	D	40.0	D
Westbound								
L	292	1752	0.23	0.17	43.7	D		
T	1022	3505	0.85	0.29	47.0	D	44.3	D
R	771	1568	0.11	0.49	16.4	B		
Northbound								
L	307	1752	0.85	0.17	70.7	E		
T	701	3505	0.55	0.20	44.0	D	53.7	D
R	314	1568	0.16	0.20	39.9	D		
Southbound								
L	307	1752	0.32	0.17	43.8	D		
T	701	3505	0.57	0.20	44.5	D	38.4	D
R	640	1568	0.34	0.41	24.7	C		

Intersection Delay = 43.8 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1

Analyst: Inter.: Perris Blvd & Ramona Expwy
Agency: Perris Area Type: All other areas
Date: 09/30/02 Jurisd:
Period: Existing PM Year : 2002
Project ID: Perris Circ. Element
E/W St: Ramona Expressway N/S St: Perris Blvd

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	2	1	1	2	1	1	2	1
LGConfig	L	TR		L	T	R	L	T	R	L	T	R
Volume	222	772	275	105	563	83	256	543	90	142	418	174
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			69			21			23			44

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru		A	
Right		A			Right		A	
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru		A	
Right		A			Right		A	
Peds					Peds			
NB Right					EB Right			
SB Right	A				WB Right		A	
Green	20.0	32.0				22.0	26.0	
Yellow	4.0	4.0				4.0	4.0	
All Red	1.0	1.0				1.0	1.0	

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	298	1787	0.83	0.17	68.5	E		
TR	1326	4973	0.82	0.27	45.7	D	49.9	D
Westbound								
L	298	1787	0.39	0.17	45.4	D		
T	953	3574	0.66	0.27	40.8	D	39.4	D
R	773	1599	0.09	0.48	16.8	B		
Northbound								
L	328	1787	0.87	0.18	72.9	E		
T	774	3574	0.78	0.22	49.6	D	55.7	E
R	346	1599	0.21	0.22	38.9	D		
Southbound								
L	328	1787	0.48	0.18	45.0	D		
T	774	3574	0.60	0.22	43.6	D	39.8	D
R	680	1599	0.21	0.43	22.0	C		

Intersection Delay = 47.1 (sec/veh) Intersection LOS = D

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: VRPA Technologies
Agency/Co.:
Date Performed: 9/30/02
Analysis Time Period: Existing AM
Intersection: Nuevo Road & Ruby Drive
Jurisdiction: Fresno County
Analysis Year: 2002
Project ID:
East/West Street: Nuevo Road
North/South Street: Ruby Drive

Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	28	460	90	77	863	9
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	31	511	100	85	958	10
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type	Undivided					
RT Channelized?						
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	21	0	72	8	3	41
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	23	0	80	8	3	45
Percent Heavy Vehicles	2	0	2	0	0	2
RT Channelized?						
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	L	L		TR	L		TR
v (vph)	31	85	23		80	8		48
C(m) (vph)	707	964	99		690	75		375
v/c	0.04	0.09	0.23		0.12	0.11		0.13
95% queue length	0.14	0.29	0.89		0.39	0.35		0.44
Control Delay	10.3	9.1	52.3		10.9	58.7		16.0
LOS	B	A	F		B	F		C
Approach Delay			20.1			22.1		
Approach LOS			C			C		

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: VRPA Technologies
Agency/Co.:
Date Performed: 9/30/02
Analysis Time Period: Existing PM
Intersection: Nuevo Road & Ruby Drive
Jurisdiction: Fresno County
Analysis Year: 2002
Project ID:
East/West Street: Nuevo Road
North/South Street: Ruby Drive

Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	37	830	38	6	572	12
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	41	922	42	6	635	13
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type	Undivided					
RT Channelized?						
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	29	1	12	14	3	29
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	32	1	13	15	3	32
Percent Heavy Vehicles	2	0	2	0	0	2
RT Channelized?						
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	L	L		TR	L		TR
v (vph)	41	6	32		14	15		35
C(m) (vph)	934	710	96		393	134		428
v/c	0.04	0.01	0.33		0.04	0.11		0.08
95% queue length	0.14	0.03	1.44		0.11	0.38		0.27
Control Delay	9.0	10.1	61.0		14.5	35.2		14.2
LOS	A	B	F		B	E		B
Approach Delay			46.8			20.5		
Approach LOS			E			C		

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: VRPA
Agency/Co.:
Date Performed: 10/1/02
Analysis Time Period: Existing AM
Intersection: Redlands & I-215 NB Ramps
Jurisdiction:
Analysis Year: 2002
Project ID: Perris Circ. Element
East/West Street: Redlands Ave
North/South Street: I-215 NB Ramps

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	148	130	0	0	315	189	362	0	150	0	0	0
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT		T	R	L	R		
PHF	1.00		1.00	1.00	1.00	1.00		
Flow Rate	278		315	189	362	150		
% Heavy Veh	0		0	0	0	0		
No. Lanes	1		2		2			
Opposing-Lanes	2		1		0			
Conflicting-lanes	2		2		2			
Geometry group	3b		5		1			

Duration, T 1.00 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	278		315	189	362	150		
Left-Turn	148		0	0	362	0		
Right-Turn	0		0	189	0	150		
Prop. Left-Turns	0.5		0.0	0.0	1.0	0.0		
Prop. Right-Turns	0.0		0.0	1.0	0.0	1.0		
Prop. Heavy Vehicle	0.0		0.0	0.0	0.0	0.0		
Geometry Group	3b		5		1			
Adjustments Table 10-40:								
hLT-adj	0.2		0.2		0.2			
hRT-adj	-0.6		-0.6		-0.6			
hHV-adj	1.7		1.7		1.7			
hadj, computed	0.1		0.0	-0.6	0.2	-0.6		

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	278		315	189	362	150		
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.25		0.28	0.17	0.32	0.13		
hd, final value	6.57		6.47	5.86	6.17	5.36		
x, final value	0.51		0.57	0.31	0.62	0.22		
Move-up time, m	2.0		2.3		2.0			
Service Time	4.6		4.2	3.6	4.2	3.4		

