



CHAPTER 3 CIRCULATION ELEMENT

1.0 INTRODUCTION

The Circulation Element represents the City's overall transportation plan. The transportation plan consists not only of the physical transportation system itself, such as streets, highways, bicycle routes and sidewalks, but also various modes of transportation, such as cars, buses, trucks, rail, bicycles, ridesharing and walking. Circulation also refers to the movement of people and goods and products within and through the City. The circulation and transportation system provides an important role in shaping the overall structure and form of the City, in that it both divides and connects land uses at the same time.

The Circulation Element specifies the system of roadways and other transportation infrastructure required to satisfy future travel demand. The Circulation Element is related to the Land Use Element, since the circulation system must adequately handle future traffic conditions and provide the means to move people and goods through and within the City of Placentia.

The Circulation Element identifies and establishes the City's policies governing the system of roadways, intersections, bike paths, pedestrian ways and other components of the circulation system, which collectively provide for the movement of people and goods throughout the City. The Circulation Element established official City policy that:

- Identifies the transportation facilities required to serve present and future vehicular and non-vehicular travel demand in the City;
- Identifies linkages between alternative modes of transportation and feasible alternative transit strategies; and
- Identifies strategies to implement the City's circulation system.

2.0 AUTHORITY FOR THE ELEMENT

The State of California Government Code Section 65302 (b)(1) requires that a General Plan include:

“A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals... and other local public utilities and facilities, all correlated with the land use element of the plan.”

3.0 SUMMARY OF EXISTING CONDITIONS

3.1 RELATIONSHIP TO OTHER PLANS

MEASURE M- GROWTH MANAGEMENT PROGRAM (GMP)

As a result of the Orange County Measure M (a ½-percent sales tax increase), passed by Orange County voters in ~~1988~~ 1990 and renewed by the voters in 2006, all Orange County cities are required to develop a Growth Management Program (GMP). The stated purpose of the GMP is to ensure that the planning, management and implementation of traffic improvements and public facilities are adequate to meet the current and projected mobility needs of Orange County.

A traffic Level of Service (LOS) policy is to be established by each City, whereby LOS “D” or better is to be designated as the overall goal. However, it is recognized that some arterials are influenced by traffic factors beyond the control of the City; therefore, a lower LOS goal may be adopted for certain arterials. A Deficient Intersection List must also be developed for “problem” locations, and if future developments significantly impact these locations, they may provide mitigation in the form of pro-rate share fees.

The overall objective of the GMP is to ensure that new developments provide their fair share of public facilities and that services and infrastructure keep pace with anticipated growth. The program calls for an annual evaluation of compliance with LOS policies, a development phasing program, participation and interaction with other jurisdictions (Growth Management Areas or GMA's) to prioritize and receive funding for regional transportation improvements, provision of a Transportation Demand Management (TDM) trip reduction program. In summary, the GMP requires development of a comprehensive program to ensure that improvement of public facilities keeps pace with development, and that new developments provide their fair share of those improvements.

CONGESTION MANAGEMENT PROGRAM (CMP)

In June 1990, California voters approved Proposition 111, which established a 9 percent per gallon gas tax, staged over a 5-year period, for the purpose of funding transportation-related improvements statewide. Congestion Management Program (CMP) legislation (originally AB 471, amended to AB 1791) requires every urbanized county with a population of 50,000 or more to adopt a CMP in order to be eligible for gasoline tax revenues associated with Proposition 111.

The CMP has an established Highway System (CMPHS), which consists of principal local arterials, Smart Streets and State Highways. In the City of Placentia, Imperial Highway, Orangethorpe Avenue and Rose Drive are included on the CMP Highway System. The intersections of Rose Drive–Tustin Avenue/Orangethorpe Avenue, SR-57 NB Ramps/Orangethorpe Avenue, SR-57 SB Ramps/Orangethorpe Avenue and Rose Drive/Imperial Highway are designated as CMP intersections. A minimum operating LOS of LOS “E” is required on CMP facilities, unless the facility was operating at a worse level when the baseline counts were conducted in 1991. Cities will be required to maintain LOS “E” or better (or baseline levels, if worse than “E”) on the CMPHS.

The CMPHS is monitored through CMP requirements and minimum Level of Service standards must be maintained in order to remain eligible for the gas tax revenues. One alternative to physical mitigation (widening streets, adding lanes at intersections, etc) is to develop a deficiency plan, whereby the CMPHS system as a whole is improved and air quality benefits are provided.

An important aspect of the CMP regulations is the requirement that new developments mitigate any significant traffic impacts to the CMPHS. This means that cities need to develop a review process whereby the traffic impacts of new projects are evaluated and impacts mitigated. This serves to ensure that the LOS standards on the CMPHS are maintained. In addition, the CMP contains requirements such as a Capital Improvement Program (CIP) submittal, a trip reduction program (TDM) and the need for inter-jurisdictional coordination.

SCAG REGIONAL TRANSPORTATION STRATEGY AND CONTROL MEASURES

The South Coast Air Quality Management District (SCAQMD) is the local air quality agency that establishes local air quality goals. The SCAQMD recently adopted the 2003 AQMP, which relies on a partnership of governmental agencies to achieve federal and state standards for improved air quality in the South Coast Air Basin (SCAB). At the regional level, the Southern California Association of Governments (SCAG) assists sub-regional and local governments in the air quality elements of transportation planning. SCAG is responsible for the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP), which include transportation improvement projects that could have significant air quality impacts. The region must demonstrate that its transportation plans and programs conform to the mandate to meet the National Ambient Air Quality Standards (NAAQS) in a timely manner.

Transportation Demand Management (TDM) was designed to reduce peak hour traffic through carpooling, vanpooling, transit and parking incentives, provision of at-work support services, and other programs. As a result of this focus and by requirement of the Orange County GMP, all Orange County cities have adopted a Trip Reduction Ordinance. The City's Trip Reduction Ordinance is provided in the Placentia Municipal Code.

3.2 EXISTING CONDITIONS

Placentia shares borders with the Cities of Brea to the north, Fullerton to the west, Anaheim to the south and Yorba Linda to the east. The Cities of Placentia, Brea and Yorba Linda collaborate as the Tri-City Area on inner-city transportation and land use issues. Many of the arterial roadways through the City of Placentia extend beyond the City boundaries into neighboring cities. Circulation issues and travel patterns, likewise, extend beyond the Placentia City limits. Land use decisions and traffic patterns in these adjacent cities have the potential to affect the quality of traffic flow and mobility in the City of Placentia, and conversely, traffic conditions and decisions made by the City of Placentia can affect its neighbors.

3.2.1 REGIONAL ACCESS

Regional access to the City of Placentia is provided by the Orange Freeway (SR-57) to the west side of the City, and the Riverside Freeway (SR-91), which is south of Placentia, in the City of Anaheim.

North-south arterials that extend through and beyond the City of Placentia include Placentia Avenue, Kraemer Boulevard and Rose Drive. East-west arterials that extend through and beyond the city limits are Imperial Highway, Bastanchury Road, Yorba Linda Boulevard, Chapman Avenue and Orangethorpe Avenue. Imperial Highway, Yorba Linda Boulevard, Orangethorpe Avenue and [Chapman Avenue](#) have full interchanges with SR-57 Freeway.

3.2.2 LOCAL ACCESS

Smaller north-south roadways that do not provide continuous north-south travel through the City include; Bradford Avenue and Melrose Street to the west side of the City, Valencia Avenue and Central Avenue in the central part of the City, and Jefferson Street, Van Buren Street and Richfield Road on the east side of the City. Other, smaller east-west roadways include Golden Avenue on the north side of the City and Palm Drive, Madison Avenue, Buena Vista Avenue, Alta Vista Avenue and Crowther Avenue in the central and southern areas of the City.

