

## 4.6 Traffic, Circulation and Parking

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### **INTRODUCTION**

*This section presents an overview of the existing traffic and circulation system in the proposed project area. It also discusses the potential impacts to traffic and circulation as a result of the implementation of the proposed project. Where impacts are identified, mitigation measures are recommended to reduce such impacts to less than significant levels to the extent possible. The section summarizes the findings of a traffic report prepared for the proposed project by Linscott, Law & Greenspan, Engineers, in December 2003. A complete copy of the traffic report has been included in Appendix 4.6 of the EIR.*

### **EXISTING CONDITIONS**

The assessment of existing conditions relevant to this study includes a description of the highway and street system, traffic volumes on these facilities, and operating conditions of analyzed intersections and public transit services. The traffic analysis study area includes selected intersections located within approximately 3/4 of a mile from the project site. The traffic analysis evaluates potential project related impacts at 26 study intersections in the vicinity of the Glendale Town Center project site. In addition, five freeway segments have also been evaluated for potential transportation impacts.

### **Regional Highway System**

Regional access to the Glendale Town Center project site is provided by State Route 134 (Ventura Freeway) and Interstate 5 (Golden State Freeway). Additional freeways providing indirect access to the project site area include State Route 2 (Glendale Freeway) and Interstate 210 (Foothill Freeway). Brief descriptions of the Ventura Freeway, Golden State Freeway, Glendale Freeway and Foothill Freeway are provided in the following paragraphs.

#### ***State Route 134 (Ventura Freeway)***

State Route 134 (Ventura Freeway) is an east-west oriented freeway that extends from the I-210 Freeway in Pasadena to U.S. Highway 101 in North Hollywood. Four mixed-flow travel lanes and one carpool lane are provided in each direction on SR-134 in the Glendale area. In the project vicinity, full interchanges are located at Pacific Avenue, Central Avenue/Brand Boulevard and Glendale Avenue/Monterey Road. The SR-134 ramps at Central Avenue and Brand Boulevard are connected by one-way connector roadways at Goode Avenue and Sanchez Drive. At Central Avenue, a westbound on-

ramp and an eastbound off-ramp provide connections to Goode Avenue and Sanchez Drive freeway frontage roadways. At Brand Boulevard, a westbound off-ramp and an eastbound on-ramp provide connections with the two freeway frontage roadways. At Glendale Avenue, an eastbound off-ramp, a southbound to eastbound loop on-ramp and a northbound to eastbound diamond on-ramp are provided. A westbound on-off ramp is provided at Monterey Road.

### ***Interstate 5 (Golden State Freeway)***

Interstate 5 (Golden State Freeway) is a north-south oriented freeway that extends between Northern and Southern California. Five mainline travel lanes are generally provided in each direction on the Golden State Freeway in the Glendale area. Northbound and southbound on and off ramps are provided at Colorado Street, west of the project site.

### ***State Route 2 (Glendale Freeway)***

State Route 2 (Glendale Freeway) is a north/south freeway that extends from just south of the I-5 Freeway near Echo Park to the south to just north of the I-210 Freeway near La Canada Flintridge to the north. The northerly terminus of the freeway occurs at Foothill Boulevard. At Colorado Street, a partial diamond interchange provides a southbound on-ramp and a northbound off-ramp.

### ***Interstate 210 (Foothill Freeway)***

The I-210 (Foothill Freeway) is primarily an east/west oriented freeway that extends from the I-5 Freeway in Sylmar to the north to State Route 57 in Pomona to the east. Full diamond interchanges with off-ramps are provided at Pennsylvania Avenue, Ocean View Boulevard and Mountain Street/Camino San Rafael in the northern portion of Glendale.

## **Existing Street System**

Immediate access to the Glendale Town Center project site is provided via Harvard Street, Orange Street, Colorado Street, Central Avenue and Brand Boulevard. The existing streets in the vicinity of the project site generally form a grid system, thus allowing easy access to and from the site in all directions. Brief descriptions of the key roadways that provide access to the Glendale Town Center site are provided in the following paragraphs.