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	278		315	189	362	150		
Service Time	4.6		4.2	3.6	4.2	3.4		
Utilization, x	0.51		0.57	0.31	0.62	0.22		
Dep. headway, hd	6.57		6.47	5.86	6.17	5.36		
Capacity	528		543	439	567	400		
Delay	16.27		17.52	11.16	19.08	9.89		
LOS	C		C	B	C	A		
Approach:								
Delay	16.27		15.14		16.39			
LOS	C		C		C			
Intersection Delay 15.88			Intersection LOS C					

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: VRPA
Agency/Co.:
Date Performed: 10/1/02
Analysis Time Period: Existing PM
Intersection: Redlands & I-215 NB Ramps
Jurisdiction:
Analysis Year: 2002
Project ID: Perris Circ. Element
East/West Street: Redlands Ave
North/South Street: I-215 NB Ramps

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	173	388	0	0	326	107	504	0	353	0	0	0
% Thrus Left Lane												

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT		T	R	L	R		
PHF	1.00		1.00	1.00	1.00	1.00		
Flow Rate	561		326	107	504	353		
% Heavy Veh	0		0	0	0	0		
No. Lanes	1		2		2			
Opposing-Lanes	2		1		0			
Conflicting-lanes	2		2		2			
Geometry group	3b		5		1			

Duration, T 1.00 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	561		326	107	504	353		
Left-Turn	173		0	0	504	0		
Right-Turn	0		0	107	0	353		
Prop. Left-Turns	0.3		0.0	0.0	1.0	0.0		
Prop. Right-Turns	0.0		0.0	1.0	0.0	1.0		
Prop. Heavy Vehicle	0.0		0.0	0.0	0.0	0.0		
Geometry Group	3b		5		1			
Adjustments Table 10-40:								
hLT-adj	0.2		0.2		0.2			
hRT-adj	-0.6		-0.6		-0.6			
hHV-adj	1.7		1.7		1.7			
hadj, computed	0.1		0.0	-0.6	0.2	-0.6		

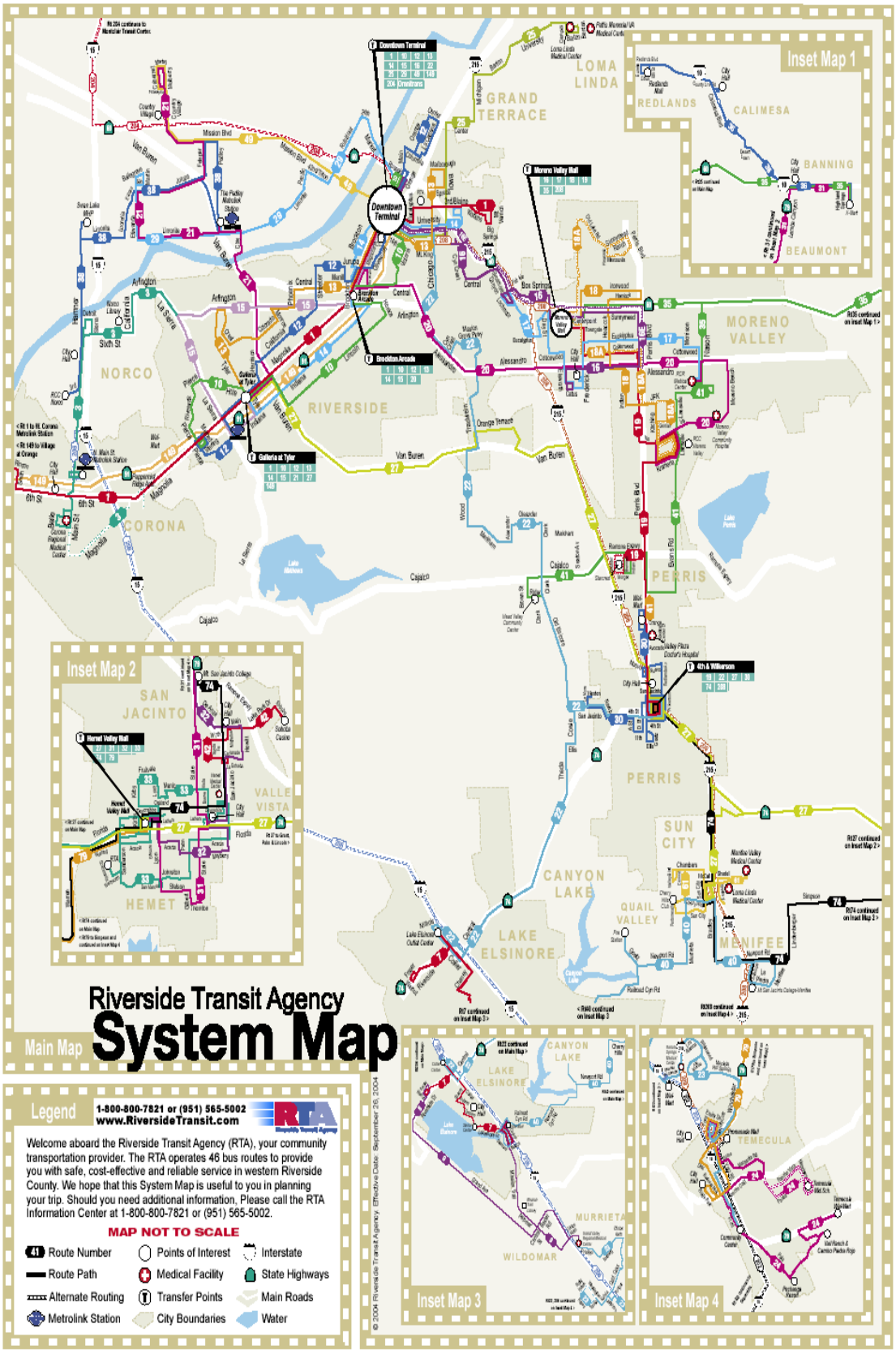
Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	561		326	107	504	353		
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.50		0.29	0.10	0.45	0.31		
hd, final value	7.27		7.85	7.23	7.01	6.19		
x, final value	1.13		0.71	0.21	0.98	0.61		
Move-up time, m	2.0		2.3		2.0			
Service Time	5.3		5.5	4.9	5.0	4.2		