3.2.3 ROADWAY FUNCTIONAL CLASSIFICATION SYSTEM

The City of Placentia circulation system consists of a network of local streets providing access to the arterial street system, which in turn provides access to the regional freeway system. This network provides access to adjacent land uses and facilitates the movement of persons and goods to and from, within and through the City. The design and operation of each street is determined by emphasis placed on



each of these functions. Streets that have a mobility and/or regional access function will typically have more lanes, higher speed limits and fewer driveways. Where access to properties is required, streets typically have fewer lanes, lower speeds, parking and more frequent driveways to serve abutting properties.

To define the intended uses of roadways, many jurisdictions, including Placentia, use a functional classification system. The classification system provides a standard for the design and operation of the roadway system. The City of Placentia classification system references and is consistent with County of Orange Master Plan of Arterial Highways (MPAH). The following street classifications have been identified:

- Major Arterial: 120 feet of right-of-way;
- Modified Major Arterial: 100 feet right-of-way;
- Primary Arterial: 100 feet right-of-way;
- Modified Primary Arterial: 80 feet right-of-way;
- Secondary Arterial: 80 feet right-of-way; and
- Modified Secondary Arterial: 64 feet right-of-way.

Table 3-1, *City of Placentia Roadway Classifications* and Exhibit 3-1, *Functional Roadway Classifications*, indicate the existing functional classification for the arterial roadways in the City of Placentia.

**Table 3-1
City of Placentia Roadway Classifications**

Arterial	Roadway Classification
East-West Roadways	
Imperial Highway	Major Arterial
Golden Avenue	Secondary
Bastanchury Road	Modified Major / Modified Primary
Yorba Linda Boulevard	Modified Major
Palm Drive	Secondary
Madison Avenue	Secondary
Buena Vista Avenue	Secondary
Alta Vista Avenue	Secondary
Chapman Avenue	Modified Primary / Primary
Crowther Avenue	Secondary
Orangethorpe Avenue	Major Arterial
North-South Roadways	
Placentia Avenue	Secondary
Melrose Street	Secondary
Bradford Avenue	Secondary
Kraemer Boulevard	Modified Major
Valencia Avenue	Secondary
Central Avenue	Secondary
Rose Drive	Modified Major
Jefferson Boulevard	Secondary
Van Buren Street	Local Street
Richfield Road	Secondary
Lakeview Avenue	Primary Arterial

3.2.4 PUBLIC TRANSPORTATION SERVICES

The transit needs of the City of Placentia are provided primarily by the Orange County Transit Authority (OCTA), with the opportunity to transfer to other transit systems from some OCTA bus routes.

The OCTA operates six routes in the City of Placentia:

- **Route 20** operates between the Cities of La Habra and Yorba Linda via Imperial Highway and serves a very small area of Placentia in the northeast corner of the City. [This route](#) provides connecting service to Norwalk Transit at Imperial and Beach, in the City of La Habra.
- **Route 24** operates between the Cities of Fullerton and Orange, traveling along Chapman Avenue in the City of Placentia. This route provides connecting service to ~~a number of~~ Los Angeles MTA routes at stops in the City of Fullerton [and Riverside RTA routes at the Village in Orange.](#)
- **Route 30** operates between the Cities of Cerritos and Anaheim, traveling along Orangethorpe Avenue. This route provides connecting service to Los Angeles MTA, Long Beach Transit, Norwalk Transit and City of Cerritos bus routes at stops in the City of Cerritos.
- **Route 53** operates between the Cities of Brea and Irvine, traveling along Placentia Avenue at the west City boundary. This route provides connecting service to ~~the Los Angeles MTA bus system at the Brea Mall.~~ [Foothill Transit at the Brea Mall.](#)
- **Route 59** provides service between the Cities of Brea and Irvine, traveling along Kraemer Boulevard in the City of Placentia. This route provides connecting service to ~~the Los Angeles MTA bus system at the Brea Mall.~~ [AMTRAC and METROLINK rail systems at the Orange Transportation Center and The Depot at Santa Ana.](#)
- **Route 213** provides service between the Cities of Brea and Irvine, traveling along Chapman Avenue and Kraemer Boulevard in the City of Placentia. This route provides connecting service ~~to the Los Angeles MTA bus system at the Brea Mall.~~ [AMTRAK and METROLINK rail systems at the Fullerton Transportation Center and the Village in Orange.](#)

3.2.5 BICYCLE AND PEDESTRIAN FACILITIES

Existing Bikeways in the City of Placentia are shown on Exhibit 3-2, *Existing Bikeways*. Bicycle lanes and bicycle routes are provided on a number of roadways throughout the City of Placentia. The bike system provides bicyclists with connections between neighborhoods, parks, schools and other neighborhood and recreational facilities. Most City bikeways are either Class II - on-street bike lanes with markings on the pavement adjacent to the curb or Class III – on-road bike routes designated by signs only.



Insert Exhibit 3-1
Functional Roadway Classifications
8.5 X 11



Insert Exhibit 3-2
Existing Bikeways
8.5 X 11



Sidewalks are provided on most arterial roadways and on most residential streets. In the southern part of the City, roadways adjacent to the railway often do not have sidewalks on the rail side of the street.

3.2.6 TRUCK ROUTES

The City of Placentia has designated selected roadways as truck routes to provide for the authorized movement of trucks through the City. Truck routes allow for the movement of truck traffic on designated streets where they would cause the least amount of neighborhood intrusion and where noise and other impacts on residential areas and other sensitive land uses would be minimized. Roadways providing access to the freeways are the most likely candidates for truck route designation. Designated truck routes in the City of Placentia are illustrated on Exhibit 3-3, *Truck Routes*. The designation of truck routes does not prevent trucks from using other roads or streets to make deliveries or for other reasons as defined in the State of California Motor Vehicle Code.

3.2.7 RAIL TRANSPORTATION

The Burlington Northern Santa Fe Railway (BNSF) operates a freight rail line along the "Orangethorpe Corridor" that connects the ports of Los Angeles with the Inland Empire and the Midwest United States. The Orangethorpe Corridor traverses several northern Orange County cities, including Fullerton, Placentia, Yorba Linda and Anaheim. Within the City of Placentia, the rail line crosses through Old Town, and intersects Richfield Road and Lakeview Avenue while traveling alongside Crowther Avenue into the City of Anaheim.

Under current conditions approximately 50 trains per day travel through the Orangethorpe rail corridor. The number of trains is projected to increase to 135 per day by the year 2020. This train traffic halts all pedestrian and automobile traffic at each of the numerous at-grade crossings of arterials within the Orange County communities. With projected increases in train activity also come increased delay, noise, air pollution, resident inconvenience and increased accident potential.

The City of Placentia has joined with the City of Anaheim and the Orange County Transportation Authority (OCTA) to form the Orange North-American Trade Rail Access Corridor (OnTrac) Authority, a joint powers authority (JPA) established in 2000. The City of Placentia is the lead agency of the OnTrac JPA, whose purpose is to accomplish the Orangethorpe Avenue Grade Separation project. This project is a 5-mile long railroad-lowering project that will lower the tracks into a trench below grade level, thereby grade separating 11 rail crossings in the cities of Placentia and Anaheim. The portion of the OnTrac project located within the Cities of Placentia and Anaheim is known as the "Orange County Gateway".

