

**City of
Bellflower**

***Circulation
Element
Update
Final Report***

by
DKS Associates

TABLE OF CONTENTS

1. PURPOSE OF THE CIRCULATION ELEMENT.....	1-1
2. INTRODUCTION.....	2-1
2.1 BELLFLOWER PLAN.....	2-1
2.2 SCOPE AND CONTENT.....	2-1
2.3 RELATED PLANS, PROGRAMS AND AGENCY COORDINATION.....	2-2
3. EXISTING CONDITIONS.....	3-1
3.1 STREETS AND HIGHWAYS.....	3-1
3.2 ROADWAY TRAFFIC OPERATION.....	3-7
3.3 INTERSECTION OPERATING CONDITIONS.....	3-13
3.4 TRANSIT SERVICE.....	3-13
3.5 RAIL.....	3-20
3.6 BICYCLE ROUTES.....	3-22
3.7 AVIATION FACILITIES.....	3-23
3.8 TRUCK ROUTES.....	3-23
3.9 PAVEMENT MANAGEMENT.....	3-25
3.10 CMP ROUTES.....	3-25
4. FUTURE YEAR 2015 TRAFFIC CONDITIONS.....	4-1
4.1 PROJECTED GROWTH IN THE REGION.....	4-1
4.2 FUTURE DEVELOPMENT WITHIN BELLFLOWER.....	4-1
4.3 YEAR 2015 ROADWAY SEGMENT CAPACITY ANALYSES.....	4-5
4.4 YEAR 2015 INTERSECTION CAPACITY ANALYSES.....	4-9
4.5 FUTURE TRANSIT SERVICE.....	4-9
4.6 FUTURE PARKING FACILITIES.....	4-12
4.7 FUTURE BICYCLE FACILITIES.....	4-12
4.8 FUTURE AVIATION FACILITIES.....	4-13
4.9 FUTURE GOODS MOVEMENT (TRUCK ROUTES).....	4-13
4.10 TRAFFIC INTRUSION IN RESIDENTIAL AREAS.....	4-13
5. CITYWIDE CIRCULATION.....	5-1
5.1 FREEWAY ACCESS.....	5-1
5.2 EAST/WEST ARTERIAL CIRCULATION.....	5-1
5.3 NORTH/SOUTH ARTERIAL CIRCULATION.....	5-2
5.4 PARKING.....	5-2
5.5 TRANSIT USE.....	5-2
5.6 NEIGHBORHOOD TRAFFIC INTRUSION.....	5-3
5.7 LAND USE.....	5-3
5.8 TRAFFIC IMPACT STUDY GUIDELINES.....	5-4
5.9 IMPACTS FROM SURROUNDING JURISDICTIONS.....	5-4
6. CIRCULATION GOALS AND POLICIES.....	6-1
6.1 FUNCTIONAL, SAFE, AND EFFICIENT STREET SYSTEM.....	6-1
6.2 BALANCED CIRCULATION SYSTEM.....	6-2
6.3 PUBLIC TRANSIT.....	6-3
6.4 ALTERNATIVE TRANSPORTATION.....	6-4
6.5 PARKING.....	6-5

List of Figures & Tables

FIGURE 3-1 BELLFLOWER AREA MAP	3-2
FIGURE 3-2 BELLFLOWER EXISTING FUNCTIONAL CLASSIFICATION SYSTEM.....	3-5
FIGURE 3-3 FLOW MAP.....	3-9
FIGURE 3-4 EXISTING ROADWAY SEGMENTS OPERATING AT UNACCEPTABLE LEVELS	3-12
FIGURE 3-5 INTERSECTION LEVEL OF SERVICE ILLUSTRATION	3-15
FIGURE 3-6 EXISTING TRANSIT SERVICE ROUTES	3-18
FIGURE 3-7 MTA METRO LINE MAP.....	3-21
FIGURE 3-8 EXISTING BIKE ROUTES.....	3-24
FIGURE 3-9 EXISTING TRUCK ROUTES	3-26
FIGURE 4-1 YEAR 2015 AVERAGE DAILY TRAFFIC VOLUMES	4-6
FIGURE 4-2 YEAR 2015 AM/PM INTERSECTION LEVEL OF SERVICE	4-11
FIGURE 4-3 TRUCK ROUTES	4-14
TABLE 3-1 EXISTING DESIGN GUIDELINES FOR ARTERIAL STREETS AND HIGHWAYS.....	3-4
TABLE 3-2 DAILY ROADWAY CAPACITY CRITERIA.....	3-8
TABLE 3-3 EXISTING LEVEL OF SERVICE SUMMARY.....	3-10
TABLE 3-4 LEVEL OF SERVICE INTERPRETATION	3-14
TABLE 3-5 AM/PM PEAK HOUR LOS AT SIGNALIZED INTERSECTIONS.....	3-16
TABLE 4-1 FUTURE (2015) LOS SUMMARY.....	4-6
TABLE 4-2 FUTURE (2015) AM/PM PEAK HOUR LOS AT SIGNALIZED INTERSECTIONS	4-10

1. PURPOSE OF THE CIRCULATION ELEMENT

The purpose of a Circulation Element is to develop a policy and technical document which presents information on how to provide a safe, effective, and efficient transportation system for a city. The State of California has required the adoption of a citywide Circulation Element since 1955. The current state mandate for a Circulation Element states that the General Plan shall include:

"...a circulation element consisting of the general location for proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan."

The "General Plan Guidelines" (Section 65302 of the California Government Code), published by the State of California, Office of Planning and Research, states that the policies and plan proposals of the Circulation Element should:

- Coordinate the transportation and circulation system with planned land uses;
- Promote the efficient transport of goods and the safe and effective movement of all segments of the population;
- Make efficient use of existing transportation facilities; and,
- Protect environmental quality and promote the wise and equitable use of economic and natural resources.

A major goal in the preparation of a General Plan is to achieve internal consistency throughout the various General Plan elements. For example, the Circulation Element portrays the roadway system needed to serve traffic generated by the uses permitted in the Land Use element.

The Circulation Element is associated with the Noise and Air Quality Elements since traffic forecasts are used, in conjunction with other data, to determine noise contours and air quality impacts of the General Plan land uses.

The Circulation Element is also related to the Safety Element, the Open Space and Conservation Element. The Safety Element addresses evacuation routes and minimum road widths to accommodate city residents in the event of a disaster, and the Open Space and Conservation Element can identify landscaping standards for roadways, scenic highways and multi-use recreation trails.

2. INTRODUCTION

2.1 BELLFLOWER PLAN

The 1977 Circulation Element addressed a broad range of issues related to physical mobility, traffic volume levels and roadway capacities. This Circulation Element Update provides a description of existing transportation conditions, an assessment of future conditions, and policies to guide the City of Bellflower into 21st Century mobility goals.

Transportation is one of the most pervasive issues of the General Plan because of its relation to the other General Plan elements. Transportation issues affect not only the local area, but require coordination with regional, State, and Federal agencies, as well as adjacent Southeast Los Angeles County (SELAC) communities.

A well-planned transportation system is important to a city's economic and social well-being. This Circulation Element is intended to guide the development of the city's transportation system in a manner that is compatible with the General Plan ideas. To help meet future transportation demands and achieve balanced growth, this Element includes specific goals and policies which serve as the basis for implementation of transportation system recommendations.

The primary goal of Bellflower's Circulation Element is to achieve and maintain a balanced, safe, problem-free transportation system which:

- Provides easy and convenient access to all areas of the community;
- Improves present traffic flows while maintaining Bellflower's sense of place;
- Reduces dependence on single occupant automobile travel by providing a high level of pedestrian, bicycle, and public transit travel opportunities; and,
- Preserves a sense of comfort and well-being throughout the community by managing the commercial/business traffic on the City's circulation system, and reducing the intrusiveness of regional traffic on neighborhood streets.

2.2 SCOPE AND CONTENT

The General Plan Circulation Element addresses the transportation improvements needed to provide adequate capacity for both existing and future land uses. It also addresses public transit services, alternative transportation modes, demand management and parking. Corresponding goals and policies have been adopted to ensure that all components of the circulation system will meet the needs for the City of Bellflower. The Circulation element establishes a hierarchy of transportation routes with specific standards described for each category of roadway.

This Circulation Element is organized into the following sections:

- 1.0: Purpose of the Circulation Element** - Defines purpose of the Circulation Element
- 2.0: Introduction** - Defines scope and content of the Circulation Element
- 3.0 Existing Conditions** - Describes the current transportation infrastructure
- 4.0: Future Year 2015 Traffic Conditions** - Forecasts future levels of service and defines future needs
- 5.0: Citywide Circulation** - Presents general descriptions of transportation issues
- 6.0: Circulation Goals and Policies** - Identifies specific goals and policies for improvements

2.3 RELATED PLANS, PROGRAMS AND AGENCY COORDINATION

As part of the Southern California Region, Bellflower is affected by regional plans and programs that are related directly or indirectly to transportation. In addition to effectively improve transportation, Bellflower must coordinate certain improvement ideas with other agencies. Examples of these are Caltrans, the Southern California Association of Governments (SCAG) and SCAG's 1994 Regional Mobility Element and Growth Management Plan; the Los Angeles County Metropolitan Transportation Authority (MTA), and the MTA's 20 Year Transportation Plan; and, the South Coast Air Quality Management District (SCAQMD), and that agency's Air Quality Management Plan. These agencies and plans are intended to work in concert to reduce area-wide traffic congestion and air pollutant levels. Planning strategies focus on reducing single occupant automobile trips and truck traffic on the regional transportation network, as well as at local levels.

Bellflower's General Plan element policies and programs that reflect and respond to SCAG's, MTA's, and SCAQMD's regional objectives. In particular, policies recommended in this Circulation Element are geared towards developing methods to reduce peak hour vehicular traffic congestion, re-directing cut through trips (neighborhood intrusion), promoting transportation modes other than single occupant vehicles (SOV) and managing the parking demand. A summary of related documents is presented below:

SCAG 1994 Regional Mobility Element (RME)

This document provides an update of the Regional Transportation Plan required by federal and state law. It responds to the Clean Air Acts. In addition to outlining the region's 20 year strategy for meeting mobility goals, the RME also serves as the \$71 billion master funding list for all transportation improvements. By law, major projects must be included in the RME (or subsequent RME updates) in order to be eligible for funding. Additionally, the RME is linked to anticipated population for growth and is a powerful engine for regional economic recovery.

SCAG is currently working on the update to the 1994 RME, which will be a 1997 Regional Transportation Plan (RTP). This update is most significant and differs from the 1994 RME because it is being developed with heavy sub-regional input. There are a total of 13 sub-regions in the SCAG planning area. Seven of these sub-regions are within Los Angeles County. Bellflower is part of the SELAC sub-region. The 1997 RTP will focus on recommending improvement projects which meet the goals of seven "Performance Indicators" which were defined by SCAG as necessary to provide a comprehensive regional transportation system.

The Performance Indicators are presented below:

- Mobility
- Accessibility
- Environment
- Cost Effectiveness
- Reliability
- Safety
- Consumer Satisfaction

MTA 20-Year Integrated Transportation Plan

In 1995, the MTA replaced its 1992 30-Year Plan with a 20-Year Plan that more accurately defined future transportation system improvements which balanced with revenues anticipated from County-Wide transportation tax initiatives. The Plan identifies the cost and expected completion dates for highway, rail, bus and demand management improvements. The document describes system improvements which respond to County growth projections.

Caltrans

Caltrans maintains interstate highways adjacent to the City and state highways within and adjacent to the City and is responsible for the interchanges serving the City. Implementation of specific recommendations from each element of the General Plan will require working with Caltrans to provide any interchange improvements in a timely manner, and thereby, provide adequate capacity on the ramps which link the local and regional circulation system.

Los Angeles County Congestion Management Plan

The Los Angeles County Metropolitan Transportation Authority (MTA) completed its first Congestion Management Plan (CMP) for Los Angeles County in 1992. A subsequent document was developed in 1993, culminating a three year period which included the assistance and input of numerous individuals representing a wide range of organizations and interests. The CMP was developed to meet the requirements of Section 65089 of the California Government Code. It is intended to address regional congestion by linking transportation, land use and air quality decisions. It helps to develop a partnership among transportation decision makers on devising appropriate transportation solutions that include all modes of travel. It also proposes transportation projects which are eligible to compete for state gas tax funds.

The CMP designated a highway system with level of service (LOS) standards, analyzed transit, transportation demand management and land use, proposed a capital improvement program, and developed a countywide model. The document includes a policy statement, assigns roles and responsibilities for local agencies and introduces a credit-system for mitigating transportation impacts.

State law requires Bellflower and each city in Los Angeles County to implement the CMP prepared by the MTA. Specifically, Bellflower must: 1) conform to the established level of service standards; 2) adopt and implement a trip-reduction and travel demand ordinance; 3) implement a program to analyze land use decisions on the regional transportation system; 4) prepare annual deficiency plans for portions of the CMP system failing to meet the established service level standards; and 5) if desired, adopt its own traffic model, which Bellflower has not developed at this time.

The CMP roadway system includes Route 19 (Lakewood Boulevard) and Route 91 (Artesia Freeway) through the City of Bellflower. According to the CMP requirements, these roadways must operate no worse than Level of Service (LOS) "E" during peak hours, although specific sections with existing LOS "F" service levels are not required to be improved to LOS "E".

SELAC Signal Synchronization Program

In 1991 the MTA initiated a Signal Support Group program which organized sub-regional groups of city traffic engineers to work together to improve the timing and coordination of traffic signals on primary arterials. There are currently seven "Signal Forums" throughout the County. The City of Bellflower is part of the SELAC Forum.

A feasibility study for recommending improvements for regionally significant arterials was completed in 1995. This study led to the MTA funding of recommended improvements which totaled approximately \$24 million. The improvements range from relatively simple traffic engineering techniques including adding turn lanes and improving signal timing to developing Intelligent Transportation System (ITS) technologies.

Air Quality Management Plan

The SCAQMD completed the Air Quality Management Plan (AQMP) in 1994. This document identified a regional strategy which contains commitments to adopt transportation controls to reduce automobile-related emissions. The document addresses all forms of transportation and related activities, including telecommunications, alternative fuel vehicles, and ITS technologies.

Other on-going, or soon to be completed, SELAC transportation projects in the Bellflower area include:

- **Alameda Corridor Goods Movement Study** - This project is funded by SCAG to determine traffic related impacts and the associated economic impact/benefit of increased and concentrated movement of goods from the Ports of Los Angeles and Long Beach by both truck and rail. Truck trips destined outside of the region will be concentrated primarily through the Alameda Corridor. Trips within the SELAC area will primarily be directed to arterial truck routes. Increased warehousing and distribution of goods is anticipated in the cities adjacent to the corridor.
- **Metro Green Line Extension** - This study analyzes the feasibility of extending the eastern (Norwalk) and western portions of this recently-opened passenger rail line.
- **I-710 Corridor Improvement Project** - Information coming from Chuck Jones, City of Lakewood.

More information about the documents described in this section can be obtained by contacting SCAG, MTA, SCAQMD, Caltrans and/or SELAC representatives.

3. EXISTING CONDITIONS

The City of Bellflower is located in the southeastern portion of the County of Los Angeles and is served by an existing network of freeways, roadways, transit, and signalized intersections. Access to Bellflower is served by three primary corridors: Interstate 105 (Glenn M. Anderson Freeway), Interstate 605 (San Gabriel River Freeway), and State Route 91 (Artesia Freeway). This network connects Bellflower to the communities in both Los Angeles and Orange counties. Figure 3-1 illustrates the proximity of the City of Bellflower within the Southeast Los Angeles County (SELAC) area.

This section documents the circulation system infrastructure and its existing operating conditions within the City of Bellflower. This section also provides an evaluation of the adequacy of the system to accommodate existing travel demand.

The components of the circulation system in the City of Bellflower include the following:

- Streets and Highways
- Rail Systems
- Aviation Facilities
- Transit Services
- Bicycle Facilities
- Goods Movement

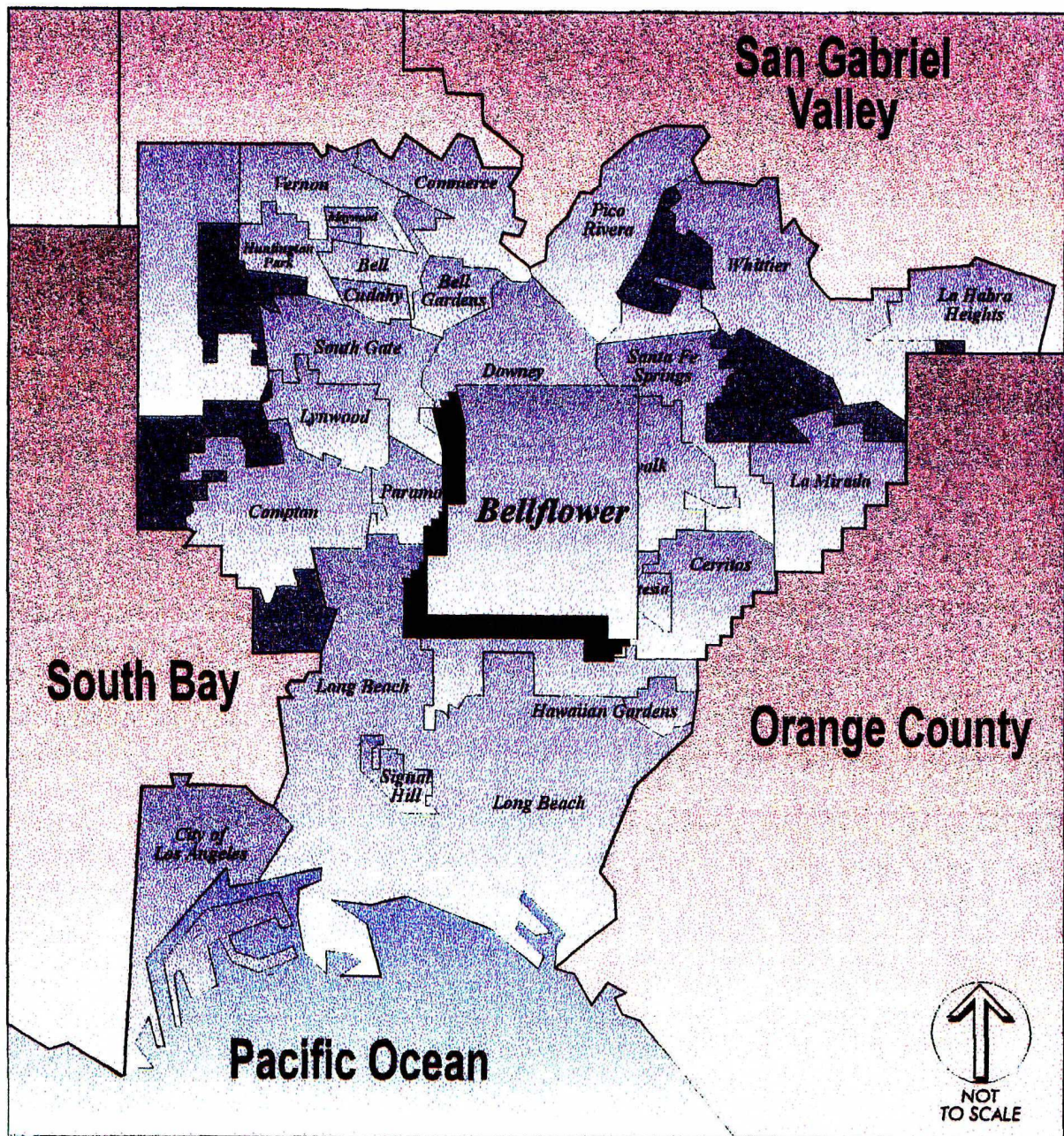
The basic components of the Bellflower circulation system are described below.