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	561		326	107	504	353		
Service Time	5.3		5.5	4.9	5.0	4.2		
Utilization, x	1.13		0.71	0.21	0.98	0.61		
Dep. headway, hd	7.27		7.85	7.23	7.01	6.19		
Capacity	561		457	357	514	581		
Delay	301.01		29.17	11.90	105.51	18.62		
LOS	F		D	B	F	C		
Approach:								
Delay	301.01		24.91		69.72			
LOS	F		C		F			
Intersection Delay	129.34		Intersection LOS		F			

Appendix C – Transit Map



Appendix D – HCS Analysis

```
HCS2000: Signalized Intersections Release 4.1

Analyst: VRPA Technologies              Inter.: Perris Blvd & Nuevo Road
Agency: Perris                          Area Type: All other areas
Date:   08/18/03                        Jurisd:
Period: Future AM                       Year  : 2003
Project ID: Perris Circ. Element
E/W St: Nuevo Road                      N/S St: Perris Blvd
```

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	1	3	0	2	2	1
LGConfig	L	T	R	L	TR		L	TR		L	T	R
Volume	167	416	111	244	719	85	209	262	761	119	283	231
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			28			21			190			58

```
Duration    1.00      Area Type: All other areas
```

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
WB Left	A				SB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
NB Right					EB Right				
SB Right	A				WB Right				
Green	12.0	40.0				19.0	29.0		
Yellow	4.0	4.0				4.0	4.0		
All Red	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	347	3467	0.54	0.10	53.0	D		
T	1191	3574	0.39	0.33	29.6	C	35.3	D
R	533	1599	0.17	0.33	28.4	C		
Westbound								
L	347	3467	0.78	0.10	64.5	E		
TR	1177	3531	0.74	0.33	36.5	D	43.1	D
Northbound								
L	283	1787	0.82	0.16	68.5	E		
TR	1114	4608	0.83	0.24	48.9	D	52.8	D
Southbound								
L	549	3467	0.24	0.16	44.4	D		
T	864	3574	0.36	0.24	38.1	D	35.8	D
R	613	1599	0.31	0.38	26.2	C		

Intersection Delay = 43.3 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1

Analyst:
Agency: Perris
Date: 08/18/03
Period: Future PM
Project ID: Perris Circ. Element
E/W St: Nuevo Road

Inter.: Perris Blvd & Nuevo Road
Area Type: All other areas
Jurisd:
Year : 2003
N/S St: Perris Blvd

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	0	1	3	0	2	2	1
LGConfig	L	T	R	L	TR		L	TR		L	T	R
Volume	233	452	128	354	721	180	232	619	195	136	559	148
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			32			45			49			37

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
WB Left	A				SB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
NB Right					EB Right				
SB Right	A				WB Right				
Green	15.0	37.0				20.0	28.0		
Yellow	4.0	4.0				4.0	4.0		
All Red	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	433	3467	0.60	0.13	52.0	D		
T	1102	3574	0.46	0.31	33.0	C	38.4	D
R	493	1599	0.22	0.31	31.0	C		
Westbound								
L	433	3467	0.91	0.13	81.5	F		
TR	1076	3490	0.88	0.31	48.6	D	58.2	E
Northbound								
L	298	1787	0.87	0.17	76.3	E		
TR	1164	4989	0.73	0.23	44.9	D	52.2	D
Southbound								
L	578	3467	0.26	0.17	43.8	D		
T	834	3574	0.74	0.23	46.4	D	42.8	D
R	640	1599	0.19	0.40	23.5	C		

Intersection Delay = 49.3 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1

Analyst: VRPA Technologies
Agency: Perris
Date: 08/18/03
Period: Future AM
Project ID: Perris Circ. Element
E/W St: Ramona Expressway

Inter.: Indian Ave & Ramona Expressway
Area Type: All other areas
Jurisd:
Year : 2002

N/S St: Indian Ave

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	1	1	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	42	2274	116	46	3407	6	86	28	27	6	6	6
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			29			1			8			1

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
WB Left	A				SB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
NB Right	A	A			EB Right	A			
SB Right	A				WB Right	A			
Green	6.0	78.0				9.0	7.0		
Yellow	4.0	4.0				4.0	4.0		
All Red	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	161	3213	0.29	0.05	56.0	E		
T	3093	4759	0.82	0.65	8.7	A	9.4	A
R	1136	1482	0.09	0.77	3.5	A		
Westbound								
L	161	3213	0.32	0.05	56.2	E		
T	3093	4759	1.22	0.65	415.7	F	410.2	F
R	1136	1482	0.01	0.77	3.3	A		
Northbound								
L	124	1656	0.77	0.08	84.5	F		
T	102	1743	0.30	0.06	55.9	E	66.7	E
R	1247	1482	0.02	0.84	1.5	A		
Southbound								
L	124	1656	0.06	0.08	51.7	D		
T	193	3312	0.04	0.06	53.4	D	49.9	D
R	222	1482	0.03	0.15	43.6	D		

Intersection Delay = 241.3 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1

Analyst:
Agency: Perris
Date: 08/18/03
Period: Future PM
Project ID: Perris Circ. Element
E/W St: Ramona Expressway

Inter.: Indian Ave & Ramona Expressway
Area Type: All other areas
Jurisd:
Year : 2002

N/S St: Indian Ave

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	1	1	3	1	1	1	1	1	1	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	42	3038	81	64	2638	26	220	11	251	6	39	24
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			20			6			63			6

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right	A				EB Right	A		
SB Right	A				WB Right	A		
Green	8.0	76.0				15.0	7.0	
Yellow	4.0	4.0				4.0	4.0	
All Red	1.0	1.0				1.0	1.0	

Cycle Length: 126.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	105	1656	0.45	0.06	59.9	E		
T	2871	4759	1.18	0.60	334.9	F	324.8	F
R	1129	1482	0.06	0.76	3.8	A		
Westbound								
L	105	1656	0.68	0.06	74.9	E		
T	2871	4759	1.02	0.60	71.8	E	71.4	E
R	1129	1482	0.02	0.76	3.6	A		
Northbound								
L	197	1656	1.24	0.12	528.0	F		
T	97	1743	0.12	0.06	57.2	E	320.8	F
R	235	1482	0.89	0.16	94.0	F		
Southbound								
L	197	1656	0.04	0.12	49.2	D		
T	97	1743	0.44	0.06	60.9	E	55.3	E
R	235	1482	0.09	0.16	45.4	D		