3.3 ANALYSIS OF EXISTING OPERATING CONDITIONS

3.3.1 DAILY TRAFFIC CONDITIONS

LEVEL OF SERVICE DEFINITION FOR ROADWAYS

Level of Service is a term used to describe the operating conditions of a roadway on a daily basis, or an intersection on a peak hour basis. When a street network carries traffic volumes that approach or exceed the network’s designed capacity, congestion occurs. A roadway’s capacity is a function primarily of the number of lanes provided to carry traffic volumes, and whether or not the roadway is divided with a median or center turn lane. The more lanes provided, the more capacity the roadway has to accommodate traffic demand. Table 3-2, *Daily Roadway Capacity by Roadway Type*, is a summary of theoretical daily traffic-carrying capacity for each of the roadway types.

**Table 3-2
Daily Roadway Capacity by Roadway Type**

Roadway Type	Estimated Daily Capacity ^(a)
Major: 6-Lane Divided	56,300 vpd
Primary: 4-Lane Divided	37,500 vpd
Secondary: 4-Lane Undivided	25,000 vpd
Collector: 2-Lane Undivided	12,500 vpd
^(a) Estimated daily capacity for Level of Service (LOS) E, expressed as vehicles per day (vpd).	

These daily capacity values provide a general guideline as to the adequacy or deficiency of the roadway system. The actual capacity of a roadway also depends on a combination of factors, including the presence or absence of intersection controls, signal timing, the frequency of driveways, on-street parking, the percentage of the daily traffic in the peak hour, the directionality of traffic in the peak hour and other factors.

The term Level of Service (LOS) is used to qualitatively describe prevailing conditions and their effect on traffic. Broadly interpreted, the LOS concept denotes operating conditions along a roadway, based on the roadway capacity and the daily traffic volumes. The LOS is related to the volume-to-capacity ratio (V/C). To determine the V/C ratio, the average daily traffic volume is divided by the link capacity. There are six defined Levels of Service, A through F which describe conditions ranging from “ideal” to “worst” as defined in Table 3-3, *Level of Service Descriptions*.



Insert Exhibit 3-3
Truck Routes
8.5 X 11

**Table 3-3
Level of Service Descriptions**

Level of Service	Description of Operation	Range of V/C Ratios
A	Describes predominantly free-flow conditions at average travel speeds. Vehicles are seldom impeded in their ability to maneuver in the traffic stream. Delays at intersections are minimal.	0.00 - 0.60
B	Represents reasonably unimpeded operations at average travel speeds. The ability to maneuver in the traffic stream is slightly restricted; delays are not bothersome	0.61 - 0.70
C	Represents stable operations, however, ability to change lanes and maneuver may be more restricted than LOS B and longer queues are experienced at intersections.	0.71 - 0.80
D	Congestion occurs and a small change in volumes increases delays substantially.	0.81 - 0.90
E	Severe congestion occurs with extensive delays and low travel speeds occur.	0.91 - 1.00
F	Characterizes arterial flow at extremely low speeds and intersection congestion occurs with high delays and extensive queuing.	> 1.00

EXISTING TRAFFIC CONDITIONS OF ROADWAYS

Existing average daily traffic (ADT) volumes were compared to roadway capacity to assess existing levels of service. This analysis was based on existing daily traffic volumes compiled for the City-wide Traffic Model, which was completed in 2002. Existing daily traffic volumes on roadway segments are presented in Exhibit 3-4, *2002 Daily Traffic Volumes*. For each roadway segment, the daily capacity was determined in accordance with the current facility type and existing number of lanes, and a V/C ratio was computed. The resulting volumes and associated V/C ratios and LOS are summarized in Table 3-4, *Level of Service on Roadway Segments Existing Conditions (2002)*.

The data in Table 3-4 indicates that the following roadway segments currently operate at LOS "E" or "F":

- Chapman Avenue: Placentia Avenue to Bradford Avenue – LOS E
- Placentia Avenue: Nutwood Avenue to Chapman Avenue – LOS F
- Lakeview Avenue: South of Orangethorpe Avenue – LOS F



Insert Exhibit 3-4
2002 Daily Traffic Volumes
8.5 X 11

**Table 3-4
Level of Service on Roadway Segments – Existing Conditions (2002)**

Location	Existing Mid-Block Lanes ¹	LOS "E" Capacity	Daily Traffic	V/C ²	LOS ³
Golden Avenue					
Kraemer Blvd to Valencia Ave	4U	25,000	5,000	0.20	A
East of Valencia Ave	4U	25,000	4,000	0.16	A
Bastanchury Road					
West of Placentia Ave	4D	37,500	18,000	0.48	A
Placentia Ave to Kraemer Blvd	4D	37,500	22,000	0.59	A
Kraemer Blvd to Valencia Ave	4D	37,500	16,000	0.43	A
East of Valencia Ave	4D	37,500	12,000	0.32	A
West of Rose Dr	4D	37,500	12,000	0.32	A
Yorba Linda Boulevard					
West of Kraemer Blvd	6D	56,300	35,000	0.62	B
Kraemer Blvd to Palm Dr	6D	56,300	32,000	0.57	A
Palm Dr to Valencia Ave	4D	37,500	27,000	0.72	C
Valencia Ave to Linda Vista	4D	37,500	24,000	0.64	B
East of Rose Dr	4D	37,500	26,000	0.69	B
Palm Drive					
Yorba Linda Blvd to Valencia Ave	4U	25,000	9,000	0.36	A
Valencia Ave to Tustin Ave	4U	25,000	11,000	0.44	A
Madison Avenue					
West of Bradford Ave	4U	25,000	6,000	0.24	A
East of Bradford Ave	4U	25,000	7,000	0.28	A
Alta Vista Street					
Kraemer Blvd to Rose Dr	4D	37,500	13,000	0.35	A
Rose Dr to Jefferson St	4D	37,500	9,000	0.24	A
Jefferson St to Van Buren St	4D	37,500	6,000	0.16	A
Chapman Avenue					
Placentia Ave to Melrose St	4D	37,500	35,000	0.93	E*
Melrose St to Bradford Ave	4D	37,500	35,000	0.93	E*
Bradford Ave to Kraemer Blvd	4D	37,500	21,000	0.56	A
Kraemer Blvd to Orangethorpe Ave	4D	37,500	11,000	0.29	A
Crowther Avenue					
West of Melrose St	2U	12,500	8,000	0.64	B
Melrose St to Bradford Ave	4U	25,000	9,000	0.36	A
Bradford Ave to Kraemer Blvd	4U	25,000	7,000	0.28	A
Kraemer Blvd to Orangethorpe Ave	4U	25,000	7,000	0.28	A
Orangethorpe Avenue					
Placentia Ave to SR-57	6D	56,300	31,000	0.55	A
SR-57 to Melrose St	6D	56,300	36,000	0.64	B
Melrose St to Kraemer Blvd	6D	56,300	23,000	0.41	A
Kraemer Blvd to Chapman Ave	4D	37,500	16,000	0.43	A
Chapman Ave to Rose Dr	4D	37,500	24,000	0.64	B
Rose Dr to Jefferson St	4D	37,500	23,000	0.61	B
Jefferson St to Van Buren St	4D	37,500	23,000	0.61	B
Van Buren St to Richfield Rd	4D	37,500	22,000	0.59	A
Richfield Rd to Lakeview Ave	4D	37,500	21,000	0.56	A