3.1 STREETS AND HIGHWAYS

Functional Classification

The two major considerations in classifying the City's street network functionally are access to adjacent properties and movement of persons and goods into and through the City. City streets are classified by the relative importance of these two functions assigned to them. The classification of streets is essentially a determination of the degree to which access functions are to be emphasized at the cost of the efficiency of movement, or discouraged to improve the movement function. The design and operation of each street, therefore, depends upon the importance placed on each of these functions. For example, streets designed to carry large volumes of vehicles into and through the City should have more lanes, higher speed limits, and fewer driveways, while residential streets have fewer lanes, lower speed limits, and more driveways to provide access to fronting properties.

The functional classification system allows the residents and City officials to identify preferred characteristics of each street. If observed characteristics of any street change from the functional classification, then actions can be taken to return the street to its originally intended use or to change the designated classification.



April 1997

City of Bellflower
Circulation Element

Figure 3-1
General Area Map

The roadway system in Bellflower is defined using a hierarchy of roadway types which differentiate the size, function and capacity of each roadway link. Based on the Los Angeles County Department of Public Works Guidelines, the City of Bellflower utilizes four primary facility-type classifications ranging from "Major" arterial with the highest roadway capacity through "secondary" arterial roadways, to "Collector" and "Local Residential" streets with the lowest capacity. Descriptions of the geometric and operational characteristics defined for freeways, arterials, and collectors in the City are presented below.

Freeways generally provide inter-regional access. Their primary function is to move vehicles through the City, thus, there is not access to adjacent land, and limited access to arterial streets. Freeways contain anywhere from 4 to 12 lanes with recommended design volumes from 65,000 to 205,000 depending on geometric designs which permit high travel speeds.

Major arterial streets and highways are designed to move relatively high volumes of traffic between freeway systems, and between the freeway and the local circulation system. Intersections along major arterials are at-grade and usually signalized. Access from private property and collector streets should be limited, as should on-street parking. When the major arterial is divided, raised median strips wide enough for left-turn pockets are provided along with extensive landscaping of the median to reduce headlight glare and to increase the overall aesthetic appearance of the street. A major arterial would consist of four lanes of through traffic and has a recommended design volume of 36,000 vehicles per day.

Secondary arterials designed to collect and distribute traffic from major highways and other arterial roadways to traffic destinations, such as schools, shopping centers, and employment centers. They have at-grade intersections, use traffic signals and restrict parking where necessary, and because of the narrower right-of-way, there is generally no raised median. A secondary arterial has a recommended design volume of 32,000 vehicles per day. Generally, arterial streets (major and secondary) serve two primary functions: (1) to move vehicles into and through the City, and (2) to serve adjacent commercial land uses. Driveways and other curb cuts along arterials are generally limited to minimize disruption to traffic flow. Other than residential streets, the majority of the streets in the City are of this classification.

Collector streets are intended to carry traffic between residential neighborhoods and the arterial street network. Within the City of Bellflower, there are two-lane roadways which have a mixture of residential and commercial land uses along them. Average daily traffic volumes on collector streets are generally designed to accommodate 14,000 vehicles. Higher density residential land uses or side yards of single-family homes may be located adjacent to collector streets. Higher traffic volumes may be acceptable on certain collector streets such as those fronting commercial development or extra wide cross sections.

Local residential streets are intended to be low-speed, low-volume streets designed to serve individual properties in the City. They allow access to residential driveways and often provide parking for the neighborhood. They are not intended to serve through traffic traveling from one street to another, but solely local traffic. Traffic volumes on a residential street are designed to carry 4,000 vehicles per day, but should not exceed about 2,500 vehicles per day and/or 200-300 vehicles per hour. The maximum residential traffic volume which is acceptable to persons living along a street may vary from one

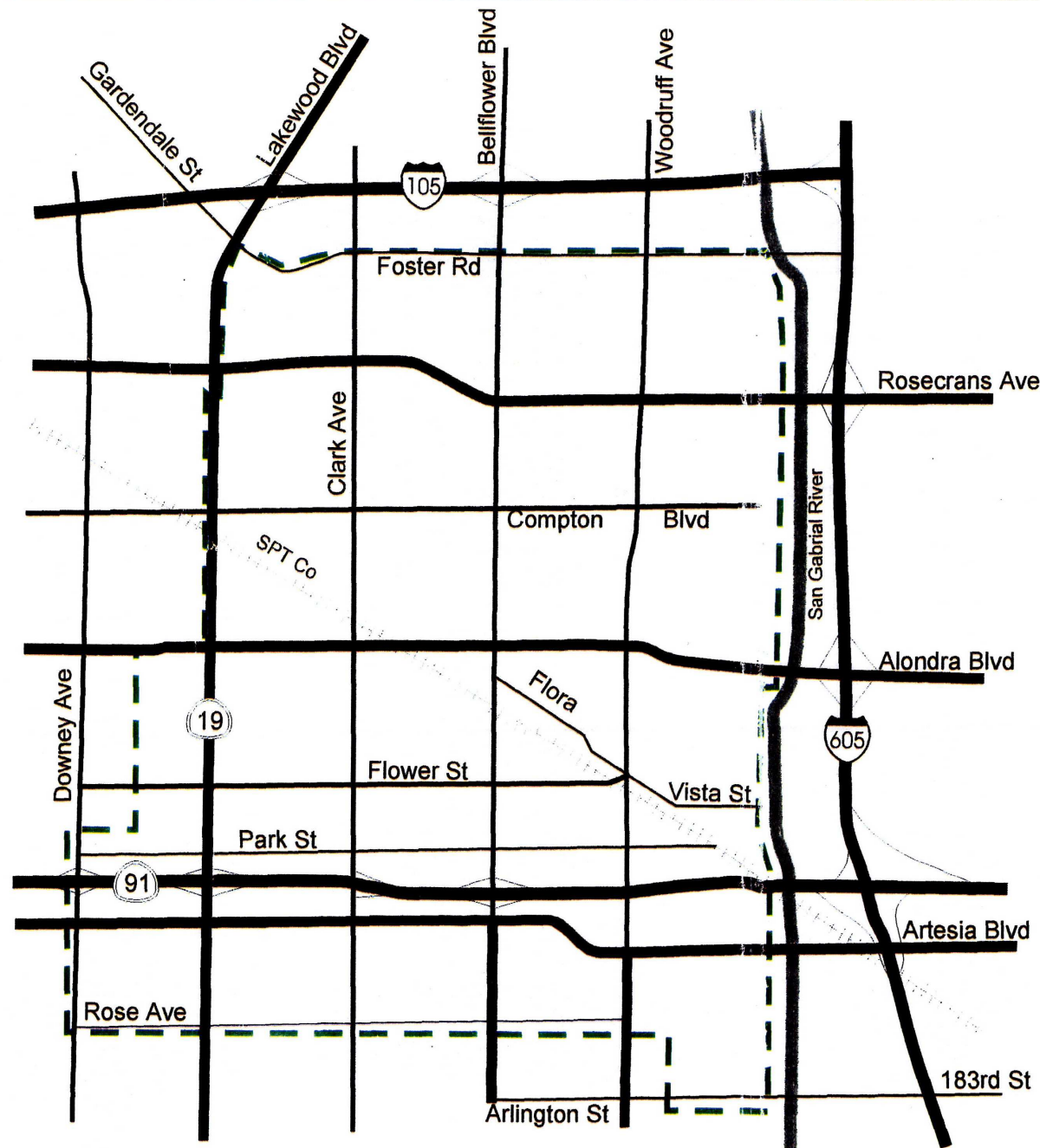
Figure 3-2

City of Bellflower

Functional Classifications

Legend:

-  City of Bellflower Boundary
-  Major Arterial
-  Secondary Arterial
-  Collector
-  Local Street



NOT
TO SCALE

Arterial Street System

Physical characteristics and operating conditions of arterial facilities within the City are described in the following paragraphs.

Alondra Boulevard - Alondra Boulevard begins at La Mirada Boulevard on the border of Los Angeles and Orange counties in the City of La Mirada and runs westward through the Cities of Cerritos, Norwalk, Bellflower, Paramount, Compton, and Carson where it terminates at Vermont Avenue where it becomes 161st Street. Alondra Boulevard is a four-lane major arterial through the City of Bellflower.

Artesia Boulevard - Artesia Boulevard originates at Beach Boulevard in the City of Buena Park in Orange County and continues westward to a point about 0.5 miles west of Alameda Street in the City of Compton where it becomes a frontage road for Route 91 access to Avalon Boulevard. West of the Harbor Freeway (Interstate 110), Route 91 becomes Artesia Boulevard until it terminates at Pacific Coast Highway (PCH) in Hermosa Beach. Artesia Boulevard is constructed to major arterial street width to accommodate a four-lane facility in the City of Bellflower.

Bellflower Boulevard - Bellflower Boulevard begins at Pacific Coast Highway (PCH or State Route 1) in Long Beach and continues northward through the cities of Long Beach, Lakewood, Bellflower and finally to Downey where it terminates at Lakewood Boulevard (State Route 19). Bellflower Boulevard is currently configured as a four-lane facility and is classified as a secondary arterial.

Clark Avenue - Clark Avenue originates at PCH in Long Beach and continues northward through the Cities of Lakewood, Bellflower, and finally to Downey where it terminates at Lakewood Boulevard (State Route 19). Clark Avenue is currently a four-lane secondary arterial within the city limits.

Compton Boulevard - Compton Boulevard is a secondary arterial which accommodates two lanes of travel in each direction through the City of Bellflower. Compton Boulevard begins at the intersection of Carfax Avenue in Bellflower and traverses west until it terminates at the intersection with Figueroa Street east of the Harbor Freeway.

Downey Avenue - Downey Avenue begins at Country Club Drive at the Lakewood Country Club in the City of Lakewood and continues northward until it ends at Galatin Road in Downey. Downey Avenue is currently configured as a four-lane secondary arterial.

Flower Street - Flower Street originates at the intersection of Flora Vista Street in the City of Bellflower and runs westward until Paramount Boulevard where it turns into East 70th Street in the City of Paramount. Flower Street is currently a four-lane secondary arterial within the city limits.

Lakewood Boulevard (SR-19) - Lakewood Boulevard, also known as State Route 19, begins in the City of Long Beach at the turnabout with the intersection of PCH, Atherton Street and Los Coyotes Diagonal and continues northward through the Cities of Lakewood, Bellflower, Paramount, Downey, Pico Rivera, South El Monte, El Monte, Rosemead, Temple City, and turns into East Orange Grove Boulevard at the intersection of Sierra Madre Villa Avenue in the City of Pasadena. Lakewood Boulevard becomes Rosemead Boulevard (SR-19) at the Santa Ana Freeway (Interstate 5). Lakewood Boulevard, a major arterial within the city limits, is currently constructed to four travel lanes and a raised median.

Rosecrans Avenue - Rosecrans Avenue originates at Euclid Street in Fullerton and stretches westward through the cities of La Mirada, Santa Fe Springs, Norwalk, Bellflower, Downey, Paramount, Compton, Los Angeles, Gardena, Hawthorne, Lawndale, El Segundo and terminates at Vista Del Mar in Manhattan Beach. Rosecrans Avenue is designated as a four-lane major arterial in the City of Bellflower.

Woodruff Avenue - Woodruff Avenue extends from Willow Street just north of the San Diego Freeway (Interstate 405) in Long Beach and continues northward through the cities of Lakewood and Bellflower until it terminates at Florence Avenue in Downey. Woodruff Avenue is classified as a four lane secondary arterial within the city limits.

Collector & Local Streets

The remaining, mostly residential streets, are classified as either "Collector" or "Local" streets. The Circulation Element does not analyze specific operations on these facilities.

3.2 ROADWAY TRAFFIC OPERATION

Roadway traffic operation is generally evaluated by the ratio of existing daily traffic volumes to the daily roadway capacity. Capacity is measured in terms of the ability of the street system to meet and serve the demands placed on it. It is generally considered the most practical measure of how well the mobility needs of the City are being met.

Average daily capacity is the theoretical maximum number of vehicles that can pass over a segment of roadway in a 24-hour period. The capacity of a roadway is affected by a number of factors including roadway type, street and lane widths, the number of travel lanes, the number of crossing roadways, signal cycle length, the absence or presence of on-street parking, the number of driveways, pavement conditions and roadway design. The daily roadway capacity criteria used in the analysis of arterial segments (24-hour volumes) is based upon Los Angeles County Department of Public Works Guidelines which are presented in Table 3-2.

The County's Guidelines contain policies on the planning and provision of traffic improvements necessary for orderly growth and development. The Traffic Level of Service Policy sets, as general criteria, an operating Level of Service (LOS) of "C" for signalized intersections, which would be a volume-to-capacity (V/C) ratio of 0.80 or less. For most areas of the County, mid-range LOS D or V/C ratio of 0.85 are the point beyond which mitigation measures are required. The City of Bellflower's accepted Level of Service value for arterial links and signalized intersections is LOS C. These values will be used to assess the adequacy of the existing circulation system.

Existing Parking Conditions

The parking system in Bellflower consists of on-street parking, public lots, private driveways, and private lots. On-street parking is available throughout the City in non-metered spaces and on streets with striped and unstriped spaces, which allow curbside parking. On-street parking is prohibited on various streets due to factors such as narrow curb-to-curb width, heavy traffic volumes, restricted sight distance, and bike lane requirements.

According to the City's study observations, parking deficiencies exist in variation throughout the City in such places as the downtown area and the Department of Motor Vehicles (DMV).

Table 3-2 City of Bellflower Daily Roadway Capacity Criteria April 1997							
<i>Arterial Highway 24-Hour Daily Volumes and Levels of Service (LOS)</i>							
Arterial	Lane Configuration	Level of Service					
		A	B	C	D	E	F
Major Arterial	4 - Divided	21,600	25,200	28,800	32,400	36,000	---
Secondary Arterial	4 - Undivided	19,200	22,400	25,600	28,800	32,000	---
Collector	2 - Undivided	8,400	9,800	11,200	12,600	14,000	---
Local	---	2,000	2,500	3,000	3,500	4,000	---
Notes: The divided lane configuration denotes a raised median while undivided denotes a painted stripe to separate on-coming traffic. The volumes shown in the table above are daily two-way traffic volumes and assume that the highways are built to their ultimate typical section as shown in Figure 3-3. The daily roadway capacity criteria used in the analysis of arterial segments (24-hour volumes) is based upon Los Angeles County Department of Public Works Guidelines.							

Existing Daily Traffic Volumes

Twenty-four hour counts were collected at seventy (70) locations throughout the City between January 17 and January 30, 1996 by Wiltec, Inc. on Tuesdays, Wednesdays and Thursdays. The existing daily traffic volumes on arterial streets are shown in Figure 3-3.

