

Section 5.4:

Traffic and Circulation



SECTION 5.4 TRAFFIC AND CIRCULATION

5.4.1 PURPOSE

This section addresses the impacts of future traffic growth, planned physical improvements, and additional improvements to accommodate growth within the City of Fullerton. Alternative modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system are also addressed. This section is based upon the *City of Fullerton General Plan Update Transportation and Circulation Existing and Buildout Conditions Report* (September 2011) prepared by Kimley-Horn Associates, Inc.; refer to <u>Appendix C</u>, <u>Traffic Impact Analysis</u>.

5.4.2 EXISTING REGULATORY SETTING

REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM

The Regional Transportation Improvement Program (RTIP) is the Southern California Association of Government's compilation of state, federal, and local funded transportation projects. In addition to projects identified in the State Transportation Improvement Program (STIP), the RTIP includes federal Congestion Mitigation and Air Quality Improvement (CMAQ) and Surface Transportation Program (STP) funds, other federal funds, and projects entirely funded out of local and private funds. The RTIP identifies all transportation projects proposed over a six-year period for the Southern California Association of Governments (SCAG) region. The projects include highway improvements, transit, rail and bus facilities, high occupancy vehicle lanes, signal synchronization, intersection improvements, and freeway ramps.

CALIFORNIA STATE SENATE BILL 375 (SB 375)

California State Senate Bill 375 (SB 375) became law effective January 1, 2009 as implementing legislation of Assembly Bill 32 (AB 32), which requires the state to reduce Greenhouse Gas (GHG) emissions across all industry sectors back to 1990 levels by the year 2020. Both laws are administered and enforced through the California Air Resources Board (CARB); refer also to the Air Quality and Climate Change Element.

Given that the transportation sector is the largest contributor to GHG pollution throughout California, SB 375 targets reduction of GHG emissions specific to cars and light trucks. The law requires each of the State's 18 Metropolitan Planning Organizations (MPO) to develop a Sustainable Communities Strategy (SCS), which will include specific strategies for improving land use and transportation efficiency. The most prominent strategy includes the identification and development of higher density, mixed-use projects around public transportation system stations. Other supported strategies relate to the integration of Intelligent Transportation Systems (ITS) to improve circulation on freeways and arterials.

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May 2012



Every SCS to be developed under SB 375 is required to be integrated into each MPO's Regional Transportation Plan (RTP), thus encouraging local jurisdictions to comply. Transportation improvement projects not listed in the RTP become ineligible to receive funding from some state and federal programs.

CONGESTION MANAGEMENT PROGRAM

The purpose of the Orange County Congestion Management Program (CMP) is to develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use, and air quality planning programs throughout the County. The City of Fullerton is required to show continued compliance with the countywide CMP. The benefits of compliance with the CMP provisions include the allocation of the City's fair share of gas tax subventions collected by the State of California.

MEASURE M AND RENEWED MEASURE M

In 1990, Orange County voters approved Measure M, a 20-year program for transportation improvements funded by a half-cent sales tax. Measure M allocates all sales tax revenues to specific Orange County transportation improvement projects in three major areas - freeways, streets and roads, and transit. In 2006, Orange County voters approved the renewal of Measure M from 2011 to 2041.

Revenue generated by Measure M is returned to local jurisdictions for use on local and regional transportation improvement and maintenance projects. Each jurisdiction is required to comply with the Countywide Traffic Improvement and Growth Management Program to receive the revenue. Pursuant to Measure M policy requirements, Fullerton must satisfy the following specific requirements to be eligible for receiving Measure M funds:

- Adopt a Growth Management Program into its General Plan that addresses the following:
 - Traffic level of service standards;
 - A development mitigation program;
 - Participation in Inter-Jurisdictional Planning Forums;
 - Development of a Seven Year Capital Improvement Program; and
 - A Transportation Demand Management (TDM) Ordinance.
- Adopt a Local TDM Ordinance.
- Agree to expend all Measure M revenues within three years of receipt.
- Adopt a Traffic Circulation Plan (General Plan Circulation Element) consistent with the Orange County Master Plan of Arterial Highways.
- Adopt and fund a Local Pavement Management Plan.
- Satisfy the Maintenance of Effort requirements.
- Adopt a Seven-Year Capital Improvement program.



SMART STREET PROGRAM

The Smart Street concept seeks to improve roadway traffic capacity and smooth traffic flow through measures such as traffic signal synchronization, bus turnouts, intersection improvements, and addition of travel lanes by removing on-street parking and consolidating driveways. Along with the State highways, the Smart Street network comprises the CMP highway system, the performance of which determines compliance with CMP level of service (LOS) thresholds. This special street designation allows for the development of improvements that enhance the traffic carrying capacity of this roadway in excess of the Major arterial designation. A dedicated funding source for Smart Streets projects is included in Measure M. Smart Streets within the City of Fullerton include:

- Beach Boulevard:
- Harbor Boulevard:
- Imperial Highway;
- Orangethorpe Avenue; and
- State College Boulevard.

5.4.3 EXISTING ENVIRONMENTAL SETTING

REGIONAL ACCESS

The City of Fullerton is located in the northwestern portion of Orange County and shares its borders with the cities of Placentia on the east, Brea and La Habra on the north, La Mirada and Buena Park on the west, and Anaheim on the south. Many of the arterial roadways in the City of Fullerton extend beyond the City boundaries into neighboring cities; thus, circulation issues and travel patterns extend beyond the Fullerton City limits. Land use decisions and traffic patterns within Fullerton and adjacent jurisdictions have the potential to affect the quality of traffic flow and mobility within each respective city.

Regional access to the City of Fullerton is provided via the Orange Freeway (SR-57), Riverside Freeway (SR-91), and Santa Ana Freeway (I-5). SR-57 passes through the eastern portion of the City in a north-south direction. SR-57 provides north-south regional circulation through the City, connecting with SR-91 at the southeast corner of the City. SR-91 forms much of the southern border with the City of Anaheim. SR-91 provides east-west regional access through Orange, Los Angeles, and Riverside Counties. The I-5 interchange with SR-91 is located at the southwest corner of the City.

Imperial Highway (SR-90) is a State Route highway that forms part of the City's northern border with the City of Brea. Imperial Highway provides east-west access through Los Angeles, Orange, and Riverside Counties.

FUNCTIONAL STREET CLASSIFICATION

The City of Fullerton circulation system consists of a network of local streets providing access to the arterial highway system, which in turn provides access to the regional freeway system. This network serves two distinct and equally important functions: it provides access to adjacent land



uses, and it 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 the importance placed on each of these functions for each classification. Streets which have a mobility and/or regional access function will have more lanes, higher speed limits, and fewer access points. Where direct access to individual properties is required, streets will have fewer lanes, slower speeds, and more frequent side streets and driveways to serve abutting properties.

To define the intended uses of roadways, many jurisdictions, including Fullerton, use a functional classification system. The system provides a logical framework for the design and operation of the roadway system. Since some major thoroughfares in the City of Fullerton are part of the county-wide arterial network, they also have to be coordinated through the Orange County Master Plan of Arterial Highways.

The current Circulation Element categorizes the City's roadways into three functional classifications, as follows:

- Arterial Highway Network (consisting of the Major and Primary arterial highway designations)
 - Major Arterials are designed to be six-lane divided facilities within 100 to 120 feet of right-of-way. Typical daily traffic volumes accommodated by a Major Arterial would be 30,000 to 49,000 vehicles per day.
 - Major Arterials carry both local and non-local commuter traffic. The Major Arterial cross-section is designed to accommodate automobiles, goods movement (trucks), transit vehicles (buses), bicycles, and pedestrians. Because of the high volumes of traffic, direct access to abutting land uses is discouraged.
 - Primary Arterials are designed to be four-lane divided facilities within 80 to 84 feet of right-of-way. Typical daily traffic volumes accommodated by a Primary Arterial would be 20,000 to 33,000 vehicles per day.

The Primary Arterial has a function similar to the Major Arterial. The difference between the two designations is capacity.

- Secondary Arterial Highway Secondary Arterials are designed to be four-lane undivided facilities within 80 to 84 feet of right-of-way. A Secondary Arterial typically accommodates 16,000 to 22,000 vehicles per day. The Secondary Arterial is designed to carry traffic between local streets and the arterial roadway network. Some Secondary Arterials may serve as through routes, but most provide direct access to local land uses. Secondary arterials can safely accommodate buses, bicycles and pedestrians, but are primarily designed for automobile traffic.
- Local Collector Street Local Collector Streets are designed to be two-lane undivided facilities within 60 to 84 feet of right-of-way. A Local Collector Street typically accommodates 10,000 vehicles per day. Local Collector Streets are intended to provide direct access to individual properties, and to collect and route local traffic to the arterial system, with limited non-local through traffic.



Most residential streets are not included in the basic circulation network contained in the Circulation Element, yet they constitute a large portion of the developed roads in Fullerton. The purpose of residential streets is to access private residential property and provide circulation throughout a neighborhood. Right-of-ways of residential streets are generally between 50 to 60 feet, with sidewalks and curbs. Residential streets under private ownership may differ from the City's normal design standards.

The existing functional classifications for the roadways in the City of Fullerton, as currently designated in the City's Circulation Element, are listed on <u>Table 5.4-1</u>, <u>Roadway Functional</u> Classifications.

Table 5.4-1
Roadway Functional Classifications

Facility Type	Number of Travel Lanes	Right-of-Way Width	Typical Daily Volume
Major Arterial Highway	6 Divided	100 to 120 feet	30,000 to 49,000
Primary Arterial Highway	4 Divided	80 to 84 feet	20,000 to 33,000
Secondary Arterial Highway	4 Undivided	80 to 84 feet	16,000 to 22,000
Local Collector Street	2 Undivided	60 to 84 feet	10,000
Residential Street	2 Undivided	Varies, typically 50 to 60 feet	Varies

EXISTING ROADWAY CONDITIONS

<u>Table 5.4-2</u>, <u>Existing Roadway Characteristics</u>, provides the existing functional classifications for the roadways, as well as the existing total number of lanes for each arterial segment, and whether a center divider is provided; whether or not on-street parking is allowed, and the posted speed limit.

Table 5.4-2
Existing Roadway Characteristics

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Roadway Segment	Direction	Classification	NB or EB	SB or WB	Center Treatment	Width (feet)	On-Street Parking	Speed Limit
Magnolia Avenue between:								
Commonwealth Avenue and W. Valencia Drive	N/S	Primary	2	2	Raised/Center Left Turn	60	None	35
W. Valencia Drive and Orangethorpe Avenue	N/S	Primary	2	2	Center Left Turn	70	None	35
Orangethorpe Avenue and I-5 Freeway	N/S	Primary	2 2 Undivided		Undivided	90	None	35
Idaho Street between:								
Imperial Highway and W. Risner Way	N/S	Primary	2	2	Center Left Turn	80	None	45
Gilbert Street between:								
W. Risner Way and Castlewood Drive	N/S	Primary	1	1	Raised	50	None	45
Castlewood Drive and Rosecrans Avenue	N/S	Primary	2	2	Raised	65	None	45
Rosecrans Avenue and Pioneer Avenue	N/S	Primary	2	2	Center Left Turn	65	NB Only	45
Pioneer Avenue and Malvern Avenue	N/S	Primary	2	2	Center Left Turn	65	None	45
Malvern Avenue and Raymer Avenue	N/S	Primary	3	2	Center Left Turn	60	None	40
Raymer Avenue and Commonwealth Avenue	N/S	Primary	2	2	Center Left Turn	40	None	40

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Roadway Segment	Direction	Classification	NB or SB or EB WB		Center Treatment	Width (feet)	On-Street Parking	Speed Limit
Brookhurst Road between:	'							
Commonwealth Avenue and W. Valencia Drive	N/S	Primary	2	2	Center Left Turn	60	None	40
W. Valencia Drive and Orangethorpe Avenue	N/S	Primary	2	2	Undivided	60	Both Sides	40
Parks Road between:	1	,						l
Rosecrans Avenue and Pioneer Avenue	N/S	Secondary	2	2	Double Yellow	45	Both Sides	40
Pioneer Avenue and Bastanchury Road	N/S	Secondary	2	2	Raised	55	None	40
Euclid Street between:	1	· · · · · · · · · · · · · · · · · · ·						I
Imperial Highway and Lakeview Drive	N/S	Major	2	2	Double Yellow	80	Both Sides	40
Lakeview Drive and Laguna Road	N/S	Major	2	2	Center Left Turn	75	Both Sides	50
Laguna Road and Rosecrans Avenue	N/S	Major	2	2	Center Left Turn	75	Both Sides	50
Rosecrans Avenue and Bastanchury Road	N/S	Major	2	2	Center Left Turn	80	None	40
Bastanchury Road and Valencia Mesa Drive	N/S	Primary	2	2	Center Left Turn	60	None	40
Valencia Mesa Drive and Valley View Drive	N/S	Primary	2	2	Center Left Turn	60	None	40
Valley View Drive and Malvern Avenue	N/S	Primary	2	2	Center Left Turn	60	None	35
Malvern Avenue and Commonwealth Avenue	N/S	Primary	2	2	Center Left Turn	70	None	35
Commonwealth Avenue and W. Valencia Drive	N/S	Primary	2	2	Center Left Turn	60	None	35
W. Valencia Drive and Orangethorpe Avenue	N/S	Primary	2	2	Center Left Turn	60	NB Only	35
Orangethorpe Avenue and SR-91 Freeway	N/S	Major	2	2	Center Left Turn	60	None	35
Highland Avenue between:		.,.						
Commonwealth Avenue and W. Valencia Drive	N/S	Secondary	2	2	Center Left Turn	40	None	30
W. Valencia Drive and Orangethorpe Avenue	N/S	Secondary	2	2	Center Left Turn	55	None	30
Harbor Boulevard between:		,						
Lambert Road and Imperial Highway	N/S	Major	3	3	Center Left Turn	80	None	45
Imperial Highway and Las Palmas Drive	N/S	Major	2	2	Center Left Turn	80	None	45
Las Palmas Drive and Bastanchury Road	N/S	Major	2	2	Raised/Center Left Turn	80	NB Only	45
Bastanchury Road and Valencia Mesa Drive	N/S	Major	3	3	Center Left Turn	80	None	45
Valencia Mesa Drive and Brea Boulevard	N/S	Major	3	3	Center Left Turn	75	None	50
Brea Boulevard and Berkeley Avenue	N/S	Major	2	2	Raised	80	None	35
Berkeley Avenue and Chapman Avenue	N/S	Primary	2	2	Center Left Turn	60	SB Only	35
Chapman Avenue and Commonwealth Avenue	N/S	Primary	2	2	Center Left Turn	50	None	35
Commonwealth Avenue and Valencia Drive	N/S	Primary	2	2	Raised/Center Left Turn	60	None	35
Valencia Drive and W. Rosslynn Avenue	N/S	Primary	2	2	Center Left Turn	60	SB Only	35
W. Rosslynn Avenue and Orangethorpe Avenue	N/S	Major	2	2	Center Left Turn	70	None	35
Orangethorpe Avenue and Orangefair Avenue	N/S	Major	3	3	Raised	80	None	35
Orangefair Avenue and SR-91 Freeway	N/S	Major	3	3	Raised	80	None	35
Brea Boulevard between:		.,						
Imperial Highway and Bastanchury Road	N/S	Major	2	2	Raised/Center Left Turn	80	Both Sides	40
Bastanchury Road and Lemon Street	N/S	Major	2	2	Raised	80	None	45
Lemon Street and Harbor Boulevard	N/S	Major	2	2	Center Left Turn	80	Both Sides	45
Lemon Street between:	1	1 -9**						1
Berkeley Avenue and Chapman Avenue	N/S	Secondary	2	2	Raised	55	None	30
Chapman Avenue and Commonwealth Avenue	N/S	Secondary	2	2	Center Left Turn	55	None	30
Commonwealth Avenue and Valencia Drive	N/S	Secondary	2	2	Center Left Turn	55	None	35
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Valencia Drive and Orangethorpe Avenue	N/S	Secondary	2	2	Raised/Center Left Turn	55	None	35



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Roadway Segment	Direction	Classification	NB or EB	SB or WB	Center Treatment	Width (feet)	On-Street Parking	Speed Limit	
Raymond Avenue between:									
Chapman Avenue and Commonwealth Avenue	N/S	Primary	2	2	Center Left Turn	60	None	35	
Commonwealth Avenue and E. Valencia Drive	N/S	Primary	2	2	Center Left Turn	60	None	35	
E. Valencia Drive and Orangethorpe Avenue	N/S	Primary	2	2	Center Left Turn	60	None	40	
Orangethorpe Avenue and SR-91 Freeway	N/S	Primary	2	2	Center Left Turn	60	None	35	
Acacia Avenue between:			ı	l					
Chapman Avenue and Commonwealth Avenue	N/S	Secondary	1	1	Center Left Turn	55	Both Sides	35	
Commonwealth Avenue and E. Valencia Drive	N/S	Secondary	1	1	Center Left Turn	55	Both Sides	35	
E. Valencia Drive and Orangethorpe Avenue	N/S	Secondary	1	1	Center Left Turn	55	Both Sides	40	
Orangethorpe Avenue and SR-91 Freeway	N/S	Secondary	1	1	Undivided/Center Left Turn	55	Both Sides	40	
State College Boulevard between:			I	I		l.			
Imperial Highway and Bastanchury Road	N/S	Major	2	5	Raised/Center Left Turn/Double Yellow	85	Partial Both Sides	45	
Bastanchury Road and Yorba Linda Boulevard	N/S	Major	3	6	Center Left Turn	80	None	45	
Yorba Linda Boulevard and Dorothy Lane	N/S	Major	3	6	Double Yellow	80	None	40	
Dorothy Lane and Nutwood Avenue	N/S	Major	3	6	Center Left Turn	80	None	40	
Nutwood Avenue and Chapman Avenue	N/S	Major	3	6	Center Left Turn	80	None	40	
Chapman Avenue and Commonwealth Avenue	N/S	Major	2	4	Center Left Turn	60	None	35	
Commonwealth Avenue and E. Valencia Dr	N/S	Major	2	4	Center Left Turn	55	None	40	
E. Valencia Drive and Orangethorpe Avenue	N/S	Major	2	4	Center Left Turn	80	NB Only	40	
Orangethorpe Avenue to SR-91 Freeway	N/S	Major	3	6	Raised	80	SB Only	40	
Associated Road between:		.,.					,		
Imperial Highway and Bastanchury Road	N/S	Secondary	2	2	Center Left Turn	60	Varies	45	
Bastanchury Road and Yorba Linda Boulevard	N/S	Secondary	2	2	Center Left Turn	60	None	40	
Placentia Avenue between:	1,4,5								
Imperial Highway and Bastanchury Road	N/S	Secondary	2	2	Raised/Double Yellow/Undivided	60	None	45	
Bastanchury Road and Palm Drive	N/S	Secondary	2	2	Undivided	60	None	45	
Palm Drive and Yorba Linda Boulevard	N/S	Secondary	2	2	Center Left Turn	60	None	40	
Yorba Linda Boulevard and Madison Avenue	N/S	Secondary	2	2	Double Yellow	60	None	40	
Madison Avenue and Nutwood Avenue	N/S	Secondary	2	2	Undivided/Center Left Turn	60	Varies	40	
Nutwood Avenue and Chapman Avenue	N/S	Secondary	2	2	Center Left Turn	60	None	40	
Chapman Avenue and Orangethorpe Avenue	N/S	Secondary	2	2	Center Left Turn	60	None	40	
Imperial Highway between:		, , , , ,		1					
Harbor Boulevard and Brea Boulevard	E/W	Major	3	3	Raised/Center left Turn/Double Yellow	80	None	45	
Brea Boulevard and State College Boulevard	E/W	Major	3	3	Raised	80	None	35	
State College Boulevard and Associated Road	E/W	Major	3	3	Double Yellow	80	None	35	
Associated Road and Placentia Avenue	E/W	Major	3	3	Double Yellow	80	None	45	
Placentia Avenue and Kramer Boulevard	E/W	Major	3	3	Raised	80	None	45	
Rosecrans Avenue between:		· · · · · · · · · · · · · · · · · · ·		1	<u>.</u>		ı		
Beach Boulevard and Gilbert Street	E/W	Primary	2	2	Center Left Turn	75	None	50	
Gilbert Street and Parks Road	E/W	Primary	2	2	Center Left Turn	75	None	45	
Parks Road and Euclid Street	E/W	Primary	2	2	Center Left Turn	75	None	45	
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Roadway Segment	Direction	Classification	NB or EB	SB or WB	Center Treatment	Width (feet)	On-Street Parking	Speed Limit	
Bastanchury Road between:									
Malvern Road and Parks Road	E/W	Major	2	2	Center Left Turn/ Double Yellow	I htt		50	
Parks Road and Euclid Street	E/W	Major	2	2	Center Left Turn	60	None	50	
Euclid Street and Laguna Road	E/W	Major	3	3	Center Left Turn	80	None	50	
Laguna Road and Harbor Boulevard	E/W	Major	3	3	Center Left Turn	80	None	40	
Harbor Boulevard and Brea Boulevard	E/W	Major	3	2	Raised	80	None	50	
Brea Boulevard and State College Boulevard	E/W	Major	3	2	Raised	80	None	50	
State College Boulevard and Associated Road	E/W	Major	2	2	Raised/Center Left Turn	80	None	45	
Associated Road and Placentia Avenue	E/W	Major	2	2	Raised/Undivided	80	None	45	
Yorba Linda Boulevard between:	•		•				•		
State College Boulevard and Associated Road	E/W	Major	3	3	Double Yellow	80	None	40	
Associated Road and Placentia Avenue	E/W	Major	3	3	Raised	80	None	40	
Placentia Avenue and N. Bradford Avenue	E/W	Major	3	3	Double Yellow	80	None	40	
Malvern Avenue between:	•		•				•		
City Boundary and Gilbert Street	E/W	Primary	2	2	Double Yellow	75	Both Sides	45	
Gilbert Street and Bastanchury Road	E/W	Primary	2	2	Raised	75	None	45	
Bastanchury Road and Basque Avenue	E/W	Primary	2	2	Undivided	75	Both Sides	45	
Basque Avenue and Euclid Street	E/W	Primary	2	2	Undivided	75	None	45	
Euclid Street and N. Woods Avenue	E/W	Primary	2	2	Center Left Turn	55	None	45	
Nutwood Avenue between:		-	•			•	•		
State College Boulevard and Commonwealth Ave	E/W	Primary	3	3	Raised	80	None	35	
Commonwealth Avenue and Placentia Avenue	E/W	Primary	2	3	Raised	80	None	35	
Chapman Avenue between:		-			1	•			
N. Woods Avenue and Harbor Boulevard	E/W	Primary	2	2	Double Yellow	60	None	40	
Harbor Boulevard and Lemon Street	E/W	Primary	2	2	Double Yellow	60	None	30	
Lemon Street and Berkeley Avenue	E/W	Primary	2	2	Center Left Turn	60	EB Only	30	
Berkeley Avenue and Raymond Avenue	E/W	Primary	2	2	Center Left Turn	60	Both Sides	35	
Raymond Avenue and Acacia Avenue	E/W	Primary	2	2	Double Yellow	60	WB Only	35	
Acacia Avenue and State College Boulevard	E/W	Major	2	2	Center Left Turn	60	EB Only	40	
State College Boulevard and Commonwealth Ave	E/W	Major	2	2	Center Left Turn	75	WB Only	35	
Commonwealth Avenue and Placentia Avenue	E/W	Major	2	2	Raised	75	None	35	
Commonwealth Avenue between:	•		•				•		
Dale Street and Magnolia Avenue	E/W	Primary	2	2	Center Left Turn	60	EB Only	40	
Magnolia Avenue and Gilbert Street	E/W	Primary	2	2	Undivided/Center Left Turn	60	Both Sides	40	
Gilbert Street and Brookhurst Street	E/W	Primary	2	2	Center Left Turn	60	EB Only	40	
Brookhurst Street and Euclid Street	E/W	Primary	2	2	Raised/Undivided	60	None	40	
Euclid Street and Highland Avenue	E/W	Primary	2	2	Undivided	55	Varies	35	
Highland Avenue and Harbor Boulevard	E/W	Primary	2	2	Undivided	55	Both Sides	30	
Harbor Boulevard and Lemon Street	E/W	Primary	2	2	Undivided	55	Both Sides	30	
Lemon Street and Raymond Avenue	E/W	Primary	2	2	Undivided	55	Both Sides	35	
Raymond Avenue and Acacia Avenue	E/W	Primary	2	2	Undivided	55	Both Sides	40	
Acacia Avenue and State College Boulevard	E/W	Primary	2	2	Undivided	55	Both Sides	40	
State College Boulevard and Chapman Avenue	E/W	Primary	2	2	Undivided	55	Both Sides	40	
Chapman Avenue and Nutwood Avenue	E/W	Major	2	2	Undivided	55	Both Sides	35	