Intersection Delay = 213.1 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1

Analyst: VRPA Technologies
Agency: Perris
Date: 08/18/03
Period: Future AM
Project ID: Perris Circ. Element
E/W St: Ramona Expressway

Inter.: Perris Blvd & Ramona Expwy
Area Type: All other areas
Jurisd:
Year : 2003

N/S St: Perris Blvd

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	405	1585	339	135	2294	231	501	514	142	199	537	557
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			85			58			36			139

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru		A	
Right		A			Right		A	
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru		A	
Right		A			Right		A	
Peds					Peds			
NB Right	A				EB Right	A		
SB Right	A				WB Right	A		
Green	17.0	44.0				21.0	16.0	
Yellow	4.0	4.0				4.0	4.0	
All Red	1.0	1.0				1.0	1.0	

Cycle Length: 118.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	490	3400	0.92	0.14	79.8	E		
T	1878	5036	0.94	0.37	44.7	D	47.3	D
R	930	1568	0.30	0.59	12.1	B		
Westbound								
L	490	3400	0.31	0.14	45.6	D		
T	1878	5036	1.36	0.37	680.9	F	603.4	F
R	930	1568	0.21	0.59	11.2	B		
Northbound								
L	605	3400	0.92	0.18	73.3	E		
T	683	5036	0.84	0.14	59.4	E	62.8	E
R	505	1568	0.23	0.32	29.6	C		
Southbound								
L	605	3400	0.37	0.18	43.0	D		
T	683	5036	0.87	0.14	63.9	E	61.7	E
R	505	1568	0.92	0.32	67.9	E		

Intersection Delay = 255.3 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1

Analyst: VRPA Technologies
Agency: Perris
Date: 08/18/03
Period: Future PM
Project ID: Perris Circ. Element
E/W St: Ramona Expressway

Inter.: Perris Blvd & Ramona Expwy
Area Type: All other areas
Jurisd:
Year : 2003
N/S St: Perris Blvd

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	476	2270	589	240	1656	190	548	807	205	324	621	373
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			85			58			36			139

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right	A				EB Right	A		
SB Right	A				WB Right	A		
Green	17.0	44.0				21.0	16.0	
Yellow	4.0	4.0				4.0	4.0	
All Red	1.0	1.0				1.0	1.0	

Cycle Length: 118.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	490	3400	1.08	0.14	232.9	F		
T	1878	5036	1.34	0.37	655.1	F	494.2	F
R	930	1568	0.60	0.59	16.3	B		
Westbound								
L	490	3400	0.54	0.14	48.2	D		
T	1878	5036	0.98	0.37	59.9	E	55.3	E
R	930	1568	0.16	0.59	10.9	B		
Northbound								
L	605	3400	1.01	0.18	128.1	F		
T	683	5036	1.31	0.14	625.8	F	380.9	F
R	505	1568	0.37	0.32	31.3	C		
Southbound								
L	605	3400	0.60	0.18	46.2	D		
T	683	5036	1.01	0.14	130.1	F	87.8	F
R	505	1568	0.51	0.32	33.4	C		

Intersection Delay = 301.0 (sec/veh) Intersection LOS = F

HCS2000: Signalized Intersections Release 4.1

Analyst:
Agency: Perris
Date: 08/18/03
Period: Future AM
Project ID: Perris Circ. Element
E/W St: Redlands Ave

Inter.: I-215 NB Ramps & Redlands Ave
Area Type: All other areas
Jurisd:
Year : 2003

N/S St: I-215 NB Ramps

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	0	0	2	1	2	1	0	0	0	0
LGConfig	L	T			T	R	L	TR				
Volume	347	260			630	464	735	1	321			
Lane Width	12.0	12.0			12.0	12.0	12.0	12.0				
RTOR Vol						116			80			

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A	A			Thru	A		
Right					Right	A		
Peds					Peds			
WB Left					SB Left			
Thru		A			Thru			
Right		A			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	20.0	45.0			40.0			
Yellow	4.0	4.0			4.0			
All Red	1.0	1.0			1.0			

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Adj Flow	Sat Rate	Ratios		Lane Group		Approach	
	Capacity		(s)	v/c	g/C	Delay	LOS	Delay	LOS
Eastbound									
L	551		3303	0.70	0.17	51.2	D		
T	1045		1792	0.28	0.58	7.8	A	32.6	C
Westbound									
T	1277		3406	0.55	0.38	27.6	C	30.1	C
R	572		1524	0.68	0.38	34.6	C		
Northbound									
L	1101		3303	0.74	0.33	38.2	D		
TR	508		1525	0.53	0.33	32.1	C	36.7	D
Southbound									

Intersection Delay = 33.2 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1

```
Analyst:                                  Inter.: I-215 NB Ramps & Redlands Ave
Agency: Perris                            Area Type: All other areas
Date:   08/18/03                          Jurisd:
Period: Future PM                         Year  : 2003
Project ID: Perris Circ. Element
E/W St: Redlands Ave                      N/S St: I-215 NB Ramps
```

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	1	0	0	2	1	2	1	0	0	0	0
LGConfig	L	T			T	R	L	TR				
Volume	405	775			651	263	1023	1	756			
Lane Width	12.0	12.0			12.0	12.0	12.0	12.0				
RTOR Vol						66			189			

```
Duration    1.00      Area Type: All other areas
```

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
EB Thru	A	A			NB Thru	A		
EB Right					NB Right	A		
EB Peds					NB Peds			
WB Left					SB Left			
WB Thru		A			SB Thru			
WB Right		A			SB Right			
WB Peds					SB Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	20.0	35.0			50.0			
Yellow	4.0	4.0			4.0			
All Red	1.0	1.0			1.0			