Mid-block Analysis

An analysis of daily operating conditions on the selected roadway segments was conducted, using the Los Angeles County Capacities and Level of Service Assumptions. The existing average daily traffic volumes for the roadway segments and assumed capacities are presented in Table 3-3. Existing daily volumes were compared to their roadway capacities to arrive at the existing LOS operation. Based on this analysis, the following roadway segments that are currently carrying traffic volumes in excess of existing LOS C, unacceptable levels, are shown on Figure 3-4 and listed below:

- Lakewood Boulevard: South City Limits to Route 91 (LOS F)
- Lakewood Boulevard: Route 91 to Alondra Boulevard (LOS E)
- Lakewood Boulevard: Alondra Boulevard to Compton Boulevard (LOS D)
- Bellflower Boulevard: Artesia Boulevard to SR-91 WB Ramps (LOS F)
- McNab Avenue: Alondra Boulevard to Hayford Street (LOS D)
- McNab Avenue: Mapledale Street to Rosecrans Avenue (LOS F)
- Woodruff Avenue: Artesia Place to Palm Street (LOS D)
- Ramona Street: e/o Clark Avenue to e/o Bellflower Boulevard (LOS F)

Figure 3-3
 City of Bellflower
 Existing Average Daily
 Traffic (ADT) Volumes

Legend:

-  City of Bellflower Boundary
-  Major Arterial
-  Secondary Arterial
-  Collector
-  Local Street
-  Average Daily Traffic (in thousands)



NOT
TO SCALE

Table 3-3

Existing (1996) Level of Service Summary

Bellflower Circulation Element

April-1997

Roadway Name	From	To	Classification	ADT	V/C	LOS
North/South Roadways						
Ardmore Ave.	south of Flower St.		Local	2,773	0.69	C
Bellflower Bl.	Rose St.	Artesia Bl.	Major	23,496	0.65	B
	Artesia Bl.	SR-91 EB Ramps	Secondary	33,744	1.05	F
	SR-91 EB Ramps	SR-91 WB Ramps	Secondary	34,101	1.07	F
	SR-91 WB Ramps	Park St.	Secondary	25,512	0.80	C
	Park St.	Flower St.	Secondary	21,502	0.67	B
	Flower St.	Oak St.	Secondary	15,717	0.49	A
	Oak St.	Alondra Bl.	Secondary	16,275	0.51	A
	Alondra Bl.	Compton Bl.	Secondary	9,731	0.30	A
	Compton Bl.	Rosecrans Ave.	Secondary	13,454	0.42	A
	Rosecrans Ave.	Foster Rd.	Secondary	16,946	0.53	A
Bixby Ave.	Artesia Pl.	Beverly St.	Local	2,081	0.52	B
	Maple St.	Flower St.	Local	2,516	0.63	C
Clark Ave.	Rose St.	Artesia Bl.	Secondary	19,654	0.61	B
	Artesia Bl.	Park St.	Secondary	20,693	0.65	B
	Park St.	Flower St.	Secondary	20,460	0.64	B
	Flower St.	Alondra Bl.	Secondary	18,185	0.57	A
	Alondra Bl.	Compton Bl.	Secondary	14,819	0.46	A
	Compton Bl.	Rosecrans Ave.	Secondary	12,700	0.40	A
	Rosecrans Ave.	Foster Rd.	Secondary	10,325	0.32	A
Lakewood Bl.	City Limit	Artesia Bl.	Major	37,439	1.04	F
	Artesia Bl.	SR-91	Major	40,980	1.14	F
	SR-91	Alondra Bl.	Major	34,909	0.97	E
	Alondra Bl.	Compton Bl.	Major	29,850	0.83	D
	Compton Bl.	Rosecrans Ave.	Major	26,814	0.74	C
Leahy St.	south of Maplewood St.		Local	312	0.08	A
	north of Alondra Bl.		Local	842	0.21	A
McNab Ave.	Alondra Bl.	Hayford St.	Local	3,209	0.80	D
	Mapledale St.	Rosecrans Ave.	Local	5,314	1.33	F
Stevens Ave.	south of Compton Bl.		Local	1,017	0.25	A
	north of Alondra Bl.		Local	1,104	0.28	A
Woodruff Ave.	Artesia Bl.	Artesia Pl.	Major	24,656	0.68	B
	Artesia Pl.	Palm St.	Secondary	25,659	0.80	D
	Palm St.	Flower St.	Secondary	23,632	0.74	C
	Flower St.	Alondra Bl.	Secondary	23,684	0.74	C
	Alondra Bl.	Compton Bl.	Secondary	20,841	0.65	B
	Compton Bl.	Rosecrans Ave.	Secondary	18,336	0.57	A
	Rosecrans Ave.	Foster Rd.	Secondary	16,438	0.51	A

Table 3-3**Existing (1996) Level of Service Summary
Bellflower Circulation Element**

April-1997

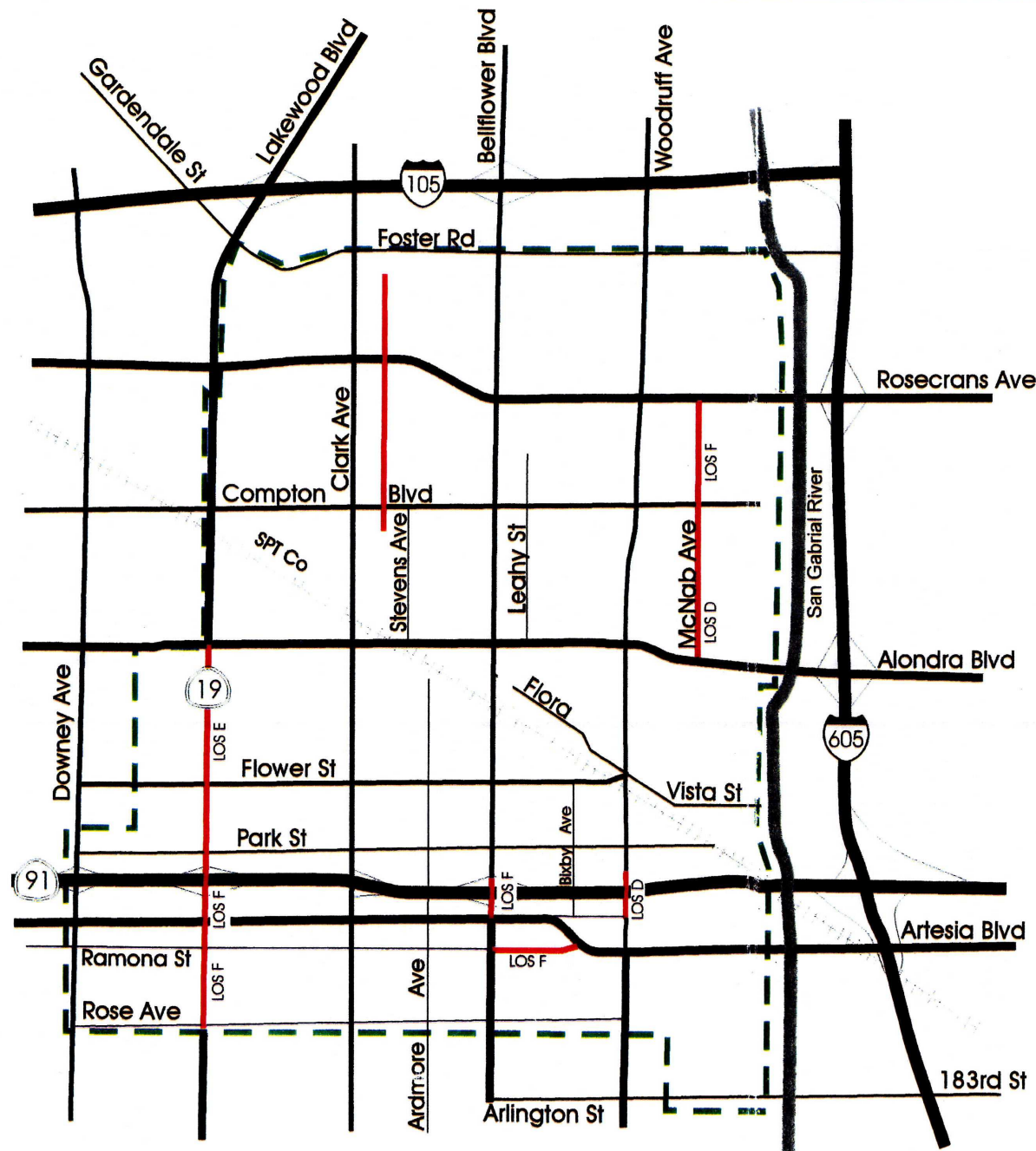
Roadway Name	From	To	Classification	ADT	V/C	LOS
East/West Roadways						
Alondra Bl.	Hayter Ave.	Lakewood Bl.	Major	16,615	0.46	A
	Lakewood Bl.	Clark Ave.	Major	19,160	0.53	A
	Clark Ave.	Bellflower Bl.	Major	18,810	0.52	A
	Bellflower Bl.	Woodruff Ave.	Major	20,886	0.58	A
	Woodruff Ave.	McNab St.	Major	24,001	0.67	B
Artesia Bl.	Downey Ave.	Lakewood Bl.	Major	20,408	0.57	A
	Lakewood Bl.	Clark Ave.	Major	20,490	0.57	A
	Clark Ave.	Bellflower Bl.	Major	17,967	0.50	A
	Bellflower Bl.	Woodruff Ave.	Major	19,547	0.54	A
	Woodruff Ave.	Carpintero Ave.	Major	21,944	0.61	B
Beverly St.	west of Bixby Ave.		Local	2,614	0.65	C
Compton Bl.	Lakewood Bl.	Clark Ave.	Secondary	9,901	0.31	A
	Clark Ave.	Bellflower Bl.	Secondary	10,331	0.32	A
	Bellflower Bl.	Woodruff Ave.	Secondary	9,427	0.29	A
	Woodruff Ave.	McNab St.	Secondary	4,516	0.14	A
Flower St.	Hayter Ave.	Lakewood Bl.	Secondary	5,744	0.18	A
	Lakewood Bl.	Clark Ave.	Secondary	6,664	0.21	A
	Clark Ave.	Bellflower Bl.	Secondary	8,736	0.27	A
	Bellflower Bl.	Civic Center Dr.	Secondary	10,723	0.34	A
Foster Rd.	Lakewood Bl.	Clark Ave.	Collector	7,177	0.51	A
	Clark Ave.	Bellflower Bl.	Collector	7,602	0.54	A
	Bellflower Bl.	Woodruff Ave.	Collector	9,036	0.65	B
	Woodruff Ave.	Faust Ave.	Collector	2,578	0.18	A
Park St.	Passage Ave.	Lakewood Bl.	Collector	2,167	0.15	A
	Lakewood Bl.	Clark Ave.	Collector	2,623	0.19	A
	Clark Ave.	Bellflower Bl.	Collector	2,109	0.15	A
	Bellflower Bl.	Woodruff Ave.	Collector	2,375	0.17	A
Ramona St.	east Bellflower Bl.		Local	4,521	1.13	F
	east of Clark Ave.		Local	5,918	1.48	F
Rose St.	west of Lakewood Bl.		Local	1,109	0.28	A
	Lakewood Bl.	Clark Ave.	Local	1,651	0.41	A
	Clark Ave.	Bellflower Bl.	Local	1,145	0.29	A
	Bellflower Bl.	Woodruff Ave.	Local	2,014	0.50	B
Rosecrans Ave.	Lakewood Bl.	Clark Ave.	Major	17,588	0.49	A
	Clark Ave.	Bellflower Bl.	Major	20,678	0.57	A
	Bellflower Bl.	Woodruff Ave.	Major	20,618	0.57	A
	Woodruff Ave.	Carpintero Ave.	Major	26,542	0.74	C

Figure 3-4
Segments Operating at
Unacceptable LOS

Legend:

 Unacceptable LOS
Segments

Note: Based upon Average Daily
Traffic Volumes/Roadway Capacity



3.3 INTERSECTION OPERATING CONDITIONS

Operating conditions have been analyzed at 23 key signalized intersections. Traffic volumes for each intersection were collected on a typical weekday during AM and PM peak traffic periods between January 17th and January 24th, 1996 by Wiltec, Inc.

The Intersection Capacity Utilization (ICU) was the methodology employed to determine operating levels of service (LOS) at selected signalized intersections. The ICU method of analyzing intersection operations is one of several parallel methods developed in the last two decades that allows the traffic engineer to perform a simple calculation of operating conditions at a signalized intersection. The end result, the overall intersection capacity utilization, is defined as the sum of the ratios of approach volume divided by approach capacity for each leg of intersection which controls traffic signal timing plus an allowance for clearance times. Thus, an ICU value of 1.00 corresponds to a condition where the sum of the approach volumes controlling the signal exactly equals the sum of the approach capacities servicing these volumes.

The ICU method requires data related to the following intersection characteristics:

- Approach lane geometry and capacities
- Turning movement volumes
- Signal control characteristics

The first data requirement pertains to intersection geometry and driver characteristics. It is necessary to determine the number of lanes available on each approach to the intersection, which turning movements are utilized at each intersection, and the number of vehicles per hour of green time that a particular lane can carry. This last value is heavily dependent on driver behavior, and has been shown to range from 1,500 to 1,800 vehicles per hour of green time. The analyses contained in this report are based on a capacity of 1,600 vehicles per hour of green time and a lost time factor of 10% as prescribed in the Los Angeles County Guidelines for Traffic Impact Studies. The ICU analysis also provides a right-turn adjustment to reflect the impact of a heavy right-turn movement. Right-turn adjustments are commonly used at T-intersections or where the right-turn volume is the largest among two opposing approach volumes. The existing counts, intersection geometrics, and all level of service calculations, including an ICU example, are included in the Technical Appendix to this document. Table 3-4 defines the level of service for intersection operating conditions and Figure 3-5 provides a graphic illustration of intersections operating at specific levels of service.

Table 3-5 displays the results of the LOS analysis for the 23 intersections for both AM and PM peak traffic periods. Only two intersections (Alondra Bl./Woodruff Ave. and Artesia Bl./Lakewood Bl.) are currently operating with a volume-to-capacity ratio exceeding 0.80, which is in fair condition. No further mitigation is contemplated at this time since all of the City's intersections are operating at a level of service D or better.

3.4 TRANSIT SERVICE

Transit operations within a local region can play a major role in the overall composition of a circulation element. Transit service has traditionally been proven to be a convenient and

cost-effective transportation alternative and will continue to be a pressing issue with local motorists.

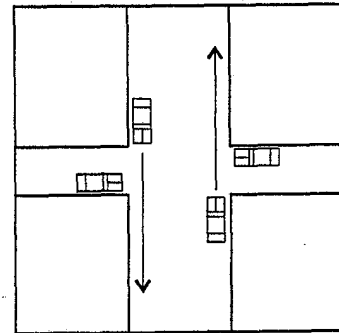
Both fixed route transit and paratransit (demand-responsive) service currently operate within the City of Bellflower. Fixed route services are typically transit lines which operate on regular schedules along a set route, stopping at pre-defined stop locations. Certain fixed route services are modified on weekends or during peak periods to accommodate the expected demand. Paratransit services, more commonly referred to as Dial-a-Ride, are demand responsive services which provide service to passengers upon an individual request basis. Although Dial-a-Ride operates within a defined service area, they do not operate on fixed routes or schedules; instead rides are provided when transit passengers call and request service. Transit dependent persons such as the elderly and the disabled usually rely on paratransit services. These demand responsive systems often provide service to major destinations such as hospitals and medical centers, but may also take passengers to local destinations such as neighborhood shopping centers.

Table 3-4 Level of Service Interpretation				April 1997
Level of Service	Description	Delay Range (Sec. per Vehicle)	Volume-to-Capacity Ratio	
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	< 5	0.60	
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	5.1 - 15.0	0.61 - 0.70	
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	15.1 - 25.0	0.71 - 0.80	
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues. <u>This level is typically associated with design practice for peak periods.</u>	25.1 - 40.0	0.81 - 0.90	
E	Poor operations. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	40.1 - 60.0	0.91 - 1.00	
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	> 60	Over 1.00	
Source: <i>Highway Capacity Manual</i> , Transportation Research Board, Special Report No. 209, Washington, DC, 1994				

The OPERATIONS LEVEL METHODOLOGY, which is described in the Transportation Research Board's Highway Capacity Manual, defines Level of Service (LOS) for signalized intersections in terms of delay. Technically, delay is the amount of time an average vehicle must wait at an intersection before being able to pass through the intersection. For signalized intersections, the relationship between LOS and delay is based on the average stopped delay per vehicle for a fifteen minute period.

LEVEL OF SERVICE "A" - Delay 0.0 to 5.0 seconds

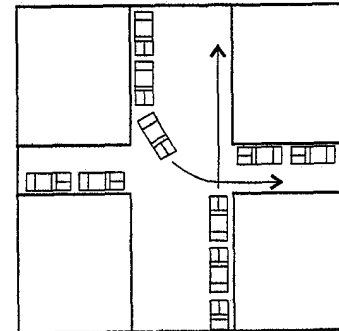
Describes operations with very low delay, i.e., less than 5 seconds per vehicle. This occurs when signal progression is extremely favorable. Most vehicles arrive during the green phase and are not required to stop at all.
Corresponding V/C ratios usually range from 0.00 to 0.60.



LOS "A"

LEVEL OF SERVICE "B" - Delay 5.1 to 15.0 seconds

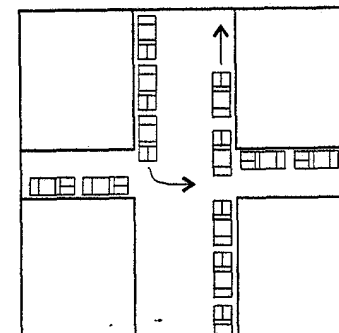
Describes operations with delay in the range of 5 to 15 seconds per vehicle generally characterized by good signal progression and/or short cycle lengths. More vehicles are required to stop than for LOS "A" causing higher levels of average delay.
Corresponding V/C ratios usually range from 0.61 to 0.70.



LOS "C"

LEVEL OF SERVICE "C" - Delay 15.1 to 25.0 seconds

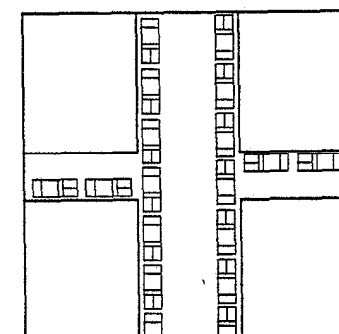
Describes operations with delay in the range of 15 to 25 seconds per vehicle. Occasionally, vehicles may be required to wait more than one red signal phase. The number of vehicles stopping at this level is significant although many pass through the intersection without stopping.
Corresponding V/C ratios usually range from 0.71 to 0.80.



LOS "D"

LEVEL OF SERVICE "E" - Delay 40.1 to 60.0 seconds

Describes operations with delay in the range of 40 to 60 seconds per vehicle. These high delay values generally indicate poor signal progression, long cycle lengths and high V/C ratios. Vehicles frequently fail to clear the intersection during the first green phase.
Corresponding V/C ratios usually range from 0.91 to 1.00.



LOS "F"

LEVEL OF SERVICE "F" - Delay 60.1 seconds plus

Describes operations with delay in excess of 60 seconds per vehicle. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection.
Corresponding V/C ratios of over 1.00 are usually associated.

SOURCE: Transportation Research Board, "Operations Level Methodology - Signalized Intersections", Highway Capacity Manual, Special Report 209, 1994.