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Roadway Segment	Direction	Classification	NB or EB	SB or WB	Center Treatment	Width (feet)	On-Street Parking	Speed Limit
Valencia Drive between:								
Dale Street and Magnolia Avenue	E/W	Primary	2	2	Raised/ Double Yellow/Undivided	65	Varies	40
Magnolia Avenue and Brookhurst Street	E/W	Primary	2	2	Undivided	65	Both Sides	35
Brookhurst Street and Euclid Street	E/W	Primary	1	1	Center Left Turn	65	Both Sides	35
Euclid Street and Highland Avenue	E/W	Primary	1	1	Center Left Turn	65	Both Sides	35
Highland Avenue and Harbor Boulevard	E/W	Local Collector	1	1	Undivided	40	Both Sides	25
Harbor Boulevard and Lemon Street	E/W	Local Collector	1	1	Undivided	40	Both Sides	25
Orangethorpe Avenue between:			•					
Auto Center Drive and Magnolia Avenue	E/W	Major	2	3	Center Left Turn/ Double Yellow	80	None	45
Magnolia Avenue and Brookhurst Street	E/W	Major	2	2	Center Left Turn	75	EB Only	45
Brookhurst Street and Euclid Street	E/W	Major	2	2	Center Left Turn	80	None	45
Euclid Street and Highland Avenue	E/W	Major	2	2	Center Left Turn	80	None	40
Highland Avenue and Harbor Boulevard	E/W	Major	3	2	Center Left Turn	80	None	35
Harbor Boulevard and Lemon Street	E/W	Major	3	3	Raised	80	None	35
Lemon Street and Raymond Avenue	E/W	Major	3	3	Center Left Turn	75	None	40
Raymond Avenue and Acacia Avenue	E/W	Major	3	3	Center Left Turn	75	None	45
Acacia Avenue and State College Boulevard	E/W	Major	3	3	Center Left Turn	75	None	45
State College Boulevard and Placentia Avenue	E/W	Major	3	3	Center Left Turn	90	None	45

The existing conditions for the arterial roadways within the City of Fullerton are briefly described below.

Major Arterial Highways

<u>Bastanchury Road</u> is generally an east-west roadway from Malvern Avenue to the eastern City limit. Bastanchury Road is currently striped as a four-lane roadway with a painted median within 100 feet of right-of-way from Malvern Avenue to Euclid Street. From Euclid Street to Brea Boulevard, it is mostly a six-lane roadway, except for a short segment as it crosses over Brea Creek. From Brea Boulevard eastward to the City boundary, Bastanchury Road is again striped as a four-lane road. Some segments of the road are improved with a raised landscaped median, while others have a painted median. The posted speed limit varies between 45 mph and 50 miles per hour (mph).

Brea Boulevard is a north-south roadway running northeast from Harbor Boulevard through the City of Fullerton into the City of Brea. Brea Boulevard currently provides four through lanes with a painted median, except for a short distance immediately north of Harbor Boulevard and approximately 0.5 mile south of Bastanchury Road where a raised landscaped median is provided. The posted speed limit varies between 40 and 45 mph.



Chapman Avenue is an east-west roadway, classified as a Major Arterial between SR-57 and State College Boulevard, and as a Primary Arterial west of State College Boulevard. Along the segment classified as a Major Arterial (between State College Boulevard and SR-57), Chapman Avenue is a four-lane divided roadway with a combination of raised and painted medians and a posted speed limit of 35 mph.

<u>Euclid Street</u> is major north-south thoroughfare from the I-405, through the City of Fullerton, up to the City of La Habra. Euclid Street is classified as a Major Arterial from Imperial Highway to Bastanchury Road, and from Orangethorpe Avenue to the southern City limit. Between Bastanchury Road and Orangethorpe Avenue, Euclid Street is classified as a Primary Arterial. Euclid Street is currently a four-lane divided roadway its entire length, with a painted center left-turn lane. The posted speed limit varies from 35 mph to 50 mph.

Harbor Boulevard is a north-south roadway that extends through the City of Fullerton, continuing beyond the north and south City limits. Harbor Boulevard is classified as a Major Arterial from Lambert Road to Berkeley Avenue, and from W. Rosslynn Avenue to the south City limit. Harbor Boulevard varies between a four-lane and a six-lane divided roadway between Lambert Road and Berkeley Avenue with a combination of raised and painted medians. Harbor Boulevard provides four lanes from W. Rosslynn Avenue to Orangethorpe Avenue, and six lanes south of Orangethorpe. The speed limit varies between 35 and 50 mph on Harbor Boulevard.

<u>Orangethorpe Avenue</u> is an east-west highway spanning the entire length of the City. It a four-lane roadway with a painted median west of Harbor Boulevard, and a six-lane roadway with a center left-turn lane east of Harbor Boulevard. The speed limit ranges from 35 mph to 45 mph.

<u>State College Boulevard</u> is a north-south Major Arterial through the eastern portion of the City. It is a six-lane roadway from the SR-91 Freeway to Orangethorpe Avenue, a four-lane divided roadway with a painted median from Orangethorpe to Chapman Avenue; then it becomes a six-lane roadway with a painted median from Chapman Avenue to Bastanchury Road. North of Bastanchury Road, it narrows to five through lanes, with three southbound and two northbound lanes. The posted speed limit on State College Boulevard varies between 35 and 40 mph.

Yorba Linda Boulevard is an east-west roadway extending from State College Boulevard to the eastern City boundary. It provides three through lanes in each direction with a painted median west of Placentia Avenue, and a raised median east of Placentia Avenue. The posted speed limit is 40 mph.

Primary Arterial Highways

<u>Brookhurst Street</u> is a north-south roadway from Commonwealth Avenue to the south City boundary. It has two lanes in each direction with a painted median. The posted speed limit on Brookhurst Street is 40 mph.

<u>Chapman Avenue</u> is an east-west roadway that extends through the City, with the majority of its length classified as a Primary Arterial. Chapman Avenue provides four travel lanes with a painted median. The posted speed limit varies between 30 and 40 mph.

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Commonwealth Avenue is an east-west roadway that extends the length of the City. Commonwealth is a four-lane divided roadway west of Euclid Avenue. East of Euclid Avenue, and through the downtown area, Commonwealth is a four-lane undivided roadway, with no center median or mid-block turn lane. At State College Boulevard, Commonwealth Avenue turns northward to intersect and end at Nutwood Avenue. This stretch of Commonwealth Avenue is designated as a Major Arterial, and currently provides four through lanes and a raised median. The posted speed limit on Commonwealth Avenue varies between 35 and 40 mph.

<u>Gilbert Street</u> is a north-south roadway extending from Commonwealth Avenue to northern City limit. Gilbert Street provided four travel lanes with a raised median or a center turn lane. The posted speed limit varies from 40 to 45 mph.

Harbor Boulevard (introduced earlier in the Major Arterial discussion) is classified as a Primary Arterial from Berkeley Avenue to W. Rosslynn Avenue. In the downtown area, between Berkeley Avenue and Valencia Drive, Harbor Boulevard is a four-lane divided primary arterial highway with a speed limit of 35 mph.

<u>Lemon Street</u> is a north-south roadway extending from the SR-91 Freeway to Berkeley Avenue. It has two lanes in each direction with a painted median most of the way. The posted speed limit on Lemon Street varies between 30 and 35 mph.

<u>Magnolia Avenue</u> is a north-south roadway extending from the south City boundary to Commonwealth Avenue. It has two lanes in each direction with a combination of raised or painted median. The posted speed limit on Magnolia Avenue is 35 mph.

<u>Nutwood Avenue</u> is an east-west roadway extending between State College Boulevard to Placentia Avenue. It has two lanes in each direction with a raised median. The posted speed limit on Nutwood Avenue is 35 mph.

<u>Raymond Avenue</u> is a north-south roadway extending from State Route 91 to Chapman Avenue. It has two lanes in each direction with a painted center turn lane. The posted speed limit on Raymond Avenue varies between 35 and 40 mph.

Rosecrans Avenue is an east-west roadway between Euclid Street and the west City limit. It has two lanes in each direction with a painted center turn lane. The posted speed limit on Rosecrans Avenue varies between 45 and 50 mph.

<u>Valencia Drive</u> is an east-west roadway classified as a Primary Arterial between Magnolia Avenue and Highland Avenue. It has two lanes in each direction between Magnolia Avenue and Brookhurst Street, transitioning to one lane in each direction with a center turn lane east of Brookhurst. The posted speed limit on Valencia Drive is 35 mph.

Secondary Arterial Highways

Acacia Avenue is a north-south roadway, classified as a Secondary Arterial from Chapman Avenue to the south City limit just past Orangethorpe Avenue. It has two lanes in each direction with a painted median. The posted speed limit on Acacia Avenue varies between 35 and 40 mph.

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<u>Associated Road</u> is a north-south roadway extending between Yorba Linda Boulevard to Imperial Highway. It has two lanes in each direction with a painted median for most of this segment. The posted speed limit on Associated Road is 40 to 45 mph.

<u>Dale Street</u> is a north-south roadway from Auto Center Drive to Artesia Boulevard. Dale Street varies between two lanes undivided from Auto Center Drive to Commonwealth Avenue to four lanes divided from Commonwealth to Artesia Boulevard.

<u>Highland Avenue</u> is a north-south roadway extending between Commonwealth Avenue and Orangethorpe Avenue. It has one lane in each direction and the posted speed limit on Highland Avenue is 30 mph.

Parks Road is a north-south roadway, classified as a Secondary Arterial between Bastanchury Road and Rosecrans Avenue. North of Rosecrans, Parks Road is classified as a Local Collector. Parks Road has one lane in each direction, separated by a raised median, and the posted speed limit on the secondary arterial highway portion of Parks Road is 40 mph.

<u>Pioneer Avenue</u> is an east-roadway extending between Gilbert Street and Parks Road. It has one lane in each direction and a raised landscaped median. The posted speed limit on Pioneer Avenue is 40 mph.

<u>Placentia Avenue</u> is a north-south roadway along the eastern edge of the City, extending from Orangethorpe Avenue to Imperial Highway. It has two lanes in each direction with a painted median. The posted speed limit on Placentia Avenue varies from 40 to 45 mph.

ORANGE COUNTY CONGESTION MANAGEMENT PROGRAM (CMP)

The Orange County Congestion Management Program (CMP) was established in 1991 in order to reduce traffic congestion and to provide a mechanism for coordinating land use and development decisions. Compliance with CMP requirements ensures a city's eligibility to compete for State gas tax funds for local transportation projects.

Within the City of Fullerton, the following arterials are included on the CMP Highway System:

- Harbor Boulevard
- Imperial Highway
- Orangethorpe Avenue
- State College Boulevard

The following are CMP intersections within the study area:

- Harbor Boulevard / Orangethorpe Avenue
- State College Boulevard / Orangethorpe Avenue
- SR-91 WB Ramp / Harbor Boulevard
- SR-91 EB Ramp / Harbor Boulevard
- SR-91 WB Ramp / State College Boulevard
- SR-91 EB Ramp / State College Boulevard
- SR-57 SB Ramp / Imperial Highway



- SR-57 NB Ramp / Imperial Highway
- Harbor Boulevard / Imperial Highway
- Beach Boulevard / Imperial Highway
- SR-57 NB Ramp / Orangethorpe Avenue
- SR-57 SB Ramp / Orangethorpe Avenue

ANALYSIS METHODOLOGY

Peak hour intersection analyses were conducted to evaluate the existing operating conditions of all study intersections. Analysis was conducted using the City of Fullerton traffic analysis software (Traffix) and the Webster Based Signal Timing Evaluation Routine (WEBSTER) software developed and operated by Albert Grover and Associates, Traffic Engineering consultant to the City.

Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. Intersections are analyzed using the Highway Capacity Manual (HCM) methodology for signalized intersections. LOS for signalized intersections is determined by calculating the average total delay in seconds per vehicle for all vehicles traveling through the intersection during the peak hour. Table 5.4-3, Intersection LOS and Corresponding HCM Delay Values, provides a description of the operating characteristics of each level of service.

Performance Criteria

The City of Fullerton's current LOS standard for peak hour intersection operation is LOS D for most of the City's intersections.

For Congestion Management Program (CMP) intersections and certain intersections located in the historic downtown area, the acceptable LOS standard is LOS E. Two study intersections are located in the historic downtown area: Chapman Avenue at Harbor Boulevard, and Commonwealth Avenue at Harbor Boulevard. Three study intersections are listed as CMP intersections: Imperial Highway at Harbor Boulevard, Orangethorpe Avenue at Harbor Boulevard, and Orangethorpe Avenue at State College Boulevard.

EXISTING TRAFFIC CONDITIONS

Existing Traffic Volumes

To determine the existing operation of the study intersections, morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak hour traffic counts were conducted between October 2008 and November 2009. Copies of the traffic count data sheets are provided in <u>Appendix C</u>.

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¹ The LOS standards are based on the currently adopted City of Fullerton General Plan (1996).



Table 5.4-3
Intersection Level of Service and Corresponding HCM Delay Values

Level of Service	Seconds of delay per vehicle	Description of Operating Characteristics
А	0.0 – 10.0	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
В	10.1 – 20.0	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
С	20.1 – 35.0	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.
D	35.1 – 55.0	This level encompasses a zone of increasing restriction, approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	55.1 – 80.0	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	≥ 80.1	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

Note: The 1996 General Plan Update peak hour intersection analysis was conducted using the Intersection Capacity Utilization (ICU) analysis methodology, which was the methodology in use by the City at the time. The City has since switched to the Highway Capacity Manual (HCM) delay methodology for intersection analysis because it provides the ability to measure intersection Level of Service and benefits of mitigation to a greater level of detail. The Orange County Congestion Management Plan (CMP) is based on the Intersection Capacity Utilization (ICU) methodology. Therefore, intersection Level of Service based on the ICU methodology is also presented for all study intersections in this report.

Peak Hour Intersection Analysis

A total of 96 intersections in the City and surrounding areas were selected for analysis of existing traffic and future traffic conditions; refer to <u>Table 5.4-4</u>, <u>Study Intersections and Jurisdictions</u>. These intersections include all intersections of arterial highways (Major, Primary, and Secondary) in the City of Fullerton, as well as nearby arterial intersections in adjacent cities. Of the 96 study intersections, 60 are within the City of Fullerton, 12 are within other cities, and 25 are arterial intersections with Caltrans freeway facilities. The locations of the study intersections are illustrated on <u>Exhibit 5.4-1</u>, <u>Study Intersections</u>. Existing lane configurations and traffic control for the study intersections are illustrated on <u>Exhibit 5.4-2a</u>, <u>Existing Lane Configuration and Traffic Control (Study Intersections 49 to 96)</u>.



Table 5.4-4 Study Intersections and Jurisdictions

Intersection No.	Intersection	Jurisdiction
1.	Lambert Street at Harbor Boulevard	Fullerton
2.	Imperial Highway at Harbor Boulevard	Fullerton; CMP1
3.	Imperial Highway at Palm Street	Fullerton
4.	Imperial Highway at Associated Road	Fullerton
5.	Rosecrans Avenue at Gilbert Street	Fullerton
6.	Rosecrans Avenue at Parks Drive	Fullerton
7.	Rosecrans Avenue at Euclid Street	Fullerton
8.	Pioneer Road at Gilbert Street	Fullerton
9.	Pioneer Road at Parks Drive	Fullerton
10.	Bastanchury Road at Parks Drive	Fullerton
11.	Bastanchury Road at Euclid Street	Fullerton
12.	Bastanchury Road at Harbor Boulevard	Fullerton
13.	Bastanchury Road at Brea Boulevard	Fullerton
14.	Bastanchury Road at State College Blvd	Fullerton
15.	Bastanchury Road at Associated Road	Fullerton
16.	Yorba Linda Boulevard at Placentia Avenue	Fullerton
17.	Yorba Linda Boulevard at State College Boulevard	Fullerton
18.	Yorba Linda Boulevard at Associated Road	Fullerton
19.	Brea Boulevard at Harbor Boulevard	Fullerton
20.	Berkeley Street at Harbor Boulevard	Fullerton
21.	Berkeley Street at Lemon Street	Fullerton
22.	Malvern Avenue at Gilbert Street	Fullerton
23.	Malvern Avenue at Bastanchury Road	Fullerton
24.	Malvern Avenue at Euclid Street	Fullerton
25.	Chapman Avenue at Harbor Boulevard	Fullerton ²
26.	Chapman Avenue at Lemon Street	Fullerton
27.	Chapman Avenue at Berkeley Street	Fullerton
28.	Chapman Avenue at Raymond Street	Fullerton
29.	Chapman Avenue at Acacia Street	Fullerton
30.	Chapman Avenue at State College Boulevard	Fullerton
31.	Chapman Avenue at Commonwealth Avenue	Fullerton
32.	Chapman Avenue at Placentia Avenue	Fullerton
33.	Nutwood Avenue at State College Boulevard	Fullerton
34.	Nutwood Avenue at Commonwealth Avenue	Fullerton
35.	Nutwood Avenue at Placentia Avenue	Fullerton
36.	Commonwealth Avenue at Dale Street	Fullerton
37.	Commonwealth Avenue at Magnolia Street	Fullerton
38.	Commonwealth Avenue at Gilbert Street	Fullerton
39.	Commonwealth Avenue at Brookhurst Street	Fullerton
40.	Commonwealth Avenue at Euclid Street	Fullerton
41.	Commonwealth Avenue at Highland Street	Fullerton
42.	Commonwealth Avenue at Harbor Boulevard	Fullerton ²
43.	Commonwealth Avenue at Lemon Street	Fullerton
44.	Commonwealth Avenue at Raymond Street	Fullerton
45.	Commonwealth Avenue at Acacia Street	Fullerton



Table 5.4-4 [continued] Study Intersections and Jurisdictions

Intersection No.	Intersection	Jurisdiction
46.	Commonwealth Avenue at State College Boulevard	Fullerton
47.	Valencia Drive at Magnolia Street	Fullerton
48.	Valencia Drive at Brookhurst Street	Fullerton
49.	Valencia Drive at Euclid Street	Fullerton
50.	Valencia Drive at Highland Street	Fullerton
51.	Orangethorpe Avenue at Magnolia Street	Fullerton
52.	Orangethorpe Avenue at Brookhurst Street	Fullerton
53.	Orangethorpe Avenue at Euclid Street	Fullerton
54.	Orangethorpe Avenue at Highland Street	Fullerton
55.	Orangethorpe Avenue at Harbor Boulevard	Fullerton; CMP1
56.	Orangethorpe Avenue at Lemon Street	Fullerton
57.	Orangethorpe Avenue at Raymond Avenue	Fullerton
58.	Orangethorpe Avenue at Acacia Street	Fullerton
59.	Orangethorpe Avenue at State College Boulevard	Fullerton; CMP1
60.	Orangethorpe Avenue at Placentia Avenue	Fullerton
61.	Imperial Highway at Euclid Street	La Habra
62.	Imperial Highway at Brea Boulevard	Brea
63.	Imperial Highway at Kraemer Boulevard	Brea
64.	Rosecrans Avenue at Beach Boulevard	La Mirada
65.	Yorba Linda Blvd at Kraemer Boulevard	Placentia
66.	La Palma Avenue at Brookhurst Street	Anaheim
67.	La Palma Avenue at Euclid Street	Anaheim
68.	La Palma Avenue at Harbor Boulevard	Anaheim
69.	La Palma Avenue at Lemon Street	Anaheim
70.	La Palma Avenue at Raymond Ave/East Street	Anaheim
71.	La Palma Avenue at State College Boulevard	Anaheim
72.	Imperial Highway at SR-57 SB Ramps	Caltrans; CMP1
73.	Imperial Highway at SR-57 NB Ramps	Caltrans; CMP1
74.	Yorba Linda Blvd at SR-57 SB Ramps	Caltrans
75.	Yorba Linda Blvd at SR-57 NB Ramps	Caltrans
76.	Nutwood Avenue at SR-57 SB Ramps	Caltrans
77.	Nutwood Avenue at SR-57 NB Ramps	Caltrans
78.	Chapman Avenue at SR-57 SB Ramps	Caltrans
79.	Chapman Avenue at SR-57 NB Ramps	Caltrans
80.	Orangethorpe Avenue at SR-57 SB Ramps	Caltrans; CMP1
81.	Orangethorpe Avenue at SR-57 NB Ramps	Caltrans; CMP1
82.	SR-91 WB Ramps at Magnolia Street	Caltrans
83.	I-5 NB Off-ramp/Buckingham at Magnolia Street	Caltrans
84.	I-5 SB/SR-91 EB Off-ramp at Magnolia Street	Caltrans
85.	SR-91 WB Ramps at Brookhurst Street	Caltrans
86.	SR-91 EB Ramps at Brookhurst Street	Caltrans
87.	SR-91 WB Ramps at Euclid Street	Caltrans
88.	SR-91 EB Ramps at Euclid Street	Caltrans
89.	SR-91 WB Ramps at Harbor Boulevard	Caltrans; CMP1
90.	SR-91 EB Ramps at Harbor Boulevard	Caltrans; CMP1



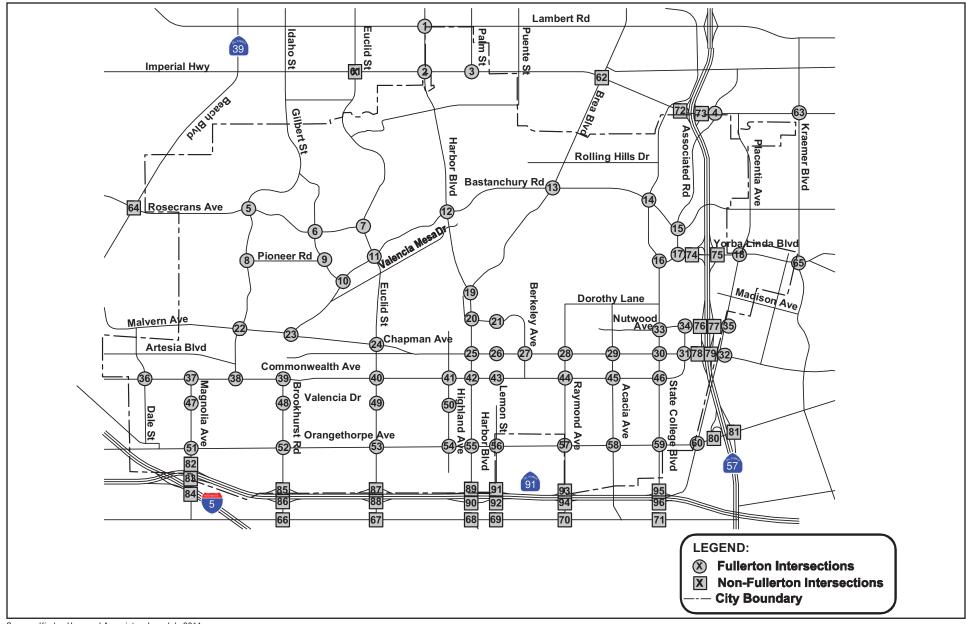
Table 5.4-4 [continued] Study Intersections and Jurisdictions

Intersection No.	Intersection	Jurisdiction
91.	SR-91 WB Ramps at Lemon Street	Caltrans
92.	SR-91 EB Ramps at Lemon Street	Caltrans
93.	SR-91 WB Ramps at Raymond Street	Caltrans
94.	SR-91 EB Ramps at Raymond Street	Caltrans
95.	SR-91 WB Ramps at State College Boulevard	Caltrans; CMP1
96.	SR-91 EB Ramps at State College Boulevard	Caltrans; CMP1
	Imperial Highway at Beach Boulevard ³	La Habra; CMP1

^{1.} CMP = Congestion Management Program

^{2.} Located within Historic Downtown area.