**Table 3-4 – Continued
Level of Service on Roadway Segments – Existing Conditions (2002)**

Location	Existing Mid-Block Lanes ¹	LOS "E" Capacity	Daily Traffic	V/C ²	LOS ³
Placentia Avenue					
North of Bastanchury Rd	4U	25,000	10,000	0.40	A
Bastanchury Rd to Yorba Linda Blvd	4U	25,000	19,000	0.76	C
Nutwood Ave to Chapman Ave	4U	25,000	26,000	1.04	F**
Chapman Ave to Crowther Ave	4U	25,000	18,000	0.72	C
Crowther Ave to Orangethorpe Ave	4U	25,000	19,000	0.76	C
Orangethorpe Ave to La Jolla St	4U	25,000	11,000	0.44	A
Melrose Street					
Chapman Ave to Crowther Ave	2U	12,500	4,000	0.32	A
Crowther Ave to Orangethorpe Ave	4U	25,000	10,000	0.40	A
Orangethorpe Ave to La Jolla St	4U	25,000	16,000	0.64	B
Bradford Avenue					
Madison Ave to Chapman Ave	2U	12,500	9,000	0.72	C
Chapman Ave to Crowther Ave	2U	12,500	9,000	0.72	C
Kraemer Boulevard					
Golden Ave to Bastanchury Rd	4D	37,500	20,000	0.53	A
Bastanchury Rd to Yorba Linda Blvd	4D	37,500	22,000	0.59	A
Yorba Linda Blvd to Alta Vista St	4D	37,500	27,000	0.72	C
Alta Vista St to Chapman Ave	4D	37,500	25,000	0.67	B
Chapman Ave to Crowther Ave	4D	37,500	22,000	0.59	A
Valencia Avenue					
Golden Ave to Bastanchury Rd	4U	25,000	8,000	0.32	A
Bastanchury Rd to Yorba Linda Blvd	4U	25,000	10,000	0.40	A
Yorba Linda Blvd to Palm Dr	4U	25,000	5,000	0.20	A
Rose Drive					
Yorba Linda Blvd to Palm Dr	4D	37,500	23,000	0.61	B
Palm Dr to Buena Vista Ave	4D	37,500	30,000	0.80	C
Buena Vista Ave to Alta Vista St	4D	37,500	25,000	0.67	B
Alta Vista St to Orangethorpe Ave	4D	37,500	22,000	0.59	A
Jefferson Street					
Alta Vista St to Orangethorpe Ave	4U	25,000	4,000	0.16	A
South of Orangethorpe Ave	2U	12,500	6,000	0.48	A
Van Buren Street					
Alta Vista St to Orangethorpe Ave	2U	12,500	7,000	0.56	A
South of Orangethorpe Ave	2U	12,500	6,000	0.48	A
Richfield Road					
North of Orangethorpe Ave	4U	25,000	9,000	0.36	A
South of Orangethorpe Ave	4U	25,000	8,000	0.32	A
Lakeview Avenue					
North of Orangethorpe Ave	4U	25,000	11,000	0.44	A
South of Orangethorpe Ave	2U	12,500	18,000	1.44	F**

¹ Number of Lanes are total number of through travel lanes as they exist today. "D" means "Divided," or that there is a center divider; "U" means "Undivided," or no center divider.

² Volume-to-Capacity ratio.

³ Level of Service per V/C ranges in Table 3.

Note: E* and F** = Unacceptable Level of Service.

3.3.2 PEAK HOUR TRAFFIC CONDITIONS

LEVEL OF SERVICE DEFINITION FOR INTERSECTIONS

For peak hour operating conditions, intersections are analyzed using the Intersection Capacity Utilization (ICU) methodology as specified by the Orange County CMP. The ICU methodology uses peak hour volumes on each approach to the intersection, number of lanes for each movement and lane capacities to calculate a volume-to-capacity ratio (V/C ratio) for each turning movement. Critical movements are then identified and an ICU value is determined by summing the critical V/C ratios. The ICU results are then related to LOS values, ranging from “A” to “F”, according to Table 3-5, *Intersection Level of Service and Corresponding ICU Values*.

**Table 3-5
Intersection Level of Service and Corresponding ICU Values**

Level of Service	Intersection Capacity Utilization (ICU)
A	0.00 – 0.60
B	0.61 – 0.70
C	0.71 – 0.80
D	0.81 – 0.90
E	0.91 – 1.00
F	Greater than 1.00

INTERSECTION CAPACITY ANALYSIS

Fifty-two (52) intersections were selected for analysis. Seven of the intersections are located in the City of Fullerton due to their proximity to Placentia. The intersections selected for analysis and the existing Level of Service at these intersections are summarized on Table 3-6, *Intersection Analysis- 2002 Conditions*.

**Table 3-6
Intersection Analysis – 2002 Conditions**

Intersection No.	Intersection	AM Peak Hour		PM Peak Hour	
		ICU	LOS	ICU	LOS
City of Placentia					
1	Kraemer Blvd & Golden Ave	0.49	A	0.60	A
2	Valencia Ave & Golden Ave	0.28	A	0.26	A
3	Rose Dr & Imperial Hwy	0.68	B	0.68	B
4	Placentia Ave & Bastanchury Rd	0.69	B	0.83	D
5	Kraemer Blvd & Bastanchury Rd	0.78	C	0.99	E *
6	Rose Dr & Bastanchury Rd	0.49	A	0.63	B
7	Valencia Ave & Bastanchury Rd	0.53	A	0.42	A



**Table 3-6 – Continued
Intersection Analysis – 2002 Conditions**

Intersection No.	Intersection	AM Peak Hour		PM Peak Hour	
		ICU	LOS	ICU	LOS
11	Bradford Ave & Yorba Linda Blvd	0.52	A	0.71	C
12	Kraemer Blvd & Yorba Linda Blvd	0.70	B	0.85	D
13	Palm Dr & Yorba Linda Blvd	0.44	A	0.47	A
14	Valencia Ave & Yorba Linda Blvd	0.66	B	0.50	A
15	Rose Dr & Yorba Linda Blvd	0.62	B	0.79	C
16	Kraemer Blvd & Morse Ave	0.56	A	0.71	C
17	Valencia Ave & Palm Dr	0.38	A	0.34	A
18	Rose Dr & Palm Dr	0.69	B	0.58	A
19	Rose Dr & Buena Vista Ave	0.79	C	0.81	D
20	Jefferson St & Alta Vista St	0.31	A	0.29	A
21	Placentia Ave & Madison Ave	0.55	A	0.61	B
22	Bradford Ave & Madison Ave	0.46	A	0.46	A
23	Kraemer Blvd & Madison Ave	0.70	B	0.64	B
24	Kraemer Blvd & Alta Vista St	0.73	C	0.82	D
25	Central Ave & Alta Vista St	0.33	A	0.34	A
26	Rose Dr & Alta Vista St	0.78	C	0.78	C
31	Placentia Ave & Nutwood Ave	0.71	C	0.63	B
32	Placentia Ave & Chapman Ave	0.73	C	0.76	C
33	Bradford Ave & Chapman Ave	0.61	B	0.59	A
34	Kraemer Blvd & Chapman Ave	0.83	D	0.84	D
35	Central Ave & Chapman Ave	0.30	A	0.41	A
36	Placentia Ave & Crowther Ave	0.47	A	0.55	A
37	Melrose St & Crowther Ave	0.37	A	0.39	A
38	Bradford Ave & Crowther Ave	0.46	A	0.48	A
39	Kraemer Blvd & Crowther Ave	0.52	A	0.67	B
40	Placentia Ave & Orangethorpe Ave	0.53	A	0.86	D
41	SR-57 SB Ramps & Orangethorpe Ave	0.55	A	0.51	A
42	SR-57 NB Ramps & Orangethorpe Ave	0.89	D	0.62	B
43	Melrose St & Orangethorpe Ave	0.51	A	0.70	B
44	Kraemer Blvd & Orangethorpe Ave	0.67	B	0.68	B
45	Miller & Orangethorpe Ave	0.53	A	0.66	B
46	Chapman Ave & Orangethorpe Ave	0.49	A	0.54	A
47	Rose Dr & Orangethorpe Ave	0.66	B	0.70	B
48	Jefferson St & Orangethorpe Ave	0.61	B	0.53	A
49	Van Buren St & Orangethorpe Ave	0.71	C	0.64	B
51	Lakeview Ave & Orangethorpe Ave	0.73	C	0.84	D
52	Placentia Ave & La Jolla St	0.23	A	0.37	A
City of Fullerton					
8	SR-57 SB Ramps & Yorba Linda Blvd	0.48	A	0.76	C
9	SR-57 NB Ramps & Yorba Linda Blvd	0.59	A	0.64	B
10	Placentia Ave & Yorba Linda Blvd	0.90	D	0.95	E *
27	SR-57 SB Ramps & Nutwood Ave	0.75	C	0.59	A
28	SR-57 NB Ramps & Nutwood Ave	0.65	B	0.57	A
29	SR-57 SB Ramps & Chapman Ave	0.61	B	0.71	C
30	SR-57 NB Ramps & Chapman Ave	0.73	C	0.79	C
Note: E* = Unacceptable Level of Service.					