April 1997

Table 3-5

Existing (1996) AM and PM Peak Hour LOS at Signalized Intersections
Bellflower Circulation Element

April-1997

Intersection	AM Peak Hour		PM Peak Hour	
	V/C Ratio	LOS	V/C Ratio	LOS
Alondra Blvd. - Lakewood Blvd.	0.521	A	0.733	C
Alondra Blvd. - Clark Ave.	0.409	A	0.618	B
Alondra Blvd. - Bellflower Blvd.	0.492	A	0.745	C
Alondra Blvd. - Woodruff Ave.	0.755	C	0.814	D
Artesia Blvd. - Lakewood Blvd.	0.744	C	0.821	D
Artesia Blvd. - Clark Ave.	0.544	A	0.665	B
Artesia Blvd. - Bellflower Blvd.	0.695	B	0.756	C
Artesia Blvd. - Woodruff Ave.	0.756	C	0.774	C
Beach St. - Bellflower Blvd.	0.488	A	0.623	B
Compton Blvd. - Lakewood Blvd.	0.485	A	0.608	B
Compton Blvd. - Clark Ave.	0.601	B	0.721	C
Compton Blvd. - Bellflower Blvd.	0.327	A	0.412	A
Compton Blvd. - Woodruff Ave.	0.527	A	0.563	A
Flora Vista St. - Woodruff Ave.	0.530	A	0.630	B
Flower St. - Bellflower Blvd.	0.442	A	0.654	B
Foster Rd. - Bellflower Blvd.	0.495	A	0.440	A
Oak St. - Bellflower Blvd.	0.323	A	0.456	A
Park St. - Bellflower Blvd.	0.500	A	0.670	B
Rosecrans Ave. - Lakewood Blvd.	0.590	A	0.643	B
Rosecrans Ave. - Clark Ave.	0.328	A	0.498	A
Rosecrans Ave. - Bellflower Blvd.	0.575	A	0.549	A
SR-91 EB Ramps - Bellflower Blvd.	0.657	B	0.724	C
SR-91 WB Ramps - Bellflower Blvd.	0.751	C	0.713	C

Fixed Route

The City of Bellflower is currently serviced by a City owned and operated fixed route bus service (The Bus) which operates the following four routes:

- Green Route
- Blue Route
- Orange Route (West)
- Orange Route (East)

In addition to the Norwalk Transit System Route 1 (Rio Hondo - Bellflower), three Los Angeles County Metropolitan Transportation Authority (MTA) fixed route transit lines also serve the City of Bellflower: Routes 127, 130, 266 and 631. The following paragraphs describe the service provided by each fixed route transit line and are presented graphically as they operate within the City of Bellflower in Figure 3-6.

Green Route

The Green Route is a counter-clockwise route that travels from Caruthers Park (adjacent to Flora Vista Street) on its southern boundary, along McNab Avenue to Rosecrans Avenue, and south along Bellflower Boulevard at the western boundary. Service is offered with an average headway of 30 minutes during weekdays and weekends. Daily ridership along this line (total persons boarding, all stops) is approximately 146.

Blue Route

The City of Bellflower's Blue Route is comprised of two rectangular routes separated by the Artesia Freeway (State Route 91). Beginning at the intersection of Bellflower and Compton, the Blue Route travels west along Compton Boulevard, south on Clark Avenue, east on Artesia Boulevard to Palo Verde Avenue. The second loop of this route travels south along Palo Verde Avenue, west on Allington Street, north on Canehill Avenue to Artesia Boulevard. The bus then travels west on Artesia Boulevard to Bellflower Boulevard where the route originates at Compton Boulevard. Service is offered with an average headway of 30 minutes during weekdays and weekends. Daily ridership along this line (total persons boarding, all stops) is approximately 100.

Orange Route

The Orange Route consists of two separate routes: Orange Route East and Orange Route West. Orange Route East is a circular route within the City of Bellflower which primarily runs north-south along Bellflower Boulevard and Woodruff Avenue, respectively. Foster Road acts as the northern limit for this part of the route while Ramona Street is the southern boundary. Orange Route West is also a circular route which runs north along Lakewood Boulevard (State Route 19) from Cedar Street to Rosecrans Avenue. Orange Route West travels north along Clark Avenue, east on Foster Road, south along Bellflower Boulevard to Cedar Street where it completes the route. Service is offered with an average headway of 60 minutes during the weekdays and weekends. Total daily ridership along the entire line is approximately 127.

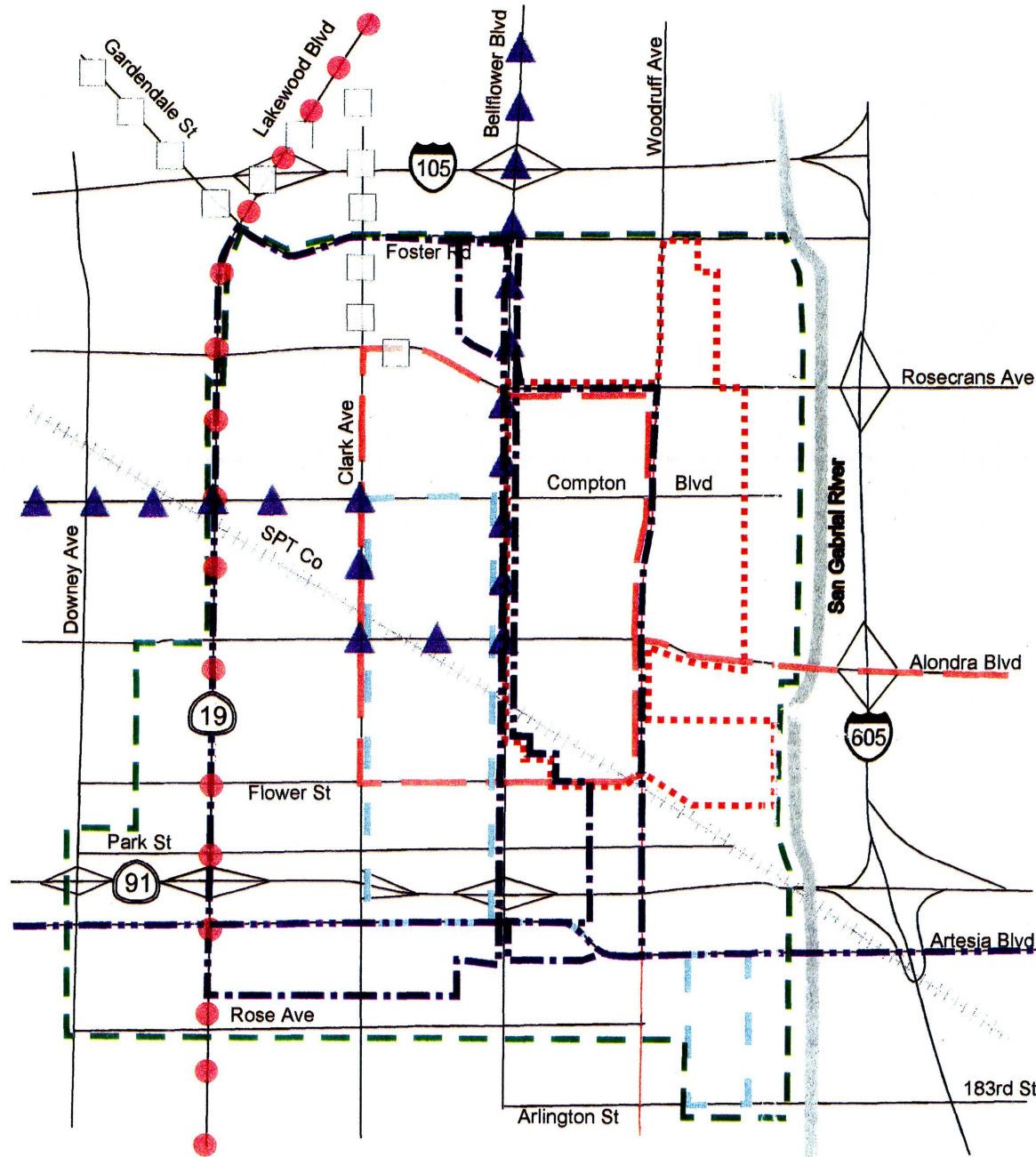
Route 1

Route 1 is an intercity transit line which connects the cities of Norwalk and Bellflower. Route 1 originates at Norwalk Square and connects with Cerritos College. From Cerritos College, Route 1 travels west along Alondra Boulevard, south on Woodruff Avenue, west on Flower Street, north along Clark Avenue, east on Rosecrans Avenue, south on Woodruff Avenue, and west along Alondra Boulevard to Cerritos College and Norwalk Square. Service on Route 1 is offered with an average headway of 30 minutes between 6:00 a.m. and 6:30 p.m. during the weekdays. No weekend service is offered along this route. No daily ridership data was available for this route.

Figure 3-6 Existing Transit Lines

Legend:

-  Bellflower Dial-a-Ride Boundary
-  Bellflower Orange Route
-  Bellflower Green Route
-  Bellflower Blue Route
-  Norwalk Route 1
-  MTA Route 127
-  MTA Route 130
-  MTA Route 266
-  MTA Route 631



↑
NOT
TO SCALE

Route 127

Route 127 is an east-west MTA route that travels predominantly along Alondra Boulevard and Somerset/Compton Boulevard. Aside from providing service to Bellflower, this route also serves Carson, Compton, Paramount, and Downey. In addition to Cal. State University at Dominguez Hills, Route 127 serves the Compton Blue Line Station. Service hours within the City of Bellflower are between approximately 5:20 a.m. and 8:25 p.m. No service for this route is offered during the weekends. No daily ridership information was available for this route.

Route 130

Route 130 is an east-west MTA route that travels primarily along Artesia Boulevard. This MTA route connects the cities of Redondo Beach, Hermosa Beach, Lawndale, Carson, Compton, Bellflower, Cerritos, Buena Park and Fullerton. Route 130 serves King Harbor, South Bay Galleria, CSU Dominguez Hills, Compton Blue Line Station, Los Cerritos Center and the Fullerton Park-and-Ride Lot. Route 130 has one stop within the City of Bellflower at the intersection of Artesia Boulevard and Lakewood Boulevard which is serviced between 5:54 a.m. and 8:23 p.m. during the week and between 6:52 a.m. and 8:23 p.m. on weekends. No daily ridership information was available for this route.

Route 266

Route 266 is also an intercity route which connects the cities of Long Beach and Lakewood to the south of Bellflower, with the cities of Downey, Pico Rivera, South El Monte, Temple City, and Pasadena. The line originates at the Long Beach V.A. Hospital, and continues along Pacific Coast Highway and north along Lakewood Boulevard into the City of Lakewood. The route operates along Lakewood Boulevard into Pasadena. Service hours within the City of Bellflower are between 5:15 a.m. and 10:20 p.m. on the weekdays and between 5:45 a.m. and 10:25 p.m. on the weekends. No daily ridership information was available for this route.

Route 631

MTA Route 631 is an intercity route which originates at the Kaiser Permanente Hospital in Bellflower and travels north along Clark Avenue to connect with the cities of Downey and South Gate where it serves Rockwell International Space Division, the Metro green Line Lakewood Station, and the Rancho Los Amigos Medical Center. Within the City, the line operates between 6:00 a.m. and 6:30 p.m. on the weekdays and between 7:00 a.m. and 4:30 p.m. during the weekends. No daily ridership information was available for this route.

Paratransit Services

Additional commuter transportation services available for residents of Bellflower are Dial-A-Ride, Ridesharing, and Park-n-Ride.

Dial-A-Ride (DAR) is public transit that provides "on-demand" transportation service for Bellflower residents 55 years or older and disabled persons of any age. Rides are limited to the City boundaries with the only exception given for medical trips within portions of the surrounding area. Common destinations within the City of Bellflower are downtown for shopping, local medical and dental centers, local grocery and drug stores, Farmer's Market at Simms Park, Thompson Park Pool, and Cerritos Community College. Trips within the City boundaries are assessed a \$0.50 fare while medical trips outside the City limits, but within the pre-arranged boundaries, are assessed a \$2.00 fare each way. This service is operated Monday through Saturday between 9:00 a.m. and 5:00 p.m. The DAR provided service to over 15,500 users in the past twelve months. Funding for this service

can come from a variety of sources and is generally restrictive to elderly and disabled transport. The MTA is currently considering deployment of a demand-based system for the general public in select areas of the County. Those areas will likely be developed within the next 2-4 years.

Ridesharing is a service that is offered to help ease highway congestion by increasing the vehicle occupancy rates and, thereby, reducing the number of total cars on the road. This also allows the rideshare vehicle to use High Occupancy Vehicles (HOV) lanes, requiring two or more passengers per vehicle, which usually bypasses rush hour traffic in adjacent freeway lanes. Ridesharing programs can be arranged through a company's Employee Transportation Coordinator (ETC). The City of Bellflower can contact its SCAG Liaison to obtain additional information about promoting Rideshare and computer matching services throughout the City.

Park-and-Ride locations allow commuters to meet and park in one location when utilizing carpools, vanpools, commuter bus service, or rail lines. There are no existing or planned park-and-ride locations within the City of Bellflower. However, a nearby park-and-ride location is located in the City of Norwalk near the intersection of Foster Road and Studebaker Road at the east end of the Glenn M. Anderson Freeway (I-105).

3.5 RAIL

Passenger Rail

There are currently no passenger rail facilities in operation within the City of Bellflower. However, the recently-opened Metro Green Line (MGL) has stations located in Downey and Norwalk. The Norwalk MGL station is located at the east end of the I-105 freeway with a 1,550 space park-and-ride lot that serves the cities of Norwalk, Santa Fe Springs and La Mirada. The Lakewood/I-105 MGL station in Downey is located near the Rockwell International Space Division which serves the cities of Downey, Lakewood and Paramount. The Metro Blue Line runs North/South along the Harbor Freeway from Long Beach into downtown Los Angeles.

Figure 3-7 illustrates the locations and routes of the three Metropolitan Transportation Authority (MTA) Metro Lines: Green, Blue and Red.

Freight Rail

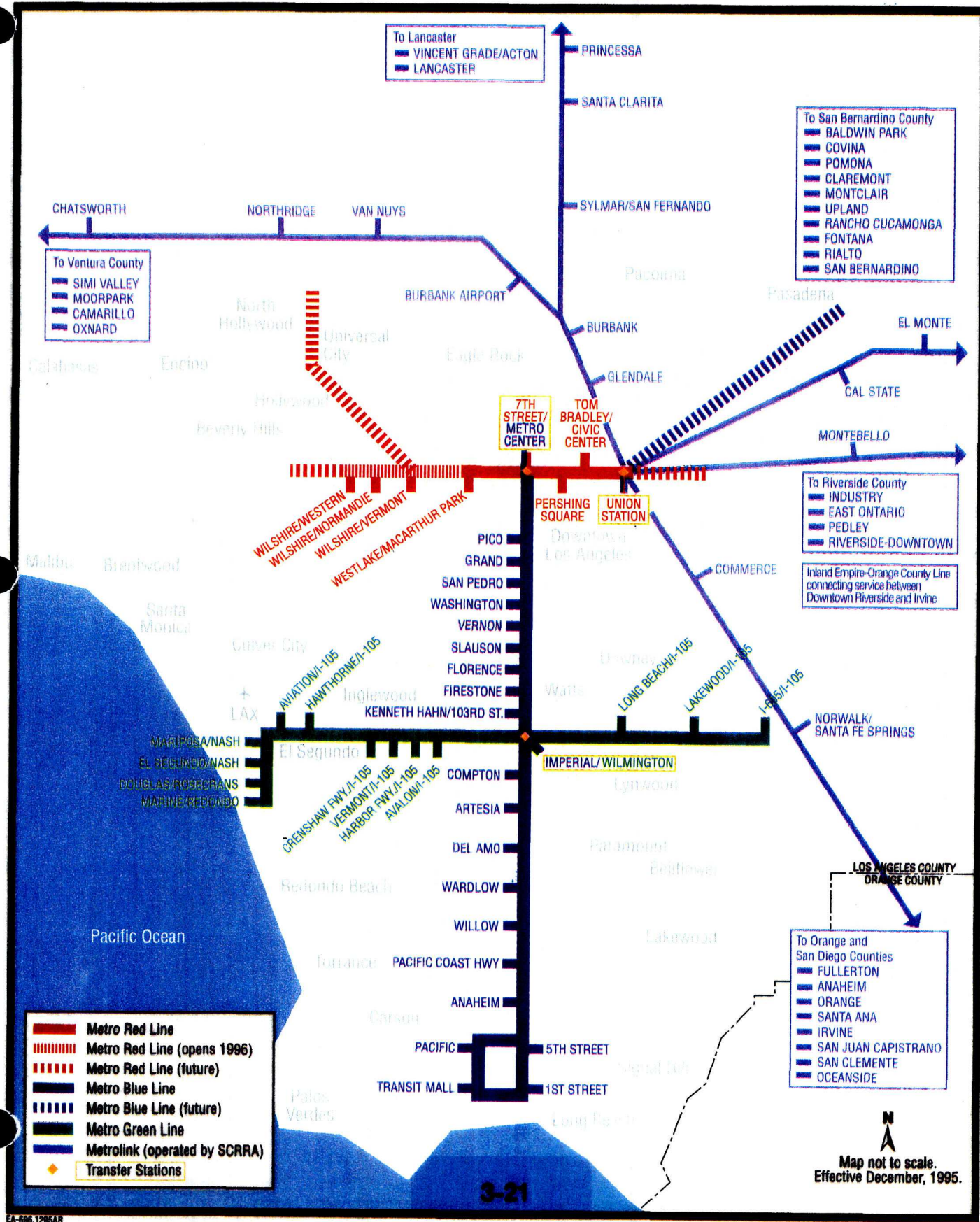
A 100-foot wide corridor, established by the West Santa Ana Branch of the Pacific Electric Line, that once served the cities of Los Angeles and Santa Ana, as well as the communities between them, is the only freight rail line which serves the City of Bellflower. In the City of Bellflower, the line lies along a south-easterly alignment which crosses Clark Avenue, Alondra Boulevard, and Bellflower Boulevard before arriving at the old train depot and passing the Bellflower Town Center. The line then continues past Woodruff Avenue and Caruthers Park before proceeding under the Artesia Freeway (Route 91) to the San Gabriel River where it enters the City of Cerritos. Within this right-of-way, the line operates a few freight trains each week which service lumber yards and other warehouses.