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	551	3303	0.82	0.17	58.3	E		
T	896	1792	0.96	0.50	54.1	D	55.5	E
Westbound								
T	993	3406	0.73	0.29	40.7	D	39.6	D
R	444	1524	0.49	0.29	36.0	D		
Northbound								
L	1376	3303	0.83	0.42	35.6	D		
TR	635	1524	0.99	0.42	95.9	F	57.1	E
Southbound								

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         Intersection Delay = 52.5  (sec/veh)   Intersection LOS = D
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MITIGATION

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HCS2000: Signalized Intersections Release 4.1

Analyst: VRPA Technologies              Inter.: I-215 SB Ramps & Cajalco Expwy
Agency: Perris                          Area Type: All other areas
Date:   09/30/02                        Jurisd:
Period: Existing AM - Mitigated         Year  : 2002
Project ID: Perris Circ. Element
E/W St: Cajalco Expressway              N/S St: I-215 SB Ramps

_____________________________SIGNALIZED INTERSECTION SUMMARY_____________________________
            |  Eastbound    |  Westbound    |  Northbound   |  Southbound   |
            | L    T    R  | L    T    R  | L    T    R  | L    T    R  |
            |_______________|_______________|_______________|_______________|
No. Lanes   |   0   2   0   |   1   2   0   |   0   0   0   |   1   1   0   |
LGConfig    |      TR       |   L   T       |               |   L  LTR      |
Volume      |     403  210  |268  675       |               |620  11   152  |
Lane Width  |     12.0      |12.0 12.0      |               |12.0 12.0      |
RTOR Vol    |          53   |               |               |          38   |
_____________________________________________________________________________________
Duration    1.00      Area Type: All other areas
                                 Signal Operations
_____________________________________________________________________________________
Phase Combination 1     2     3     4 |           5     6     7     8
EB  Left                              | NB  Left
    Thru                A             |     Thru
    Right               A             |     Right
    Peds                              |     Peds
WB  Left          A                   | SB  Left   A
    Thru          A     A             |     Thru   A
    Right                             |     Right  A
    Peds                              |     Peds
NB  Right                             | EB  Right
SB  Right                             | WB  Right
Green           25.0  32.0                  48.0
Yellow           4.0   4.0                  4.0
All Red          1.0   1.0                  1.0
                                       Cycle Length: 120.0   secs
_____________________Intersection Performance Summary_____________________________
Appr/   Lane       Adj Sat     Ratios       Lane Group   Approach
Lane    Group     Flow Rate  __________     __________  __________
Grp     Capacity     (s)     v/c    g/C     Delay LOS   Delay LOS
_____________________________________________________________________________________
Eastbound

TR       846       3173      0.74   0.27    43.6   D    43.6   D

Westbound
L        345       1656      0.86   0.21    69.6   E
T        1711      3312      0.44   0.52    13.6   B    29.5   C

Northbound



Southbound
L        662       1656      0.62   0.40    30.6   C
LTR      644       1610      0.64   0.40    28.3   C    29.5   C