Table 3-6 indicates that with the exception of two intersections, all study intersections are operating at LOS D or better under existing conditions. Two intersections are currently operating at LOS E in the evening peak hour:

- Kraemer Boulevard and Bastanchury Road (City of Placentia), and
- Placentia Avenue and Yorba Linda Boulevard (City of Fullerton).

4.0 DESCRIPTION OF CIRCULATION PLAN

4.1 ANALYSIS OF BUILDOUT TRAFFIC CONDITIONS

Analysis of projected traffic conditions at build-out of the City was conducted to determine whether or not the City's circulation system can accommodate the future traffic demands of the City's land use plan. The buildout year is assumed to be Year 2025. If roadway or intersection deficiencies are projected to occur as a result of buildout of General Plan land uses, improvements needed to accommodate future traffic volumes will be identified.

4.1.1 METHODOLOGY

The methodology for evaluating future traffic volumes on the roadway segments and at intersections in Placentia is based on the following major premises:

- The Circulation Element must be consistent with all other Elements of the General Plan, especially the Land Use Element, such that there is good balance between the transportation capacity to be provided and the travel demand to be generated by the buildout land uses.
- The effects of increased traffic in Placentia due to growth and development in neighboring communities must be taken into consideration. While "through" traffic is not encouraged, its presence must be recognized so that the Circulation Element can be responsive.
- The City's current circulation system is built out to its designated capacities, and is assumed to be the network for buildout analysis. If improvements to the roadway system or intersections are needed to accommodate General Plan buildout, these will be recommended as mitigation measures.

4.1.2 BUILDOUT TRAFFIC PROJECTIONS

While the City of Placentia is almost fully developed, some parcels are still vacant, underdeveloped or have the potential for further development. The Land Use Element of the General Plan quantifies the potential development on these underdeveloped and vacant parcels. The remaining potential development on these parcels is estimated to consist of approximately 1,911,805 square feet of development (commercial, industrial or office) and 280 residential units.



For analysis of future traffic conditions, each parcel was identified in terms of its potential future land use, including the land use type (residential, retail, office, industrial, etc.) and the quantity of those land uses (dwelling units, thousand square feet, etc.). The additional trips generated by the proposed developments were estimated and distributed on the surrounding road network.

4.1.3 BUILDOUT TRAFFIC CONDITIONS ON ROADWAYS

Forecasted daily traffic volumes are presented on Exhibit 3-5, *Buildout (2025) Daily Roadway Segment Traffic Volumes*. Forecasted operating conditions for Buildout Year 2025 are presented in Table 3-7, *Level of Service on Roadway Segments, Buildout Conditions (2025)*.

Table 3-7 indicates roadway segments would continue to operate at LOS D or better at buildout, with the exception of one roadway segment:

- Placentia Avenue from Nutwood Avenue to Chapman Avenue, LOS F.

Placentia Avenue is classified as a Secondary Arterial.

RECOMMENDED IMPROVEMENTS TO MITIGATE IMPACTS

Since the acceptable threshold for Level of Service is D, the segment referenced above is considered to be impacted. Placentia Avenue from Nutwood Street to Chapman Avenue would need to be widened to four lanes divided in order to achieve the acceptable LOS threshold of D. Additional capacity would be achieved through the addition of a center median. It should be noted that the roadway currently allows on-street parallel parking on both sides of the street and that it already has a narrow center turn lane, allowing the road to function like a Primary Roadway, although constrained by the land widths and on-street parking. Eliminating on-street parking on one or both sides would allow a full-width center turn lane to be installed with the existing curb-to-curb width. Removal of on-street parking would impact adjacent development on the street.



Insert Exhibit 3-5
Buildout (2025) Daily Roadway Segment Traffic Volumes
8.5 X 11



**Table 3-7
Level of Service on Roadway Segments, Building Conditions (2025)**

Location	Circulation Element Classification ¹	LOS "E" Capacity	Daily Traffic	V/C ²	LOS ³
Placentia Avenue					
North of Bastanchury Rd	Secondary 4U	25,000	11,000	0.44	A
Bastanchury Rd to Yorba Linda Blvd	Secondary 4U	25,000	21,000	0.84	D
Nutwood Ave to Chapman Ave	Secondary 4U	25,000	28,000	1.12	F**
Chapman Ave to Crowther Ave	Secondary 4U	25,000	22,000	0.88	D
Crowther Ave to Orangethorpe Ave	Secondary 4U	25,000	21,000	0.84	D
Orangethorpe Ave to La Jolla St	Secondary 4U	25,000	10,000	0.40	A
Melrose Street					
Chapman Ave to Crowther Ave	Secondary 4U	25,000	5,000	0.20	A
Crowther Ave to Orangethorpe Ave	Secondary 4U	25,000	12,000	0.48	A
Orangethorpe Ave to La Jolla St	Secondary 4U	25,000	18,000	0.72	C
Bradford Avenue					
Madison Ave to Chapman Ave	Secondary 4U	25,000	11,000	0.44	A
Chapman Ave to Crowther Ave	Secondary 4U	25,000	5,000	0.20	A
Kraemer Boulevard					
Golden Ave to Bastanchury Rd	Major Modified 6D	56,300	28,000	0.50	A
Bastanchury Rd to Yorba Linda Blvd	Major Modified 6D	56,300	30,000	0.53	A
Yorba Linda Blvd to Alta Vista St	Major Modified 6D	56,300	35,000	0.62	B
Alta Vista St to Chapman Ave	Major Modified 6D	56,300	30,000	0.53	A
Chapman Ave to Crowther Ave	Major Modified 6D	56,300	34,000	0.60	A
Valencia Avenue					
Golden Ave to Bastanchury Rd	Secondary 4U	25,000	10,000	0.40	A
Bastanchury Rd to Yorba Linda Blvd	Secondary 4U	25,000	11,000	0.44	A
Yorba Linda Blvd to Palm Dr	Secondary 4U	25,000	5,000	0.20	A
Rose Drive					
Yorba Linda Blvd to Palm Dr	Major Modified 6D	56,300	28,000	0.50	A
Palm Dr to Buena Vista Ave	Major Modified 6D	56,300	38,000	0.67	B
Buena Vista Ave to Alta Vista St	Major Modified 6D	56,300	34,000	0.60	A
Alta Vista St to Orangethorpe Ave	Major Modified 6D	56,300	34,000	0.60	A
Jefferson Street					
Alta Vista St to Orangethorpe Ave	Secondary 4U	25,000	9,000	0.36	A
South of Orangethorpe Ave	Secondary 4U	25,000	8,000	0.32	A
Van Buren Street					
Alta Vista St to Orangethorpe Ave	Secondary 4U	25,000	6,000	0.24	A
South of Orangethorpe Ave	Secondary 4U	25,000	3,000	0.12	A
Richfield Road					
North of Orangethorpe Ave	Secondary 4U	25,000	9,000	0.36	A
South of Orangethorpe Ave	Secondary 4U	25,000	11,000	0.44	A
Lakeview Avenue					
North of Orangethorpe Ave	Secondary 4U	25,000	14,000	0.56	A
South of Orangethorpe Ave	Secondary 4U	25,000	21,000	0.84	D
Golden Avenue					
Kraemer Blvd to Valencia Ave	Secondary 4U	25,000	6,000	0.24	A
East of Valencia Ave	Secondary 4U	25,000	4,000	0.16	A