### *Pacific Avenue*

Pacific Avenue is a north-south oriented roadway that is located west of the project site. Pacific Avenue is designated as a Minor Arterial south of the Ventura Freeway and a Major Arterial north of the freeway to Glenoaks Boulevard in the Circulation Element of the City of Glendale General Plan. Two through travel lanes are provided in each direction on Pacific Avenue within the study area. Exclusive left-turn lanes are provided on Pacific Avenue at the intersections with West Broadway and West Colorado Street. Curbside parking is generally prohibited on both sides of Pacific Avenue. Pacific Avenue is posted for a speed limit of 25 miles per hour (MPH) north of Colorado Street and 30 MPH south of Colorado Street in the project vicinity. Bus stops for MTA Routes 183 and 201 and the Glendale Beeline Routes 5 and 6 are provided along Pacific Avenue.

### *Central Avenue*

Central Avenue is a north-south oriented roadway that borders the project site to the west. Central Avenue is designated as a Major Arterial within the study area in the Circulation Element of the City of Glendale General Plan. Two through travel lanes are provided in each direction on Central Avenue within the study area. Exclusive left-turn lanes are provided in both directions on Central Avenue at the major intersections in the project vicinity. Dual left-turn lanes are provided for northbound motorists at the intersection with the SR-134 on-ramp/Goode Avenue. Curbside parking is generally prohibited on both sides of Central Avenue north of Lexington Drive. South of Lexington Drive, two-hour metered parking between the hours of 9:00 AM and 6:00 PM is allowed along the east and west sides of Central Avenue. Central Avenue is posted for a speed limit of 35 MPH near the project site. Bus stops for MTA Routes 180, 181 and 380 and the Glendale Beeline Routes 1, 2, 4 and 5 are provided along Central Avenue.

### *Orange Street*

Orange Street is a north-south oriented roadway that extends between Doran Street and Colorado Street and bisects the project site. Orange Street is designated as an Urban Collector in the Circulation Element of the City of Glendale General Plan. One through travel lane is provided in each direction on Orange Street within the study area. Exclusive left-turn lanes are provided on Orange Street at the intersections with Broadway, Colorado Street and Harvard Street. Two-hour metered parking is generally allowed along both sides of Orange Street between the hours of 9:00 AM and 6:00 PM. There is no posted speed limit on Orange Street in the project vicinity; thus, it is assumed to be a speed limit of 25 MPH consistent with the State of California Vehicle Code.

### ***Brand Boulevard***

Brand Boulevard is a north-south oriented roadway that borders the project site to the east. Brand Boulevard is designated as a Major Arterial between Glenoaks Boulevard and the southerly City boundary in the Circulation Element of the City of Glendale General Plan. Two through travel lanes are provided in each direction on Brand Boulevard within the study area. Exclusive left-turn lanes are provided in both directions on Brand Boulevard at the major intersections in the project vicinity. Dual left-turn lanes are provided in the northbound direction at the intersection with the SR-134 westbound off-ramp/Goode Avenue and in the southbound direction at the intersection with SR-134 eastbound on-ramp/Sanchez Drive. Two-hour angled parking is generally provided along both sides of Brand Boulevard between the hours of 9:00 AM and 6:00 PM near the project site. In addition, some of the angled parking, as well as a few parallel parking areas north of Lexington Drive, are designated as 30-minute parking. Bus stops are provided along Brand Boulevard for MTA Routes 92, 183 and 201 and for Glendale Beeline Routes 1, 2, 3, 4 and 11. Brand Boulevard is posted for a speed limit of 25 MPH within the study area.