Metro Rail System

Metropolitan Transportation Authority

Figure 3-7



3.6 BICYCLE ROUTES

A vital component of any circulation element is the bicycle path system. Bikeways are not only a significant transportation resource but also can be instrumental in the implementation of an open space or park and recreation plan.

The City of Bellflower currently provides only one primary bicycle facility along Woodruff Avenue. Additional bike lanes may be planned through a Southeast Los Angeles County (SELAC) Master Plan of Bikeways to connect all major trip generator activity centers inside the City and connect the City's bikeway network with regional network located in adjacent cities. For example, the City identified the potential for developing a scenic bikeway corridor along the railroad right-of-way from the Los Angeles River to Coyote Creek.

Caltrans has designated three classes of bikeways which may be established in California¹. A definition of each bikeway class is presented below.

Class I Bikeway (Bike Path) - Provides for bicycle travel on a right-of-way completely separated from any street or highway. Class I trails are usually fenced and found along flood control channels and the beach cities with limited access points. There are currently no Class I bikeways within the City of Bellflower. However, an additional bikeway is proposed along the rail corridor known as the West Santa Ana Branch of the Pacific Electric Line.

Willdan Associates completed the West Branch Greenway Feasibility Study and Master Plan in October, 1995 which investigated the feasibility of creating a mix of related uses to form a multi-modal transportation corridor, a linear park, and a greenway along the rail line. The West Branch Greenway is approximately 8.4 miles long and has the potential to link existing trail corridors along three rivers (Los Angeles, San Gabriel and Coyote Creek), as well as local bikeways, parks and other community facilities. The West Branch Greenway has been included in the MTA's recently published Southeast Area Bikeways Master Plan as a "planned bike path or trail."

Class II Bikeway (Bike Lane) - Provides a restricted right-of-way for cyclists with a striped lane for one-way travel along a street or highway with signs indicating the bicycle route on the road. Motor vehicles are permitted to use the bike lane to make turns at intersections/driveways and to park where indicated. There are currently no Class II bikeways within the City of Bellflower.

Class III Bikeway (Bike Route) - Provides for shared use with pedestrian and/or motor vehicle traffic. Signs are posted which indicate that the road also serves as a bike route although no special striping is provided for cyclists. This type of facility does not provide cyclists with increased privileges, but rather, informs motorists of the preferred cycling route. The only Class III bikeway within the City of Bellflower runs from Byrum Zinn Park, west on Foster Road, and south along Woodruff Avenue through the entire length of the City, and a connection from Woodruff Avenue to Caruthers Park.

¹ *California Highway Design Manual, 4th Edition, Bikeway Planning and Design*, California Department of Transportation, Sacramento, CA 1990.

Existing bike routes and the location of major bike generators are shown in Figure 3-8. Other bike routes, including the San Gabriel Riverbed Trail, located in adjacent jurisdictions, are not shown on this map.

3.7 AVIATION FACILITIES

There are no general or commercial aviation facilities, or heliports, located within the City of Bellflower limits. Passenger air carrier and air cargo facilities are located at Long Beach Municipal Airport located approximately 6.5 miles to the south of Bellflower, and at the Los Angeles International Airport (LAX) located approximately 17 miles to the west along the I-105 freeway.

3.8 TRUCK ROUTES

The City has established a designated truck route plan. These routes have been selected to direct heavy truck traffic onto arterial and collector facilities, thereby reducing truck traffic on local (residential) streets. This plan aids the control of noise and air pollution in residential areas throughout the City. It also protects local streets from significant pavement damage which is the result of heavy truck traffic. Industrial and commercial areas of the City requiring truck access are well serviced by truck routes.

The following truck routes are included within the City:

- Artesia Boulevard: Eastern City Limits to Downey Ave./Western City Limits
- Artesia Place: Woodruff Avenue to Artesia Boulevard
- Flower Street: Woodruff Avenue to Bellflower Boulevard
- Alondra Boulevard: Lakewood Boulevard to Western City Limits
- Rosecrans Avenue: Eastern City Limits to Lakewood Bl./Western City Limits
- Woodruff Avenue: Southern City Limits to Foster Rd./Northern City Limits
- Bellflower Boulevard: Southern City Limits to Flower Street
- Bellflower Boulevard: Alondra Boulevard to Flora Vista Street
- Bellflower Boulevard: Alondra Boulevard to Foster Rd./Northern City Limits
- Clark Avenue: State Route 91 to Southern City Limits
- Downey Avenue: Artesia Boulevard to North City Limits

Lakewood Boulevard is also used as a truck route because of the intense concentration of commercial activity along this facility. It was not included as a City truck route because of its State Route designation. Existing truck routes currently serve the needs of the City. The network connects major commercial centers together and provides a balanced truck route system within the City.

Figure 3-8
City of Bellflower
Existing and Proposed
Bikeway Facilities

Legend:

-  City of Bellflower Boundary
-  Class III Bikeway
-  Proposed West Branch Corridor
-  State Highway (Lakewood Bl.)



In addition to the truck routes listed above, several segments of roadway have been designated as "No Trucks Allowed" to further reduce the impact of trucks on local facilities. Routes designated with "No Trucks Allowed" are listed below.

- Palo Verde Avenue: Allington St./Southern City Limits to Artesia Boulevard
- McNab Avenue: Alondra Boulevard to Rosecrans Avenue
- Eucalyptus Avenue: Flora Vista Street to Compton Boulevard
- Bellflower Boulevard: Flower Street to Flora Vista Street
- Ardmore Avenue: Southern City Limits to Pacific Avenue
- Stevens Avenue: Alondra Boulevard to Compton Boulevard
- Ardis Avenue: Compton Boulevard to Rosecrans Avenue
- Virginia Avenue: Walnut Street to Hegel Street
- Cerritos Avenue: Compton Boulevard to Rosecrans Avenue
- Coke Avenue: Southern City Limits to Artesia Boulevard

Existing city truck routes and routes designated as "No Trucks Allowed" were identified in the Bellflower Municipal Code (BMC) in 1977 and are shown graphically in Figure 3-9.

3.9 PAVEMENT MANAGEMENT

A Bellflower Pavement Management System (PMS) containing the following four components: 1) Collection and Storage of Data, 2) Analysis of Data, 3) Retrieval of Data, and 4) Update of Data was completed by Willdan Associates. One of the primary data collection efforts for this project focused on the pavement condition of each street within the City of Bellflower.

Each street was visually surveyed to determine the existing condition of the pavement. The survey concentrated on determining structural deterioration, which is the primary source of increased maintenance cost on the street system throughout the City. The PMS data base contains information collected from over five hundred survey forms for roadway segments within the City of Bellflower.

3.10 CMP ROUTES

The 1993 Congestion Management Program (CMP) for Los Angeles County is a state-mandated program enacted by the state legislature after increasing concern that urban congestion was impacting the economic vitality of the state and diminishing the quality of life in many communities. Los Angeles County is one of thirty-two urbanized counties across the state that are required to develop a CMP to:

- Link land use, transportation, and air quality decisions;
- Develop a partnership among transportation decision makers on devising appropriate transportation solutions that include all modes of travel; and
- Propose transportation projects which are eligible to compete for state gas tax funds.

The MTA developed the CMP to be a key link in countywide, multimodal planning and program implementation. The CMP is one of many important tools to address transportation needs throughout Los Angeles County.

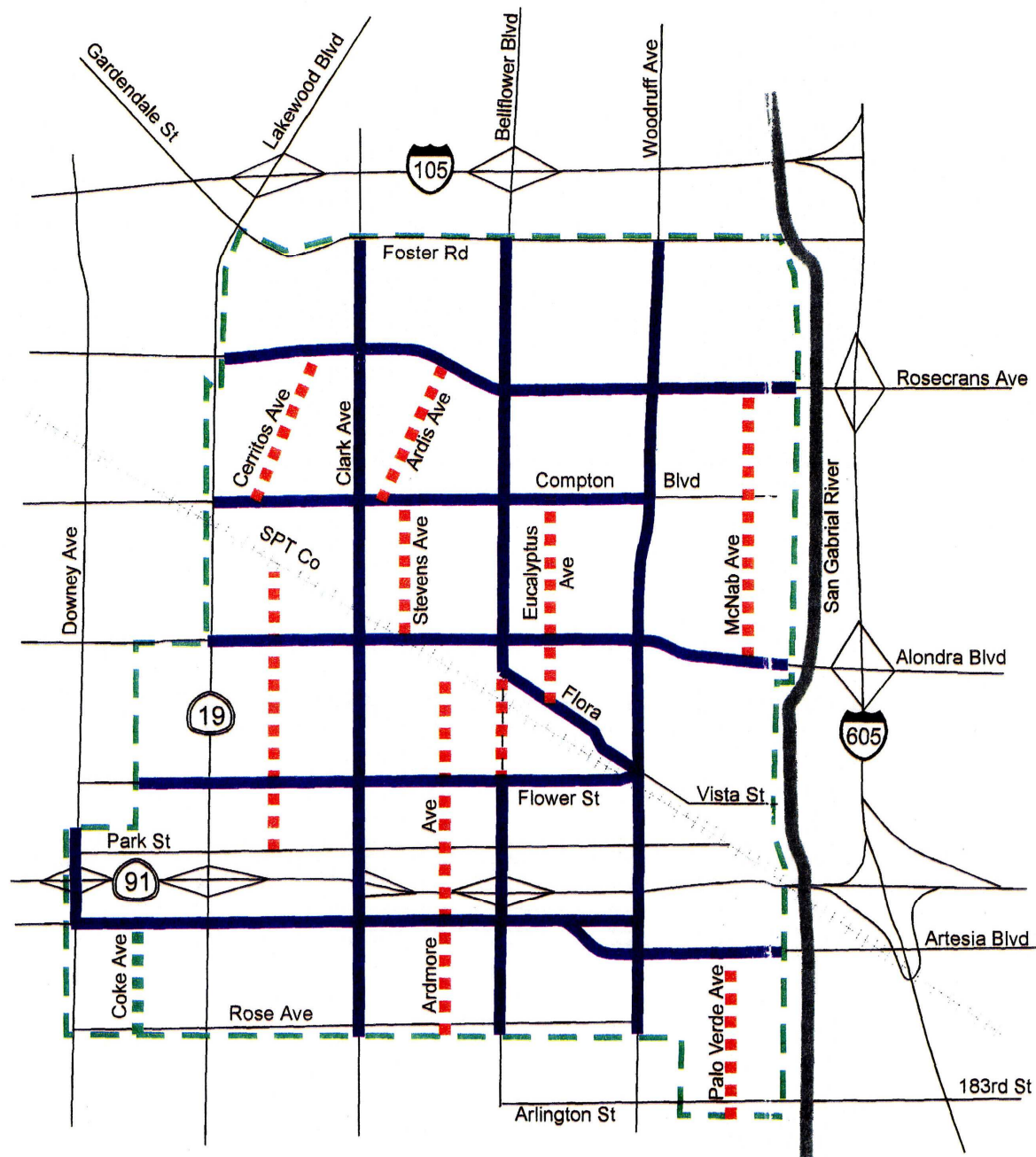


Figure 3-9
Existing Truck Routes
and No Trucks Allowed
Segments

Legend:

-  City of Bellflower Boundary
-  Truck Routes
-  No Trucks Allowed
-  State Highway (Lakewood Bl.)



NOT
TO SCALE

The CMP statute requires designation of a system of highways and roadways, including all state highways and principal arterials to:

- Allow local jurisdictions to measure their success at minimizing traffic congestion, and provide "before & after" data for evaluating congestion mitigation measures;
- Provide quantitative input into programming (funding) decisions, with consistent countywide data on current levels of traffic congestion;
- Provide data for validating and updating the countywide model; and
- Provide the baseline system levels of service used in the deficiency plan to determine countywide (not jurisdiction specific) deficiencies.

The MTA's CMP manual should be reviewed to identify specific requirements.

Lakewood/Rosemead Boulevard (State Route 19) and the Artesia Freeway (State Route 91) are the only roadways, located in the City of Bellflower, included in the Los Angeles County CMP highway system, which extends more than 1,000 miles (including approximately 500 miles of freeway, 400 miles of state-maintained arterials, and 100 miles of locally-maintained arterials). Although the CMP highway system makes up less than five percent of the roadway mileage in Los Angeles County, travel statistics indicate that this CMP network carries over fifty percent of the automobile travel in the county.

The two existing CMP arterial monitoring stations located in the City of Bellflower and their 1993 AM/PM peak hour levels of service are presented below.

1. Lakewood Boulevard/Artesia Boulevard (LOS E / LOS C)
2. Lakewood Boulevard/Rosecrans Avenue (LOS C / LOS C)

4. FUTURE YEAR 2015 TRAFFIC CONDITIONS

The purpose of this section is to address the future circulation system requirements for the City of Bellflower. To assess future travel circulation system requirements within the City, a computerized traffic volume model (TRAFFIX) was utilized to determine year 2015 traffic forecasts.

4.1 PROJECTED GROWTH IN THE REGION

Future growth and development within the City of Bellflower will inevitably result in corresponding increases in traffic within the City. In addition to increases in traffic attributable to growth and development within the City of Bellflower itself, the City will be impacted by future growth and development in surrounding communities in the Southeast Los Angeles County (SELAC) such as the cities of Lakewood, Downey, Norwalk, and Cerritos. Growth in the region, or "ambient growth," will result in increased "through traffic" on the primary roadways within the City of Bellflower. Future development within Bellflower would potentially impact all streets in the City, while through traffic growth would primarily impact freeways and arterials used as bypass routes.

The Growth Management Chapter of the SCAG Regional Comprehensive Plan, which presents forecasts to establish socioeconomic parameters for the development of various functional chapters of the Regional Comprehensive Plan (RCP), was utilized in this report to obtain an ambient growth factor for the City of Bellflower. Based upon discussions with City of Bellflower Planning Staff, it was determined that this ambient growth rate would be used to forecast traffic volume increases for the Year 2015 scenario.

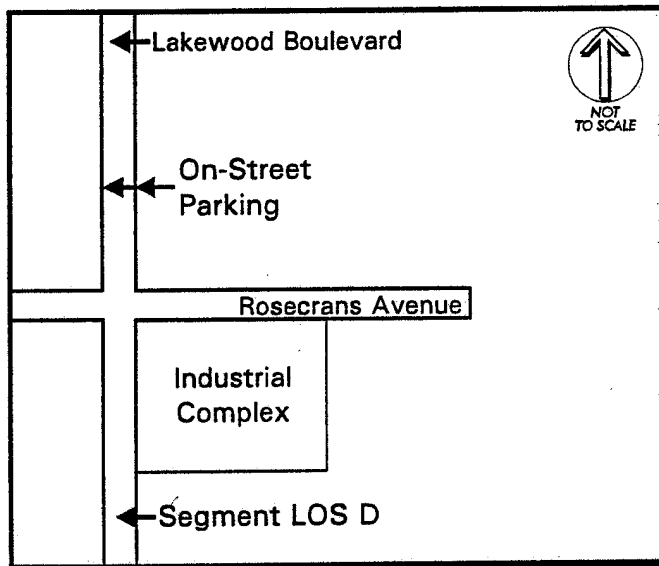
Using the year 1990 (1,913,000) and year 2000 (2,037,000) population forecasts for the SELAC sub-region, a population forecast for 1996 was interpolated to be 1,987,400. An annual percentage increase in population between 1996 (1,987,400) and 2015 (2,223,000) was calculated to be 0.59 percent per year. A growth factor was then calculated, over the nineteen year period, to be 1.118, and was rounded off to 1.12.

The existing traffic counts (arterial segments and intersection turn movements) were then projected "city-wide" to the forecast year using a growth factor of 1.12 to estimate traffic-related impacts and identify future roadway deficiencies in the circulation system.

4.2 FUTURE DEVELOPMENT WITHIN BELLFLOWER

City staff has identified seven specific areas within the City of Bellflower in which redevelopment is expected to occur in the future. Future land use assumptions within these specific areas were developed by the City of Bellflower Planning staff. However, all redevelopment in these specific areas is expected to be covered by the 1.12 ambient growth factor used for City-wide projections to estimate future traffic volumes along roadways in and adjacent to the specific areas. The boundaries for each of these redevelopment areas are presented on the following pages.

The future land use projections throughout the City indicate that the level of future development will be minimal since the City is generally "built-out" and no major density changes will be made to the 2015 land use scenario. These estimated redevelopment opportunities within the City will not result in significant changes in daily traffic patterns compared with the general ambient growth rate. Therefore, an ambient growth rate of 1.12 will be used City-wide to project future traffic volumes at all key intersections and along the arterial segments. The City would need to require more specific analysis of potential impacts on significant, large-scale development projects. Determination of which projects would require additional analysis would be left to the discretion of City staff.



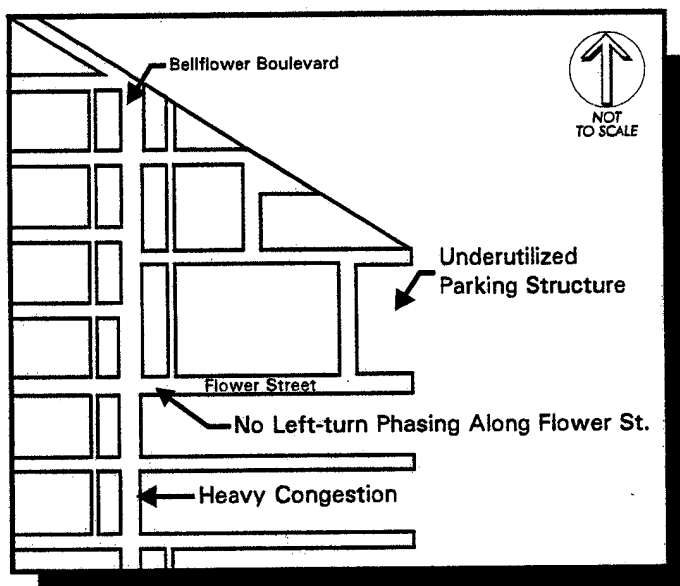
4.2.1 Specific Area 1

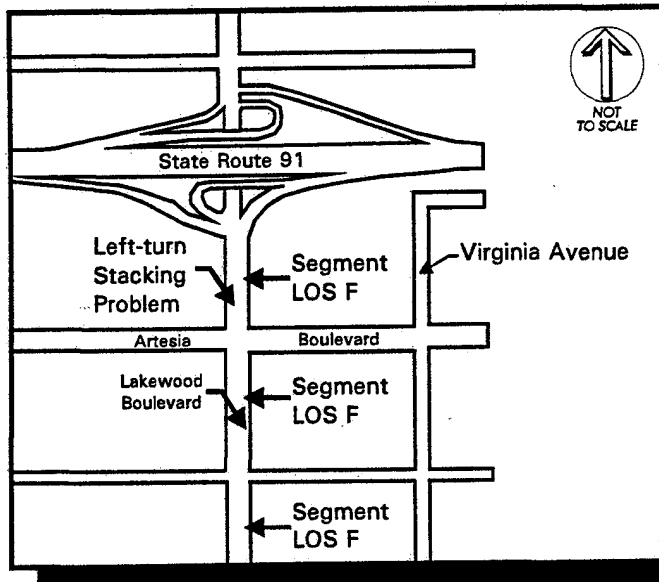
Area #1 is located in the northwestern quadrant of the City around the intersection of Lakewood Boulevard and Rosecrans Avenue. The transportation issues within this area are focused around the new industrial complex that was under construction at the time the intersection and ADT counts were taken in January, 1996. Small sections of the curb face, near the driveways, are designated as no stopping (red curb face) to improve safety and sight visibility for motorists leaving the industrial

complex onto Rosecrans Avenue. An additional driveway along Lakewood Boulevard is expected to open when Phase II is constructed.