Table 3-7 – Continued
Level of Service on Roadway Segments, Building Conditions (2025)

Location	Circulation Element Classification ¹	LOS "E" Capacity	Daily Traffic	V/C ²	LOS ³
Bastanchury Road					
West of Placentia Ave	Major Modified 6D	56,300	25,000	0.44	A
Placentia Ave to Kraemer Blvd	Major Modified 6D	56,300	35,000	0.62	B
Kraemer Blvd to Valencia Ave	Major Modified 6D	56,300	23,000	0.41	A
East of Valencia Ave	Primary Modified 4D	37,500	20,000	0.53	A
West of Rose Dr	Primary Modified 4D	37,500	21,000	0.56	A
Yorba Linda Boulevard					
West of Kraemer Blvd	Major Modified 6D	56,300	37,000	0.66	B
Kraemer Blvd to Palm Dr	Major Modified 6D	56,300	40,000	0.71	C
Palm Dr to Valencia Ave	Major Modified 6D	56,300	32,000	0.57	A
Valencia Ave to Linda Vista	Major Modified 6D	56,300	27,000	0.48	A
East of Rose Dr	Major Modified 6D	56,300	28,000	0.50	A
Palm Drive					
Yorba Linda Blvd to Valencia Ave	Secondary 4U	25,000	11,000	0.44	A
Valencia Ave to Tustin Ave	Secondary 4U	25,000	14,000	0.56	A
Madison Avenue					
West of Bradford Ave	Secondary 4U	25,000	9,000	0.36	A
East of Bradford Ave	Secondary 4U	25,000	9,000	0.36	A
Alta Vista Street					
Kraemer Blvd to Rose Dr	Secondary 4U	25,000	15,000	0.60	A
Rose Dr to Jefferson St	Secondary 4U	25,000	9,000	0.36	A
Jefferson St to Van Buren St	Secondary 4U	25,000	8,000	0.32	A
Chapman Avenue					
Placentia Ave to Melrose St	Primary Modified 4D	37,500	24,000	0.64	B
Melrose St to Bradford Ave	Primary Modified 4D	37,500	22,000	0.59	A
Bradford Ave to Kraemer Blvd	Primary Modified 4D	37,500	21,000	0.56	A
Kraemer Blvd to Orangethorpe Ave	Primary 4D	37,500	15,000	0.40	A
Crowther Avenue					
West of Melrose St	Secondary 4U	25,000	9,000	0.36	A
Melrose St to Bradford Ave	Secondary 4U	25,000	11,000	0.44	A
Bradford Ave to Kraemer Blvd	Secondary 4U	25,000	8,000	0.32	A
Kraemer Blvd to Orangethorpe Ave	Secondary 4U	25,000	7,000	0.28	A
Orangethorpe Avenue					
Placentia Ave to SR-57	Major 6D	56,300	44,000	0.78	C
SR-57 to Melrose St	Major 6D	56,300	45,000	0.80	C
Melrose St to Kraemer Blvd	Major 6D	56,300	31,000	0.55	A
Kraemer Blvd to Chapman Ave	Major 6D	56,300	20,000	0.36	A
Chapman Ave to Rose Dr	Major 6D	56,300	29,000	0.52	A
Rose Dr to Jefferson St	Major 6D	56,300	24,000	0.43	A
Jefferson St to Van Buren St	Major 6D	56,300	23,000	0.41	A
Van Buren St to Richfield Rd	Major 6D	56,300	22,000	0.39	A
Richfield Rd to Lakeview Ave	Major 6D	56,300	23,000	0.41	A
¹ "Major," "Primary," or "Secondary" designations are per the City's General Plan. Number of Lanes are for total of both directions as they exist today. "D" means "Divided," or that there is a center divider; "U" means "Undivided," or no center divider. ² Volume-to-Capacity ratio. ³ Level of Service per V/C ranges in Table 3. Note: F** = Unacceptable Level of Service.					



4.1.4 BUILDOUT TRAFFIC CONDITIONS AT INTERSECTIONS

The ICU analysis was conducted for buildout conditions, and the LOS was determined for each of the intersections. The results are presented in Table 3-8, *Intersection Levels of Service at Buildout (2025)*.

**Table 3-8
Intersection Levels of Service at Buildout (2025)**

Int. #	Intersection	AM Peak Hour		PM Peak Hour	
		ICU	LOS	ICU	LOS
City of Placentia					
8	Kraemer Blvd & Golden Ave	0.63	B	0.73	C
9	Valencia Ave & Golden Ave	0.39	A	0.39	A
10	Rose Dr & Imperial Hwy	0.92	E *	0.86	D
11	Placentia Ave & Bastanchury Rd	1.13	F **	0.94	E *
12	Kraemer Blvd & Bastanchury Rd	1.08	F **	0.92	E *
13	Valencia Ave & Bastanchury Rd	0.81	D	0.59	A
14	Rose Dr & Bastanchury Rd	0.68	B	0.70	B
27	Bradford Ave & Yorba Linda Blvd	0.58	A	0.84	D
28	Kraemer Blvd & Yorba Linda Blvd	1.04	F **	1.10	F **
29	Palm Dr & Yorba Linda Blvd	0.46	A	0.49	A
30	Valencia Ave & Yorba Linda Blvd	0.85	D	0.70	B
31	Rose Dr & Yorba Linda Blvd	0.68	B	0.76	C
32	Kraemer Blvd & Morse Ave	0.63	B	0.74	C
33	Valencia Ave & Palm Dr	0.47	A	0.44	A
34	Rose Dr & Palm Dr	0.91	E *	0.71	C
35	Rose Dr & Buena Vista Ave	0.85	D	0.87	D
36	Jefferson St & Alta Vista St	0.41	A	0.41	A
37	Placentia Ave & Madison Ave	0.60	A	0.72	C
38	Bradford Ave & Madison Ave	0.62	B	0.65	B
39	Kraemer Blvd & Madison Ave	0.83	D	0.69	B
40	Kraemer Blvd & Alta Vista St	0.83	D	0.87	D
41	Central Ave & Alta Vista St	0.37	A	0.45	A
42	Rose Dr & Alta Vista St	0.97	E *	0.87	D
50	Placentia Ave & Nutwood Ave	1.02	F **	0.72	C
51	Placentia Ave & Chapman Ave	0.90	D	0.98	E *
52	Bradford Ave & Chapman Ave	0.71	C	0.75	C
53	Kraemer Blvd & Chapman Ave	0.96	E *	0.90	D
54	Central Ave & Chapman Ave	0.33	A	0.43	A
55	Placentia Ave & Crowther Ave	0.52	A	0.63	B
56	Melrose St & Crowther Ave	0.41	A	0.48	A
57	Bradford Ave & Crowther Ave	0.57	A	0.62	B
58	Kraemer Blvd & Crowther Ave	0.66	B	0.80	C
59	Placentia Ave & Orangethorpe Ave	0.68	B	1.09	F **
60	SR-57 SB Ramps & Orangethorpe Ave	0.70	B	0.58	A
61	SR-57 NB Ramps & Orangethorpe Ave	0.98	E *	0.74	C
62	Melrose St & Orangethorpe Ave	0.65	B	0.90	D