### ***Glendale Avenue***

Glendale Avenue is a north-south oriented roadway that is located east of the project site. Glendale Avenue is designated as a Major Arterial in the Circulation Element of the City of Glendale General Plan. Two through travel lanes are provided in each direction on Glendale Avenue in the project vicinity. Exclusive left-turn lanes are provided in both directions on Glendale Avenue at the major intersections in the project vicinity. Two-hour metered parking is generally provided along both sides of Glendale Avenue between the hours of 9:00 AM and 6:00 PM. Glendale Avenue is posted for a speed limit of 30 MPH within the study area. Bus stops are provided along Glendale Avenue for MTA Routes 90 and 91 and for Glendale Beeline Routes 3, 4 and 11.

### ***Broadway***

Broadway is an east-west oriented roadway that is located north of the project site. Broadway is designated as a Minor Arterial in the Circulation Element of the City of Glendale General Plan. Two through travel lanes are provided in each direction on Broadway within the study area. Exclusive left-turn lanes are provided in both directions on Broadway at the major intersections in the project vicinity. Curbside parking is generally prohibited on both sides of Broadway. Bus stops are provided along Broadway for MTA Routes 180, 181, 183, 201 and 380 and for Glendale Beeline Routes 3 and 4. There is no posted speed limit on Broadway in the project vicinity; thus, it is assumed to be a speed limit of 25 MPH consistent with the State of California Vehicle Code.

### *Goode Avenue*

Goode Avenue is a one-way, westbound roadway located north of the project site that extends between the SR-134 ramps at Central Avenue and Brand Boulevard. Goode Avenue is designated as a Major Arterial in the Circulation Element of the City of Glendale General Plan. Three through westbound travel lanes are generally provided on Goode Avenue within the study area. An exclusive left-turn lane is provided in the westbound direction at the intersection with Central Avenue. Curbside parking is prohibited on both sides of Goode Avenue within the study area. There is no posted speed limit on Goode Avenue in the project vicinity; thus, it is assumed to be a speed limit of 25 MPH consistent with the State of California Vehicle Code.

### *Sanchez Drive*

Sanchez Drive is a one-way, eastbound roadway located north of the project site that extends between the SR-134 ramps at Central Avenue and Brand Boulevard. Sanchez Drive is designated as a Major Arterial in the Circulation Element of the City of Glendale General Plan. Three through westbound travel lanes are generally provided on Sanchez Drive within the study area. An exclusive right-turn lane is provided in the eastbound direction at the Brand Boulevard intersection. Curbside parking is prohibited on both sides of Sanchez Drive within the study area. There is no posted speed limit on Sanchez in the project vicinity; thus, it is assumed to be a speed limit of 25 MPH consistent with the State of California Vehicle Code.

### *Harvard Street*

Harvard Street is an east-west oriented roadway that bisects the project site. Harvard Street is designated as an Urban Collector roadway in the Circulation Element of the City of Glendale General Plan. One through travel lane is provided in each direction on Harvard Street within the study area. Exclusive left-turn lanes are provided on Harvard Street at the intersections with Central Avenue, Brand Boulevard and Glendale Avenue. Curbside parking is generally allowed on both sides of Harvard Street east of Louise Street. West of Louise Street, two-hour metered parking between the hours of 9:00 AM and 6:00 PM is allowed along both sides of Harvard Street. Bus stops are provided along Harvard Street for Glendale Beeline Routes 3 and 4. Harvard Street is posted for a speed limit of 25 MPH within the study area.

### *Colorado Street*

Colorado Street is an east-west oriented roadway that borders the project site to the south. Colorado Street is designated as a Major Arterial in the Circulation Element of the City of Glendale General Plan.

Two through travel lanes are provided in each direction on Colorado Street within the study area. Exclusive left-turn lanes are provided in both directions on Colorado Street at the major intersections in the project vicinity. Dual left-turn lanes are provided on Colorado Street in the westbound direction at the intersection with the I-5 Freeway on/off-ramps and Kenilworth Avenue. Curbside parking is generally prohibited on both sides of Colorado Street west of Central Avenue. East of Central Avenue, two-hour metered parking between the hours of 9:00 AM and 6:00 PM is allowed along both sides of Colorado Street. Bus stops are provided along Colorado Street for MTA Route 183 and for Glendale Beeline Routes 5, 6 and 11. Colorado Street is posted for a speed limit of 35 MPH within the study area.