4.2.2 Specific Area 2

Area #2 is located in the central section of the City around the intersection of Bellflower Bl. and Flower St. This intersection currently has lead-lag phasing along Bellflower Bl. while no left-turn phasing is in use along Flower St. The issues within this area are concerned with perceived parking and general circulation problems around the Town Center. Additionally, a multi-screen theater, approximately 40,000 square feet, is expected to be developed within this area of the City, with the exact location to be determined later. According to City staff, the parking structure in the Town Center is under-utilized by the courts, city, and library patrons. The City is periodically changing transportation-related restrictions along Flower Street adjacent to the Post Office in an attempt to fix the conflicts in this area.





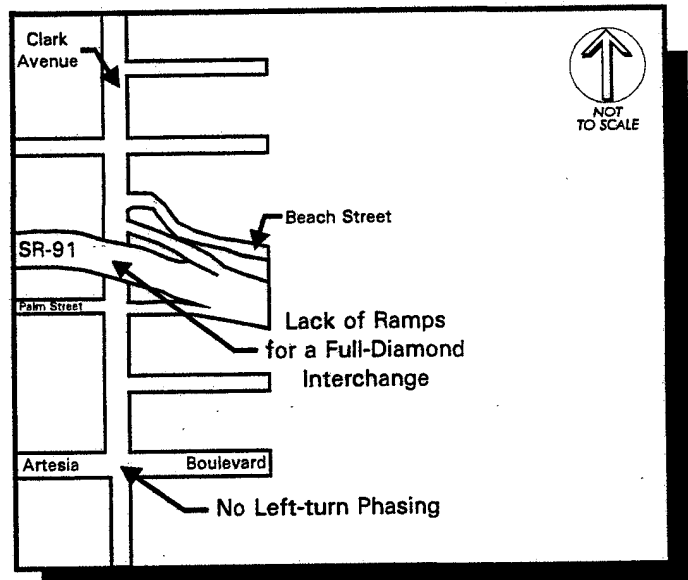
4.2.3 Specific Area 3

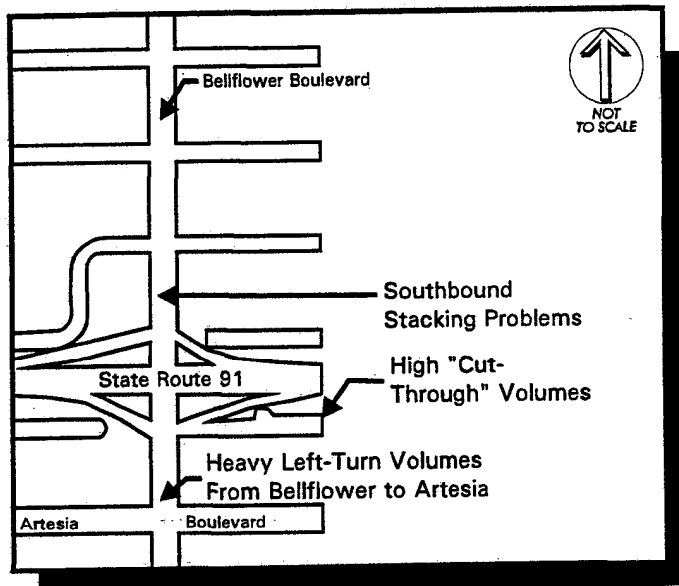
Area #3 is located in the southwestern portion of the City near the intersection of Lakewood Boulevard and Artesia Boulevard. The transportation issues in this area are centered around the heavy volume of traffic that these two roadways experience on a daily basis in addition to the close proximity of the Artesia Freeway (SR-91). The relatively short distance between SR-91 and Artesia Boulevard is the primary cause for the vehicle stacking problem that occurs in this area during the peak hour traffic periods.

Lakewood Boulevard is projected to operate at a poor level of service (LOS D or worse) throughout the entire stretch of this arterial within the City.

4.2.4 Specific Area 4

Area #4 is located in the southern section of the City near the intersection of Clark Avenue and Artesia Boulevard. The transportation issues within this area are centered around the lack of freeway access ramps to complete a full-diamond interchange at Clark Avenue. The Clark Avenue/Artesia Boulevard intersection and roadway segments are expected to operate at acceptable levels of service in the future. As traffic congestion in the area continues to increase, motorists are likely to use both Clark Avenue and Artesia Boulevard as "cut-through" arterials to avoid heavy congestion on the freeways and other major roadways throughout the City.





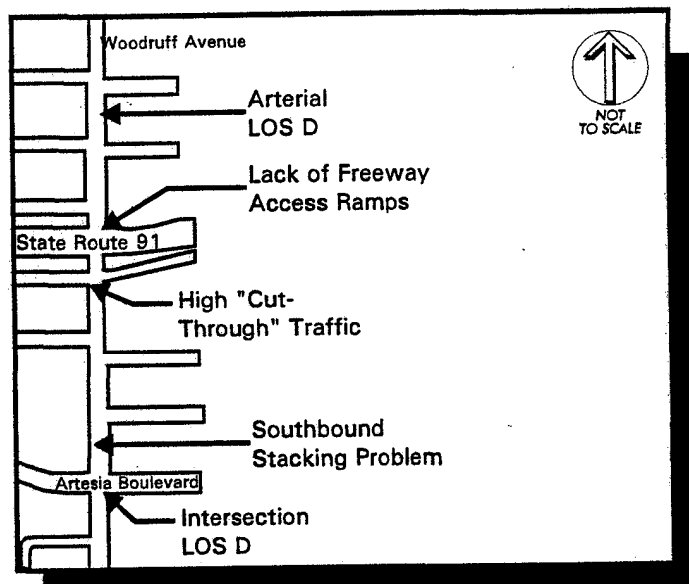
4.2.5 Specific Area 5

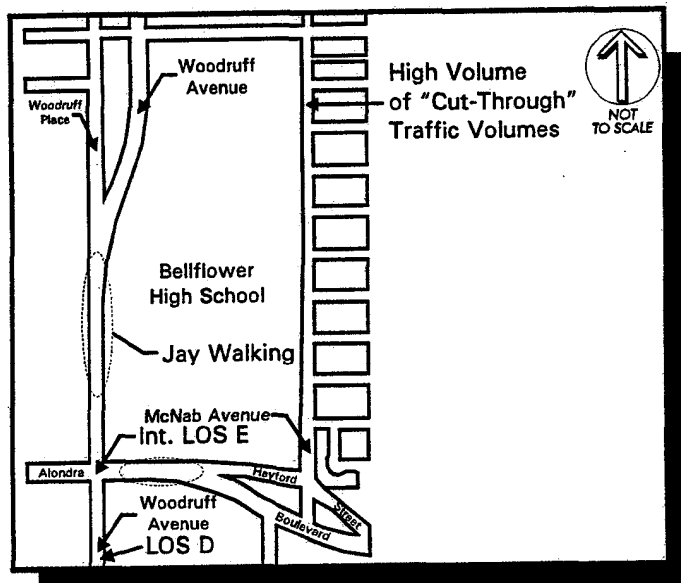
Area #5 is located near the southwestern quadrant of the City around the Artesia Freeway ramps at Bellflower Boulevard. The transportation issues within this area are focused on the high daily and peak hour volumes along Bellflower Boulevard in addition to the direct access to the Artesia Freeway at Bellflower Boulevard. The intersection of Bellflower Boulevard and Artesia Boulevard is projected to operate at Level of Service D ($V/C=0.847$) during the PM peak in the year 2015. Also, Beverly Street is used as a "cut-through" street by local commuters to bypass heavily congested roadways. There is a high level of congestion on the north side of the Artesia Freeway along Bellflower Boulevard in the AM peak and a stacking problem during the high levels of congestion north of Artesia Boulevard due to the heavy left-turn volumes onto the Artesia Freeway and onto Artesia Boulevard from Bellflower Boulevard. Additionally, Beverly Street experiences a high level of "cut-through" traffic from motorists exiting the eastbound Artesia Freeway at Bellflower Boulevard to reach locations inside and outside the City of Bellflower. This occurrence happens primarily due to the fact that the next eastbound off-ramp from the Artesia Freeway is east of the 605 Freeway at Pioneer. Average vehicle speeds tend to be well over the posted 25 mph speed limit along this roadway which is a potential safety issue.

through" street by local commuters to bypass heavily congested roadways. There is a high level of congestion on the north side of the Artesia Freeway along Bellflower Boulevard in the AM peak and a stacking problem during the high levels of congestion north of Artesia Boulevard due to the heavy left-turn volumes onto the Artesia Freeway and onto Artesia Boulevard from Bellflower Boulevard. Additionally, Beverly Street experiences a high level of "cut-through" traffic from motorists exiting the eastbound Artesia Freeway at Bellflower Boulevard to reach locations inside and outside the City of Bellflower. This occurrence happens primarily due to the fact that the next eastbound off-ramp from the Artesia Freeway is east of the 605 Freeway at Pioneer. Average vehicle speeds tend to be well over the posted 25 mph speed limit along this roadway which is a potential safety issue.

4.2.6 Specific Area 6

Area #6 is located in the southern section of the City near the intersection of Woodruff Avenue and Artesia Boulevard. The transportation issues within this area are a direct result of the issues presented for Areas 4 and 5. Although the Artesia Freeway does not have any ramps at Woodruff Avenue, the level of service during the AM and PM peak hours at the intersection of Woodruff Avenue and Artesia Boulevard is LOS D. Additionally, the level of service along Woodruff Avenue through this portion of the City is projected to operate at LOS D in the future (Year 2015). The heavy daily and peak hour traffic volumes expected to occur in this area are primarily attributed to motorists utilizing arterials in the City of Bellflower as "cut-through" arterials to reach destinations outside the city limits.





4.2.7 Specific Area 7

Area #7 is located around Bellflower High School along Woodruff Avenue between Alondra Boulevard and Compton Boulevard.

The transportation issues within this area are centered around the volume of traffic along Woodruff Avenue in addition to the heavy traffic volumes utilizing McNab Avenue as a "cut-through" arterial from Rosecrans Avenue and Woodruff Avenue. McNab Avenue tends to experience relatively high travel speeds from students as well as commuters. The intersection of Alondra Boulevard and Woodruff

Avenue is one of two intersections projected to operate at an unacceptable level of service (LOS E) in the PM peak hour.

4.3 YEAR 2015 ROADWAY SEGMENT CAPACITY ANALYSES

In order to provide a forecast of expected traffic flow conditions within the City of Bellflower, year 2015 average daily traffic volume projections were calculated by applying the ambient growth factor to the existing (1996) ADT volumes. The projected traffic volumes were then compared with the roadway capacities to determine the volume-to-capacity ratios and the corresponding level of service for each segment. Figure 4-1 presents the year 2015 average daily traffic volume projections.

Chapter 3 identified the City's acceptable level of service for arterial links as LOS C. This is consistent with the Los Angeles County Congestion Management Program (CMP) guidelines for mitigation to acceptable levels. A review of Table 4-1 shows that most of the roadway facilities within Bellflower are expected to operate better than LOS C. However, the following roadway segments are expected to operate worse than LOS C in the year 2015:

- Ardmore Avenue: south of Flower Street (LOS D)
- Bellflower Boulevard: SR-91 WB Ramps to Park Street (LOS D)
- Lakewood Boulevard: Compton Boulevard to Rosecrans Avenue (LOS D)
- Rosecrans Avenue: Woodruff Avenue to Carpintero Avenue (LOS D)
- Woodruff Avenue: Artesia Place to Palm Street (LOS D)
- Woodruff Avenue: Palm Street to Flower Street (LOS D)
- Woodruff Avenue: Flower Street to Alondra Boulevard (LOS D)
- Lakewood Boulevard: Alondra Boulevard to Compton Boulevard (LOS E)
- McNab Avenue: Alondra Boulevard to Hayford Street (LOS E)

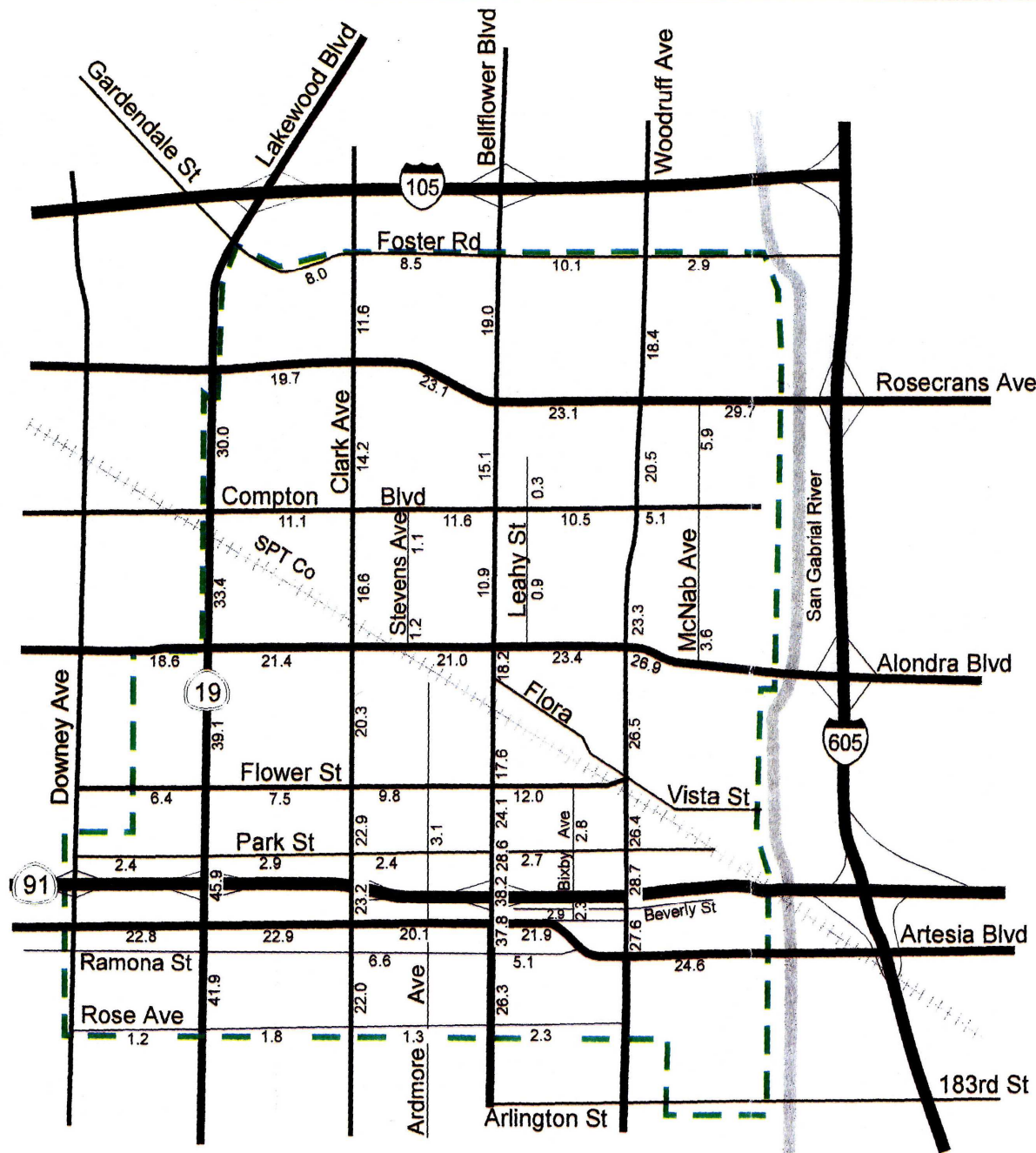


Figure 4-1
City of Bellflower
Future Year 2015
Average Daily Traffic

Legend:

- City of Bellflower Boundary
- Major Arterial
- Secondary Arterial
- Collector
- Local Street
- Average Daily Traffic (in thousands)