^{3.} This intersection was added to the study area upon request from the City of La Habra and is not identified on the exhibits; refer to Appendix C of the Draft EIR.



Source: Kimley-Horn and Associates, Inc., July 2011.

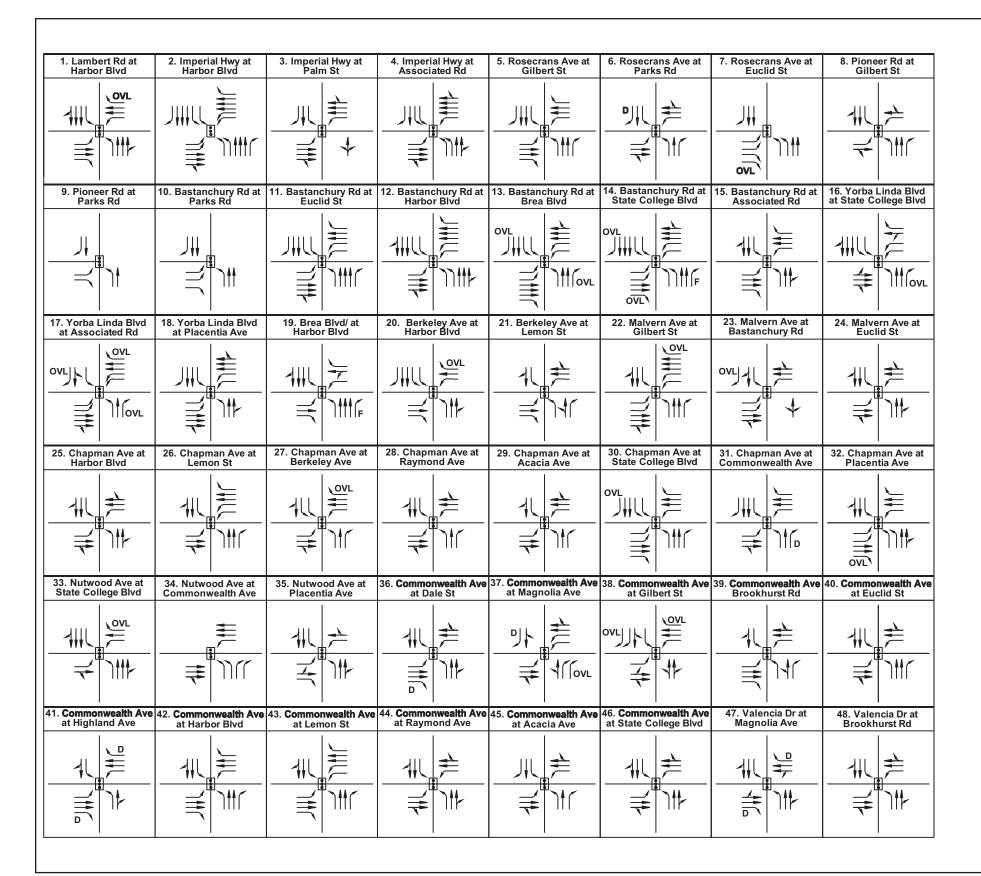
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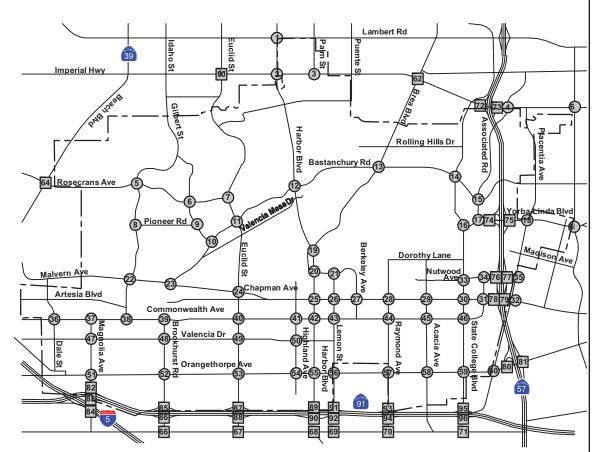




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Study Intersections





LEGEND:

- X Fullerton Intersections
- **X** Non-Fullerton Intersections
- F Free Right-Turn Lane
- **OVL Right-Turn Overlap**
- Signalized
- --- City Boundary
- **D** Defacto Right Turn Lane

Source: Kimley-Horn and Associates, Inc., July 2011.

RBF

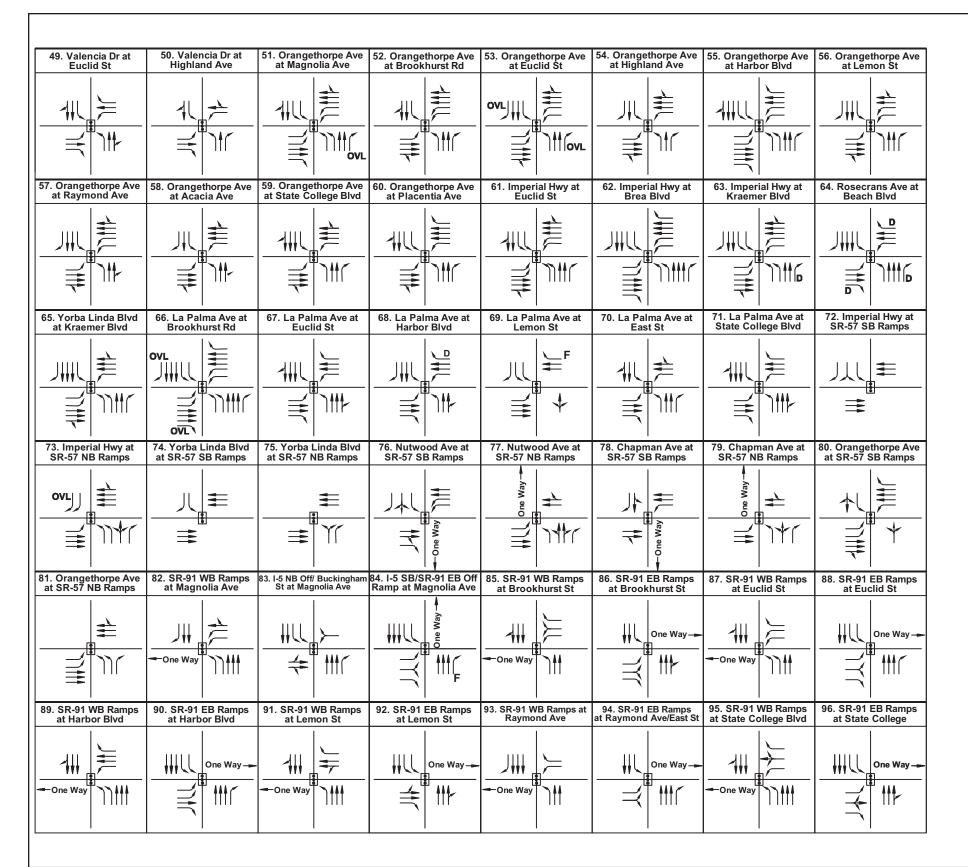
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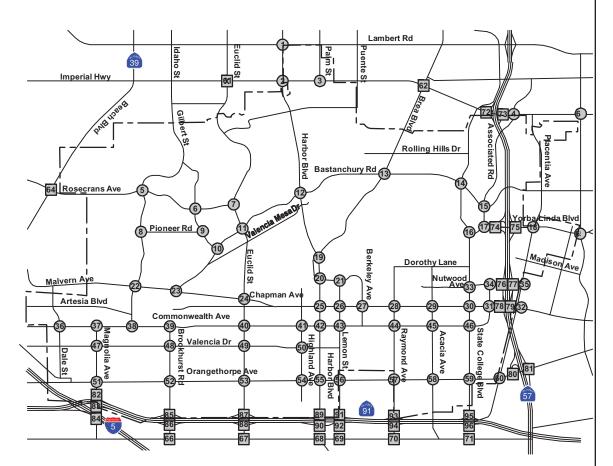
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Traffic and Circulation



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LEGEND:

- X Fullerton Intersections
- **X** Non-Fullerton Intersections
- F Free Right-Turn Lane
- **OVL Right-Turn Overlap**
- Signalized
- --- City Boundary
- **D** Defacto Right Turn Lane

Source: Kimley-Horn and Associates, Inc., July 2011.

NOT TO SCALE



THE FULLERTON PLAN 2030 PROGRAM ENVIRONMENTAL IMPACT REPORT

Traffic and Circulation



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Existing conditions delay values and the corresponding LOS are summarized in <u>Table 5.4-5</u>, <u>Existing Peak Hour Intersection Operations</u>.

Table 5.4-5 Existing Peak Hour Intersection Operations

Intersection	Interception	Control	A	M Peak Hoι	ır	P	M Peak Hou	ır
Number	Intersection	Control	ICU	Delay	LOS	ICU	Delay	LOS
1.	Lambert Street at Harbor Boulevard	S	0.70	40.0	D	0.88	46.0	D
2.	Imperial Highway at Harbor Boulevard	S	0.75	38.0	D	0.68	40.0	D
3.	Imperial Highway at Palm Street	S	0.54	22.0	С	0.68	28.0	С
4.	Imperial Highway at Associated Road	S	0.67	36.0	D	0.84	42.0	D
5.	Rosecrans Avenue at Gilbert Street	S	0.83	40.0	D	0.72	33.0	С
6.	Rosecrans Avenue at Parks Drive	S	0.63	18.0	В	0.27	11.0	В
7.	Rosecrans Avenue at Euclid Street	S	0.69	24.0	С	0.45	20.0	В
8.	Pioneer Road at Gilbert Street	S	0.43	14.0	В	0.47	14.0	В
9.	Pioneer Road at Parks Drive	S	0.42	16.0	В	0.15	13.0	В
10.	Bastanchury Road at Parks Drive	S	0.48	22.0	С	0.25	11.0	В
11.	Bastanchury Road at Euclid Street	S	0.65	34.0	С	0.79	38.0	D
12.	Bastanchury Road at Harbor Boulevard	S	0.78	39.0	D	0.75	36.0	D
13.	Bastanchury Road at Brea Boulevard	S	0.70	34.0	С	0.70	33.0	С
14.	Bastanchury Road at State College Blvd	S	0.60	31.0	С	0.66	36.0	D
15.	Bastanchury Road at Associated Road	S	0.80	38.0	D	0.65	34.0	С
16.	Yorba Linda Boulevard at Placentia Avenue	S	0.66	35.0	С	0.81	39.0	D
17.	Yorba Linda Boulevard at State College Blvd	S	0.69	33.0	С	0.74	33.0	С
18.	Yorba Linda Boulevard at Associated Road	S	0.85	40.0	D	1.08	77.0	F
19.	Brea Boulevard at Harbor Boulevard	S	0.74	28.0	С	0.74	30.0	С
20.	Berkeley Street at Harbor Boulevard	S	0.62	25.0	С	0.64	25.0	С
21.	Berkeley Street at Lemon Street	S	0.52	30.0	С	0.53	30.0	С
22.	Malvern Avenue at Gilbert Street	S	0.93	45.0	D	0.78	36.0	D
23.	Malvern Avenue at Bastanchury Road	S	0.72	36.0	D	0.71	37.0	D
24.	Malvern Avenue at Euclid Street	S	0.83	35.0	С	0.72	35.0	С
25.	Chapman Avenue at Harbor Boulevard	S	0.68	30.0	С	0.79	32.0	С
26.	Chapman Avenue at Lemon Street	S	0.44	26.0	С	0.52	28.0	С
27.	Chapman Avenue at Berkeley Street	S	0.39	16.0	В	0.48	16.0	В
28.	Chapman Avenue at Raymond Street	S	0.67	29.0	С	0.63	30.0	С
29.	Chapman Avenue at Acacia Street	S	0.42	16.0	В	0.47	16.0	В
30.	Chapman Avenue at State College Boulevard	S	0.82	38.0	D	0.85	41.0	D
31.	Chapman Avenue at Commonwealth Avenue	S	0.53	17.0	В	0.72	24.0	С
32.	Chapman Avenue at Placentia Avenue	S	0.67	34.0	С	0.74	36.0	D
33.	Nutwood Avenue at State College Boulevard	S	0.85	32.0	С	0.82	34.0	С
34.	Nutwood Avenue at Commonwealth Avenue	S	0.18	16.0	В	0.25	11.0	В
35.	Nutwood Avenue at Placentia Avenue	S	0.74	19.0	В	0.63	27.0	С



Table 5.4-5 [continued] Existing Peak Hour Intersection Operations

Intersection	latore eller	Control	AM Peak Hour			PM Peak Hour		
Number	Intersection		ICU	Delay	LOS	ICU	Delay	LOS
36.	Commonwealth Avenue at Dale Street	S	0.38	17.0	В	0.33	16.0	В
37.	Commonwealth Avenue at Magnolia Street	S	0.50	21.0	С	0.57	23.0	С
38.	Commonwealth Avenue at Gilbert Street	S	0.65	41.0	D	0.73	39.0	D
39.	Commonwealth Avenue at Brookhurst Street	S	0.53	26.0	С	0.53	26.0	С
40.	Commonwealth Avenue at Euclid Street	S	0.71	28.0	С	0.71	27.0	С
41.	Commonwealth Avenue at Highland Street	S	0.37	16.0	В	0.51	17.0	В
42.	Commonwealth Avenue at Harbor Boulevard	S	0.59	28.0	С	0.64	27.0	С
43.	Commonwealth Avenue at Lemon Street	S	0.59	28.0	С	0.56	30.0	С
44.	Commonwealth Avenue at Raymond Street	S	0.57	27.0	С	0.61	28.0	С
45.	Commonwealth Avenue at Acacia Street	S	0.25	14.0	В	0.28	14.0	В
46.	Commonwealth Avenue at State College Blvd	S	0.62	23.0	С	0.61	28.0	С
47.	Valencia Drive at Magnolia Street	S	0.52	13.0	В	0.72	14.0	В
48.	Valencia Drive at Brookhurst Street	S	0.49	23.0	С	0.40	20.0	В
49.	Valencia Drive at Euclid Street	S	0.74	32.0	С	0.69	24.0	С
50.	Valencia Drive at Highland Street	S	0.32	16.0	В	0.39	17.0	В
51.	Orangethorpe Avenue at Magnolia Street	S	0.73	34.0	С	0.76	33.0	С
52.	Orangethorpe Avenue at Brookhurst Street	S	0.61	28.0	С	0.51	28.0	С
53.	Orangethorpe Avenue at Euclid Street	S	0.66	30.0	С	0.66	29.0	С
54.	Orangethorpe Avenue at Highland Street	S	0.44	19.0	В	0.38	18.0	В
55.	Orangethorpe Avenue at Harbor Boulevard	S	0.54	29.0	С	0.67	33.0	С
56.	Orangethorpe Avenue at Lemon Street	S	0.56	26.0	С	0.79	32.0	С
57.	Orangethorpe Avenue at Raymond Avenue	S	0.49	29.0	С	0.60	32.0	С
58.	Orangethorpe Avenue at Acacia Street	S	0.27	11.0	В	0.43	13.0	В
59.	Orangethorpe Avenue at State College Blvd	S	0.89	39.0	D	0.61	29.0	С
60.	Orangethorpe Avenue at Placentia Avenue	S	0.59	33.0	С	0.60	34.0	С
61.	Imperial Highway at Euclid Street	S	0.72	37.0	D	0.65	35.0	С
62.	Imperial Highway at Brea Boulevard	S	0.77	42.0	D	0.78	43.0	D
63.	Imperial Highway at Kraemer Boulevard	S	0.73	40.0	D	0.77	41.0	D
64.	Rosecrans Avenue at Beach Boulevard	S	0.73	41.0	D	0.80	42.0	D
65.	Yorba Linda Blvd at Kraemer Boulevard	S	0.68	36.0	D	0.89	40.0	D
66.	La Palma Avenue at Brookhurst Street	S	0.60	37.0	D	0.69	40.0	D
67.	La Palma Avenue at Euclid Street	S	0.79	42.0	D	0.81	46.0	D
68.	La Palma Avenue at Harbor Boulevard	S	0.51	31.0	С	0.81	40.0	D
69.	La Palma Avenue at Lemon Street	S	0.73	40.0	D	0.86	44.0	D
70.	La Palma Avenue at Raymond Ave/East St	S	0.68	40.0	D	0.80	46.0	D
71.	La Palma Avenue at State College Boulevard	S	0.77	46.0	D	1.00	72.0	F
72.	Imperial Highway at SR-57 SB Ramps	S	0.62	22.0	С	0.61	21.0	С
73.	Imperial Highway at SR-57 NB Ramps	S	0.70	26.0	С	0.91	28.0	С



Table 5.4-5 [continued] Existing Peak Hour Intersection Operations

Intersection	Interception	Control	AM Peak Hour			PM Peak Hour		
Number	Intersection		ICU	Delay	LOS	ICU	Delay	LOS
74.	Yorba Linda Blvd at SR-57 SB Ramps		0.47	19.0	В	0.77	28.0	С
75.	Yorba Linda Blvd at SR-57 NB Ramps	S	0.58	20.0	В	0.64	23.0	С
76.	Nutwood Avenue at SR-57 SB Ramps	S	0.42	27.0	С	0.56	25.0	С
77.	Nutwood Avenue at SR-57 NB Ramps	S	0.71	27.0	С	0.46	23.0	С
78.	Chapman Avenue at SR-57 SB Ramps	S	0.62	19.0	В	0.81	25.0	С
79.	Chapman Avenue at SR-57 NB Ramps	S	0.70	24.0	С	0.90	28.0	С
80.	Orangethorpe Avenue at SR-57 SB Ramps	S	0.48	27.0	С	0.50	27.0	С
81.	Orangethorpe Avenue at SR-57 NB Ramps	S	0.56	22.0	С	0.75	26.0	С
82.	SR-91 WB Ramps at Magnolia Street	S	0.63	19.0	В	0.56	16.0	В
83.	I-5 NB Off-ramp/Buckingham at Magnolia St	S	0.84	30.0	С	0.87	33.0	С
84.	I-5 SB/SR-91 EB Off-ramp at Magnolia Street	S	0.66	22.0	С	0.83	30.0	С
85.	SR-91 WB Ramps at Brookhurst Street	S	0.36	17.0	В	0.49	20.0	В
86.	SR-91 EB Ramps at Brookhurst Street	S	0.63	22.0	С	0.68	21.0	С
87.	SR-91 WB Ramps at Euclid Street	S	0.59	19.0	В	0.71	23.0	С
88.	SR-91 EB Ramps at Euclid Street	S	0.46	17.0	В	0.50	19.0	В
89.	SR-91 WB Ramps at Harbor Boulevard	S	0.44	16.0	В	0.38	15.0	В
90.	SR-91 EB Ramps at Harbor Boulevard	S	0.50	22.0	С	0.44	21.0	С
91.	SR-91 WB Ramps at Lemon Street	S	0.66	23.0	С	0.77	26.0	С
92.	SR-91 EB Ramps at Lemon Street	S	0.55	25.0	С	0.65	25.0	С
93.	SR-91 WB Ramps at Raymond Street	S	0.59	22.0	С	0.82	23.0	С
94.	SR-91 EB Ramps at Raymond Street	S	0.76	31.0	С	0.63	30.0	С
95.	SR-91 WB Ramps at State College Boulevard	S	0.53	20.0	В	0.74	18.0	В
96.	SR-91 EB Ramps at State College Boulevard	S	0.54	24.0	С	0.52	22.0	С
	Imperial Highway at Beach Boulevard ¹	S	0.63	42.0	D	0.75	47.0	D

S = Signalized, U = Unsignalized

Intersection delay is expressed in average seconds of delay per vehicle during the peak hour.

As indicated in <u>Table 5.4-5</u>, all study intersections are currently operating at an acceptable LOS (LOS D or better for City intersections and LOS E for CMP facilities and intersections located within the historic downtown core), with the exception of the following intersections:

- Yorba Linda Boulevard and Associated Road (#18); and
- La Palma Avenue and State College Boulevard (#71).