### ***Chevy Chase Drive***

Chevy Chase Drive is an east-west oriented roadway that is located south of the project site. Chevy Chase Drive is designated as a Minor Arterial between the City's westerly boundary to Glenoaks Boulevard and as a Community Collector between Glenoaks Boulevard and the City's northeasterly boundary in the Circulation Element of the City of Glendale General Plan. Two through travel lanes are provided in each direction on Chevy Chase Drive within the study area. Exclusive left-turn lanes are provided on Chevy Chase Drive at the intersections with Central Avenue and Brand Boulevard. Curbside parking is generally allowed on both sides of Chevy Chase Drive in the project vicinity. Bus stops are provided along Chevy Chase Drive for MTA Route 183 and for Glendale Beeline Route 4. There is no posted speed limit on Chevy Chase in the project vicinity; thus, it is assumed to be a speed limit of 25 MPH consistent with the State of California Vehicle Code.

### ***Monterey Road***

Monterey Road is an east-west oriented roadway that is located north of the project site. Monterey Road is designated as a Major Arterial between Cordova Avenue and Glendale Avenue, and as an Urban Collector between Glendale Avenue and Verdugo Road in the Circulation Element of the City of Glendale General Plan. Two through travel lanes are provided in both directions on Monterey Road within the study area. Monterey Road provides access to the westbound Ventura Freeway. There is no posted speed limit on Monterey Road in the project vicinity; thus, it is assumed to be a speed limit of 25 MPH consistent with the State of California Vehicle Code.

## **Traffic Volumes and Levels of Service**

A total of 26 intersections located in the vicinity of the project site were identified and analyzed as part of the traffic study. **Figure 4.6-1, Existing Lane Configurations**, displays the location of each intersection. All but one of the 26 study intersections are controlled by traffic signals. Intersection No. 14, Orange Street and West Colorado Street, is currently one-way stop sign controlled with the stop sign facing

Orange Street. The following presents a description of the methodology utilized to analyze operating conditions and the resulting levels of service for the analyzed intersections.

### *Level of Service Methodology*

#### **Intersections**

The Intersection Capacity Utilization (ICU) method of analysis for signalized intersections was utilized in the traffic analysis and determines volume-to-capacity (V/C) ratios on a critical lane basis. The overall intersection V/C ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. The LOS concept indicates a measure of average operating conditions at an intersection. LOS is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overload at LOS F. Intersection Level of Service definitions for signalized intersections are provided in **Table 4.6-1, Level of Service Definitions for Signalized Intersections**, below.

**Table 4.6-1  
Level of Service Definitions for Signalized Intersections**

<b>LOS</b>	<b>Volume/Capacity Ratio</b>	<b>Description</b>
A	0.00 – 0.604	Free flow conditions; unimpeded ability to maneuver pass; very little delay; no platoons; highest average travel speeds.
B	0.605 – 0.704	Mostly free flow conditions; presence of other vehicles begins to be noticeable. Passing is required to maintain speeds; slightly less average travel speeds than Level of Service A.
C	0.705 – 0.804	Traffic density clearly affects ability to pass maneuver within the stream. Speeds are reduced to about 50 MPH on highways to about fifty (50) percent of the average on urban arterials. Motorists will experience appreciable tension while driving in urban areas.
D	0.805 – 0.904	Unstable flow. Speeds are reduced from forty (40) to sixty (60) percent of normal. Passing demand is high although mostly impossible on two-lane highways. Traffic disruptions usually cause extensive queues.
E	0.904 – 1.004	Very unstable flow at or near capacity. Passing maneuvering virtually impossible. Extensive platooning on highways queuing on arterials. Speeds range from 20 MPH or less on arterials two-lane highways up to 50 MPH on multi-lane highways.
F	>1.005	Forced or breakdown flow. Demand exceeds capacity. Vehicles experience short spurts of movements followed by stoppages. Intersection congestion, long queues, delays are common for Level of Service F.