**Table 3-8 – Continued
Intersection Levels of Service at Buildout (2025)**

Int. #	Intersection	AM Peak Hour		PM Peak Hour	
		ICU	LOS	ICU	LOS
63	Kraemer Blvd & Orangethorpe Ave	0.87	D	0.75	C
64	Miller & Orangethorpe Ave	0.57	A	0.82	D
65	Chapman Ave & Orangethorpe Ave	0.64	B	0.55	A
66	Rose Dr & Orangethorpe Ave	0.90	D	0.87	D
67	Jefferson St & Orangethorpe Ave	0.53	A	0.60	A
68	Van Buren St & Orangethorpe Ave	0.66	B	0.61	B
53	Lakeview Ave & Orangethorpe Ave	0.96	E *	0.93	E *
54	Placentia Ave & La Jolla St	0.30	A	0.47	A
City of Fullerton					
8	SR-57 SB Ramps & Yorba Linda Blvd	0.79	C	0.99	E *
9	SR-57 NB Ramps & Yorba Linda Blvd	0.63	B	0.88	D
10	Placentia Ave & Yorba Linda Blvd	0.99	E *	1.09	F **
27	SR-57 SB Ramps & Nutwood Ave	0.96	E *	0.72	C
28	SR-57 NB Ramps & Nutwood Ave	0.59	A	0.47	A
29	SR-57 SB Ramps & Chapman Ave	0.72	C	0.69	B
30	SR-57 NB Ramps & Chapman Ave	0.74	C	0.82	D
Note: E* and F** = Unacceptable Level of Service.					

The data in Table 3-8 indicates twelve intersections in the City of Placentia ~~and three intersections in the City of Fullerton~~ would operate at LOS “E” or LOS “F” in one or both peak hours:

City of Placentia Intersections

- Rose Drive and Imperial Highway: LOS E in the AM peak hour;
- Placentia Avenue and Bastanchury Road: LOS F in the AM peak hour and LOS E in the PM peak hour;
- Kraemer Boulevard and Bastanchury Road: LOS F in the AM peak hour and LOS E in the PM peak hour;
- Kramer Boulevard and Yorba Linda Boulevard: LOS F in the AM and PM peak hours;
- Rose Drive and Palm Drive: LOS E in the AM peak hour;
- Rose Drive and Alta Vista Street: LOS E in the AM peak hour;
- Placentia Avenue and Nutwood Avenue: LOS F in the AM peak hour;
- Placentia Avenue and Chapman Avenue: LOS E in the PM peak hour;
- Kraemer Boulevard and Chapman Avenue: LOS E in the AM peak hour;
- Placentia Avenue and Orangethorpe Avenue: LOS F in the PM peak hour;
- SR-57 NB Ramps and Orangethorpe Avenue: LOS E in the AM peak hour; and
- Lakeview Avenue and Orangethorpe Avenue: LOS E in the AM and PM peak hours.



City of Fullerton Intersections

- ~~SR-57 SB Ramps and Yorba Linda Boulevard: LOS E in the PM peak hour;~~
- ~~Placentia Avenue and Yorba Linda Boulevard: LOS E in the AM peak hour and LOS F in the PM peak hour; and~~
- ~~SR-57 NB Ramps and Nutwood Avenue: LOS E in the AM peak hour.~~

RECOMMEND IMPROVEMENTS TO MITIGATE IMPACTS

Improvements were identified that would achieve Level of Service “D” under buildout conditions at the 15 impacted intersections. These improvements are:

City of Placentia Intersection Improvements

- **Rose Drive and Imperial Highway:** The addition of a northbound through lane would improve the Level of Service from LOS E to LOS D for the AM peak hour.
- **Placentia Avenue and Bastanchury Road:** The addition of a westbound left turn lane and a southbound left turn lane would improve the Level of Service from LOS F to LOS C for the AM peak hour and from LOS E to LOS C for the PM peak hour.
- **Kraemer Boulevard and Bastanchury Road:** The addition of an eastbound right turn lane and a southbound right turn lane would improve the Level of Service from LOS F to LOS C for the AM peak hour and from LOS E to LOS D for the PM peak hour.
- **Kramer Boulevard and Yorba Linda Boulevard:** The addition of a northbound right turn lane, south bound left turn lane, westbound left turn lane, westbound right turn lane and east bound right turn lane would improve the Level of Service from LOS F to LOS D for AM and PM peak hour.
- **Rose Drive and Palm Drive:** The restriping of eastbound lanes as a combined left turn lane and through lane and two right turn lanes would improve the Level of Service from LOS E to LOS B for the AM peak hour.
- **Rose Drive and Alta Vista Street:** The addition of a southbound right turn lane would improve the Level of Service from LOS E to LOS D for the AM peak hour.
- **Placentia Avenue and Nutwood Avenue:** The restriping of eastbound lanes as one left turn lane, a combined left turn lane and through lane, and two right turn lanes would improve the Level of Service from LOS F to LOS D for the AM peak hour.
- **Placentia Avenue and Chapman Avenue:** The addition of a southbound left turn lane would improve the Level of Service from LOS E to LOS D for the PM peak hour.

- **Kraemer Boulevard and Chapman Avenue:** The addition of an eastbound right turn lane and conversion of the eastbound through lane to a combined through lane and right turn lane would improve the Level of Service from LOS E to LOS D for the AM peak hour.
- **Placentia Avenue and Orangethorpe Avenue:** The addition of a southbound right turn lane and an eastbound left turn lane would improve the Level of Service from LOS F to LOS D for the PM peak hour.
- **SR-57 Northbound and Orangethorpe Avenue:** Restriping of northbound lanes as one left turn lane, one combined left turn and right turn lane, and one right turn lane would improve the Level of Service from LOS E to LOS D for the AM peak hour.
- **Lakeview Avenue and Orangethorpe Avenue:** The addition of a westbound left turn lane would improve the Level of Service from LOS E to LOS D for the AM and PM peak hours.

City of Fullerton Intersections

- **SR-57 and Yorba Linda Boulevard:** The addition of a southbound left turn lane would improve the Level of Service from LOS E to LOS C for the PM peak hour.
- **Placentia Avenue and Yorba Linda Boulevard:** The addition of a northbound left turn lane and an eastbound left turn lane would improve the Level of Service from LOS E to LOS D for the AM peak hour and from LOS F to LOS D for the PM peak hour.
- **SR-57 and Nutwood Avenue:** The addition of a southbound right turn lane would improve the Level of Service from LOS E to LOS D for the AM peak hour.

A summary of the buildout ICU and LOS values with the recommended improvements in place are presented in Table 3-9, *Summary of Buildout (2025) Intersection Operation After Mitigation*.