^{1.} This intersection was added to the study area upon request from the City of La Habra and is not identified on the exhibits; refer to Appendix C of the Draft EIR.



PUBLIC TRANSPORTATION SERVICES

Located at the southeast edge of the downtown area, the Fullerton Transportation Center (FTC) is a hub for all modes of public transportation. Commuter rail service (Metrolink) is provided from the FTC to Los Angeles Union Station on two separate lines on a daily basis. Public bus transit services are provided within the City of Fullerton by the Orange County Transportation Authority (OCTA). Bus routes link various destinations within the City and throughout the county, including Cal State Fullerton, Fullerton College, the Anaheim Transportation Center, Angel Stadium, and Disneyland. The FTC also provides access to private taxi services and secure bicycle storage. The FTC is within walking distance of downtown.

Orange County Transportation Authority (OCTA)

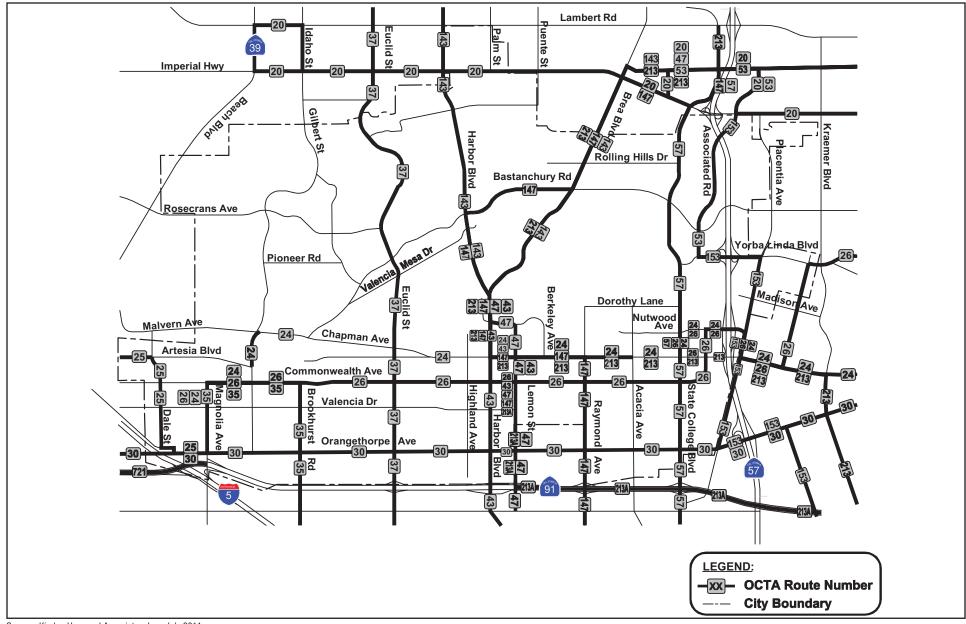
OCTA operates several routes in and through the City of Fullerton. <u>Exhibit 5.4-3</u>, <u>OCTA Bus Routes</u>, illustrates the bus routes that traverse the City of Fullerton. A brief description of each of the transit lines in the City of Fullerton is provided below.

<u>Route 20</u> operates between the Cities of Yorba Linda and La Habra, serving the City of Fullerton via Imperial Highway. Major destinations along Route 20 include the Richard Nixon Library, Brea Mall, and the La Habra Marketplace. Service is provided Monday through Friday with a headway (frequency of bus arrival) of 100 minutes in each direction from approximately 6:00 AM to 7:30 PM. No weekend service is provided on Route 20.

<u>Route 24</u> operates between the Cities of Buena Park and Orange, traveling along Commonwealth Avenue in the City of Fullerton. Service is provided Monday through Friday from approximately 5:00 AM to 9:30 PM with a headway of approximately one hour.

Route 25 operates between the Buena Park Metrolink Station, the Fullerton Park 'N Ride area, and Huntington Beach, briefly serving the City of Fullerton via Magnolia Avenue and Orangethorpe Avenue. Service is provided Monday through Friday from approximately 5:00 AM to 11:00 PM. This route has a headway of approximately 45 minutes. On weekends and holidays service is provided with a frequency of one bus per hour in each direction from approximately 8:00 AM to 8:00 PM.

Route 26 operates between the Fullerton Park 'N Ride area and the North Orange County Community College District in Yorba Linda, serving Fullerton via Magnolia Avenue and Commonwealth Avenue. Major destinations along Route 26 include the Fullerton Transportation Center, Cal State Fullerton, and the Richard Nixon Library. Service is provided Monday through Friday from approximately 5:00 AM to 11:00 PM. Headways on Route 26 are approximately 30 minutes from 5:00 AM to 6:00 PM, and approximately one hour from 6:00 PM to 11:00 PM. Service is limited between the Cal State Fullerton area and Yorba Linda on some trips. On weekends and holidays, service is provided approximately every hour from 8:00 AM to 7:00 PM.



Source: Kimley-Horn and Associates, Inc., July 2011.

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OCTA Bus Routes



Route 30 operates between the Los Cerritos Center and the Anaheim Hills area, serving the City of Fullerton via Orangethorpe Avenue. Service is provided Monday through Friday from approximately 4:00 AM to 11:30 PM. Bus arrival frequency is normally 45 minutes. On weekends and holidays, service is provided with a headway of one hour from approximately 6:30 AM to 9:00 PM.

Route 35 operates between the Fullerton Park 'N Ride area and Pacific Coast Highway in Huntington Beach. Route 35 travels on Brookhurst Street for almost the entire route. Service is provided Monday through Friday from approximately 4:30 PM to 10:00 PM at 30-40 minute headways. On weekends and holidays, service is provided from approximately 5:00 AM to 7:30 PM with a headway of one hour.

Route 37 operates between the Cities of La Habra and Fountain Valley, traveling mostly on Euclid Street. Destinations along this route include the North Orange County Community College District, Anaheim Plaza, Garden Grove Civic Center, and Mile Square Park. Service is provided Monday through Friday with a headway of approximately 30-40 minutes from approximately 5:00 AM to 8:00 PM and from 8:00 PM to 11:30 PM with a headway of one hour. On Saturdays, service is provided at about 35-minute intervals from 5:30 AM to 9:00 PM. On Sundays and holidays, service is provided with a headway of one hour from approximately 7:00 AM to 8:00 PM.

Route 143 operates between the Cities of Costa Mesa and Fullerton. Service is provided Monday through Friday with a headway of 15 minutes in each direction from approximately 4:00 AM to 8:00 PM and from 8:00 PM to 1:30 AM with 20-30 minute headways. On weekends and holidays service is provided from 4:00 AM to 9:00 PM with 20-30 minute headways in each direction. Then service runs on one-hour headways until 1:30 AM.

Route 47 operates between the Cities of Fullerton and Newport Beach, traveling along Lemon Street, Commonwealth Avenue, and Harbor Boulevard in the City of Fullerton. Major destinations within the City of Fullerton include North Court, Fullerton Transportation Center, and Fullerton College. Service is provided Monday through Friday with headways of approximately 15-20 minutes in each direction from approximately 4:00 AM to 11:00 PM.

Route 53 operates between the Cities of Orange and Irvine, traveling along Orangethorpe Avenue and Placentia Avenue, Yorba Linda Boulevard, and Associated Road in the City of Fullerton. Service is provided Monday through Friday from approximately 4:00 AM to 12:00 AM. Route 53 has a headway of 10-15 minutes for most of the day, except late evening hours when it runs at 30-minute intervals. On weekends and holidays, service is provided with a frequency of one bus every 15 to 20 minutes from approximately 6:00 AM to 10:00 PM.

Route 57 operates between the Cities of Brea and Newport Beach, serving the City of Fullerton along State College Boulevard. Route 57 provides service to Brea Mall, Cal State Fullerton, Angel Stadium, The Block at Orange, UCI Medical Center, Santa Ana College, the Orange County Performing Arts Center, Newport Transportation Center, and others along the route. Service is provided throughout the week from approximately 4:30 AM to 1:30 AM at approximately 10 to 20-minute intervals in the cities of Anaheim and Santa Ana and 30-minute intervals in the cities of Fullerton, Brea, Costa Mesa, and Newport Beach. Less frequent service is provided in the evening and early morning.



Route 153 is operated between Brea and Orange, traveling along Orangethorpe Avenue, Placentia Avenue, Yorba Linda Boulevard, and Associated Road in the City of Fullerton. Service is provided Monday through Friday from approximately 4:00 AM to midnight at one-hour intervals. On weekends and holidays, service is provided with a headway of one hour from approximately 6:00 AM to 10:00 PM.

Route 213 is operated between the Brea Park 'N Ride and the University Research Center in Irvine, traveling along State College Boulevard, Brea Boulevard, Harbor Boulevard, and Chapman Avenue in the City of Fullerton. Service is provided Monday through Friday with four southbound trips in the morning commute hours and four northbound trips in the afternoon commute hours at half-hour intervals.

Route 721 is an inter-county express route and operates between the Fullerton Park 'N Ride area and downtown Los Angeles via the 91 Freeway and 110 Freeway. Service is provided to the Los Angeles Convention Center, Staples Center, and other downtown destinations. Service is provided Monday through Friday, which includes four northbound and two southbound trips in the morning between 5:00 AM and 9:30 AM and two northbound and four southbound trips in the afternoon between 3:00 PM and 7:30 PM. There is no weekend service on this route.

Route 757 is operated between the Pomona Fairplex Park-and-Ride and the Santa Ana Transit Terminal. This route is operated using mid-size buses. Southbound service is provided Monday through Friday departing Pomona Fairplex at 5:40 AM and 6:10 AM. Weekday northbound service departs Santa Ana at 4:40 PM and 5:10 PM. There is no weekend service.

Route 758 is operated between the Chino Transit Center and Irvine Transportation Center. Southbound service departs the Chino Transit Center Monday through Friday at 5:32 AM and 6:02 AM. Northbound service departs the Irvine Transportation Center at 4:15 PM and 4:45 PM. There is no weekend service on Route 758.

Metrolink

Metrolink is a commuter rail service jointly operated by the Los Angeles County Metropolitan Transportation Authority (Metro), the Orange County Transportation Authority (OCTA), the Riverside Transportation Commission (RCTC), San Bernardino Associated Governments (SANBAG), and the Ventura County Transportation Commission (VCTC). Metrolink provides rail service to the southland, from Oxnard to San Bernardino, from Lancaster to Oceanside. Two Metrolink lines run through the FTC. The Orange County Line runs between Los Angeles Union Station and Oceanside, and the 91 Line runs between LA Union Station and downtown Riverside. Northbound trains operate at 15-30 minute headways in the morning commute hours and southbound trains run every 15-30 minutes in the evening commute hours. The FTC is a "Rail 2 Rail" station, allowing Metrolink monthly pass holders to ride the Amtrak Pacific Surfliner trains for free.

Amtrak

Amtrak trains serve the FTC via two routes. The Pacific Surfliner runs from Oakland to San Diego. Northbound and southbound trains arrive and depart the FTC hourly from approximately 6:00 AM to 10:00 PM. The Southwest Chief runs from LA Union Station to Albuquerque,

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continuing on to Chicago. Eastbound and westbound trains arrive and depart the FTC once daily.

BICYCLE FACILITIES

The City of Fullerton Bikeways Master Plan (August 2011) describes the City's existing, approximately 37-mile, bikeways network, as well as the methods by which the City's existing conditions were recorded and evaluated. Additionally, the Plan estimates the existing number of bicycle commuters within the City today.

Fullerton's existing bikeways network consists primarily of on-street Class II bicycle lanes and Class III bicycle routes located along major vehicular arterials. While bikeways facilities are present throughout most areas of the City, a number of system gaps and facility inconsistencies exist. These gaps and inconsistencies are likely the result of the City's historical development patterns, and the incremental development of various neighborhoods over time. Connectivity between the City's recreational trails, which are typically unpaved and not designed for primary use by bicyclists, and the bikeways network is discussed in the Bikeways Master Plan.

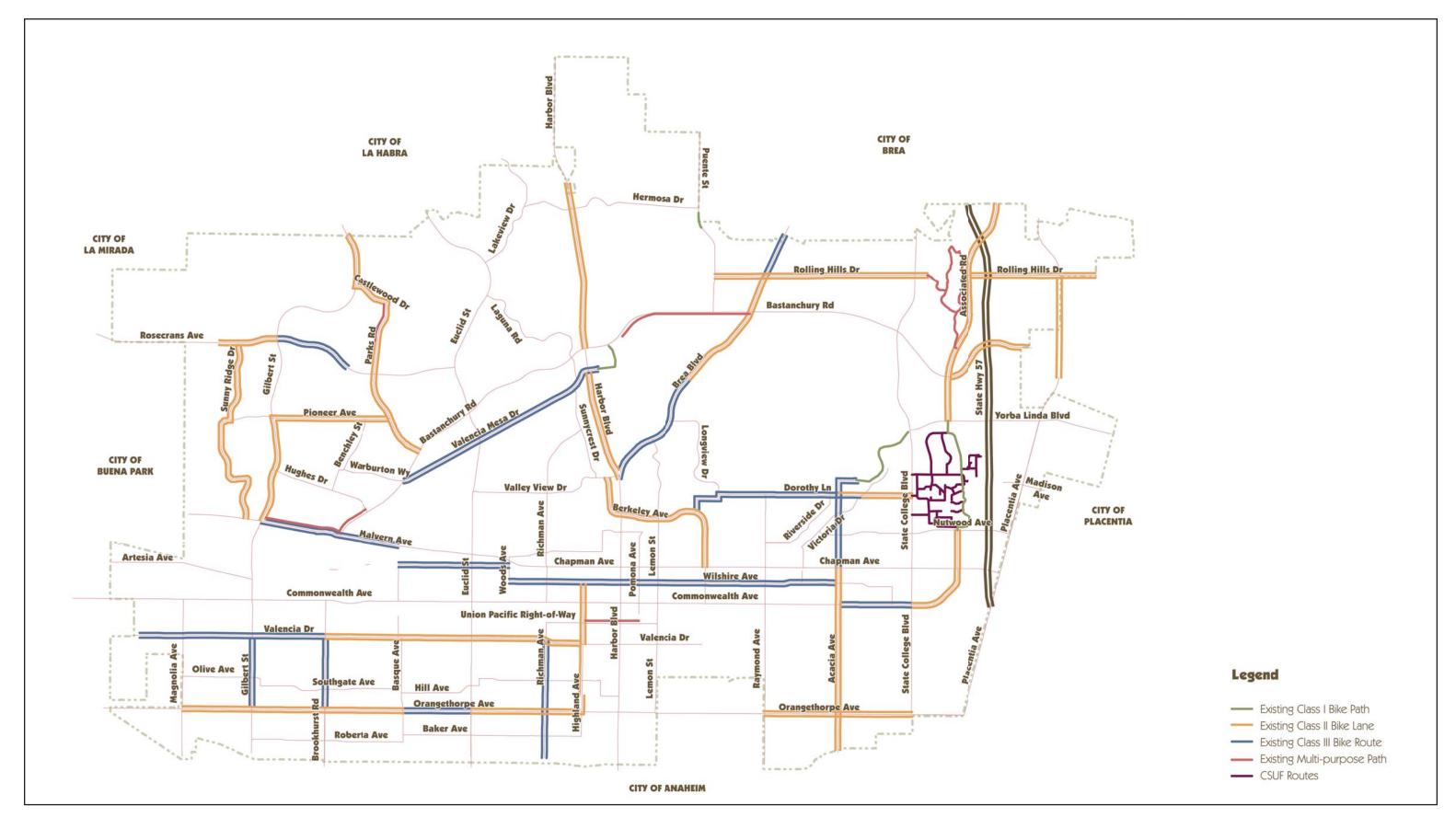
Inventory of Existing Conditions

An inventory of existing conditions was conducted to determine the location and condition of the City's bikeways facilities, and to record a variety of aspects pertaining to the bikeways network. The methodology and approach to the inventory are discussed in the Bikeways Master Plan. Fullerton's current bikeways network consists of approximately 4.59 miles of Class I off-street bikeways and paved multi-purpose paths, 20.46 miles of Class II on-street bicycle lanes, and 12.20 miles of Class III on-street bicycle routes. Exhibit 5.4-4, Existing Bikeways Network, illustrates the City's existing bikeways.

Existing Off-Street Bikeways

Class I bikeways (also called "bike paths") provide a separated right-of-way for the exclusive use of bicycles and pedestrians, where cross flow traffic is minimized to the greatest extent possible. Per State of California Department of Transportation (Caltrans) standards, Class I bikeways are built to a minimum standard 8-foot paved width with an additional 2-foot clear space on each side. The preferred width is 12 feet of pavement. Fullerton also has a number of multipurpose paths that do not meet Caltrans design standards, but are useful for bicyclists, as well as other non-motorized users.

Class I bikeways and paved multipurpose paths differ from earthen recreational trails in that recreational trails are intended to be a self-contained network connecting pedestrians, equestrians, and recreational bicyclists to areas of scenic and natural value. Mountain bicyclists can use this network to connect to on-street facilities. While these unpaved trails indirectly work in conjunction with the bikeway system, they do not fall within the scope of this Bicycle Element or the parameters of a Class I bikeway per the Caltrans definition. While recreational trails provide vital leisure and health opportunities in Fullerton, they are not designed for high-speed bicycle travel or use by bicycle commuters. In Fullerton, Class I bikeways account for only 1.44 miles (or 2.0 percent) of the existing bikeways network. Class I segments and paved multipurpose paths within Fullerton are identified in Exhibit 5.4-4, and include those outlined in Table 5.4-6, Off-Road Bikeways.



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THE FULLERTON PLAN 2030 PROGRAM ENVIRONMENTAL IMPACT REPORT **Existing Bikeways Network**

Traffic and Circulation



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Table 5.4-6
Off-Road Bikeways

Path	From	То	Facility Type			
Brea Creek/ Malvern Avenue	Bastanchury Road	Gilbert Street	 Paved multipurpose path exists along north side 			
Craig Regional Park loop path			Class 1 and paved multipurpose paths			
Fullerton Creek bike path	Melody Lane	State College Boulevard	Paved multi-purpose bike pathBridge connecting bike path to Old River Road			
North-south paths through CSU Fullerton	Nutwood Avenue	Yorba Linda Boulevard	 County-wide path through campus; additional campus paths throughout; dismount zones are located in the center of campus 			
East-west paths through CSU Fullerton	Dorothy Lane/State College Boulevard	Gymnasium Campus Drive	Campus bike paths; campus center is restricted to bicycles			
Bastanchury Road Malvern Avenue Hug		Hughes Drive	Paved multi-purpose path exists along north side			
Parks Road	Parks Road Castlewood Drive Avenida Del Norte		 Paved multi-purpose path exists along west side 			
Union Pacific RR Right- of-Way Multi-purpose Path	Harbor Boulevard	Highland Avenue	Paved multi-purpose path			

Existing On-Street Bike Lanes and Routes

Existing on-street bikeways consist of both Class II and Class III facilities and are present throughout the City. Class II bikeways (also called "bike lanes") provide a striped lane for one-way bicycle travel on a street or highway. Class II bikeways are primarily present on major and primary arterials. In Fullerton, Class II bikeways account for 37.08 miles (or 53 percent) of the existing bikeways network and are illustrated on Exhibit 5.4-4.



Class III bikeways (called "bike routes") are streets that bicyclists share with motor vehicle traffic. These facilities are marked by signage. They may also be marked with pavement markers called "sharrows." In Fullerton, Class III bikeways account for 31.74 miles (or 45 percent) of the existing bikeways network and are identified on <u>Exhibit 5.4-4</u>.

In Fullerton, Class II and Class III bikeways provide the primary network for bicyclists traveling throughout the City. <u>Table 5.4-7</u>, <u>Existing Bikeways</u>, outlines existing Class II and Class III bikeways along with their beginning and ending points.

Table 5.4-7 Existing Bikeways

Street	From	То	Facility Type			
East-West On-Street Bikeways						
Rolling Hills Drive	Puente Street	Hickory Place	6'-wide Class II bike lanes			
Rolling Hills Drive	Associated Road	Tri-City Park	6'-wide Class II bike lanesA painted hatched out buffer exists			
Bastanchury Road	Associated Road	Placentia city limit	Class II bike lanes			
Rosecrans Avenue	Fire Road	Camino Centrolama	 Class II bike lanes from Fire Road to Gilbert Street; Class III bike route from Gilbert Street to Camino Centrolama 			
Pioneer Avenue	Gilbert Street	Parks Road	6'- wide Class II bike lanes			
Valencia Mesa Drive	Bastanchury Road	Youth Way	Class III bike route			
Berkeley Avenue	West Valley View Drive	Chapman Avenue	Class II bike lanes			
Dorothy Lane	Berkeley Avenue	State College Boulevard	 Class II bike lane on north side from Acacia Avenue to Victoria Drive Class II bike lanes from Victoria Drive to State College Boulevard Class III bike route on south side from Acacia Avenue to Victoria Drive Class III bike route from Berkeley Avenue to Acacia Avenue 			
Malvern Avenue	Gilbert Street	Basque Avenue	 Class III bike route No facilities eastbound Gilbert Street to Basque Avenue 			
Chapman Avenue/ Wilshire Avenue	Basque Avenue	Acacia Avenue	Class III bike route			
Commonwealth Avenue	Acacia Avenue	Nutwood Avenue	 Class III bike route from Acacia Avenue to State College Boulevard Class II bike lanes from State College Boulevard to Nutwood Avenue The bike lane between State College Boulevard and Chapman Avenue is shared with parked cars 			
Valencia Drive	Buena Park city limit	Highland Avenue	 Class II bike lanes from Brookhurst Road to Highland Avenue Class III bike route from Buena Park city limit to Brookhurst Avenue 			



Table 5.4-7 [continued] Existing Bikeways

Street	From	То	Facility Type
Orangethorpe Avenue	Magnolia Avenue	State College Boulevard	 Class II bike lanes from State College Boulevard to Raymond Avenue Class II bike lanes from Highland Avenue to Euclid Street Class III bike route from Euclid Street to Basque Avenue Class II bike lanes from Basque Avenue to Magnolia Avenue
North-South On-Str			
Sunny Ridge Drive	Rosecrans Avenue	Malvern Avenue	Class II bike lanes
Gilbert Street	La Habra city limit	Orangethorpe Boulevard	 8'-wide Class II bike lanes from La Habra city limit to Castlewood Drive Narrow Class II bike lanes from Pioneer Avenue to Malvern Avenue Class III bike route from Valencia Drive to Orangethorpe Avenue – needs more signs
Parks Road/ Castlewood Drive	Gilbert Street	Bastanchury Road	 Class II bike lanes Multi-purpose trail on west side north of Avenida del Norte
Brookhurst Road	Orangethorpe Avenue	Valencia Drive	Class III bike route
Richman Avenue	Valencia Drive	CA-91	Class III bike route
Highland Avenue	Chapman Avenue	Orangethorpe Avenue	 Class II bike lanes from Wilshire Avenue to Valencia Drive Class II bike lane from Hill Avenue to Valencia Drive on southbound side only Class II bike lane from Orangethorpe Avenue to Hill Avenue on northbound side only
Harbor Boulevard	La Habra city limit	Brea Boulevard	 Class II bike lanes from La Habra city limit to Bastanchury Road Class II bike lanes from Valencia Mesa Drive to Valley View Drive Class II bike lane on southbound side only from West Valley View Drive to Brea Boulevard
Brea Boulevard	Brea city limit	Harbor Boulevard	 Class III bike route from Brea city limit to Rolling Hills Drive Class II bike lanes from Rolling Hills Drive to just north of Panorama Road Class III bike route from just north of Panorama Road to Harbor Boulevard
Melody Lane/ Acacia Avenue	Fullerton Creek	Anaheim city limit	 Class III bike route from Fullerton Creek on Melody Lane and on Acacia Avenue from Melody Lane to Chapman Avenue Class II bike lanes from Chapman Avenue to Anaheim city limit
Associated Road	Brea city limit	Yorba Linda Boulevard	Class II bike lanes



Bikeway Plans of Neighboring Cities

Some of Fullerton's neighboring cities have bicycle plans that link to Fullerton's bikeways.