*Source: Linscott, Law & Greenspan, Engineers*

LOS criteria for unsignalized intersections are stated in terms of average control delay per vehicle. The LOS is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of service time for the approach

and degree of utilization. **Table 4.6-2, Level of Service for Unsignalized Intersection**, provides a description of LOS.

**Table 4.6-2  
Level of Service for Unsignalized Intersection**

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

*Source: Linscott, Law & Greenspan, Engineers*

### Freeway

Freeway segment Levels of Service are in accordance with the definitions included in the *2002 Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, June 2002. The demand/capacity (D/C) ratios and Level of Service relationships are defined in the CMP document and presented in **Table 4.6-3, Caltrans Freeway Segment Level of Service Designations**, (please reference Exhibit D-6, General Procedure for Freeway Segment [Mainline] Analysis, in Appendix D of the CMP).

**Table 4.6-3  
Caltrans Freeway Segment Level of Service Designations**

D/C	LOS	D/C	LOS
0.00 – 0.35	A	>1.00 – 1.25	F(0)
>0.35 – 0.54	B	>1.25 – 1.35	F(1)
>0.54 – 0.77	C	>1.35 – 1.45	F(2)
>0.77 – 0.93	D	>1.45	F(3)
>0.93 – 1.00	E	---	---

*Source: Linscott, Law & Greenspan, Engineers*

FIGURE 4.6-1 EXISTING LANE CONFIGURATIONS

## *Existing Levels of Service*

### **Weekday**

#### *Intersections*

Manual counts of vehicular turning movements were conducted at each of the 26 study intersections in October 2002, during the morning (AM) and afternoon (PM) commuter periods to determine the peak hour of traffic volume. The manual counts were conducted at the study intersections from 7:00 to 9:00 AM to determine the AM peak commuter hour and from 4:00 to 6:00 PM to determine the PM peak commuter hour, which are the periods generally associated with peak commuter hours in the metropolitan areas.

The traffic counts were conducted in the fall of 2002 to reflect a representative period of overall system-wide peak traffic volumes. Counts were not conducted during summer months, when overall system-wide traffic volumes are lower due to some schools being out of session, vacations and more atypical travel patterns. In addition, it should be noted that the existing manual count data were increased by an annual growth factor of one percent per year to reflect existing traffic volumes. This factor is based on traffic growth estimates for the San Fernando Valley published in the *2002 Congestion Management Program for Los Angeles County*. Thus, the existing traffic volumes utilized in this analysis (i.e., traffic volume figures, Level of Service calculations, etc.) reflect existing conditions.

**Table 4.6-4, Existing Weekday Volume to Capacity Ratios and Levels of Service**, summarizes the existing AM and PM peak hour LOS at each of the 26 existing study intersections. As shown on the table, 19 intersections are presently operating at LOS D or better during the AM and PM peak hours. The 7 exceptions are as follows:

- Pacific Avenue and SR-134 Freeway eastbound ramps (LOS E during PM peak hour);
- Pacific Avenue and W. Colorado Street (LOS E during PM peak);
- Brand Boulevard and SR-134 Freeway westbound/Goode Ave (LOS E during PM peak hour);
- Brand Boulevard and Colorado Street (LOS E during PM peak);
- Glendale Avenue and Monterey Road (LOS F during AM peak, LOS E during PM peak hour);
- Glendale Avenue and SR-134 Freeway eastbound ramps (LOS F during PM peak hour); and
- Glendale Avenue and Colorado Street (LOS E during PM peak hour).