         Intersection Delay = 33.0  (sec/veh)   Intersection LOS = C
_____________________________________________________________________________________
```

HCS2000: Signalized Intersections Release 4.1

Analyst:
Agency: Perris
Date: 09/30/02
Period: Existing PM + Mitigation
Project ID:
E/W St: Cajalco Expressway

Inter.: I-215 SB Ramps & Cajalco Expwy
Area Type: All other areas
Jurisd:
Year : 2002
N/S St: I-215 SB Ramps

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	1	2	0	0	0	0	1	1	0
LGConfig		TR		L	T					L	LTR	
Volume		631	246	309	497					757	1	186
Lane Width		12.0		12.0	12.0					12.0	12.0	
RTOR Vol			62									47

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left					NB Left				
Thru		A			Thru				
Right		A			Right				
Peds					Peds				
WB Left	A				SB Left	A			
Thru	A	A			Thru	A			
Right					Right	A			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	21.0	26.0				29.0			
Yellow	3.0	5.0				4.0			
All Red	0.0	1.0				1.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
TR	960	3322	0.94	0.29	54.1	D	54.1	D
Westbound								
L	401	1719	0.86	0.23	52.2	D		
T	1910	3438	0.29	0.56	7.2	A	24.4	C
Northbound								
Southbound								
L	554	1719	0.91	0.32	53.3	D		
LTR	537	1667	0.91	0.32	54.8	D	54.0	D

Intersection Delay = 44.6 (sec/veh) Intersection LOS = D

HCS2000: Signalized Intersections Release 4.1

Analyst:
Agency: Perris
Date: 12/12/02
Period: Existing PM- Mitigated timing
Project ID: Perris Circ. Element
E/W St: Ramona Expressway

Inter.: I-215 NB Ramps & Ramona Expwy
Area Type: All other areas
Jurisd:
Year : 2002

N/S St: I-215 NB Ramps

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	0	1	1	0	0	0	0
LGConfig	L	T			TR		L	TR				
Volume	205	1027			610	766	229	1	239			
Lane Width	12.0	12.0			12.0		12.0	12.0				
RTOR Vol						192			60			

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left A			
Thru	A	A			Thru A			
Right					Right A			
Peds					Peds			
WB Left					SB Left			
Thru		A			Thru			
Right		A			Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	17.0	44.0			16.5			
Yellow	3.0	5.0			3.5			
All Red	0.5	0.0			0.5			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Flow (s)	Sat Rate	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound									
L	322	1703		0.71	0.19	41.5	D		
T	2441	3406		0.47	0.72	1.1	A	7.8	A
Westbound									
TR	1544	3158		0.85	0.49	20.9	C	20.9	C
Northbound									
L	312	1703		0.81	0.18	52.3	D		
TR	280	1525		0.71	0.18	43.3	D	48.4	D
Southbound									

Intersection Delay = 19.2 (sec/veh) Intersection LOS = B

Appendix E – Existing Funding Sources

Senate Bill 45

Senate Bill (SB) 45 substantially revises the process for estimating the amount of State and federal funds to be available for transportation projects in the State, as well as appropriating and allocating the available funds, by changing the 7-year State Transportation Improvement Program (STIP) to a 4-year program. Other revisions included: changing the components of the regional and state transportation improvement programs, changing the name of the Transportation Planning and Development (TP&D) Account to the Public Transportation Account and changing the way funds are allocated from that account. SB 45 declared the Legislature's intent regarding budget estimates by Caltrans and the California Transportation Commission (CTC) based on specified factors. The bill eliminated various transportation-related programs, including traffic systems management, flexible congestion relief, commuter and urban rail transit, and the state-local transportation partnership program. The bill provided that Caltrans is continued as the responsible agency for the State highway system, as specified. The Legislature, through the enactment of SB 45, establishes priorities and processes for the programming and expenditure of State transportation funds that are at the discretion of the Legislature and the Governor. Caltrans is responsible for the planning, design, construction, maintenance and operation of the State highway system.

The method by which the estimate of funding is determined shall be determined by the CTC, in consultation with Caltrans, transportation planning agencies and County transportation commissions. This bill also allowed local agencies to have more power over funds allocated to transportation planning projects in their jurisdiction.

State Transportation Improvement Program (STIP)

State law requires the California Transportation Commission (CTC) to adopt a STIP every two years. Previously, the STIP allocated anticipated State and federal funding to projects over a seven-year period, but since SB 45 has passed this process has changed. The 2000 STIP covered a period of four years. Future STIPs will cover a period of five years. The STIP programs State and federal gas tax funds for CTC controlled highway and commuter rail projects. The current STIP includes a list of transportation projects proposed in the County's Regional Transportation Improvement Programs (RTIP) and the STIP, which are approved by funding by the CTC. It should be noted that funding in the current STIP has been severely reduced due to State budget shortfalls. SCAG and RCTC are working with the CTC and other local agencies to address funding issues and will be preparing the RTIP for Riverside County.

Surface Transportation Program (STP)

The STP provides flexible funding that may be used by States and localities for projects on any federal-aid highway, including the National Highway System (NHS), bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities. A portion of funds reserved for rural areas may be spent on rural minor collectors. STP funds are programmed through the STIP process.

Interregional Improvement Program (IIP)

The IIP deals with projects identified as providing the most adequate interregional road system to all economic centers throughout the State. Funding for this program is equal to 25% of all funds allocated through the SB 45 process. Caltrans submits the projects through the STIP process to program into the STIP. The STIP is a program based on the current adopted STIP and the most recent Project Delivery Report. It may include additional schedule changes and/or cost changes, plus new projects that Caltrans proposed for the interregional road system, as well as the intercity rail program, mass transit guideway or grade separation programs. The IIP is a State funded program.

Regional Improvement Program (RIP)

The RIP deals with projects identified as providing the most adequate regional road system to all economic centers throughout the State. Funding for this program is equal to 75% of all funds allocated through the SB 45 process. Regional planning agencies submit the projects through their RTIP process to program into the STIP. Currently, all State highways and other local regional facilities are eligible for RIP funding.

State Highway Operation and Protection Program (SHOPP)

State legislation created SHOPP for Caltrans to be responsible for State highway safety and rehabilitation projects, seismic retrofit projects, land and buildings projects, landscaping, operational improvements, bridge replacement and the minor program. Unlike STIP projects, SHOPP projects may not increase roadway capacity; SHOPP is a four-year program of projects, adopted separately from the STIP cycle. The majority of the funds for this project come from the old nine-cent State gas tax from federal funds, but a portion is also funded through the recent State gas tax increase.

To be compatible with the Fund Estimate, a formula based on pavement condition and safety concerns are issued to estimate an additional three years of the SHOPP.

Congestion Mitigation and Air Quality (CMAQ) Program

The primary purpose of CMAQ Program is to fund projects and programs in air quality non-attainment and maintenance areas for ozone, carbon monoxide (CO), and small particulate matter (PM-10), which reduce transportation related emissions. The City of Perris may submit applications for eligible projects when funds are available.

Transportation Enhancement Program

Transportation Enhancements (TE) are transportation-related activities that are designed to strengthen the cultural, aesthetic and environmental aspects of the Nation's intermodal transportation system. The transportation enhancements program provides for the implementation of a variety of non-traditional projects, with examples ranging from the restoration of historic transportation facilities, to bike and pedestrian facilities, to landscaping and scenic beautification, and to the mitigation of water pollution from highway runoff. The City of Perris may submit applications for eligible projects when funds are available.

Federal Transportation Administration (FTA)

The FTA provides Federal funds for improvements in rural and urban transit operations. The basic structure of the federal transit programs remains essentially the same, but several new programs and activities have been added and new features have been incorporated. The funding flexibility features first incorporated in the ISTEA and similar matching ratios to the highway programs have been retained. The definition of a capital project has been revised to include preventive maintenance, the provision of non-fixed route paratransit service, the leasing of equipment or facilities, safety equipment and facilities, facilities that incorporate community services such as daycare and health care, and transit enhancements. The FTA sections that provide transit moneys are as follows:

Formula Grants The various Formula Grants programs are authorized for FYs 1998-2003. After set asides for the Rural Transportation Accessibility Incentive Program, the Clean Fuels program and the Alaska Railroad (see "Rail" programs), the remaining funding is apportioned using three statutory formulas for urbanized areas, non-urbanized areas, and special needs of the elderly and persons with disabilities.

Rural Transportation Accessibility Incentive Program This program provides funding for the 5-year period of FYs 1999-2003 for over-the-road bus service. The purpose of the funding is to help public and private operators finance the incremental capital and training costs of complying with the DOT's final rule on accessibility of over-the-road buses. Funding may be used for intercity fixed-route over-the-road bus service and other over-the-road service such as local fixed route, commuter, charter, and tour service. The Secretary will allocate available funding through a competitive grant selection process.

Clean Fuels Formula Grant Program This new program supports the global warming initiative by providing an opportunity to accelerate the introduction of advanced bus propulsion technologies into the mainstream of the Nation's transit fleets. When the authorization in this formula grants account is combined with the authorization in the Capital Investment Grants account, funding is authorized for the Clean Fuels Formula Grant Program. Eligible projects include the purchasing or leasing of clean fuel buses and facilities, and the improvement of existing facilities to accommodate clean fuel buses.

Clean fuel buses include those powered by compressed natural gas, liquefied natural gas, biodiesel fuels, batteries, alcohol-based fuels, hybrid electric, fuel cell, certain clean diesel and other low or zero emissions technology. Available funds will be allocated among the eligible grant applications using a formula based on an area's non-attainment rating, number of buses and bus passenger-miles.

Urbanized Area Formula Grant Program Authorizations for the 6-year period are provided for the Urbanized Area Formula Grant Program (Title 49 U.S.C. Section 5307). Under this program, 91.23 percent of the funding is made available to all urbanized areas with a population of 50,000 or more. For urbanized areas with populations less than 200,000, funding may be used for either capital or operating costs at local option and without limitation. For urbanized areas with populations of 200,000 or more, the definition of "capital" has been revised to include preventive maintenance. Operating assistance for these larger areas is no longer an eligible expense. Also, for these larger areas, at least 1 percent of the funding apportioned to each area must be used for transit enhancement activities such as historic preservation, landscaping, public art, pedestrian access, bicycle access and enhanced access for persons with disabilities.

Formula Grant Program for other than Urbanized Areas This program receives 6.37 percent of the funding available for apportionment in proportion to each State's non-urbanized population. Funding may continue to be used for capital, operating, State administration and project administration expenses.

Formula Grant Program and Loans for Special Needs of Elderly Individuals and Individuals with Disabilities This program receives 2.4 percent of formula funding available and is apportioned based on each State's share of population for these groups of people.
Capital Investment Grants

TEA-21 also continues the current program structure of three major programs:

New starts Total funding is authorized for FYs 1998-2003. Not less than 92 percent is to be applied to projects for final design and construction. The Secretary is to evaluate and rate New Starts projects as "highly recommended," "recommended" and "not recommended." In addition to the current report each February by the Secretary on funding recommendations, a supplemental report is now required to be submitted to Congress each August. This report is to describe the Secretary's evaluation and rating of each project that has completed alternatives analyses or preliminary engineering since the last report. In evaluating projects, the Secretary is to consider the following new factors: population density and current transit ridership in the corridor; the technical capability of the grant recipient to construct the project; and factors that reflect differences in local land, construction, and operating costs. A number of projects are identified for funding during the reauthorization period.

Fixed Guideway Modernization Authorizations for this program are over the 6-year period. The allocation of funding under the first four tiers has been modified slightly, but will continue to be apportioned using system-wide mileage based on data used to apportion the funding in FY 1997. Also, the number of tiers has been increased from four to seven. The funding in these three additional tiers will be apportioned based on actual route-miles and revenue vehicle-miles on segments at least 7 years old.

Bus. Funding is authorized for bus and bus-related facilities over the 6-year period. A portion is authorized for the Federal Transit Administration's Bus Testing Facility in Pennsylvania for each of the 6 years of the reauthorization period. A number of bus projects are identified for funding in FYs 1999 and 2000.

Transit Benefits

The Act changes the Internal Revenue Code to help level the playing field between parking benefits and transit/vanpool benefits. The limit on nontaxable transit and vanpool benefits is increased from $65 to $100 per month for taxable years beginning after December 31, 2001.

In addition, the bill allows transit and vanpool benefits to be offered in lieu of compensation payable to an employee for taxable years beginning after December 31, 1997, giving transit and vanpool benefits the same tax treatment given to parking benefits under the Taxpayer Relief Act of 1997.

Transportation Equity Act for the Twenty First Century (TEA-21)

TEA-21 is also known as "federal reauthorization," a piece of legislation passed by Congress in December of 1998 that provides for a major restructuring of the highway program. TEA-21 was adopted to provide funding for highways, highway safety and mass transportation for six years to improve air quality and congestion and has been a very successful program since its inception. Similar legislation will continue to be a contributor to City of Perris transportation improvements. Key components of this Act include a great flexibility in the programming of projects, a level of playing field between highway and transit projects with a consistent 80/20 matching ratio, ties to the Federal Clean Air Act and Americans with Disabilities Act and earmarked construction projects. The TEA-21 program consists of programs designed to provide funds to special projects that must qualify through the Federal Transportation Improvement Program (FTIP) before they receive funds.

TEA-21, as well as the Clean Air Act Amendment (CAAA) is changing the way transportation planning is accomplished in California. The current Federal Transportation Improvement Program (FTIP) fulfills each of the TEA-21 requirements and conforms to the RTP and other regional plans. Congress is currently in the process of developing new federal reauthorization legislation.

Transportation Development Act

The Transportation Development Act is California law, which provides funding for transit through Local Transportation Funds (LTF) and State Transit Assistance Funds (STAF). These funds are California State sales tax funds that are available for transit operations and street and road purposes. The LTF has been in existence since 1972 derived from 1/4 cent of retail sales tax collected in the State of California. STAF, in existence since 1980, is generated by a gasoline sales tax. The LTF is distributed to each City and the unincorporated areas based on population. In Riverside County, the LTF may be used for both transit and street and road purposes as long as all transit needs are addressed, whereas STAF must be used for transit purposes only.

Local Funding Sources

Local contribution to State Highways and the regional and local roadway system in the City of Perris is optional. The only means of collecting revenue for local streets and roads is through mitigation and developer fees. The City has the responsibility and authority to enact and collect these fees in order to make transportation improvements.

In addition to mitigation and developer fees, the City of Perris requires dedication of right-of-way and improvement of infrastructure to accommodate proposed developments.

Appendix F – Potential Funding Sources

Vehicle In-Lieu Fees

As indicated above, vehicle in-lieu fees are collected by the State and returned to the County under Section 11005 of the Revenue and Taxation Code. The tax is paid annually by motor vehicle owners in lieu of a county property tax on motor vehicles. These funds are deposited in each local government's general fund (including the City of Perris), and can be used for any purpose.