- City of Anaheim has proposed bike lanes on Brookhurst Street that will connect to those planned on Brookhurst Street in Fullerton. The also have planned bike lanes on East Street that will link to bike lanes on Raymond Avenue in Fullerton, with a short gap between the city limits and La Palma Avenue.
- City of Brea has bike lanes on State College Boulevard that will link with planned bike lanes on State College Boulevard in Fullerton. Brea has bike lanes on Associated Road that presently continue in Fullerton. The City of Brea plans to put a bike route on Brea Boulevard that will connect to bike lanes in Fullerton. Brea plans a bike path along Puente Street that will hook up with the planned bike route in Fullerton. They also plan bike paths in Arovista Park that will link with a bike path that Fullerton is planning, as well as paths that will link with our multipurpose paths in Craig Regional Park.
- City of Buena Park has no adopted bicycle plan or planned bikeways.
- City of La Habra has existing bike lanes on Idaho Street that connect with both existing and proposed bike lanes on Gilbert Street. It also has bike lanes on Euclid Street that link with proposed bike lanes on Euclid Street in Fullerton. Thirdly, bike lanes on Montwood Avenue will connect directly to a future Class III bike route on Lakeview Drive.
- City of La Mirada has an existing bike route that will join the planned bike lanes on Rosecrans Avenue.
- City of Placentia has bike lanes on Golden Avenue to continue onto Rolling Hills Drive in Fullerton. They also have bike lanes on Bastanchury Road that will link to those in Fullerton when they are striped. Their bike route on Primrose Avenue will connect to bike lanes on Nutwood Avenue when they go in. Placentia has a bike route on Chapman Avenue that will link to the future bike route on Chapman Avenue. They plan bike lanes on Orangethorpe Avenue that will connect to existing bike lanes in Fullerton. Last, Placentia plans a bike route on Madison Avenue that will hook up with proposed bike lanes on Madison Avenue in Fullerton.

Additionally, a coordinated Fourth Supervisorial District Bikeways Collaborative was initiated in 2011 with OCTA, the County of Orange, Caltrans, and the cities of Anaheim, Buena Park, Fullerton, La Habra, and Placentia in order to identify, prioritize, and implement regional bikeway improvements. The efforts resulted in the *Fourth District Bikeways Strategy*, which focuses on ten regional bikeway corridors that would help to improve bikeways connectivity in the Fourth Supervisorial District. The ten regional corridors combine existing bikeway facilities with new proposed segments. Many of these corridors build on existing and proposed bikeways identified in the 2009 OCTA Commuter Bikeways Strategic Plan (CBSP).



The improvements proposed along the ten corridors include implementing new bikeway facilities and upgrading existing facilities to provide enhanced striping, signage, or safety features for cyclists. Class I off-street, paved bikeways are proposed along off-street sections of the corridors (typically along flood control channels, through parks, or within railroad rights-of-way). On-street segments are proposed to include Class II on-street bike lanes where street, bridge, and right-of-way widths permit. In constrained locations, Class III bikeways may be provided.

Selected on-street segments along lower traffic volume and lower speed streets (below 35 miles per hour) may also be candidates for bicycle boulevards.

5.4.4 SIGNIFICANCE THRESHOLDS AND CRITERIA

Appendix G of the CEQA Guidelines contains the Initial Study Environmental Checklist, which was included with the Notice of Preparation to show the areas being analyzed within the EIR; refer to Appendix A of this EIR. The Initial Study includes questions relating to traffic and circulation. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this Section. Accordingly, a project would typically have a significant impact on traffic and circulation if the project would result in any of the following:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; and/or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

5.4.5 PROJECT IMPACTS AND MITIGATION MEASURES

TRAFFIC OPERATIONS

■ IMPLEMENTATION OF THE FULLERTON PLAN COULD CONFLICT WITH AN APPLICABLE PLAN, ORDINANCE, OR POLICY ESTABLISHING MEASURES OF EFFECTIVENESS FOR INTERSECTIONS.

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Impact Analysis:

FORECAST METHODOLOGY

Analysis of projected traffic conditions at build-out of the City was conducted to determine whether or not the City's planned circulation system can accommodate the future traffic demands of build-out of the City, including changes proposed by The Fullerton Plan. Buildout assumes that the City will build out to its General Plan potential and, in addition, that the proposed land use intensity for the Focus Areas are realized. Study intersection analysis for the buildout conditions is conducted using existing lane configurations in order to determine the necessary intersection improvements to accommodate trips generated from The Fullerton Plan Focus Areas, independent of previous study recommendations.

Baseline General Plan forecasts were derived from the City's traffic analysis software (Traffix), which is maintained by Albert Grover and Associates (AGA). At most arterial intersections, future buildout year 2030 traffic volumes include an ambient growth factor of 10 percent for through movements and 5 percent for turning movements from the existing traffic volumes. There are some exceptions, such as at freeway ramps, T-intersections, and in the industrial areas of the City. New trips generated by potential development in the Focus Areas are then added to the base volumes, as described below.

Focus Area Trip Generation

Twelve geographic focus areas have been identified in the City within which to concentrate future community-based planning efforts; refer to Exhibit 3-4. The Fullerton Plan anticipates future growth to occur within these areas.

For the analysis of future traffic conditions, each Focus Area is broken into a number of sub-areas. Each sub-area was quantified in terms of its proposed 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.). Sub-areas were further divided or combined into Traffic Analysis Zones (TAZ) as appropriate.

The trip-making potential is quantified by TAZ, sub-area, and Focus Area, first by applying standard trip generation rates for each land use, and then applying appropriate factors to account for pass-by potential and for the mixed-use nature of the proposed land uses. With regard to trip-generating potential, one characteristic of multi-use developments is the potential for beneficial interactions among site uses in terms of walk/bike trips or shared vehicular trips between land uses. These interactions represent the potential for a reduction in the number of new trips assumed for the new development.

For example, residents of the proposed residential developments may also patronize the proposed new commercial development. Vehicular trips between the residential and commercial zones could be contained within the project area, and would not contribute to traffic growth at off-site intersections. Walking and biking trips between uses would represent elimination of a vehicular trip altogether. Shuttle activity between educational institutions and the commercial centers would further reduce vehicular trips. This potential for reduction in vehicular trips is known as internal capture. As a result of these factors, the total inbound and outbound vehicular trips for the project may be reduced. Varying internal capture factors were



applied to the different Focus Areas, depending on the mix, proximity, and quantity of complementary uses proposed.

It is also recognized that not all trips into and out of the area will be "new" trips on the roadway system. Some trips to the project area will consist of "pass-by" trips – motorists who are already traveling on the surrounding roadways from one place to another, and who stop at another land use on their way. Common pass-by trips for a commercial center would be individuals who stop to shop or run errands on their way to or from work or school.

Although the trip generation for the Focus Areas does consider some trip reductions associated with internal capture and "pass-by" trips, it is noted that the Institute of Transportation Engineers (ITE) Trip Generation rates are based on traffic surveys of land uses across the country, which have been conducted at a time when the automobile is the predominant mode of travel. Thus, the trip generation rates do not reflect the potential traffic benefits of the emerging sustainability mentality and a society trending toward multi-modal solutions, such as enhanced pedestrian, bicycle, and transit; improved connectivity between rail or transit centers and target destinations; shorter commute trips; an aging population with reduced driving habits; and other emerging trends.

The number of trips that could be expected to be generated by the potential development identified in the Focus Areas was calculated and is summarized in <u>Table 5.4-8</u>, <u>Focus Area Peak Hour Trip Generation</u>. As indicated in <u>Table 5.4-8</u>, the proposed land use mix for the Focus Areas has the potential to generate approximately 16,493 new trips citywide in the morning peak hour, and approximately 20,530 new trips in the evening peak hour.

BUILDOUT TRAFFIC CONDITIONS

The additional trips that would be generated by buildout of the Focus Areas were estimated and distributed on the surrounding road network. Interaction between complementary land uses within the City, and pass-by assumptions were taken into account in the distribution and assignment of traffic; refer to Appendix C.

Buildout Traffic Conditions at Intersections

Intersection analysis was conducted for buildout conditions using buildout forecast traffic volumes with existing lane configurations. <u>Table 5.4-9</u>, <u>Buildout Peak Hour Intersection Operations</u>, identifies the LOS for the study intersections using the HCM methodology.

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Table 5.4-8
Focus Area Peak Hour Trip Generation

Footio Aron	Land Use	Doily	A	M Peak Ho	ur	P	PM Peak Ho	ur
Focus Area		Daily	ln	Out	Total	In	Out	Total
West Coyote Hills								
Residential		7,273	143	428	570	484	284	768
Commercial		2,918	41	27	68	124	129	253
Church		-93	-4	-2	-6	-3	-3	-6
Government Fa	acilities	132	16	2	19	3	15	18
Internal Cap.		-512	-10	-23	-33	-30	-21	-52
Pass-by						-42	-44	-86
	Total	9,718	186	432	618	<i>536</i>	360	895
Transportation Center								
Residential		10,374	159	636	796	629	339	967
Commercial		9,447	134	86	220	402	419	821
Office		1,101	136	19	155	25	124	149
Internal Cap.		-2,511	-51	-89	-141	-127	-106	-232
Pass-by						-137	-142	-279
	Total	18,411	378	652	1,030	792	634	1426
Airport Industrial								
Residential		584	10	36	45	35	19	55
Commercial		-1,525	-21	-13	-36	-65	-68	-133
Office		2,491	308	42	351	58	280	337
Industrial		425	50	8	56	7	52	59
Internal Cap.		-263	-13	-6	-19	-11	-17	-27
Pass-by		0	0	0	0	22	23	45
	Total	1,712	334	67	397	46	289	336
Chapman Corridor								
Residential		1945	30	120	150	118	65	181
Commercial		11,177	158	102	260	477	496	971
Office		2,220	274	37	312	52	249	300
Industrial		-100	-12	-2	-13	-2	-12	-14
	Sub-Total	15,242	450	257	709	645	798	1,438
Internal Cap.		-744	-22	-13	-32	-32	-39	-70
Pass-by		0	0	0	0	-161	-168	-330
	Total	14,498	428	244	677	452	591	1,038
Commonwealth Corrido	or		T	_	1			
Residential		3,399	55	211	259	209	113	316
Commercial		1,876	26	16	42	81	82	163
Office		4,656	577	81	655	107	524	630
Industrial		-358	-42	-5	-47	-6	-44	-50
Government Fa		162	21	2	23	3	18	21
	Sub-Total	9,735	637	305	932	394	693	1,080
Internal Cap.		-469	-23	-9	-32	-19	-29	-48
Pass-by		0	0	0	0	-26	-27	-56
	Total	9,266	614	296	900	349	637	976



Table 5.4-8 [continued] Focus Area Peak Hour Trip Generation

F	l and the	Deil	A	M Peak Ho	ur	Р	M Peak Ho	ur
Focus Area	Land Use	Daily	In	Out	Total	ln	Out	Total
Downtown								
Residential		6,277	97	384	481	383	209	590
Commercial		-231	-3	-1	-5	-9	-10	-21
Office		2,570	317	43	362	60	288	349
Industrial		-262	-30	-4	-35	-4	-32	-37
Education		9,487	670	167	837	251	586	837
Government F	acilities	39	5	1	6	1	4	5
	Sub-Total	17,880	1,056	590	1,646	682	1,045	1,723
Internal Cap.		-491	-7	-14	-22	-24	-20	-43
Pass-by		0	0	0	0	3	3	7
	Total	17,389	1,049	576	1,624	661	1,028	1,687
Education								
Residential		8,333	129	510	640	507	273	783
Commercial		16,711	238	152	390	710	740	1,451
Office		7,612	943	129	1,070	175	855	1,030
	Sub-Total	32,656	1,310	791	2,100	1,392	1,868	3,264
Internal Cap.		-2,902	-102	-73	-174	-127	-156	-284
Pass-by		0	0	0	0	-241	-252	-492
,	Total	29,754	1,208	718	1,926	1,024	1,460	2,488
Harbor Gateway	•							
Residential		17,014	262	1,044	1,306	1,032	558	1,589
Commercial		29,892	425	272	696	1,271	1,326	2,597
Office		8,167	1,013	138	1,150	188	917	1,104
Industrial		17	2	1	3	1	3	2
	Sub-Total	55,090	1,702	1,455	3,155	2,492	2,804	5,292
Internal Cap.		-9,861	-310	-230	-538	-435	-511	-947
Pass-by		0	0	0	0	-432	-450	-882
	Total	45,229	1,392	1,225	2,617	1,625	1,843	3,463
North Harbor								•
Residential		1,598	24	99	124	97	53	149
Commercial		5,836	83	54	136	248	258	507
Office		8,117	1,007	137	1,143	187	912	1,100
	Sub-Total	15,551	1,114	290	1,403	532	1,223	1,756
Internal Cap.		-1,353	-103	-27	-131	-47	-111	-156
Pass-by		0	0	0	0	-85	-88	-173
	Total	14,198	1,011	263	1,272	400	1,024	1,427
North Industrial								
Residential		7,592	117	465	583	459	248	707
Commercial		15,579	222	142	363	664	690	1,354
Office		8,923	1,105	152	1,256	206	1,003	1,208
Industrial		1,264	147	19	167	22	155	175
	Sub-Total	33,358	1,591	778	2,369	1,351	2,096	3,444
Internal Cap.		-6,113	-226	-132	-359	-258	-342	-601
Pass-by		0	0	0	0	-226	-235	-460
	Total	27,245	1,365	646	2,010	867	1,519	2,383



Table 5.4-8 [continued] Focus Area Peak Hour Trip Generation

Footio Area	Londilloo	Doily	AM Peak Hour			PM Peak Hour			
Focus Area	Land Use	Daily	In	Out	Total	ln	Out	Total	
Orangethorpe Corridor	Nodes								
Residential		4,652	72	287	359	285	153	436	
Commercial		23,233	332	212	543	991	1,031	2,020	
Office		2,280	285	41	322	54	258	309	
	Sub-Total	30,165	689	540	1,224	1,330	1,442	2,765	
Internal Cap.		-2,747	-69	-55	-123	-124	-134	-255	
Pass-by		0	0	0	0	-336	-351	-688	
	Total	27,418	620	485	1,101	870	957	1,822	
Southeast Industrial									
Residential		1,337	20	84	102	82	44	125	
Commercial		5,128	74	45	118	217	228	446	
Office		-120	-14	-2	-15	-3	-14	-15	
Industrial		17,747	2,062	280	2,342	300	2,172	2,470	
	Sub-Total	24,092	2,142	407	2,547	596	2,430	3,026	
Internal Cap.		-2,361	-188	-38	-226	-64	-221	-285	
Pass-by		0	0	0	0	-74	-78	-152	
	Total	21,731	1,954	369	2,321	458	2,131	2,589	
TOTAL		236,569	10,539	5,973	16,493	8,080	12,473	20,530	



Table 5.4-9 Buildout Peak Hour Intersection Operations

Intersection			А	M Peak Hou	ır	PM Peak Hour		
Number	Intersection	Control	ICU	Delay	LOS	ICU	Delay	LOS
1.	Lambert Street at Harbor Boulevard	S	0.93	50.0	D	1.07	79.0	F
2.	Imperial Highway at Harbor Boulevard*	S	1.05	61.0	F	0.96	56.0	Е
3.	Imperial Highway at Palm Street	S	1.02	50.0	F	1.11	74.0	F
4.	Imperial Highway at Associated Road	S	0.75	37.0	D	0.93	48.0	D
5.	Rosecrans Avenue at Gilbert Street	S	1.00	67.0	F	0.93	44.0	D
6.	Rosecrans Avenue at Parks Drive	S	0.86	21.0	С	0.33	13.0	В
7.	Rosecrans Avenue at Euclid Street	S	0.80	26.0	С	0.56	20.0	В
8.	Pioneer Road at Gilbert Street	S	0.55	22.0	С	0.60	24.0	С
9.	Pioneer Road at Parks Drive	S	0.47	16.0	В	0.18	13.0	В
10.	Bastanchury Road at Parks Drive	S	0.53	23.0	С	0.29	12.0	В
11.	Bastanchury Road at Euclid Street	S	0.79	40.0	D	0.92	48.0	D
12.	Bastanchury Road at Harbor Boulevard	S	1.08	97.0	F	1.04	84.0	F
13.	Bastanchury Road at Brea Boulevard	S	0.83	39.0	D	0.86	39.0	D
14.	Bastanchury Road at State College Blvd	S	0.73	33.0	С	0.85	58.0	Е
15.	Bastanchury Road at Associated Road	S	0.99	53.0	D	0.81	39.0	D
16.	Yorba Linda Boulevard at Placentia Avenue	S	0.76	39.0	D	1.00	85.0	F
17.	Yorba Linda Boulevard at State College Blvd	S	0.80	38.0	D	0.89	38.0	D
18.	Yorba Linda Boulevard at Associated Road	S	0.96	59.0	Е	1.25	128.0	F
19.	Brea Boulevard at Harbor Boulevard	S	0.99	69.0	E	1.08	88.0	F
20.	Berkeley Street at Harbor Boulevard	S	0.85	44.0	D	1.02	90.0	F
21.	Berkeley Street at Lemon Street	S	0.60	32.0	С	0.63	32.0	С
22.	Malvern Avenue at Gilbert Street	S	1.12	89.0	F	1.00	56.0	F
23.	Malvern Avenue at Bastanchury Road	S	0.87	47.0	D	0.92	63.0	Е
24.	Malvern Avenue at Euclid Street	S	1.06	71.0	F	0.96	58.0	Е
25.	Chapman Avenue at Harbor Boulevard**	S	1.00	58.0	F	1.16	103.0	F
26.	Chapman Avenue at Lemon Street	S	0.62	29.0	С	0.74	32.0	С
27.	Chapman Avenue at Berkeley Street	S	0.51	17.0	В	0.68	18.0	В
28.	Chapman Avenue at Raymond Avenue	S	0.91	71.0	E	0.95	75.0	Е
29.	Chapman Avenue at Acacia Street	S	0.58	16.0	В	0.71	21.0	С
30.	Chapman Avenue at State College Boulevard	S	1.11	99.0	F	1.28	145.0	F
31.	Chapman Avenue at Commonwealth Avenue	S	1.08	59.0	F	1.36	166.0	F
32.	Chapman Avenue at Placentia Avenue	S	0.83	39.0	D	0.90	47.0	D
33.	Nutwood Avenue at State College Boulevard	S	1.00	43.0	F	1.02	48.0	F
34.	Nutwood Avenue at Commonwealth Avenue	S	0.28	14.0	В	0.33	14.0	В
35.	Nutwood Avenue at Placentia Avenue	S	0.84	22.0	С	0.86	28.0	С
36.	Commonwealth Avenue at Dale Street	S	0.48	18.0	В	0.48	15.0	В
37.	Commonwealth Avenue at Magnolia Street	S	0.70	25.0	С	0.76	26.0	С
38.	Commonwealth Avenue at Gilbert Street	S	0.65	44.0	D	1.02	73.0	F
39.	Commonwealth Avenue at Brookhurst Street	S	0.70	30.0	С	0.69	29.0	С



Table 5.4-9 [continued] Buildout Peak Hour Intersection Operations

Intersection			A	M Peak Hou	ır	PM Peak Hour		
Number	Intersection	Control	ICU	Delay	LOS	ICU	Delay	LOS
40.	Commonwealth Avenue at Euclid Street	S	1.00	54.0	F	1.01	61.0	F
41.	Commonwealth Avenue at Highland Street	S	0.55	17.0	В	0.91	20.0	В
42.	Commonwealth Avenue at Harbor Blvd**	S	1.01	52.0	F	1.27	127.0	F
43.	Commonwealth Avenue at Lemon Street	S	0.87	36.0	D	0.89	42.0	D
44.	Commonwealth Avenue at Raymond Avenue	S	0.81	34.0	С	0.94	43.0	D
45.	Commonwealth Avenue at Acacia Street	S	0.37	14.0	В	0.55	15.0	В
46.	Commonwealth Avenue at State College Blvd	S	0.85	29.0	С	0.94	61.0	Е
47.	Valencia Drive at Magnolia Street	S	0.72	15.0	В	0.97	22.0	С
48.	Valencia Drive at Brookhurst Street	S	0.61	26.0	С	0.90	74.0	Е
49.	Valencia Drive at Euclid Street	S	0.96	71.0	E	0.95	49.0	D
50.	Valencia Drive at Highland Street	S	0.46	18.0	В	0.55	19.0	В
51.	Orangethorpe Avenue at Magnolia Street	S	0.90	39.0	D	0.93	44.0	D
52.	Orangethorpe Avenue at Brookhurst Street	S	0.79	32.0	С	0.72	32.0	С
53.	Orangethorpe Avenue at Euclid Street	S	0.91	40.0	D	0.94	51.0	D
54.	Orangethorpe Avenue at Highland Street	S	0.58	23.0	С	0.55	16.0	В
55.	Orangethorpe Avenue at Harbor Boulevard*	S	0.87	56.0	Е	1.17	95.0	F
56.	Orangethorpe Avenue at Lemon Street	S	0.91	42.0	D	1.24	120.0	F
57.	Orangethorpe Avenue at Raymond Avenue	S	0.71	34.0	С	0.87	41.0	D
58.	Orangethorpe Avenue at Acacia Street	S	0.65	12.0	В	0.57	15.0	В
59.	Orangethorpe Avenue at State College Blvd*	S	1.34	150.0	F	0.95	46.0	D
60.	Orangethorpe Avenue at Placentia Avenue	S	0.76	38.0	D	0.75	40.0	D
61.	Imperial Highway at Euclid Street	S	0.87	42.0	D	0.79	42.0	D
62.	Imperial Highway at Brea Boulevard	S	0.91	64.0	Е	0.94	58.0	Е
63.	Imperial Highway at Kraemer Boulevard	S	0.82	43.0	D	0.86	45.0	D
64.	Rosecrans Avenue at Beach Boulevard	S	0.84	46.0	D	0.92	48.0	D
65.	Yorba Linda Blvd at Kraemer Boulevard	S	0.73	37.0	D	0.97	46.0	D
66.	La Palma Avenue at Brookhurst Street	S	0.66	37.0	D	0.77	42.0	D
67.	La Palma Avenue at Euclid Street	S	0.89	46.0	D	0.92	52.0	D
68.	La Palma Avenue at Harbor Boulevard	S	0.62	33.0	С	0.97	52.0	D
69.	La Palma Avenue at Lemon Street	S	0.84	41.0	D	1.05	66.0	F
70.	La Palma Avenue at Raymond Ave/East St	S	0.79	48.0	D	0.92	59.0	Е
71.	La Palma Avenue at State College Boulevard	S	0.87	49.0	D	1.12	96.0	F
72.	Imperial Highway at SR-57 SB Ramps*	S	0.74	23.0	С	0.72	22.0	С
73.	Imperial Highway at SR-57 NB Ramps*	S	0.80	31.0	С	0.97	32.0	С
74.	Yorba Linda Blvd at SR-57 SB Ramps	S	0.59	20.0	В	0.89	33.0	С
75.	Yorba Linda Blvd at SR-57 NB Ramps	S	0.68	22.0	С	0.76	25.0	С
76.	Nutwood Avenue at SR-57 SB Ramps	S	0.54	27.0	С	0.72	29.0	С
77.	Nutwood Avenue at SR-57 NB Ramps	S	0.82	32.0	С	0.69	26.0	С
78.	Chapman Avenue at SR-57 SB Ramps	S	0.93	29.0	С	1.25	105.0	F