Table 4-1

Future (2015) Level of Service Summary
Bellflower Circulation Element

April-1997

Roadway Name	From	To	Classification	ADT	V/C	LOS
North/South Roadways						
Ardmore Ave.	south of Flower St.		Local	3,103	0.78	D
Bellflower Bl.	Rose St.	Artesia Bl.	Major	26,292	0.73	C
	Artesia Bl.	SR-91 EB Ramps	Secondary	37,760	1.18	F
	SR-91 EB Ramps	SR-91 WB Ramps	Secondary	38,159	1.19	F
	SR-91 WB Ramps	Park St.	Secondary	28,548	0.89	D
	Park St.	Flower St.	Secondary	24,061	0.75	C
	Flower St.	Oak St.	Secondary	17,587	0.55	A
	Oak St.	Alondra Bl.	Secondary	18,212	0.57	A
	Alondra Bl.	Compton Bl.	Secondary	10,889	0.34	A
	Compton Bl.	Rosecrans Ave.	Secondary	15,055	0.47	A
	Rosecrans Ave.	Foster Rd.	Secondary	18,963	0.59	A
Bixby Ave.	Artesia Pl.	Beverly St.	Local	2,329	0.58	B
	Maple St.	Flower St.	Local	2,815	0.70	C
Clark Ave.	Rose St.	Artesia Bl.	Secondary	21,993	0.69	B
	Artesia Bl.	Park St.	Secondary	23,155	0.72	C
	Park St.	Flower St.	Secondary	22,895	0.72	C
	Flower St.	Alondra Bl.	Secondary	20,349	0.64	B
	Alondra Bl.	Compton Bl.	Secondary	16,582	0.52	A
	Compton Bl.	Rosecrans Ave.	Secondary	14,211	0.44	A
	Rosecrans Ave.	Foster Rd.	Secondary	11,554	0.36	A
Lakewood Bl.	City Limit	Artesia Bl.	Major	41,894	1.16	F
	Artesia Bl.	SR-91	Major	45,857	1.27	F
	SR-91	Alondra Bl.	Major	39,063	1.09	F
	Alondra Bl.	Compton Bl.	Major	33,402	0.93	E
	Compton Bl.	Rosecrans Ave.	Major	30,005	0.83	D
Leahy St.	south of Maplewood St.		Local	349	0.09	A
	north of Alondra Bl.		Local	942	0.24	A
McNab Ave.	Alondra Bl.	Hayford St.	Local	3,591	0.90	E
	Mapledale St.	Rosecrans Ave.	Local	5,946	1.49	F
Stevens Ave.	south of Compton Bl.		Local	1,138	0.28	A
	north of Alondra Bl.		Local	1,235	0.31	A
Woodruff Ave.	Artesia Bl.	Artesia Pl.	Major	27,590	0.77	C
	Artesia Pl.	Palm St.	Secondary	28,712	0.90	D
	Palm St.	Flower St.	Secondary	26,444	0.83	D
	Flower St.	Alondra Bl.	Secondary	26,502	0.83	D
	Alondra Bl.	Compton Bl.	Secondary	23,321	0.73	C
	Compton Bl.	Rosecrans Ave.	Secondary	20,518	0.64	B
	Rosecrans Ave.	Foster Rd.	Secondary	18,394	0.57	A

Table 4-1

Future (2015) Level of Service Summary
Bellflower Circulation Element

April-1997

Roadway Name	From	To	Classification	ADT	V/C	LOS
East/West Roadways						
Alondra Bl.	Hayter Ave.	Lakewood Bl.	Major	18,592	0.52	A
	Lakewood Bl.	Clark Ave.	Major	21,440	0.60	A
	Clark Ave.	Bellflower Bl.	Major	21,048	0.58	A
	Bellflower Bl.	Woodruff Ave.	Major	23,371	0.65	B
	Woodruff Ave.	McNab St.	Major	26,857	0.75	C
Artesia Bl.	Downey Ave.	Lakewood Bl.	Major	22,837	0.63	B
	Lakewood Bl.	Clark Ave.	Major	22,928	0.64	B
	Clark Ave.	Bellflower Bl.	Major	20,105	0.56	A
	Bellflower Bl.	Woodruff Ave.	Major	21,873	0.61	B
	Woodruff Ave.	Carpintero Ave.	Major	24,555	0.68	B
Beverly St.	west of Bixby Ave.		Local	2,925	0.73	C
Compton Bl.	Lakewood Bl.	Clark Ave.	Secondary	11,079	0.35	A
	Clark Ave.	Bellflower Bl.	Secondary	11,560	0.36	A
	Bellflower Bl.	Woodruff Ave.	Secondary	10,549	0.33	A
	Woodruff Ave.	McNab St.	Secondary	5,053	0.16	A
Flower St.	Hayter Ave.	Lakewood Bl.	Secondary	6,428	0.20	A
	Lakewood Bl.	Clark Ave.	Secondary	7,457	0.23	A
	Clark Ave.	Bellflower Bl.	Secondary	9,776	0.31	A
	Bellflower Bl.	Civic Center Dr.	Secondary	11,999	0.37	A
Foster Rd.	Lakewood Bl.	Clark Ave.	Collector	8,031	0.57	A
	Clark Ave.	Bellflower Bl.	Collector	8,507	0.61	B
	Bellflower Bl.	Woodruff Ave.	Collector	10,111	0.72	C
	Woodruff Ave.	Faust Ave.	Collector	2,885	0.21	A
Park St.	Passage Ave.	Lakewood Bl.	Collector	2,425	0.17	A
	Lakewood Bl.	Clark Ave.	Collector	2,935	0.21	A
	Clark Ave.	Bellflower Bl.	Collector	2,360	0.17	A
	Bellflower Bl.	Woodruff Ave.	Collector	2,658	0.19	A
Ramona St.	east Bellflower Bl.		Local	5,059	1.26	F
	east of Clark Ave.		Local	6,622	1.66	F
Rose St.	west of Lakewood Bl.		Local	1,241	0.31	A
	Lakewood Bl.	Clark Ave.	Local	1,847	0.46	A
	Clark Ave.	Bellflower Bl.	Local	1,281	0.32	A
	Bellflower Bl.	Woodruff Ave.	Local	2,254	0.56	B
Rosecrans Ave.	Lakewood Bl.	Clark Ave.	Major	19,681	0.55	A
	Clark Ave.	Bellflower Bl.	Major	23,139	0.64	B
	Bellflower Bl.	Woodruff Ave.	Major	23,072	0.64	B
	Woodruff Ave.	Carpintero Ave.	Major	29,700	0.83	D

- Bellflower Boulevard: Artesia Boulevard to SR-91 EB Ramps (LOS F)
- Bellflower Boulevard: SR-91 EB Ramps to SR-91 WB Ramps (LOS F)
- Lakewood Boulevard: City Limit to Artesia Boulevard (LOS F)
- Lakewood Boulevard: Artesia Boulevard to SR-91 (LOS F)
- Lakewood Boulevard: SR-91 to Alondra Boulevard (LOS F)
- McNab Avenue: Mapledale Street to Rosecrans Avenue (LOS F)
- Ramona Street: east of Bellflower Boulevard (LOS F)
- Ramona Street: east of Clark Avenue (LOS F)

4.4 YEAR 2015 INTERSECTION CAPACITY ANALYSES

Intersection capacity analyses were conducted for the year 2015 scenario for the key intersections within the City. Year 2015 turning movement counts were obtained from the TRAFFIX model output which used the existing (1996) traffic counts with the applied 1.12 ambient growth factor to forecast 2015 turn movement volumes. The TRAFFIX model was then used to calculate the critical movements of conflicting vehicles which travel through the intersection during the peak hour, and compared the critical volume with standard intersection capacities based on the number of lanes. The City's accepted level of service for traffic signal controlled intersections is LOS D.

There are 2 intersections projected to operate at an unacceptable level of service (i.e., worse than LOS D) in the PM peak period during the 2015 scenario. Table 4-2 presents the results of the level of service analyses, including volume-to-capacity ratio, while Figure 4-2 depicts the AM/PM level of service at all key intersection locations analyzed for this scenario. It should be noted that significant development and/or redevelopment projects could result in traffic volumes which exceed the ambient growth rate. These projects would require a detailed Traffic Impact Study (TIS) to determine specific project-related impacts and appropriate mitigation measures.

4.5 FUTURE TRANSIT SERVICE

The future growth of commercial development planned in the redevelopment areas of the City could create a greater demand for transit services that would be supported by the expansion of alternative travel modes. The redevelopment areas are illustrated in the land use element of the General Plan. Bus transit and increased usage of the Metro Green Line would contribute to a further reduction in automobile demand. The Los Angeles County Metropolitan Transportation Authority (MTA) is currently conducting transit studies throughout all areas of the county which evaluate future transit opportunities and constraints that result in recommended modifications of the service routes and operational structure within a sub-region. With any increase in growth and population in the City, the need for bus transit services would also likely increase. Future transportation system recommendations would consider this increased transit demand and include expanded public transit improvements.

Table 4-2

Future Year (2015) AM and PM Peak Hour LOS at Signalized Intersections

Bellflower Circulation Element

April-1997

Intersection	AM Peak Hour		PM Peak Hour	
	V/C Ratio	LOS	V/C Ratio	LOS
Alondra Blvd. - Lakewood Blvd.	0.583	A	0.821	D
Alondra Blvd. - Clark Ave.	0.457	A	0.693	B
Alondra Blvd. - Bellflower Blvd.	0.552	A	0.834	D
Alondra Blvd. - Woodruff Ave.	0.846	D	0.912	E
Artesia Blvd. - Lakewood Blvd.	0.832	D	0.919	E
Artesia Blvd. - Clark Ave.	0.610	B	0.745	C
Artesia Blvd. - Bellflower Blvd.	0.778	C	0.847	D
Artesia Blvd. - Woodruff Ave.	0.847	D	0.867	D
Beach St. - Bellflower Blvd.	0.546	A	0.698	B
Compton Blvd. - Lakewood Blvd.	0.543	A	0.681	B
Compton Blvd. - Clark Ave.	0.673	B	0.808	D
Compton Blvd. - Bellflower Blvd.	0.366	A	0.462	A
Compton Blvd. - Woodruff Ave.	0.591	A	0.630	B
Flora Vista St. - Woodruff Ave.	0.594	A	0.706	C
Flower St. - Bellflower Blvd.	0.495	A	0.733	C
Foster Rd. - Bellflower Blvd.	0.555	A	0.493	A
Oak St. - Bellflower Blvd.	0.361	A	0.510	A
Park St. - Bellflower Blvd.	0.560	A	0.750	C
Rosecrans Ave. - Lakewood Blvd.	0.662	B	0.720	C
Rosecrans Ave. - Clark Ave.	0.367	A	0.558	A
Rosecrans Ave. - Bellflower Blvd.	0.643	B	0.615	B
SR-91 EB Ramps - Bellflower Blvd.	0.736	C	0.811	D
SR-91 WB Ramps - Bellflower Blvd.	0.841	D	0.798	C

4.6 FUTURE PARKING FACILITIES

Anticipated redevelopment within the City will result in a change in parking demand both in terms of number of spaces provided and location. New residential units, retail facilities, restaurants, offices and other new projects will require parking. For all new development projects, the City should enforce zoning codes to mitigate the potential of future parking deficiencies. The City recently completed a parking analysis to identify the existing parking spaces in association with discussions related to the proposed multi-screen theater complex (approximately 40,000-45,000 square feet).

However, the redevelopment of downtown may require an examination of the existing and future parking supply.

4.7 FUTURE BICYCLE FACILITIES

The existing bicycle network in the City of Bellflower, and the Southeast Area (SELAC) is generally discontinuous. The MTA is in the process of completing six Bicycle Master Plans for each sub-regional area within Los Angeles County. The Draft Southeast Area Bicycle Master Plan is one of these six Master Plans which provides a tool for prioritizing and funding bicycle projects of regional significance in order to develop a coordinated network of bicycle facilities. This document is focused on regional facilities and recommends policies which promote bicycle transportation as a viable commute option to the single-occupant vehicle.

According to the 1990 National Personal Transportation Survey (NPTS), 0.7 percent of all trips are made by bicycles nationwide. Approximately 0.9 percent of all trips in Los Angeles County are currently made by bicycles. The main goal for these Bicycle Master Plans is to reduce motor vehicle trips by providing a safer and more convenient access to regional activity centers by bicycle. Regional activity centers are those facilities that serve utilitarian or commute bicycle traffic including: shopping centers, employment centers, universities and colleges, high schools, hospitals, recreation centers, and transit stations. Bicycle activity centers in the City of Bellflower include: the Town Center/Library, Kaiser Foundation Hospital, Bellflower Doctor's Hospital, and Bellwood General Hospital.

A policy goal of the Southern California Association of Governments (SCAG) in the 1994 Regional Mobility Element (RME) is to increase the pedestrian and bicycle share of trips to 10 percent of all trips and 5 percent of home-to-work trips.

The proposed Regional Bikeway system developed for the Southeast Area in the MTA's Plan forms a north/south and east/west network linking existing bike lanes, bikeways in exclusive rights-of-way along river channels, proposed bikeways along railroad right-of-ways, and gap closures. This network would serve major activity centers and transit facilities including the Metrolink, Metro Blue and Metro Green Lines while connecting to existing and proposed routes in the San Gabriel Valley area, Central Area of Los Angeles County and the existing & proposed Orange County Commuter Bikeway system. The following bike facilities (Class I and Class II routes) passing through the City of Bellflower which were recommended in the Draft Southeast Area Bicycle Master Plan for future implementation are identified below:

- Artesia Boulevard: City of Long Beach to Orange County
- Rosecrans Avenue: 110 Freeway to Colima Road
- Clark Avenue: Imperial Highway to City of Long Beach
- Woodruff Avenue: Firestone Boulevard to Los Coyotes Diagonal
- Railroad ROW: Los Angeles River to Coyote Creek

Recommendations in this element will focus on expanding the local bicycle network and integrating those facilities with the regional routes identified in the MTA's Plan. Specific locations of these local facilities are identified in Chapter 5 of this report.

4.8 FUTURE AVIATION FACILITIES

At present there are no airport facilities located within the City of Bellflower. In the future, there are no plans to add any aviation facilities within the City.

4.9 FUTURE GOODS MOVEMENT (TRUCK ROUTES)

Planning for goods movement, particularly truck traffic, through the City of Bellflower must account for the existing Federal and State highway truck routes and for the future development patterns within the City. Figure 4-3 illustrates the future truck routes through the City of Bellflower.

4.10 TRAFFIC INTRUSION IN RESIDENTIAL AREAS

Traffic on streets in the City of Bellflower consists of motorists who live, work, and shop within the City. There are other motorists who drive through the City but have some other destination outside the City. These trips constitute neighborhood intrusion, and can be controlled, or diverted to major arterials with specific traffic control technologies. These recommendations will be identified in Chapter 5.

Heavy commuter traffic volumes on Ramona Street, Beach Street, and McNab Avenue contribute to commuter traffic intrusion through residential areas. These roadways are prime examples of streets located in different residential neighborhoods that have experienced significant pass-through traffic.

The traffic capacity of residential streets is not as clearly definable as capacity of arterial or collector streets. For this reason, capacity on local streets is generally defined as "environmental capacity." Environmental capacity for a given street is the maximum volume which can be achieved without interfering with the normal patterns of life of residents along the street. The environmental capacity differs from area to area depending upon such factors as residential density, neighborhood characteristics and residents' perceptions. Even where relatively high volumes on residential streets are not perceived as unacceptable, the daily traffic volume should not exceed about 2,500 vehicles or 200-300 vehicles per hour. Traffic volumes beyond this level on any residential street should be addressed with appropriate measures which would lower the volume or reclassify and upgrade the street.

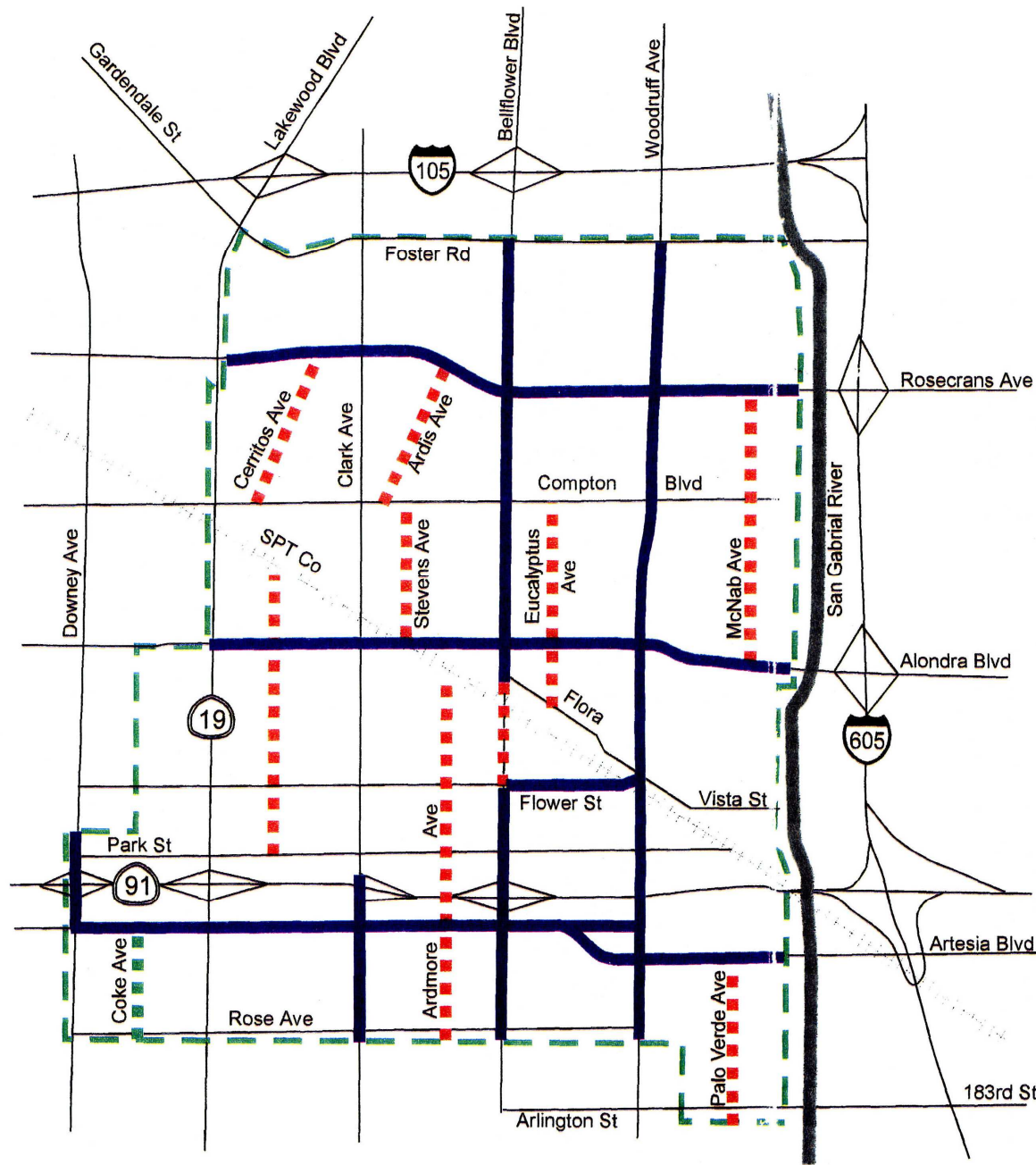


Figure 4-3
Future Truck Routes
and No Trucks Allowed
Segments

Legend:

-  City of Bellflower Boundary
-  Truck Routes
-  No Trucks Allowed
-  State Highway (Lakewood Bl.)