Table 3-9
Summary of Buildout Intersection Operation After Mitigation

Intersection		Buildout Conditions After Mitigation			
		AM Peak Hour		PM Peak Hour	
#	Name	ICU	LOS	ICU	LOS
City of Placentia					
3	Rose Drive and Imperial Highway	0.90	D	0.82	D
4	Placentia and Bastanchury	0.79	C	0.76	C
5	Kraemer and Bastanchury	0.78	C	0.90	D
12	Kraemer and Yorba Linda	0.85	D	0.88	D



Table 3-9 – Continued
Summary of Buildout Intersection Operation After Mitigation

Intersection		Buildout Conditions After Mitigation			
		AM Peak Hour		PM Peak Hour	
#	Name	ICU	LOS	ICU	LOS
18	Rose and Palm	0.66	B	0.67	B
26	Rose and Alta Vista	0.90	D	0.87	D
31	Placentia and Nutwood	0.81	D	0.78	C
32	Placentia and Chapman	0.79	C	0.86	D
34	Kraemer and Chapman	0.83	D	0.90	D
40	Placentia and Orangethorpe	0.68	B	0.88	D
42	SR-57 NB and Orangethorpe	0.81	D	0.72	C
51	Lakeview and Orangethorpe	0.85	D	0.88	D
City of Fullerton					
8	SR-57 SB and Yorba Linda	0.79	C	0.71	C
10	Placentia and Yorba Linda	0.85	D	0.90	D
27	SR-57 SB and Nutwood	0.85	D	0.67	B

5.0 PLANNING FACTORS, GOALS AND POLICIES

The Circulation Element’s goals and policies define the City’s vision for a balanced, efficient circulation system which incorporates many modes of travel and which allows for the safe movement of people and goods in and around Placentia.

TRANSPORTATION FACILITIES

Planning Factor

The City of Placentia is approaching buildout conditions. As new development occurs, it is important to maintain adequate transportation facilities to provide for the movement of existing and future residents.

Goal **CIR-1** *Provide adequate transportation facilities Levels of Service (LOS) for existing and future inhabitants of the City.*

Policies CIR-1.1 Developments that are under the City’s jurisdiction are to provide improvements needed to maintain LOS D or better with existing plus new development traffic.

 CIR-1.2 Assure all new development pay it’s fair share of costs associated with that development including regional traffic mitigation.

- CIR-1.3 For development projects, an approved phasing program (if applicable) is required that identifies phases of the proposed development which also corresponds to required improvements to roadway capacities. The phasing program must demonstrate the adequacy of the infrastructure to support the proposed project as well as a financing source to fund the improvements.
- CIR-1.4 The City shall continue to collect Thoroughfare Acreage Fees for improvements within its boundaries and shall work with adjacent jurisdictions through the Inter-Jurisdictional Forums to determine acceptable impact fees within the growth management area. These fees may be assessed as necessary in addition to the City's Thoroughfare Acreage Fees to cover shortfalls that may not be generated by the established fee program.

■ ■ ■

BALANCED, FUNCTIONAL, AND EFFICIENT STREET SYSTEM

Planning Factor

The efficient and safe movement of traffic within Placentia is a concern of the City and its residents. Planning and design of the circulation system needs to include policies to minimize safety hazards.

Goal **CIR-2** *Maintain a safe, efficient, economical, and aesthetically pleasing transportation system providing for the movement of people, goods, and services to serve the existing and future needs of the City of Placentia.*

Policies CIR-2.1 Link with arterial highways of adjoining jurisdictions so that projected traffic flows safely and efficiently through the City.

CIR-2.2 Ensure adequate capacity to accommodate the traffic generated by land uses within the City.

CIR-2.3 Participate in transportation planning efforts which involve other governmental agencies, mandated programs, and regulations in order to minimize environmental impacts related to transportation and to enhance transportation systems.

CIR-2.4 Respond to transportation problem areas with efforts to implement both interim and long-term solutions.

CIR-2.5 Encourage development which contributes to a balanced land use, which in turn serves to reduce overall trip lengths (i.e., locate retail in closer proximity to residents).



- CIR-2.6 Require new development to conform to the standards and criteria of the City of Placentia and other mandated programs. This includes mitigation of traffic impacts to the surrounding street system.
- CIR-2.7 Maintain consistency between the City Circulation Element and the Orange County Master Plan of Arterial Highways (MPAH).
- CIR-2.8 Route through traffic around residential neighborhoods and recreational areas.
- CIR-2.9 Encourage subdivision design and traffic calming techniques which reduces vehicle speed and discourages through traffic on local streets.
- CIR-2.10 Reduce potential traffic conflicts by controlling access and minimizing driveway and local street intersections with arterial highways.
- CIR-2.11 Design streets and turning movements to provide vehicle operating speeds consistent with traffic needs and adjacent land use.
- CIR-2.12 Develop additional capacity on arterial streets using the existing right-of-way, as needed or required.
- CIR-2.13 Encourage the development of aesthetic streetscapes to promote a positive City image and provide visual relief.
- CIR-2.14 Require adequate off-street parking for all land uses so that on street parking is not necessary on arterial streets.
- CIR-2.15 Minimize the use of signs and billboards along arterial highways and ensure adequate visibility of necessary traffic and informational signs.
- CIR-2.16 Require adequate noise mitigation measures for new developments along arterial highways.
- CIR-2.17 Continue to assure safety at the railroad/roadway crossing locations.
- CIR-2.18 Coordinate with railroad lowering efforts to improve safety at railroad crossings within the City.

CIR-2.19 Require the use of Transportation Control Measures (TCM's) to improve air quality and reduce traffic congestion.

ALTERNATIVE MODES OF TRANSPORTATION

Planning Factor

As the City continues to approach build-out conditions, alternative modes of transportation become increasingly important to reduce traffic related impacts.

Goal **CIR-3** ***Encourage alternative modes of transportation, including public transportation, bicycles, ridesharing, and walking, to support land use plans and related transportation needs.***

- Policies**
- CIR-3.1 Encourage development and improvements which incorporate innovative methods of accommodating transportation demands.
 - CIR-3.2 Support the development of a high-quality public transit system that minimizes dependency on the automobile.
 - CIR-3.3 Ensure that effective Transportation Demand Management (TDM) measures and programs such as ridesharing and increased vehicle occupancy are being implemented.
 - CIR-3.4 Encourage development and site design which facilitate implementation of high quality bicycle routes which meet or exceed established standards.
 - CIR-3.5 Implement adequate sidewalks and crosswalks to meet the required uses and needs, which serves to encourage alternative modes of transportation.
 - CIR-3.6 Respond to increases in demand for additional bus service through interaction with OCTA and other available resources.
 - CIR-3.7 Install handicap access ramps to improve disabled access.
 - CIR-3.8 Encourage pedestrian activities through streetscape and transit enhancement programs.
 - CIR-3.9 Cooperate and assist transit agency efforts to enhance transit environments by improving passenger loading sites by providing bus benches, safety lighting and other improvements to enhance bus stops.



CIR-3.10 Establish a Metrolink stop to serve both residents and commuters.

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INTER-JURISDICTIONAL COOPERATION

Planning Factor

As traffic is a regional concern, the City of Placentia recognizes the importance of coordinating with neighboring jurisdictions to mitigate traffic related impacts in the area.

Goal **CIR-4** ***Coordinate and cooperate with neighboring jurisdictions and the County to reduce traffic and parking congestion.***

Policies CIR-4.1 The City shall participate in Inter-Jurisdictional Planning Programs to discuss developments with multi-jurisdictional impacts and appropriate mitigation measures.

CIR-4.2 The City shall cooperate with the County in the annual Congestion Management Plan update in order to receive State gas tax revenue.

CIR-4.3 The City shall participate in meetings with other jurisdictions and the Air Quality Management District (AQMD) and the Southern California Association of Governments (SCAG) to develop and adopt Transportation Control Measures that will improve air quality and reduce traffic congestion.