Table 5.4-9 [continued] **Buildout Peak Hour Intersection Operations**

Intersection	Interception	Control	А	M Peak Hoι	ır	PM Peak Hour		
Number	Intersection		ICU	Delay	LOS	ICU	Delay	LOS
79.	Chapman Avenue at SR-57 NB Ramps	S	1.01	50.0	F	1.25	114.0	F
80.	Orangethorpe Avenue at SR-57 SB Ramps*	S	0.64	30.0	С	0.66	33.0	С
81.	Orangethorpe Avenue at SR-57 NB Ramps*	S	0.67	23.0	С	0.90	31.0	С
82.	SR-91 WB Ramps at Magnolia Street	S	0.73	20.0	В	0.66	17.0	В
83.	I-5 NB Off-ramp/Buckingham at Magnolia St	S	0.93	36.0	D	0.98	44.0	D
84.	I-5 SB/SR-91 EB Off-ramp at Magnolia Street	S	0.66	22.0	С	0.95	37.0	D
85.	SR-91 WB Ramps at Brookhurst Street	S	0.51	20.0	В	0.63	23.0	С
86.	SR-91 EB Ramps at Brookhurst Street	S	0.76	26.0	С	0.88	39.0	D
87.	SR-91 WB Ramps at Euclid Street	S	0.80	23.0	С	0.97	37.0	D
88.	SR-91 EB Ramps at Euclid Street	S	0.60	18.0	В	0.66	22.0	С
89.	SR-91 WB Ramps at Harbor Boulevard*	S	0.68	19.0	В	0.75	20.0	В
90.	SR-91 EB Ramps at Harbor Boulevard*	S	0.65	25.0	С	0.72	25.0	С
91.	SR-91 WB Ramps at Lemon Street	S	0.89	31.0	С	1.11	72.0	F
92.	SR-91 EB Ramps at Lemon Street	S	0.78	30.0	С	0.92	35.0	С
93.	SR-91 WB Ramps at Raymond Avenue	S	0.73	26.0	С	1.01	33.0	F
94.	SR-91 EB Ramps at Raymond Avenue	S	0.89	37.0	D	0.78	32.0	С
95.	SR-91 WB Ramps at State College Blvd*	S	0.69	23.0	С	0.94	25.0	С
96.	SR-91 EB Ramps at State College Boulevard*	S	0.65	26.0	С	0.69	24.0	С
	Imperial Highway at Beach Boulevard*1	S	0.71	43.0	D	0.84	50.0	D

S = Signalized, U = Unsignalized, * = CMP Intersection, ** = Located within Historic Downtown area. Intersection delay is expressed in average seconds of delay per vehicle during the peak hour.

As indicated in <u>Table 5.4-9</u>, the following 35 intersections would operate at an unacceptable LOS (LOS F for CMP intersections, LOS E or worse for all other intersections) in one or both peak hours:

- Lambert Road and Harbor Boulevard (PM peak hour) (#1)
- Imperial Highway and Harbor Boulevard (AM and PM peak hours) (#2)
- Imperial Highway at Palm Street (AM and PM Peak Hours) (#3)
- Rosecrans Avenue at Gilbert Street (AM Peak Hour) (#5)
- Bastanchury Road at Harbor Boulevard (AM and PM Peak Hours) (#12)
- Bastanchury Road at State College Boulevard (PM Peak Hour)(#14)
- Yorba Linda Boulevard at Placentia Avenue (AM and PM Peak Hours) (#16)
- Yorba Linda Boulevard at State College Boulevard (PM Peak Hour) (#17)
- Brea Blvd at Harbor Boulevard (AM and PM Peak Hours) (#19)
- Berkeley Street at Harbor Boulevard (PM Peak Hour) (#20)
- Malvern Avenue at Gilbert Street (AM and PM Peak Hours) (#22)
- Malvern Avenue at Bastanchury Road (PM Peak Hour) (#23)

^{1.} This intersection was added to the study area upon request from the City of La Habra and is not identified on the exhibits; refer to Appendix C of the Draft EIR.



- Malvern Avenue at Euclid Street (AM and PM Peak Hours) (#24)
- Chapman Avenue at Harbor Boulevard (AM and PM Peak Hours) (#25)
- Chapman Avenue at Raymond Avenue (AM and PM Peak Hours) (#28)
- Chapman Avenue at State College Boulevard (AM and PM Peak Hours) (#30)
- Chapman Avenue at Commonwealth Avenue (AM and PM Peak Hours) (#31)
- Nutwood Avenue at State College Boulevard (AM and PM Peak Hours) (#33)
- Commonwealth Avenue at Gilbert Street (PM Peak Hour) (#38)
- Commonwealth Avenue at Euclid Street (AM and PM Peak Hours) (#40)
- Commonwealth Avenue at Harbor Boulevard (AM and PM Peak Hours) (#42)
- Commonwealth Avenue at State College Boulevard (PM Peak Hour) (#46)
- Valencia Drive at Brookhurst Road (PM Peak Hour) (#48)
- Valencia Drive at Euclid Street (AM Peak Hour) (#49)
- Orangethorpe Avenue at Harbor Boulevard (AM and PM Peak Hours) (#55)
- Orangethorpe Avenue at Lemon Street (PM Peak Hour) (#56)
- Orangethorpe Avenue at State College Boulevard (AM Peak Hour) (#59)
- Imperial Highway at Brea Boulevard (AM and PM Peak Hours) (#62)
- La Palma Avenue at Lemon Street (PM Peak Hour) (#69)
- La Palma Avenue at Raymond Avenue/East Street (PM Peak Hour) (#70)
- La Palma Avenue at State College Boulevard (PM Peak Hour) (#71)
- Chapman Avenue at SR-57 SB Ramps (PM Peak Hour) (#78)
- Chapman Avenue at SR-57 NB Ramps (AM and PM Peak Hours) (#79)
- SR-91 WB Ramps at Lemon Street (PM Peak Hour) (#91)
- SR-91 WB Ramps at Raymond Avenue (PM Peak Hour) (#94)

It should be noted that the results of the buildout analysis are based on a traditional traffic volume "build-up method," in which a straight-line traffic growth in automobile traffic and the auto-related trips associated with future development are added to existing traffic. As stated, the ITE Trip Generation rates are based on traffic surveys of land uses across the country, which have been conducted at a time when the automobile is the predominant mode of travel. The Traffix analysis software does not reflect the potential traffic benefits of the emerging sustainability mentality and a society trending toward multi-modal solutions, such as enhanced pedestrian, bicycle, and transit; improved connectivity between rail or transit centers and target destinations; shorter commute trips; an aging population with reduced driving habits; and other emerging trends. The traffic forecasts, therefore, provide a conservative, worst-case estimate of future traffic volumes, based on traditional automobile-focused assumptions.

The traditional approach to mitigating deficient LOS conditions is to provide additional intersection capacity (i.e., intersection widening, additional lanes), which could, in turn, have right-of-way impacts at some locations. Fullerton is a relatively built out City with mature land uses and an established transportation system. New roadways or major widening projects are not feasible or preferred. Further, it is not possible to accurately predict the exact improvements required at each intersection in the long-term, as the type of development, timing of development, and conditions at the time in which the development would occur are not currently known. The current trend toward alternative travel modes and away from the single-occupant vehicle may result in some cases where a better LOS is achieved and less mitigation is needed. The Fullerton Plan supports analyzing and evaluating urban streets using an integrated approach that considers the points of view of automobile drivers, transit passengers, bicyclists and pedestrians rather than auto-centric thresholds which conflict with other policies of The



Fullerton Plan – including better environments for walking and bicycling, safer streets, increased transit use, cost-effective infrastructure investments, reduced greenhouse gas emissions, and the preservation of open space (Policy P5.12). Thus, as future planning efforts occur within the Focus Areas, detailed multi-modal analysis would be conducted in order to determine specific impacts associated with proposed development and where mitigation is found to be needed, alternative mitigation in lieu of capacity improvements would be encouraged (Mitigation Measure TR-1). Such mitigation could include providing or contributing to a circulator shuttle or transit system between activity centers and rail or transit centers; improved walking and biking facilities; and encouraging mixed-use and higher-density developments in order to facilitate onsite trip purpose capture. Such measures would have the dual benefit of avoiding or reducing right-of-way impacts, and at the same time reducing the dependence on the automobile, which would reduce traffic impacts and further the vision of The Fullerton Plan. However, impacts to the 35 identified intersections would remain significant and unavoidable.

Proposed General Plan Update Policies and Actions:

P1.7 Development that Supports Mobility

Support projects, programs, policies and regulations to promote a development pattern that encourages a network of multi-modal transportation options.

P5.1 Circulation Between Cities

Support regional and subregional efforts to implement programs that coordinate the multi-modal transportation needs and requirements across jurisdictions, including but not limited to the Master Plan of Arterial Highways, the Commuter Bikeways Strategic Plan, the Signal Synchronization Master Plan, the Orange County Congestion Management Plan, and the Growth Management Plan.

P5.2 Reduction of Single Occupant Vehicle Trips

Support regional and subregional efforts to increase alternatives to and infrastructure supporting reduction of single occupant vehicle trips.

P5.3 Mobility Information Infrastructure

Support projects, programs, policies and regulations to utilize signage and technology to provide real-time information to users of the multi-modal transportation network.

P5.5 Fullerton Transportation Center

Support projects, programs, policies and regulations to advance the Fullerton Transportation Center as an important economic asset that provides efficient regional travel and mode choice options for business, commerce and the general public.

P5.6 Quality Highways and Roads

Support projects, programs, policies and regulations to operate and maintain a comprehensive network of arterial highways and local roads supporting safe and efficient movement of people, goods and services to, through and within the City.

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P5.7 Complete Streets

Support projects, programs, policies and regulations to maintain a balanced multimodal transportation network that meets the needs of all users of the streets, roads and highways – including bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation and seniors – for safe and convenient travel in a manner that is suitable to the suburban and urban contexts within the City.

P5.8 Maximization of Person-Trips

Support programs, policies and regulations to plan for and implement an efficient transportation network that maximizes capacity for person-trips, not just vehicle-trips.

P5.9 Coordination with Schools

Support projects, programs, policies and regulations to improve – in coordination with the school districts – alternatives to the motorized transport of students by parents to and from school.

P5.10 Easements and Rights-Of-Way

Support projects, programs, policies and regulations to use public easements and rights-of-way along flood control channels and/or inactive railroads as part of the multi-modal network.

P5.11 Integrated Land Use and Transportation

Support projects, programs, policies and regulations to integrate land use and transportation planning and implementation. (Also see Chapter 1: Community Development and Design, P1.4 Connection and Integration of Uses.)

P5.12 Multi-Modal Traffic Analysis

Support programs, policies and regulations to analyze and evaluate urban streets using an integrated approach from the points of view of automobile drivers, transit passengers, bicyclists and pedestrians rather than auto-centric thresholds which conflict with other policies of The Fullerton Plan – including better environments for walking and bicycling, safer streets, increased transit use, cost-effective infrastructure investments, reduced greenhouse gas emissions, and the preservation of open space.

P5.13 Development-Oriented Transit

Support projects, programs, policies and regulations to encourage transit improvements that incentivize investment and link neighborhoods, while fitting the scale and traffic patterns of the surrounding area.

P5.14 Fair Share of Improvements

Support policies and regulations which require new development to pay a fair share of needed transportation improvements based on a project's impacts to the multi-modal transportation network.

P5.15 Neighborhood and Focus Area Connections

Support projects, programs, policies and regulations to connect neighborhoods via a multi-modal network to each other and to the City's Focus Areas.



P5.16 Infrastructure for Low and Zero Emission Vehicles

Support projects, programs, policies and regulations to encourage the development of private and/or public infrastructure facilitating the use of alternative fuel vehicles.

P6.1 Consideration of Bicyclists

Support regional and subregional efforts to ensure bicyclists are considered when developing new or retrofitting existing transportation facilities and systems.

P6.2 Inter-Jurisdiction Connections

Support efforts to maintain, expand and create new connections between the Fullerton bicycle network and the bicycle networks of adjacent cities, Orange County and the region.

P6.3 Bicycle Transportation Plan

Support projects, programs and policies to maintain and update as necessary a Bicycle Transportation Plan prepared and approved pursuant to the California Streets and Highways Code to maintain eligibility for funding for State Bicycle Transportation Account funds.

P6.4 Bicyclist Use on All Streets

Support projects, programs, policies and regulations to recognize that every street in Fullerton is a street that a bicyclist can use.

P6.5 Bicycling Safety and Convenience

Support projects, programs, policies and regulations that make bicycling safer and more convenient for all types of bicyclists.

P6.6 Safe Travel to Key Destinations

Support projects, programs, policies, and regulations to facilitate safe travel by bicycle to key destinations within the community and the larger region.

P6.7 Development Projects

Support projects, programs, policies, and regulations to reduce negative impacts to and increase opportunities for bicycle users and the bicycle network in private and public development projects.

P6.8 Multi-Tiered Bicycle Network

Support projects, programs, policies and regulations to develop a multi-tiered network of bicycle travel options that consider traffic volumes and rider experience; and which recognizes that all streets should be safe for bicycling.

P6.9 Intersection Safety

Support projects, programs, policies, and regulations to support the safe and efficient movement of bicyclists through and across intersections.

P6.10 Bicyclist Education

Support projects and programs in conjunction with local bike shops, organizations and advocates to foster responsible ridership and reduce barriers to bicycling.



P6.11 Neighborhood and Focus Area Connections

Support projects, programs, policies and regulations to connect neighborhoods via a multi-modal network to each other, and to and through the City's Focus Areas.

P6.12 Bicycle Parking and Facilities

Support projects, programs, policies, and regulations to provide convenient bicycle parking and other bicycle facilities in existing and potential high demand locations within the City, such as educational institutions, parks, business districts, transit stops, retail, commercial and employment centers.

P6.13 Design Standards

Support projects, programs, policies and regulations to use recognized bicycle infrastructure design standards of the Federal Highway Administration, California Department of Transportation, and the American Association of State Highway and Transportation Officials, and participate in their pilot studies for alternative designs when appropriate.

A5.1 Improved Transit Service

Work with OCTA to improve the coverage of transit service in Fullerton by providing transit routes that more directly serve residential neighborhoods and enhancing regional transit connections in Fullerton through additional routes and increased service frequency.

A5.2 Signal Coordination

Collaborate with Caltrans, OCTA and neighboring cities to achieve multi-jurisdictional traffic signal coordination across city boundaries.

A5.3 Rail and Rapid Transit

Participate in the planning efforts for regional and inter-state rail and rapid transit projects to represent the interests of the City.

A5.4 Alternative Parking Solutions

Evaluate and revise the Zoning Ordinance related to parking requirements for individual projects to consider the urban context and proximity to multi-modal transportation infrastructure; consider Parking Management Districts for shared parking and other opportunities to reduce the parking requirements of individual projects.

A5.5 Dedications for Right-of-Way

Establish by local ordinance the ability to require a dedication or irrevocable offer of dedication of real property for streets, alleys, and additional land as may be necessary to provide bicycle paths and/or local transit facilities, consistent with the provisions of the Subdivision Map Act or as otherwise allowed under State law.

A5.6 Right-of-Way Deficiencies

Monitor private development projects adjacent to the street intersections/segments with substandard (deficient) right-of-way, as analyzed to accommodate multi-modal transportation infrastructure, and facilitate dedication in accordance with the City regulations.



A5.7 Traffic Impact Fee Program

Revise the traffic impact fee program to ensure that new development pays its appropriate fair share of the costs (fair share contribution) of improvements needed to accommodate the development when considered in the context of a multi-modal transportation system.

A5.8 Safe Routes to School Program

Work with local school districts, individual schools and parent organizations to develop and implement a Safe Routes to School Program for safe walking and bicycling to schools at every elementary, middle and high school.

A6.1 Development of Multi-Tiered Network of Bikeways

Work with the Bicycle Users Subcommittee and the community to further develop the current bicycle network into a multi-tiered network of on- and off-street bicycle travel options.

A6.2 Regular Review by Bicycle Users Subcommittee

Establish a regular review through the Bicycle Users Subcommittee of network gaps, barriers, new opportunities and unsafe conditions on any City street and their relative priority for completion. This list would be presented to the City Council for review and approval as part of the priority setting process to implement The Fullerton Plan with the approved list informing Capital Improvement Project planning and funding needs.

A6.3 Collaboration with North Orange County Cities and Agencies

Collaborate with the Orange County Transportation Authority (OCTA), North Orange County cities and other agencies as appropriate on short- and long-term strategies to integrate bicycle routes and networks across jurisdictional boundaries.

A6.4 Standards for Intersection Improvements

Establish City standards for intersection improvements, which include signal systems appropriate to detect bicycles and time to facilitate safe crossing.

Mitigation Measures:

TR-1 Prior to approval of any General Plan Amendment and/or Zone Change associated with the focused planning efforts for The Fullerton Plan Focus Areas, the City and/or project proponent shall prepare a detailed multi-modal analysis in order to determine specific impacts associated with the proposed General Plan Amendment and/or Zone Change, and where applicable, identify mitigation measures to reduce impacts to less than significant levels based on City adopted multi-modal thresholds. The multi-modal analysis shall specify the timing, funding, construction, and fair share responsibilities for all traffic improvements necessary to maintain satisfactory levels of service within the City of Fullerton and surrounding jurisdictions, in accordance with the significant impact criteria established by the jurisdiction that controls the affected area.



- TR-2 In conjunction with the preparation of any multi-modal analysis as required in Mitigation Measure TR-1, the City of Fullerton shall coordinate with adjacent jurisdictions, as applicable, to assess potential project impacts for any development forecasted to generate more than 100 peak hour trips in The Fullerton Plan Focus Areas. Improvements to mitigate significant impacts and the associated fair share costs shall be developed in coordination with the jurisdiction that controls the affected areas.
- TR-3 In conjunction with preparation of any multi-modal analysis as required in Mitigation Measure TR-1, any project that would contribute measurable traffic to the freeway system shall prepare an analysis to determine potential impacts to freeway mainline segments, weaving, and freeway ramps, per the Caltrans Guide for the Preparation of Traffic Impact Studies. Mitigation measures shall be identified to reduce impacts to less than significant levels.

Level of Significance After Mitigation: Significant Unavoidable Impact under Buildout 2030 conditions for the following intersections:

- Lambert Road and Harbor Boulevard (PM peak hour) (#1)
- Imperial Highway and Harbor Boulevard (AM and PM peak hours) (#2)
- Imperial Highway at Palm Street (AM and PM Peak Hours) (#3)
- Rosecrans Avenue at Gilbert Street (AM Peak Hour) (#5)
- Bastanchury Road at Harbor Boulevard (AM and PM Peak Hours) (#12)
- Bastanchury Road at State College Boulevard (PM Peak Hour)(#14)
- Yorba Linda Boulevard at Placentia Avenue (AM and PM Peak Hours) (#16)
- Yorba Linda Boulevard at State College Boulevard (PM Peak Hour) (#17)
- Brea Blvd at Harbor Boulevard (AM and PM Peak Hours) (#19)
- Berkeley Street at Harbor Boulevard (PM Peak Hour) (#20)
- Malvern Avenue at Gilbert Street (AM and PM Peak Hours) (#22)
- Malvern Avenue at Bastanchurv Road (PM Peak Hour) (#23)
- Malvern Avenue at Euclid Street (AM and PM Peak Hours) (#24)
- Chapman Avenue at Harbor Boulevard (AM and PM Peak Hours) (#25)
- Chapman Avenue at Raymond Avenue (AM and PM Peak Hours) (#28)
- Chapman Avenue at State College Boulevard (AM and PM Peak Hours) (#30)
- Chapman Avenue at Commonwealth Avenue (AM and PM Peak Hours) (#31)
- Nutwood Avenue at State College Boulevard (AM and PM Peak Hours) (#33)
- Commonwealth Avenue at Gilbert Street (PM Peak Hour) (#38)
- Commonwealth Avenue at Euclid Street (AM and PM Peak Hours) (#40)
- Commonwealth Avenue at Harbor Boulevard (AM and PM Peak Hours) (#42)
- Commonwealth Avenue at State College Boulevard (PM Peak Hour) (#46)
- Valencia Drive at Brookhurst Road (PM Peak Hour) (#48)
- Valencia Drive at Euclid Street (AM Peak Hour) (#49)
- Orangethorpe Avenue at Harbor Boulevard (AM and PM Peak Hours) (#55)
- Orangethorpe Avenue at Lemon Street (PM Peak Hour) (#56)
- Orangethorpe Avenue at State College Boulevard (AM Peak Hour) (#59)
- Imperial Highway at Brea Boulevard (AM and PM Peak Hours) (#62)
- La Palma Avenue at Lemon Street (PM Peak Hour) (#69)



- La Palma Avenue at Raymond Avenue/East Street (PM Peak Hour) (#70)
- La Palma Avenue at State College Boulevard (PM Peak Hour) (#71)
- Chapman Avenue at SR-57 SB Ramps (PM Peak Hour) (#78)
- Chapman Avenue at SR-57 NB Ramps (AM and PM Peak Hours) (#79)
- SR-91 WB Ramps at Lemon Street (PM Peak Hour) (#91)
- SR-91 WB Ramps at Raymond Avenue (PM Peak Hour) (#94)

CONSISTENCY WITH THE CONGESTION MANAGEMENT PLAN

■ IMPLEMENTATION OF THE FULLERTON PLAN COULD EXCEED STANDARDS ESTABLISHED BY THE ORANGE COUNTY CONGESTION MANAGEMENT PLAN.