The City currently programs these funds for public facilities and services it is mandated to provide through the general fund. Still, it is appropriate to identify motor vehicle in-lieu fees as a potential funding source to offset the "shortfall" needed to maintain the City's street and highway system.

Local Sales Tax Increase for Transportation

Local sales tax revenues provide the largest single source of funding to most state and local governments. In California, the State Legislature and Governor retain sole authority to enable other public entities to enact sales tax increases.

Sales tax increases used for transportation purposes have a long history. For example, a 0.5 percent sales tax increase was enacted in 1988 in Riverside County to provide necessary transportation improvements. The sales tax was extended in November 2002.

A number of other counties have also implemented sale tax increases for transportation purposes including Alameda, Contra Costa, Fresno, Imperial, Monterey, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Mateo, Santa Barbara and Santa Clara. A local sales tax increase for transportation improvements has proven to be a good revenue source for the following reasons:

There is flexibility in how the revenues can be used, i.e., for highway maintenance or capital projects, or for transit purposes.

Sales taxes have proven extremely responsive to inflation, unlike gasoline taxes. In the 1970s, highway departments depended on gas tax revenues were hit a double flow: reduced vehicle-miles of travel and improved fuel economy. This resulted in reduced gas tax allocations. On the other hand, retail sales increased at least as much as inflation, and in many growing areas more-so, indicating that a sales tax increase can keep up with inflation.

Sales taxes also tend to be a fairly reliable source of funds, therefore it is possible to sell revenue anticipation bonds at reasonable interest rates backed by future tax receipts. This stability permits large projects to go ahead more quickly than they would under a "pay as you go" method.

Sales taxes provide a very broad tax base, so that a small tax increase can produce a considerable revenue stream. Depending on local conditions, a half-cent sales tax increase can generate the same revenue as a 20 to 25-cent per gallon (or even more) increase in the gasoline tax.

Historically, the electorate has been least opposed to sales tax increases since a majority of the population uses the transportation system on a daily basis and is aware of needed improvements.

Because a separate transportation authority outside the existing government framework is usually formed to administer the sales tax increase, expenditures are exempted from the existing Gann Initiative's spending limits. An increase in the Statewide gasoline tax, even though it is really a user fee, would be subject to the Gann funding limits.

The tax is easy to administer, since similar systems for collection and distribution already exist such as the Local Transportation Fund/Transportation Development Act (TDA/LTF) funding process.

A local sales tax increase gives an area more local control over project selection and priority than a gas tax increase which is collected by the State and disbursed consistent with State allocation requirements.

The passage of the Measure A sales tax extension will ensure a continued funding source of local transportation funds for the City of Perris. It should be noted that unlike existing sales tax revenues (where the State keeps three-quarters of the tax collected and returns only one quarter to the local jurisdiction), 100 percent of the increase in sales taxes are returned to the local jurisdictions responsible for administering the allocation. A small share of the tax is kept by the State to cover its administrative costs.

City Contributions

City contributions, composed of several funding sources, could be applied toward construction of the City's street and highway system. This revenue source could be developed in cooperation with the County. The amount of City contribution would be based upon the extent of improvement to facilities located or planned within the SOI. City contributions would be composed of several funding sources including City general funds, local agency imposed traffic impact fees, development fees, redevelopment area funds, etc.

To implement this system in the City of Perris, an assessment of existing revenue sources to complement the planned street and highway program would be developed. Cost estimates associated with unfunded projects would then be divided by the number of trips generated from planned land uses. The result would be traffic impact fees based upon cost per trip.

There is justification for the sharing of traffic impact fees between the City and the County for new development projects of regional significance such as a regional activity center or other large employment center. Traffic effects of such projects transcend jurisdictional boundaries; therefore, it would be reasonable to develop fee sharing between the City of Perris and the County.

Community Service/Special Assessment Districts for Roads

Assessment districts have been used to fund a variety of public works improvements in California since 1911. Assessment districts are used when a well-defined and limited area of land benefit from the improvement. An assessment may be paid in cash by the landholder, or through installments (usually on the land owner's property tax bill). Assessments do not require a vote of the owners or voters in the assessed area, but rather are created through administrative procedures. Typically, assessed land owners must be given appropriate notice and a hearing must be held. There is a mechanism for majority protest of the assessment.

Bonds issued to pay for improvements are exempt from State and federal taxes, and carry a lower interest rate than privately raised capital. Assessments can be levied by a county, City, or special district, and can overlap jurisdictional boundaries with the consent of local governments involved. Special district assessments must have specified enabling authority to levy assessments from the State Legislature.

The distribution of assessments (or "spread") is done on a formula basis, and must be reasonably related to benefits received. The assessment can be a flat fee (e.g., $400 per acre), or it can be related to the benefit conferred on a parcel (e.g., a graduated fee based on distance, where land further from the improvement pays less). Operating costs may also be paid through assessment districts.

This funding mechanism is not currently used in the City of Perris for highway construction purposes. The City, however, should investigate this method of financing large projects. This method may also be appropriate for local circulation improvements within a defined area of benefit.

Local (Countywide) Gasoline Tax

A local option gas tax for streets and roads projects was enacted by the State in 1981. It may be imposed by voters after placed on the ballot by the Board of Supervisors and approval of a majority of the municipalities weighed by population. The County and its cities must agree through a tax agreement on how the funds are to be allocated. To date, no counties in California have adopted such a tax.

Public/Private Joint Venture Revenues

When a local jurisdiction owns excess land adjacent to its transportation facilities, the full value of such property may be captured by leasing the air, surface, or subsurface rights. These leases can provide a steady stream of income, usually over long lease terms (typically 40 to 99 years). Because land values in the City of Perris are not extremely high, the value of air rights over existing City facilities is presumably nonexistent, however, the leasing of excess surface rights may be desirable in some areas. Short-term leases can be negotiated for surface parking, mini storage facilities, recreational uses, etc.

Redevelopment District Areas

Transportation improvement projects within incorporated jurisdictions could be funded through the use tax increment funds provided from new or improved development located within City redevelopment areas. City redevelopment plans would contain planned circulation improvements required as a condition for redevelopment. Tax increments received by the City of Perris could be applied to street and highway projects within areas covered by Redevelopment Plans to defray the costs of such improvements.

Other State Programs

One other proposed State transportation improvement program implemented with passage of SCA-1 on June 5, 1990, included the "State/Local Transportation Partnership Program."

The State/Local Transportation Partnership Program provides new revenues for eligible projects on local roads, State highways, or mass transit guideways statewide. The State/Local Transportation Partnership Program is a "matching" program wherein the State's match never exceeds 50%. The State's match would be dependent upon the amount of revenues requested by local agencies for eligible projects.