5. CITYWIDE CIRCULATION

While the current level of service (LOS) on many of the City's streets and intersections are within acceptable standards, some circulation and capacity problems currently constrain the City of Bellflower's future ability to serve vehicle carrying capacities. This is especially true on significant roadway corridors such as Lakewood Boulevard, Alondra Boulevard and Bellflower Boulevard. Furthermore, the ability of the City to influence the ultimate configuration of the interchanges and freeway ramps within the City's corporate limit and sphere, (particularly, Lakewood Boulevard and the Clark Avenue/91 freeway connection) is limited since modifications to this interchange and ramps are primarily under the jurisdiction of Caltrans rather than the City. Differences exist between Caltrans and the City with respect to what constitutes an acceptable peak hour level of service on the ramps at this interchange.

A number of critical transportation issues have been identified during the development of this Circulation Element which have resulted in transportation goals and implementation policies. Detailed analysis of each of these issues is contained in the Existing Conditions and Analysis sections of this document. A brief description of each of these issues is also provided below:

5.1 FREEWAY ACCESS

Congestion at freeway ramp intersections, freeway over-crossings, and freeway frontage road intersections represent the city's most significant circulation problem. A key objective in the General Plan Circulation Element is to improve freeway access through redesign of freeway ramps and frontage road intersections of the Artesia Freeway (SR-91).

5.2 EAST/WEST ARTERIAL CIRCULATION

Primary east-west circulation is provided by the following arterial roadways:

Rosecrans Avenue, which extends both east and west beyond the City limits and connects with both the 710 and 605 freeways.

Compton Boulevard, which extends west beyond the City limits and ends just east of Woodruff in a residential area near the San Gabriel River.

Alondra Boulevard, which extends both east and west beyond the City limits and connects with both the 710 and 605 freeways.

Flower Street, which extends west beyond the City limits and turns into 70th Street before becoming discontinuous near Paramount Boulevard and east until it merges with Flora Vista Street east of Woodruff Avenue.

Artesia Boulevard, which runs just south and parallel to the 91 freeway, and extends both east and west beyond the City limits.

Other significant east-west roadways include Foster Road, which forms the northern border of the City and ends just west of the 605 freeway at the San Gabriel River, and Park Street which runs just north and parallel to the 91 freeway, ending just east of Woodruff.

5.3 NORTH/SOUTH ARTERIAL CIRCULATION

Primary north-south circulation is provided by the following arterial roadways:

Lakewood Boulevard, forms a portion of the western border of the City, extends both north and south beyond the City limits, and connects with both the 105 and 91 freeways.

Clark Avenue, extends both north and south beyond the City limits, and connects with State Route 91 with a half-diamond interchange consisting of a westbound off-ramp and an eastbound on-ramp.

Bellflower Boulevard, extends both north and south beyond the City limits, connects with both the Interstate 105 and State Route 91 freeways and runs through downtown Bellflower.

Woodruff Avenue, extends both north and south beyond the City limits.

5.4 PARKING

According to City staff, there appears to be a perceived parking deficiency in and around the Town Center area. The City recently conducted a survey in the downtown area to assess the current supply of on- and off-street parking. However, a comprehensive downtown parking study has not been done which would inventory and analyze the current supply and demand of parking spaces, and recommend alternative parking strategies such as shared parking, assessment districts, and permit parking where appropriate.

Another inherent problem throughout the City is the amount of on-street parking along heavily congested arterials (i.e., Lakewood Boulevard) which tends to decrease capacity and safety. The City needs to work towards eliminating on-street parking or implementing peak period parking restrictions in certain areas to increase lane capacity and the free flow of vehicles.

Private parking lots are self-regulated with the exception of city-owned parking lots. The City needs to review off-street parking requirements for new developments to ensure future adequacy throughout the City.

5.5 TRANSIT USE

Although the City of Bellflower is well-served by local and regional transit agencies and various forms of public transit, the current demand needs to increase in order to: 1) reduce congestion, 2) decrease the number of single occupant vehicles, and 3) work toward meeting regional air quality goals. A well tailored transit system, including fixed route and

demand responsive services, will also help attract non-residents to the City of Bellflower for shopping, business, and other recreational/social activities. Further development and increased access to the MTA Green Line will also provide increased opportunities to promote transit usage and link the City of Bellflower with the entire region.

5.6 NEIGHBORHOOD TRAFFIC INTRUSION

Several local streets throughout the City of Bellflower experience high levels of traffic intrusion from the larger, more congested arterial roadways around the City. Two of the more heavily impacted residential streets are 1) McNab Avenue near the high school, and 2) Beverly Street, which acts as a frontage road on the south side of the Artesia Freeway. Both of these streets are posted 25 mph. However, residents and commuters utilizing these roadways to bypass the more heavily congested roadways and freeways tend to travel through the neighborhoods at relatively high and unsafe speeds for the area. Several traffic calming devices (i.e., cul-de-sacs, speed bumps, etc.) can be implemented in various portions of the City, where appropriate, to reduce the neighborhood traffic intrusion onto the residential street network.

5.7 LAND USE

The Circulation Element and the Land Use Element of the General Plan are closely related. Each specific land use (residential, commercial, office, industrial, etc.) generates trips based both on an hourly and a daily basis. These trips result in vehicular and pedestrian traffic levels. Vehicular traffic can add to the traffic volumes on streets adjacent to the land use.

Therefore, development plans need to be reviewed by identifying the impact on the roadways and intersections ability to accommodate any increased traffic volumes. This Circulation Element has been prepared by forecasting future traffic levels using the ambient growth rate described in Chapter 4. Recommended roadway improvements have been identified for areas where development plans are known. Where new developments are considered, a Traffic Impact Study (TIS) could be considered by the City to determine specific impacts and mitigation measures.

The City of Bellflower recently developed a Housing Element which could also affect local roadways operating conditions. The Housing Element identified 24,117 units in Bellflower in 1990 and 24,334 in 1996. In addition, SCAG requires each City in the region to forecast the number of expected residential units in 5-year increments. The forecast of expected residential units within the City of Bellflower in the year 2001 is an additional 2,239 units, or a forecast total of 26,573.

A high concentration of development in these additional residential units in the year 2001 in specific areas of Bellflower may require traffic impact studies to identify potential transportation related impacts and mitigation measures on the adjacent roadway system. The City needs to review the Housing Element policy document when considering the requirement of a Traffic Impact Study (TIS).

5.8 TRAFFIC IMPACT STUDY GUIDELINES

Specific requirement guidelines of TIS documents is presented in the Appendix to this document. The City can consider adopting these guidelines, or a variation of the guidelines, for future impact studies to be conducted within the City of Bellflower. These Guidelines are consistent with the *Program of Instruction for the Traffic Management of Land Development* by the Traffic Institute of Northwestern University. The Los Angeles County Congestion Management Program (CMP) also provides traffic study guidelines for developments which may impact CMP roadways.

The Guidelines presented in the Appendix provides typical traffic generation rates, land use categories, and information needed for determining the area of influence, site traffic distribution and access requirements.

5.9 IMPACTS FROM SURROUNDING JURISDICTIONS

Regional growth within incorporated areas adjacent to the City of Bellflower impact the City's developments, and have been considered in defining the General Plan circulation system. Also, special consideration has been given to objectives of the General Plan such as minimizing levels of through traffic on the City's arterial system, particularly in residential areas.

The City's circulation system will continue to be significantly impacted by surrounding regional growth. The Circulation Element policies encourage a cooperative effort between the City of Bellflower and the surrounding jurisdictional agencies (City and County of Los Angeles), to design and equitably fund regionally significant facilities in the City's Circulation element.

6. CIRCULATION GOALS AND POLICIES

The City of Bellflower is a generally "built-out," fully developed community. However, in order to guide the demand for capacity and re-development efforts, a consistent set of policies are required to meet the travel expectations of the City's residents, business owners and visitors. The following goals and policies form the basis for the Circulation Element.

6.1 FUNCTIONAL, SAFE, AND EFFICIENT STREET SYSTEM

A transportation network must be well planned, functional, safe, and properly maintained to allow street traffic to move efficiently over time. In addition to congestion relief, a well-designed circulation system offers benefits, such as cleaner air, time savings, and reduced motorist anxiety.

Goal 1: Provide a comprehensive transportation system for the movement of persons and goods with optimum safety, efficiency, and convenience, and with a minimum of delay and cost.

- Policy 1.1:** Improve or maintain the current Level of Service for all arterial/arterial signalized intersections, and at arterial connectors with freeway interchanges.
- Policy 1.2:** Use basic traffic engineering techniques (i.e., signal timing, signal phasing, and neighborhood traffic control) to reduce existing congestion at critical locations within the City, and plan for more extensive improvements (additional lanes, traffic diversion, freeway access) to serve future increases in traffic.
- Policy 1.3:** Emphasize traffic solutions that are safe, effective and efficient, minimizing road widening projects where possible.
- Policy 1.4:** Improve regional circulation and coordinate ongoing street system master plan efforts by working with State of California, Los Angeles County, and the cities of Lakewood, Norwalk, Downey, Paramount, Cerritos and Long Beach.
- Policy 1.5:** Use redevelopment funding sources to provide necessary transportation improvements within redevelopment project areas whenever funds are available.
- Policy 1.6:** Examine the use of assessment districts to retrofit applicable neighborhoods with transportation improvements.
- Policy 1.7:** Work with the SPT CO Railroad, the Public Utilities Commission, and other responsible agencies to establish grade separations between the diagonal freight rail line and major arterials.

Policy 1.8: Work with the State to prohibit peak hour parking on State Route 19, Lakewood Boulevard, as a means of obtaining increased roadway capacity.

Policy 1.9: Accommodate off-street parking in new developments, working toward the elimination of future demand for on-street parking. As new development occurs with adequate off-street parking, eliminate adjacent on-street parking, wherever appropriate.

Policy 1.10: Minimize the impact of major and secondary street "spill-over" traffic onto residential neighborhood streets by installing traffic diverters, restrictive channelizations, cul-de-sacs, additional signals, and other traffic calming devices which will discourage "cut-through" traffic, ensuring local neighborhood access.

Implementation Measure 1.1: Work with Caltrans to improve the freeway interchanges serving the City.

Implementation Measure 1.2: Carry out cooperative studies with neighboring jurisdictions where necessary, to resolve issues such as peak period parking removal and neighborhood intrusion.

Implementation measure 1.3: Develop an equitable transportation improvement fee program to fund the improvements needed to upgrade the City's roadway system according to the General Plan Circulation Element.

Implementation Measure 1.4: Implement the traffic improvements outlined in the City's Redevelopment Plan.

6.2 BALANCED CIRCULATION SYSTEM

A balanced circulation system is designed to provide safe and efficient access to all types of land uses throughout a community. Truck routes and adequate off-street parking are two strategies which are utilized to help traffic move smoothly and more efficiently.

Goal 2: Provide a balanced roadway system which will provide adequate accessibility to existing and future land uses with minimum impact on residential neighborhoods.

Policy 2.1: Modify designated truck routes for the use of commercial and industrial traffic to direct regional truck traffic to regional routes and allow origin/destination trips throughout the City.

Policy 2.2: Provide adequate, clean, safe and accessible off-street parking areas throughout the City wherever the provision of public parking is determined necessary.

Policy 2.3: Minimize curb cuts from new development and redevelopment projects onto each of the arterials defined in this Circulation Element as major and secondary highways.

Policy 2.4: Promote reciprocal access between parcels to minimize driveways and curb cuts.

Implementation Measure 2.1: Monitor through-traffic intrusion in residential neighborhoods and implement strategies to reduce through-traffic (neighborhood intrusion) impacts (i.e., traffic diverters, cul-de-sacs, etc.) where necessary.

Implementation Measure 2.2: Establish design standards for curb cuts at a minimum distance from the curb return in commercial areas.

Implementation Measure 2.3: Require private streets to be upgraded in order to provide improved safety and access where they intersect with public streets.

6.3 PUBLIC TRANSIT

Although the majority of Bellflower residents rely on the single passenger automobile as their primary mode of transportation to work, school, and shopping, many others rely upon public transportation. Bellflower is well-served by local and regional transit agencies and various forms of public transit. The City's interests lie in ensuring a high level of transit service to meet resident's demands and also to reduce congestion, to work toward meeting regional air quality goals, and to attract non-residents to Bellflower for shopping and business. Development of the MTA's Green Line also provides opportunities for Bellflower to promote transit usage and link the City with the region.

In addition, utilization of alternative transportation modes including car-pooling, bicycles and walking will reduce traffic congestion and minimize related environmental air quality affects.

Goal 3: Provide residents and business occupants in the City of Bellflower with a convenient and viable public transportation system.

Policy 3.1: Maintain the current level of transit service provided by the local transit system, and work towards enhancing that system to increase the City's transit mode split.

Policy 3.2: Promote the development of a multi-modal transit center with downtown redevelopment plans.

Policy 3.3: Enhance the transit system's operations and efficiency, by coordinating regional and County Smart Shuttle proposals..

Implementation Measure 3.1: Work with the Long Beach transit and the Los Angeles County Metropolitan Transportation Authority (MTA) to maintain bus routes and regular bus schedules citywide for both local and regional trips.

Implementation Measure 3.2: Work with the group of transit service providers to re-structure transit service within the City to determine if more areas can be served without increasing capital costs.

Implementation Measure 3.3: Develop a Bus Turnout Master Plan for future development, which indicates locations of bus turnouts and shelters, as appropriate.

Implementation Measure 3.4: Encourage the MTA to establish demand responsive Smart Shuttle service to better serve residential neighborhoods that are removed from major transit lines.

Implementation Measure 3.5: Consider shuttles from MTA's Metro Green line stations to major employment and activity centers (i.e., Kaiser Hospital, and Bellflower Town Center).

6.4 ALTERNATIVE TRANSPORTATION

Transportation demand management, or TDM, involves using incentives and programs to reduce the number of vehicles on roadways, particularly during peak travel periods. The Air Quality Management Plan for the South Coast Air Basin and the MTA's Congestion Management Program requires such TDM programs for major employers and provides "credits" to cities that implement them. The City will support regional goals for congestion relief and cleaner air through the following goals and policies.

Goal 4: Encourage the use of alternative and/or non-motorized transportation modes including bicycle and pedestrian travel.

Policy 4.1: Promote the use of alternative forms of transportation (other than single passenger cars) to reduce congestion, traffic, noise and air quality impacts.

Policy 4.2: Promote the use of carpools, whenever possible.

Policy 4.3: Provide pollution-free and congestion-reducing bicycle, jogging, walking, handicapped-accessible pathways and lanes which link major destination centers within the City as practical.

Policy 4.4: Promote bicycle use by meeting State and regional requirements regarding secure and adequate areas for the parking and storage of bicycles, showers, lockers, and other facilities in public and private developments.

Policy 4.5: Minimize pedestrian-bicycle conflict by properly striping roadways when re-striping is required.

Policy 4.6: Work to ensure that developments within the redevelopment district incorporate features which facilitate increased bike use and pedestrian travel.

Implementation Measure 4.1: Pursue opportunities to develop Park-n-Ride facilities to encourage use of carpools and reduce single occupant vehicles.

Implementation Measure 4.2: Provide safe bicycle and pedestrian routes between residential neighborhoods and the schools, local commercial areas, and other uses serving the immediate area.

Implementation Measure 4.3: Complete a Citywide Bicycle master plan which is coordinated with the MTA's SELAC sub-region Bicycle Master Plan

Implementation Measure 4.4: Provide bicycle racks and storage areas at public buildings, and encourage private developments to do the same.

Implementation Measure 4.5: Work to develop a bicycle facility along the SPT CO Railroad tracks.

6.5 PARKING

Adequate off-street parking facilities in commercial and industrial developments can help traffic move smoothly by removing parked vehicles from major travel ways. In residential neighborhoods, adequate off-street parking creates safer, better looking environments for residents. The following goals and supporting policies are designed to allow some on-street parking while assuring that adequate off-street parking is available to allow for smooth traffic flow during peak travel times.

Goal 5: Provide adequate, properly designed off-street parking facilities for all developments and work towa

Policy 5.1: Require new development projects to provide parking facilities consistent with zoning code requirements and ensure adequate off-street parking requirements in the zoning code.

Policy 5.2: Support shared-use parking arrangements where it can be shown that such arrangements will not create on-street parking problems.

Policy 5.3: Allow businesses to meet zoning code parking requirements with off-site parking facilities, provided such facilities are convenient, safe and permanently available for the patrons using them.

Policy 5.4: Examine alternative measures to provide consolidated parking facilities within the Town Center/downtown area.

Implementation Measure 5.1: Work towards eliminating on-street parking where appropriate to increase lane capacity (peak period parking restrictions may be an interim measure).

Implementation Measure 5.2: Complete a comprehensive downtown parking study which inventories and analyzes the current supply and demand by type (metered, structure) and turn-over rates, and compares this supply/demand ratio by alternative redevelopment scenarios such as the development of a theater complex and recommends alternative parking strategies (i.e., shared parking, assessment districts, permit parking, parking allocation, etc.) and amended code standards where appropriate.

districts, permit parking, parking allocation, etc.) and amended code standards where appropriate.

Implementation Measure 5.3: Formulate new rates based on specific and individual uses instead of utilizing the general rate of one parking space per 300 square feet of usable floor area.

Implementation Measure 5.4: Continue to enforce off-street parking requirements.

Implementation Measure 5.5: Review current off-street parking requirements to ensure that they are sensitive to safety and air quality planning while adequately meeting the need of the use they serve.