Impact Analysis: The CMP is directly linked to transportation issues, with requirements that all new developments mitigate their traffic impacts on the surrounding street system. The CMP includes issues such as LOS standards, coordination with other jurisdictions, TDM ordinances and application, monitoring conditions, and mitigation of impacts.

Fullerton would be required to show continued compliance with the countywide CMP. Within the City of Fullerton, the following intersections are included on the CMP Highway System:

- Harbor Boulevard and Orangethorpe Avenue
- State College Boulevard and Orangethorpe Avenue
- SR-91 WB Ramp and Harbor Boulevard
- SR-91 EB Ramp and Harbor Boulevard
- SR-91 WB Ramp and State College Boulevard
- SR-91 EB Ramp and State College Boulevard
- SR-57 SB Ramp and Imperial Highway
- SR-57 NB Ramp and Imperial Highway
- Harbor Boulevard and Imperial Highway
- SR-57 NB Ramp and Orangethorpe Avenue
- SR-57 SB Ramp and Orangethorpe Avenue

Cities are obligated to maintain minimum Level of Service standards (LOS E or better) at CMP intersections, in order to remain eligible for funding for transportation improvements. Within the defined CMP highway network, no intersection may be allowed to deteriorate to a condition worse than LOS E, or the baseline LOS if worse than LOS E, without mitigation being prescribed in an acceptable deficiency plan. All CMP intersections in the study area are currently operating at an acceptable Level of Service.

As indicated in <u>Table 5.4-9</u>, the following CMP intersections would operate at an unacceptable LOS (LOS F) according to CMP performance criteria with buildout conditions:

- Imperial Highway at Harbor Boulevard (#2)
- Orangethorpe Avenue at Harbor Boulevard (#55)
- Orangethorpe Avenue at State College Boulevard (#59)



The operation of all CMP intersections would be monitored through the biennial reporting process, to determine whether or not the forecasted conditions would actually occur. V/C ratio increases beyond 0.10 above the base condition are considered to not comply with CMP LOS objectives and shall require mitigation or a deficiency plan.

As stated, the traditional approach to mitigating deficient LOS conditions is to provide additional intersection capacity (i.e., intersection widening, additional lanes), which could, in turn, have right-of-way impacts at some locations. Fullerton is a relatively built out City with mature land uses and an established transportation system. New roadways or major widening projects are not feasible or preferred. Further, it is not possible to accurately predict the exact improvements required at each intersection in the long-term, as the type of development, timing of development, and conditions at the time in which the development would occur are not currently known. The current trend toward alternative travel modes and away from the single-occupant vehicle may result in some cases where a better LOS is achieved and less mitigation is needed. The Fullerton Plan supports analyzing and evaluating urban streets using an integrated approach that considers the points of view of automobile drivers, transit passengers, bicyclists and pedestrians rather than auto-centric thresholds which conflict with other policies of The Fullerton Plan – including better environments for walking and bicycling, safer streets, increased transit use, cost-effective infrastructure investments, reduced greenhouse gas emissions, and the preservation of open space (Policy P5.12). Thus, as future planning efforts occur within the Focus Areas, detailed multi-modal analysis would be conducted in order to determine specific impacts associated with proposed development and where mitigation is found to be needed, alternative mitigation in lieu of capacity improvements would be encouraged (Mitigation Measure TR-1). Such mitigation could include providing or contributing to a circulator shuttle or transit system between activity centers and rail or transit centers; improved walking and biking facilities; and encouraging mixed-use and higher-density developments in order to facilitate onsite trip purpose capture. Such measures would have the dual benefit of avoiding or reducing right-of-way impacts, and at the same time reducing the dependence on the automobile, which would reduce traffic impacts and further the vision of The Fullerton Plan. However, impacts to the three CMP intersections identified above would remain significant and unavoidable.

Proposed General Plan Update Policies and Actions:

P1.7 Development that Supports Mobility

Support projects, programs, policies and regulations to promote a development pattern that encourages a network of multi-modal transportation options.

P5.1 Circulation Between Cities

Support regional and subregional efforts to implement programs that coordinate the multi-modal transportation needs and requirements across jurisdictions, including but not limited to the Master Plan of Arterial Highways, the Commuter Bikeways Strategic Plan, the Signal Synchronization Master Plan, the Orange County Congestion Management Plan, and the Growth Management Plan.

P5.2 Reduction of Single Occupant Vehicle Trips

Support regional and subregional efforts to increase alternatives to and infrastructure supporting reduction of single occupant vehicle trips.



P5.3 Mobility Information Infrastructure

Support projects, programs, policies and regulations to utilize signage and technology to provide real-time information to users of the multi-modal transportation network.

P5.5 Fullerton Transportation Center

Support projects, programs, policies and regulations to advance the Fullerton Transportation Center as an important economic asset that provides efficient regional travel and mode choice options for business, commerce and the general public.

P5.6 Quality Highways and Roads

Support projects, programs, policies and regulations to operate and maintain a comprehensive network of arterial highways and local roads supporting safe and efficient movement of people, goods and services to, through and within the City.

P5.7 Complete Streets

Support projects, programs, policies and regulations to maintain a balanced multimodal transportation network that meets the needs of all users of the streets, roads and highways – including bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation and seniors – for safe and convenient travel in a manner that is suitable to the suburban and urban contexts within the City.

P5.8 Maximization of Person-Trips

Support programs, policies and regulations to plan for and implement an efficient transportation network that maximizes capacity for person-trips, not just vehicle-trips.

P5.9 Coordination with Schools

Support projects, programs, policies and regulations to improve – in coordination with the school districts – alternatives to the motorized transport of students by parents to and from school.

P5.10 Easements and Rights-Of-Way

Support projects, programs, policies and regulations to use public easements and rights-of-way along flood control channels and/or inactive railroads as part of the multi-modal network.

P5.11 Integrated Land Use and Transportation

Support projects, programs, policies and regulations to integrate land use and transportation planning and implementation. (Also see Chapter 1: Community Development and Design, P1.4 Connection and Integration of Uses.)

P5.12 Multi-Modal Traffic Analysis

Support programs, policies and regulations to analyze and evaluate urban streets using an integrated approach from the points of view of automobile drivers, transit passengers, bicyclists and pedestrians rather than auto-centric thresholds which conflict with other policies of The Fullerton Plan – including better environments for walking and bicycling, safer streets, increased transit use, cost-effective



infrastructure investments, reduced greenhouse gas emissions, and the preservation of open space.

P5.13 Development-Oriented Transit

Support projects, programs, policies and regulations to encourage transit improvements that incentivize investment and link neighborhoods, while fitting the scale and traffic patterns of the surrounding area.

P5.14 Fair Share of Improvements

Support policies and regulations which require new development to pay a fair share of needed transportation improvements based on a project's impacts to the multimodal transportation network.

P5.15 Neighborhood and Focus Area Connections

Support projects, programs, policies and regulations to connect neighborhoods via a multi-modal network to each other and to the City's Focus Areas.

P5.16 Infrastructure for Low and Zero Emission Vehicles

Support projects, programs, policies and regulations to encourage the development of private and/or public infrastructure facilitating the use of alternative fuel vehicles.

A5.1 Improved Transit Service

Work with OCTA to improve the coverage of transit service in Fullerton by providing transit routes that more directly serve residential neighborhoods and enhancing regional transit connections in Fullerton through additional routes and increased service frequency.

A5.2 Signal Coordination

Collaborate with Caltrans, OCTA and neighboring cities to achieve multi-jurisdictional traffic signal coordination across city boundaries.

A5.3 Rail and Rapid Transit

Participate in the planning efforts for regional and inter-state rail and rapid transit projects to represent the interests of the City.

A5.4 Alternative Parking Solutions

Evaluate and revise the Zoning Ordinance related to parking requirements for individual projects to consider the urban context and proximity to multi-modal transportation infrastructure; consider Parking Management Districts for shared parking and other opportunities to reduce the parking requirements of individual projects.

A5.5 Dedications for Right-of-Way

Establish by local ordinance the ability to require a dedication or irrevocable offer of dedication of real property for streets, alleys, and additional land as may be necessary to provide bicycle paths and/or local transit facilities, consistent with the provisions of the Subdivision Map Act or as otherwise allowed under State law.



A5.6 Right-of-Way Deficiencies

Monitor private development projects adjacent to the street intersections/segments with substandard (deficient) right-of-way, as analyzed to accommodate multi-modal transportation infrastructure, and facilitate dedication in accordance with the City regulations.

A5.7 Traffic Impact Fee Program

Revise the traffic impact fee program to ensure that new development pays its appropriate fair share of the costs (fair share contribution) of improvements needed to accommodate the development when considered in the context of a multi-modal transportation system.

A5.8 Safe Routes to School Program

Work with local school districts, individual schools and parent organizations to develop and implement a Safe Routes to School Program for safe walking and bicycling to schools at every elementary, middle and high school.

P6.1 Consideration of Bicyclists

Support regional and subregional efforts to ensure bicyclists are considered when developing new or retrofitting existing transportation facilities and systems.

P6.2 Inter-Jurisdiction Connections

Support efforts to maintain, expand and create new connections between the Fullerton bicycle network and the bicycle networks of adjacent cities, Orange County and the region.

P6.3 Bicycle Transportation Plan

Support projects, programs and policies to maintain and update as necessary a Bicycle Transportation Plan prepared and approved pursuant to the California Streets and Highways Code to maintain eligibility for funding for State Bicycle Transportation Account funds.

P6.4 Bicvclist Use on All Streets

Support projects, programs, policies and regulations to recognize that every street in Fullerton is a street that a bicyclist can use.

P6.5 Bicycling Safety and Convenience

Support projects, programs, policies and regulations that make bicycling safer and more convenient for all types of bicyclists.

P6.6 Safe Travel to Key Destinations

Support projects, programs, policies, and regulations to facilitate safe travel by bicycle to key destinations within the community and the larger region.

P6.7 Development Projects

Support projects, programs, policies, and regulations to reduce negative impacts to and increase opportunities for bicycle users and the bicycle network in private and public development projects.



P6.8 Multi-Tiered Bicycle Network

Support projects, programs, policies and regulations to develop a multi-tiered network of bicycle travel options that consider traffic volumes and rider experience; and which recognizes that all streets should be safe for bicycling.

P6.9 Intersection Safety

Support projects, programs, policies, and regulations to support the safe and efficient movement of bicyclists through and across intersections.

P6.10 Bicyclist Education

Support projects and programs in conjunction with local bike shops, organizations and advocates to foster responsible ridership and reduce barriers to bicycling.

P6.11 Neighborhood and Focus Area Connections

Support projects, programs, policies and regulations to connect neighborhoods via a multi-modal network to each other, and to and through the City's Focus Areas.

P6.12 Bicycle Parking and Facilities

Support projects, programs, policies, and regulations to provide convenient bicycle parking and other bicycle facilities in existing and potential high demand locations within the City, such as educational institutions, parks, business districts, transit stops, retail, commercial and employment centers.

P6.13 Design Standards

Support projects, programs, policies and regulations to use recognized bicycle infrastructure design standards of the Federal Highway Administration, California Department of Transportation, and the American Association of State Highway and Transportation Officials, and participate in their pilot studies for alternative designs when appropriate.

A6.1 Development of Multi-Tiered Network of Bikeways

Work with the Bicycle Users Subcommittee and the community to further develop the current bicycle network into a multi-tiered network of on- and off-street bicycle travel options.

A6.2 Regular Review by Bicycle Users Subcommittee

Establish a regular review through the Bicycle Users Subcommittee of network gaps, barriers, new opportunities and unsafe conditions on any City street and their relative priority for completion. This list would be presented to the City Council for review and approval as part of the priority setting process to implement The Fullerton Plan with the approved list informing Capital Improvement Project planning and funding needs.

A6.3 Collaboration with North Orange County Cities and Agencies

Collaborate with the Orange County Transportation Authority (OCTA), North Orange County cities and other agencies as appropriate on short- and long-term strategies to integrate bicycle routes and networks across jurisdictional boundaries.



A6.4 Standards for Intersection Improvements

Establish City standards for intersection improvements, which include signal systems appropriate to detect bicycles and time to facilitate safe crossing.

Mitigation Measures: Refer to Mitigation Measure TR-1.

Level of Significance After Mitigation: Significant Unavoidable Impact under Buildout 2030 conditions for the following CMP intersections:

- Imperial Highway at Harbor Boulevard (#2)
- Orangethorpe Avenue at Harbor Boulevard (#55)
- Orangethorpe Avenue at State College Boulevard (#59)

AIR TRAFFIC PATTERNS

■ IMPLEMENTATION OF THE FULLERTON PLAN WOULD NOT RESULT IN A CHANGE IN AIR TRAFFIC PATTERNS RESULTING IN SUBSTANTIAL SAFETY RISKS.

Impact Analysis: Fullerton Municipal Airport, located in the western portion of the City, is the only general aviation airport in Orange County, accommodating commercial and private flights that are not conducted by airlines or the military. The Airport also serves as a base of operations for public safety operations.

The Orange County Airport Land Use Commission (ALUC) is required to prepare and adopt an airport land use compatibility plan for each airport within its jurisdiction. As adopted by the Orange County ALUC, the *Airport Environs Land Use Plan for the Fullerton Municipal Airport* (November 2004) intends to safeguard the general welfare of the inhabitants within the vicinity of the airport and to ensure the continued operation of the airport. Specifically, the plan seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace.

Fullerton Municipal Airport is located within the Airport Industrial Focus Area which also includes the surrounding industrial development on the western border of the City, adjacent to Interstate 5 and the 91 Freeway. This Focus Area is composed mainly of industrial development, with minimal retail and other supportive uses. The Airport Industrial Focus Area is envisioned as a primary industrial area characterized by large sites and buildings for continued and expanded industrial uses, and related businesses. Future development would capitalize on the presence of the Fullerton Municipal Airport by catering to pilots and to businesses that value proximity to the Airport.

Other Focus Areas within the Fullerton Airport Planning Area include the western portion of the Commonwealth Corridor, Orangethorpe Corridor, and a small portion of the West Coyote Hills Focus Area. The Fullerton Plan does not propose changes to existing land uses within the City. Implementation of The Fullerton Plan would not change air traffic patterns or result in substantial safety risks associated with the Fullerton Municipal Airport. Future development within the airport planning area boundaries would be reviewed on a project-by-project basis for

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consistency with the noise, safety, and height restrictions established by the *Airport Environs Land Use Plan for the Fullerton Municipal Airport*. Impacts would be less than significant; refer also to <u>Section 5.1</u>, <u>Land Use and Planning</u> and <u>Section 5.9</u>, <u>Hazards and Hazardous Materials</u>.

Proposed General Plan Update Policies and Actions:

P12.8 Airport Safety Standards

Support policies, projects, programs and regulations that provide for safe and efficient airport operations through compliance with the Fullerton Municipal Airport (FMA) Master Plan and the Airport Land Use Commission for Orange County's Airport Environs Land Use Plan for FMA and the Airport Environs Land Use Plan for Heliports.

Mitigation Measures: No further mitigation is required beyond compliance with the proposed General Plan Update Policies and Actions.

Level of Significance After Mitigation: Less Than Significant Impact.

DESIGN FEATURES OR INCOMPATIBLE USES

■ IMPLEMENTATION OF THE FULLERTON PLAN WOULD NOT RESULT IN INCREASED HAZARDS DUE TO A DESIGN FEATURE OR INCOMPATIBLE USES.

Impact Analysis: Implementation of The Fullerton Plan is not anticipated to result in inadequate design features or incompatible uses. Through the City's development review process, future developments would be evaluated to determine the appropriate land use permit for authorizing their use and the conditions for their establishment and operation. At a minimum, compliance with relevant Municipal Code standards would be required. Therefore, The Fullerton Plan would not substantially increase hazards due to design feature or incompatible uses. A less than significant impact would occur in this regard.

Future development projects would be evaluated on a case-by-case basis to ensure that adequate access and circulation to and within the development would be provided. Access to development sites would be required to comply with all City design standards and would be reviewed by the City and the Fullerton Fire Department to ensure that inadequate design features or incompatible uses do not occur. The City and the Fullerton Fire Department would review future development in order to ensure that structures are designed to meet adopted standards and that adequate emergency access is provided. Therefore, implementation of The Fullerton Plan would not result in significant impacts involving inadequate design features or incompatible uses.

Proposed General Plan Update Policies and Actions:

P12.4 Balance Safety Needs

Support policies, projects, programs, and regulations that balance the need to reduce vehicle accidents, injuries, and deaths through traffic calming and street design with the need to facilitate emergency response times.



P12.7 Fire Code Amendments

Support policies, programs, and regulations that give the Fire Marshall flexibility to approve streets and fire lanes with reduced clearance requirements when other fire safety factors are incorporated into the project (such as street connectivity, traffic safety, and the presence of sprinkler systems).

Mitigation Measures: No further mitigation is required beyond compliance with the proposed General Plan Update Policies and Actions.

Level of Significance After Mitigation: Less Than Significant Impact.

INADEQUATE EMERGENCY ACCESS

■ IMPLEMENTATION OF THE FULLERTON PLAN WOULD NOT RESULT IN INADEQUATE EMERGENCY ACCESS.

Impact Analysis: Implementation of The Fullerton Plan is not anticipated to result in inadequate emergency access. Future development projects would be required to comply with the City's development review process including review for compliance with the City's Zoning Code. New developments would be required to comply with all applicable fire code and ordinance requirements for construction and access to the site. Individual projects would be reviewed by the Fullerton Fire Department to determine the specific fire requirements applicable to the specific development and to ensure compliance with these requirements. This would ensure that new developments would provide adequate emergency access to and from the site. Further, the City and the Fullerton Fire Department would review any modifications to existing roadways to ensure that adequate emergency access or emergency response would be maintained. Emergency response and evacuation procedures would be coordinated through the City in coordination with the police and fire departments, resulting in less than significant impacts.

Proposed General Plan Update Policies and Actions:

P12.4 Balance Safety Needs

Support policies, projects, programs, and regulations that balance the need to reduce vehicle accidents, injuries, and deaths through traffic calming and street design with the need to facilitate emergency response times.

P12.7 Fire Code Amendments

Support policies, programs, and regulations that give the Fire Marshall flexibility to approve streets and fire lanes with reduced clearance requirements when other fire safety factors are incorporated into the project (such as street connectivity, traffic safety, and the presence of sprinkler systems).

P13.1 Inter-City Coordination

Support regional and subregional efforts to: coordinate as appropriate Continuity of Operations Plan, plans and procedures for Emergency Operations Centers, and emergency response training systems; maintain inter-agency and public



communications systems that will provide mutual aid and be reliable during and following an emergency; and, formulate definitive plans and procedures for evacuation of hazard-prone areas and high risk uses.

P13.5 Community Emergency Preparedness

Support policies, programs and regulations that ensure the City, its residents, businesses, and services are prepared for effective response and recovery in the event of emergencies or disasters, including the provision of information about the current nature and extent of local safety hazards and emergency plans, including evacuation plans and procedures to accommodate special needs populations (information should be provided in multiple languages to maximize understanding by community members).

P24.12 Environmental Impact of Support Facilities

Support projects, programs, policies and regulations to limit the construction of facilities in open space areas and to design necessary improvements such as fire roads, access roads, and parking facilities, to minimize environmental impacts and maintain the visual qualities of the open space.

Mitigation Measures: No further mitigation is required beyond compliance with the proposed General Plan Update Policies and Actions.

Level of Significance After Mitigation: Less Than Significant Impact.

PUBLIC TRANSIT, BICYCLE, OR PEDESTRIAN FACILITIES

■ IMPLEMENTATION OF THE FULLERTON PLAN WOULD NOT CONFLICT WITH ADOPTED POLICIES, PLANS, OR PROGRAMS REGARDING PUBLIC TRANSIT, BICYCLE, OR PEDESTRIAN FACILITIES OR DECREASE THEIR PERFORMANCE OR SAFETY.

Impact Analysis: The Fullerton Transportation Center provides access to Amtrak and Metrolink rails service, the OCTA bus system, private taxi service, and secure bicycle storage. Commuter rail service (Metrolink) is provided from the Transportation Center to Los Angeles Union Station on a daily basis. Bus routes link various destinations within the City and throughout the county, including Cal State Fullerton, Fullerton College, the Anaheim Transportation Center, Angel Stadium, and Disneyland.

The Fullerton Plan promotes and supports transit opportunities within the City. The Fullerton Transportation Center Focus Area is envisioned as a major activity hub for both the City and the region, characterized by development that encourages use of the regional transportation options available. The Transportation Center will contain compact, mixed use developments providing housing as well as open space in order to provide increased transit, bicycle, and pedestrian access. Actions established by The Fullerton Plan include working with OCTA to improve transit service and coverage by providing additional routes that directly serve residential neighborhoods and increase service frequency. The City will also continue to participate in planning efforts for regional and inter-state rail and rapid transit projects and support



collaboration with transit providers, Caltrans, and neighboring cities to achieve multijurisdictional coordination. Further, the City promotes transit-oriented development to encourage transit improvements within the City. The Fullerton Plan would not conflict with adopted policies, plans, or programs addressing public transit.

The City of Fullerton Bicycle Master Plan (Bicycle Master Plan) serves as a guiding document for the development and maintenance of a bikeways network that is safe, efficient, and comfortable, and that facilitates transportation as well as recreation. As a component of The Fullerton Plan, the proposed Bicycle Master Plan has been prepared in accordance with requirements for a Bicycle Transportation Plan ("BTP") (Section 891.2(a) through (k) of the Streets and Highways Code) and establishes the City of Fullerton's eligibility for Caltrans Bicycle Transportation Account ("BTA") funds. The Bicycle Master Plan sets forth a program for enhancements, improvements, and additions to the City's bikeways network to ensure that it meets the needs of users, now and in the future; refer to Exhibit 5.4-5, Proposed Bikeway Improvements. As part of the implementation program, recommended projects are grouped into priority categories, potential funding sources have been identified, and design guidelines have been established to ensure a high-quality bicycle network.

Implementation of The Fullerton Plan and Bicycle Master Plan would improve and support the City's bikeways network, providing additional opportunities for people to move through and around the City. The Fullerton Plan Goal 6 (A bicycle friendly city where bicycling is a safe and convenient alternative to motorized transportation and a recreational opportunity for people of all ages and abilities) establishes the City's desire to promote bicycle activity. Policies and actions support bicycle infrastructure and connectivity throughout the City and surrounding region and encourage programs and policies that make bicycling safer and more convenient for all types of bicyclists. Thus, The Fullerton Plan would not conflict with adopted policies, plans, or programs addressing bicycle facilities.

Sidewalks and pedestrian facilities are provided on major streets and within residential neighborhoods throughout the City. The Fullerton Plan encourages increased pedestrian activity through enhanced pedestrian facilities and uses that support walkability and connectivity. The Fullerton Plan includes policies to support physical activity by providing convenient and safe areas for physical activity as well as sidewalks that promote walking and facilitate access. Further, the City supports land use and zoning changes that would provide access to daily retail needs, recreational facilities, and transit stops within a walkable distance (i.e., a quarter- to a half-mile) of established residential uses (Policy 14.6, Amenities Within a Walkable Distance). Additionally, The Fullerton Plan supports safe routes to schools programs (Action 5.8, Safe Routes to School Program). The Fullerton Plan would not conflict with adopted policies, plans, or programs pertaining to pedestrian facilities.

The Fullerton Plan focuses on providing adequate transit, bicycle, and pedestrian facilities to serve the needs of the community and to support development within key areas of the City. Overall, The Fullerton Plan supports a multi-modal transportation network and implementation of complete streets to provide sufficient mobility. Policy 5.7 supports a balanced multi-modal transportation network that meets the needs of all users. Alternative modes of transportation are provided and encouraged through the provision of various transit opportunities, an improved bikeways network, and pedestrian amenities that encourage walking and enhance the pedestrian experience. The Fullerton Plan would not conflict with adopted policies, plans, or

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programs related to public transit, bicycle, or pedestrian facilities, nor impact the performance or safety of these systems. Impacts would be less than significant in this regard.

Proposed General Plan Update Policies and Actions:

P5.12 Multi-Modal Traffic Analysis

Support programs, policies and regulations to analyze and evaluate urban streets using an integrated approach from the points of view of automobile drivers, transit passengers, bicyclists, and pedestrians rather than auto-centric thresholds which conflict with other policies of The Fullerton Plan – including better environments for walking and bicycling, safer streets, increased transit use, cost-effective infrastructure investments, reduced greenhouse gas emissions, and the preservation of open space.

P5.13 Development-Oriented Transit

Support projects, programs, policies and regulations to encourage transit improvements that incentivize investment and link neighborhoods while fitting the scale and traffic patterns of the surrounding area.

P6.1 Consideration of Bicyclists

Support regional and subregional efforts to ensure bicyclists are considered when developing new or retrofitting existing transportation systems.

P6.2 Inter-Jurisdiction Connections

Support efforts to maintain, expand and create new connections between the Fullerton bicycle network and the bicycle networks of adjacent cities, Orange County, and the region.

P6.3 Bicycle Transportation Plan

Support projects, programs and policies to maintain and update as necessary a Bicycle Transportation Plan prepared and approved pursuant to the California Streets and Highways Code to maintain eligibility for funding for State Bicycle Transportation Account funds.

P6.4 Bicyclist Use on All Streets

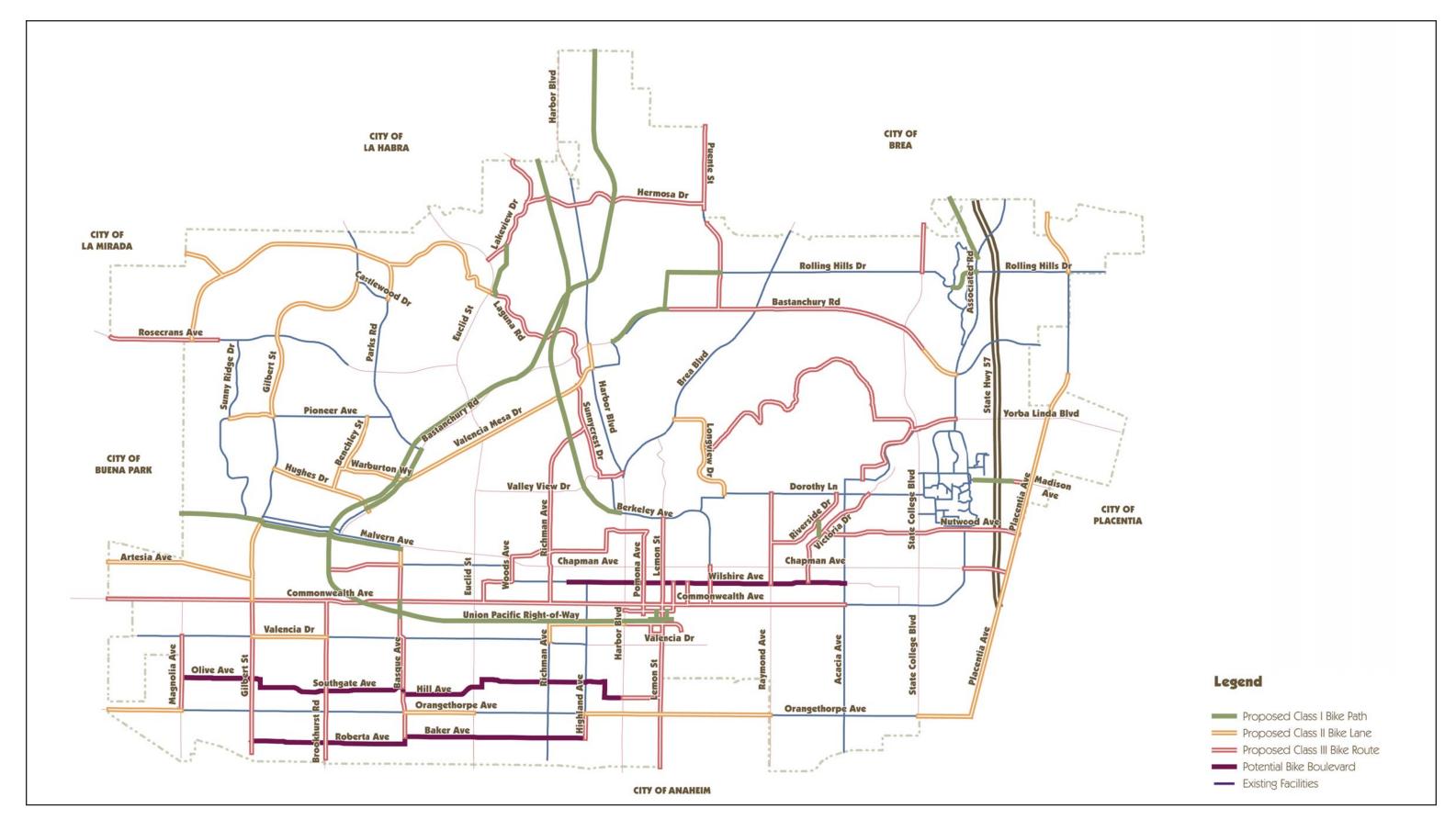
Support projects, programs, policies and regulations to recognize that every street in Fullerton is a street that a bicyclist can use.

P6.5 Bicycling Safety and Convenience

Support projects, programs, policies and regulations that make bicycling safer and more convenient for all types of bicyclists.

P6.6 Safe Travel to Key Destinations

Support projects, programs, policies, and regulations to facilitate safe travel by bicycle to key destinations within the community and larger region.



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P6.7 Development Projects

Support projects, programs, policies, and regulations to reduce negative impacts to and increase opportunities for bicycle users and the bicycle network in private and public development projects.

P6.8 Multi-Tiered Bicycle Network

Support projects, programs, policies, and regulations to develop a multi-tiered network of bicycle travel options that consider traffic volumes and rider experience; and which recognizes that all streets should be safe for bicycling.

P6.9 Intersection Safety

Support projects, programs, policies, and regulations to support the safe and efficient movement of bicyclists through and across intersections.

P6.10 Bicyclist Education

Support projects and programs in conjunction with local bike shops, organizations, and advocates to foster responsible ridership and break down an individual's barriers to bicycling.

P6.11 Neighborhood and Focus Area Connections

Support projects, programs, policies and regulations to connect neighborhoods via a multi-modal network to each other, and to and through the City's Focus Areas.

P6.12 Bicycle Parking and Facilities

Support projects, programs, policies, and regulations to provide convenient bicycle parking and other bicycle facilities in existing and potential high demand locations within the City, such as educational institutions, parks, business districts, transit stops, retail, commercial and employment centers.

P6.13 Design Standards

Support projects, programs, policies, and regulations to utilize recognized bicycle infrastructure design standards of the Federal Highway Administration, California Department of Transportation, and the American Association of State Highway and Transportation Officials and participate in their pilot studies for alternative designs when appropriate.

P6.14 Design Technology and Innovation

Support projects, programs, policies, and regulations to consider bicycle friendly design using new technologies and innovative treatments.

P14.5 Opportunities for Physical Activity

Support policies, projects, programs, and regulations that provide for convenient and safe areas that facilitate opportunities for physical activity such as parks, trails, open space, safe streets for bicycling, safe sidewalks for walking, and recreational facilities for residents of all ages and abilities.



P14.6 Amenities Within a Walkable Distance

Support policies and regulations involving land use and zoning changes that would provide access to daily retail needs, recreational facilities, and transit stops within a walkable distance (i.e., a quarter- to a half-mile) of established residential uses.

A5.1 Improved Transit Service

Work with OCTA to improve the coverage of transit service in Fullerton, by providing transit routes that more directly serve residential neighborhoods and enhancing regional transit connections in Fullerton through additional routes and increased service frequency.

A5.2 Signal Coordination

Collaborate with Caltrans, OCTA, and neighboring cities to achieve multijurisdictional traffic signal coordination across city boundaries.

A5.3 Rail and Rapid Transit

Participate in the planning efforts for regional and inter-state rail and rapid transit projects to represent the interests of the City.

A5.5 Dedications for Right-of-Way

Establish by local ordinance the ability to require a dedication or irrevocable offer of dedication of real property for streets, alleys, and additional land as may be necessary to provide bicycle paths and/or local transit facilities, consistent with the provisions of the Subdivision Map Act or as otherwise allowed under State law.

A5.8 Safe Routes to School Program

Work with local school districts, individual schools and parent organizations to develop and implement a Safe Routes to School Program for safe walking and bicycling to schools at every elementary, middle and high school.

A6.1 Development of Multi-Tiered Network of Bikeways

Work with the Bicycle Users Subcommittee and the community to further develop the current bicycle network into a multi-tiered network of on- and off-street bicycle travel options.

A6.2 Regular Review by Bicycle Users Subcommittee

Establish a regular review through the Bicycle Users Subcommittee of network gaps, barriers, new opportunities, and unsafe conditions on any City street; and their relative priority for completion. This list would be presented to the City Council for review and approval as part of priority setting process to implement The Fullerton Plan with the approved list informing Capital Improvement Project planning and funding needs.

A6.3 Collaboration with North Orange County Cities and Agencies

Collaborate with North Orange County cities and other agencies as appropriate on short- and long-term strategies to integrate bicycle routes and networks across jurisdictional boundaries.



A6.4 Standards for Intersection Improvements

Establish City standards for intersection improvements which include signal systems appropriate to detect bicycles and time to facilitate safe crossing.

A6.5 Roadway Restoration Subsequent to Repairs

Establish City standards to require a road to be restored to, or exceed if warranted by the prior condition, its original quality, following the completion of road work repairs by the City, private entity or other agencies such as utilities, paying particular attention to surface smoothness and re-striping suitable for bicycling.

A6.6 Pavement Management for Bikeways

Update the variables in the pavement management system to give priority or otherwise have a shorter replacement cycle to those streets which are identified as a Class II or Class III bikeway in the City's Bicycle Master Plan.

A6.7 Bikeway Signage Standards

Develop City-standards for signage when bikeways are impacted by construction or require the use of signs consistent with recognized standards including those of the Federal Highway Administration, California Department of Transportation, and the American Association of State Highway and Transportation Officials and include review of proposed signs by the City as part of a Traffic Control Plan or similar.

A6.8 Bicycle Parking and Storage Standards

Establish City standards for bicycle parking and storage, including specifications for racks and lockers, in public and private projects.

A6.9 Bicycle Boulevard Pilot Project

Evaluate a location for and pursue a pilot project to employ traffic calming and other measures to create a bicycle boulevard, a low speed street which has been optimized for bicycle traffic. Bicycle boulevards discourage cut-through motor vehicle traffic, but typically allow local motor vehicle traffic.

Mitigation Measures: No further mitigation is required beyond compliance with the proposed General Plan Update Policies and Actions.

Level of Significance After Mitigation: Less Than Significant Impact.

5.4.6 CUMULATIVE IMPACTS

■ FUTURE DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE FULLERTON PLAN COULD RESULT IN CUMULATIVE TRAFFIC AND CIRCULATION IMPACTS.

Impact Analysis: Cumulative traffic impacts are analyzed in terms of impacts within the City of Fullerton and impacts to the traffic system in neighboring communities. The Mobility Chapter considers regional circulation issues including the movement of transportation modes through and between cities. Baseline General Plan forecasts were derived from the City's traffic



software, which accounts for regional growth. In order to evaluate the growth anticipated by The Fullerton Plan, the number of trips that could be expected to be generated by the potential development identified in the Focus Areas was calculated. Buildout land uses were grouped by Focus Area and sub-area, and aggregated into Traffic Analysis Zones. The trip distribution assumptions for each Traffic Analysis Zone include a combination of assignments to multiple destinations within the City and external to the City.

Development associated with buildout of The Fullerton Plan would involve an increase in residential and non-residential development above existing conditions. As indicated in <u>Table 5.4-9</u>, 35 study intersections, including three CMP intersections are anticipated to operate at a deficient LOS with buildout of The Fullerton Plan.

As stated, the traditional approach to mitigating deficient LOS conditions is to provide additional intersection capacity (i.e., intersection widening, additional lanes), which could, in turn, have right-of-way impacts at some locations. Fullerton is a relatively built out City with mature land uses and an established transportation system. New roadways or major widening projects are not feasible or preferred. Further, it is not possible to accurately predict the exact improvements required at each intersection in the long-term, as the type of development, timing of development, and conditions at the time in which the development would occur are not currently known. The current trend toward alternative travel modes and away from the single-occupant vehicle may result in some cases where a better LOS is achieved and less mitigation is needed. The Fullerton Plan supports analyzing and evaluating urban streets using an integrated approach that considers the points of view of automobile drivers, transit passengers, bicyclists and pedestrians rather than auto-centric thresholds which conflict with other policies of The Fullerton Plan - including better environments for walking and bicycling, safer streets, increased transit use, cost-effective infrastructure investments, reduced greenhouse gas emissions, and the preservation of open space (Policy P5.12). Thus, as future planning efforts occur within the Focus Areas, detailed multi-modal analysis would be conducted in order to determine specific impacts associated with proposed development and where mitigation is found to be needed, alternative mitigation in lieu of capacity improvements would be encouraged (Mitigation Measure TR-1). Such mitigation could include providing or contributing to a circulator shuttle or transit system between activity centers and rail or transit centers; improved walking and biking facilities; and encouraging mixed-use and higher-density developments in order to facilitate onsite trip purpose capture. Such measures would have the dual benefit of avoiding or reducing right-of-way impacts, and at the same time reducing the dependence on the automobile, which would reduce traffic impacts and further the vision of The Fullerton Plan. However, buildout of The Fullerton Plan would result in cumulatively considerable traffic and circulation impacts associated with the 35 intersections, including three CMP intersections, identified above.

Proposed General Plan Update Policies and Actions: Refer to the Policies and Actions cited above.

Mitigation Measures: Refer to Mitigation Measure TR-1 through TR-3.

Level of Significance After Mitigation: Significant Unavoidable Impact under Buildout 2030 and cumulative conditions associated with the following intersections, including three CMP intersections:



- Lambert Road and Harbor Boulevard (PM peak hour) (#1)
- Imperial Highway and Harbor Boulevard (AM and PM peak hours) (#2)
- Imperial Highway at Palm Street (AM and PM Peak Hours) (#3)
- Rosecrans Avenue at Gilbert Street (AM Peak Hour) (#5)
- Bastanchury Road at Harbor Boulevard (AM and PM Peak Hours) (#12)
- Bastanchury Road at State College Boulevard (PM Peak Hour)(#14)
- Yorba Linda Boulevard at Placentia Avenue (AM and PM Peak Hours) (#16)
- Yorba Linda Boulevard at State College Boulevard (PM Peak Hour) (#17)
- Brea Blvd at Harbor Boulevard (AM and PM Peak Hours) (#19)
- Berkeley Street at Harbor Boulevard (PM Peak Hour) (#20)
- Malvern Avenue at Gilbert Street (AM and PM Peak Hours) (#22)
- Malvern Avenue at Bastanchury Road (PM Peak Hour) (#23)
- Malvern Avenue at Euclid Street (AM and PM Peak Hours) (#24)
- Chapman Avenue at Harbor Boulevard (AM and PM Peak Hours) (#25)
- Chapman Avenue at Raymond Avenue (AM and PM Peak Hours) (#28)
- Chapman Avenue at State College Boulevard (AM and PM Peak Hours) (#30)
- Chapman Avenue at Commonwealth Avenue (AM and PM Peak Hours) (#31)
- Nutwood Avenue at State College Boulevard (AM and PM Peak Hours) (#33)
- Commonwealth Avenue at Gilbert Street (PM Peak Hour) (#38)
- Commonwealth Avenue at Euclid Street (AM and PM Peak Hours) (#40)
- Commonwealth Avenue at Harbor Boulevard (AM and PM Peak Hours) (#42)
- Commonwealth Avenue at State College Boulevard (PM Peak Hour) (#46)
- Valencia Drive at Brookhurst Road (PM Peak Hour) (#48)
- Valencia Drive at Euclid Street (AM Peak Hour) (#49)
- Orangethorpe Avenue at Harbor Boulevard (AM and PM Peak Hours) (#55)
- Orangethorpe Avenue at Lemon Street (PM Peak Hour) (#56)
- Orangethorpe Avenue at State College Boulevard (AM Peak Hour) (#59)
- Imperial Highway at Brea Boulevard (AM and PM Peak Hours) (#62)
- La Palma Avenue at Lemon Street (PM Peak Hour) (#69)
- La Palma Avenue at Raymond Avenue/East Street (PM Peak Hour) (#70)
- La Palma Avenue at State College Boulevard (PM Peak Hour) (#71)
- Chapman Avenue at SR-57 SB Ramps (PM Peak Hour) (#78)
- Chapman Avenue at SR-57 NB Ramps (AM and PM Peak Hours) (#79)
- SR-91 WB Ramps at Lemon Street (PM Peak Hour) (#91)
- SR-91 WB Ramps at Raymond Avenue (PM Peak Hour) (#94)

5.4.7 SIGNIFICANT UNAVOIDABLE IMPACTS

The Fullerton Plan would result in significant and unavoidable impacts associated with deficient operation of the following 35 intersections, including three CMP intersections, under both project and cumulative project conditions:

- Lambert Road and Harbor Boulevard (PM peak hour) (#1)
- Imperial Highway and Harbor Boulevard (AM and PM peak hours) (#2)
- Imperial Highway at Palm Street (AM and PM Peak Hours) (#3)
- Rosecrans Avenue at Gilbert Street (AM Peak Hour) (#5)
- Bastanchury Road at Harbor Boulevard (AM and PM Peak Hours) (#12)



- Bastanchury Road at State College Boulevard (PM Peak Hour)(#14)
- Yorba Linda Boulevard at Placentia Avenue (AM and PM Peak Hours) (#16)
- Yorba Linda Boulevard at State College Boulevard (PM Peak Hour) (#17)
- Brea Blvd at Harbor Boulevard (AM and PM Peak Hours) (#19)
- Berkeley Street at Harbor Boulevard (PM Peak Hour) (#20)
- Malvern Avenue at Gilbert Street (AM and PM Peak Hours) (#22)
- Malvern Avenue at Bastanchury Road (PM Peak Hour) (#23)
- Malvern Avenue at Euclid Street (AM and PM Peak Hours) (#24)
- Chapman Avenue at Harbor Boulevard (AM and PM Peak Hours) (#25)
- Chapman Avenue at Raymond Avenue (AM and PM Peak Hours) (#28)
- Chapman Avenue at State College Boulevard (AM and PM Peak Hours) (#30)
- Chapman Avenue at Commonwealth Avenue (AM and PM Peak Hours) (#31)
- Nutwood Avenue at State College Boulevard (AM and PM Peak Hours) (#33)
- Commonwealth Avenue at Gilbert Street (PM Peak Hour) (#38)
- Commonwealth Avenue at Euclid Street (AM and PM Peak Hours) (#40)
- Commonwealth Avenue at Harbor Boulevard (AM and PM Peak Hours) (#42)
- Commonwealth Avenue at State College Boulevard (PM Peak Hour) (#46)
- Valencia Drive at Brookhurst Road (PM Peak Hour) (#48)
- Valencia Drive at Euclid Street (AM Peak Hour) (#49)
- Orangethorpe Avenue at Harbor Boulevard (AM and PM Peak Hours) (#55)
- Orangethorpe Avenue at Lemon Street (PM Peak Hour) (#56)
- Orangethorpe Avenue at State College Boulevard (AM Peak Hour) (#59)
- Imperial Highway at Brea Boulevard (AM and PM Peak Hours) (#62)
- La Palma Avenue at Lemon Street (PM Peak Hour) (#69)
- La Palma Avenue at Raymond Avenue/East Street (PM Peak Hour) (#70)
- La Palma Avenue at State College Boulevard (PM Peak Hour) (#71)
- Chapman Avenue at SR-57 SB Ramps (PM Peak Hour) (#78)
- Chapman Avenue at SR-57 NB Ramps (AM and PM Peak Hours) (#79)
- SR-91 WB Ramps at Lemon Street (PM Peak Hour) (#91)
- SR-91 WB Ramps at Raymond Avenue (PM Peak Hour) (#94)

All other impacts related to traffic and circulation associated with implementation of The Fullerton Plan would be less than significant with compliance with the policies and actions in The Fullerton Plan.

If the City of Fullerton approves The Fullerton Plan, the City shall be required to cite their findings in accordance with *CEQA Guidelines* Section 15091 and prepare a Statement of Overriding Considerations in accordance with *CEQA Guidelines* Section 15093.

5.4.8 SOURCES CITED

Kimley-Horn and Associates, Inc., City of Fullerton General Plan Update Transportation and Circulation Existing and Build-out Conditions Report, September 2011.

Orange County Airport Land Use Commission, *Airport Environs Land Use Plan for the Fullerton Municipal Airport*, November 2004.



Orange County Transportation Authority, Notice of Availability/Notice of Completion of a Draft Environmental Impact Report (DEIR) for the Fullerton Plan comment letter, dated April 10, 2012.

RBF Consulting, The Fullerton Plan Draft, August 2011.

Ryan Snyder Associates, Fullerton Bicycle Master Plan, August 2011.

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