**Table 4.6-4  
Existing Weekday Volume to Capacity Ratios and Levels of Service**

No.	Intersection	AM or PM	Volume to Capacity Ratio	Level of Service
1	Colorado Street Freeway Extension/ I-5 Ramps and West Colorado Street	AM	0.602	A
		PM	0.695	B
2	Pacific Avenue and SR-134 Freeway WB Ramps	AM	0.754	C
		PM	0.824	D
3	Pacific Avenue and SR-134 Freeway EB Ramps	AM	0.849	D
		PM	0.991	E
4	Pacific Avenue and West Broadway	AM	0.465	A
		PM	0.652	B
5	Pacific Avenue and West Colorado Street	AM	0.893	D
		PM	0.957	E
6	Central Avenue and SR-134 Freeway WB On-Ramp/Goode Avenue	AM	0.622	B
		PM	0.887	D
7	Central Avenue and SR-134 Freeway EB Off-Ramp/Sanchez Drive	AM	0.749	C
		PM	0.765	C
8	Central Avenue and West Broadway	AM	0.495	A
		PM	0.759	C
9	Central Avenue and West Harvard Street	AM	0.352	A
		PM	0.484	A
10	Central Avenue and West Colorado Street	AM	0.652	B
		PM	0.868	D
11	Central Avenue and West Chevy Chase Drive	AM	0.576	A
		PM	0.717	C
12	Orange Street and West Broadway	AM	0.315	A
		PM	0.572	A
13	Orange Street and West Harvard Street	AM	0.192	A
		PM	0.329	A
14	Orange Street and West Colorado Street	AM	9.4 <sup>1</sup>	A
		PM	10.8 <sup>1</sup>	B
15	Brand Boulevard and SR-134 Freeway WB Off-Ramp/Goode Avenue	AM	0.854	D
		PM	0.906	E
16	Brand Boulevard and SR-134 Freeway EB On-Ramp/Sanchez Drive	AM	0.782	C
		PM	0.750	C
17	Brand Boulevard and Broadway	AM	0.554	A
		PM	0.703	B
18	Brand Boulevard and Harvard Street	AM	0.397	A
		PM	0.624	B
19	Brand Boulevard and Colorado Street	AM	0.756	C
		PM	0.910	E
20	Brand Boulevard and Chevy Chase Drive	AM	0.734	C
		PM	0.825	D
21	SR-134 Freeway WB Ramps and Monterey Road	AM	0.802	C
		PM	0.762	C
22	Glendale Avenue and Monterey Road	AM	1.043	F
		PM	0.964	E
23	Glendale Avenue and SR-134 Freeway EB Ramps	AM	0.689	B
		PM	1.002	E
24	Glendale Avenue and East Broadway	AM	0.749	C
		PM	0.898	D
25	Glendale Avenue and East Harvard Street	AM	0.627	B
		PM	0.734	C
26	Glendale Avenue and East Colorado Street	AM	0.851	D
		PM	0.958	E

Source: Linscott, Law & Greenspan, Engineers

<sup>1</sup> Unsignalized intersection – intersection delay in seconds based on HCM method. LOS based on HCM method.

## Freeways

Table 4.6-5, Existing Weekday Freeway AM Peak Hour Levels of Service, and Table 4.6-6, Existing Weekday Freeway PM Peak Hour Levels of Service, summarize the existing AM and PM peak hour LOS at five freeway segments. As shown on the table, the majority of freeway segments, with the exception of the SR-134 Freeway segment west of Central Avenue, are presently operating at LOS D or worse during the AM and PM peak hours.

**Table 4.6-5  
Existing Weekday Freeway AM Peak Hour Levels of Service**

No.	Freeway Segment	Direction	Peak Hour Capacity	Demand	D/C	LOS
1	I-5 Freeway north of Colorado St	NB	10,000	8,830	0.88	D
		SB	10,000	9,950	1.00	E
2	I-5 Freeway south of Colorado St	NB	10,000	8,600	0.86	D
		SB	10,000	9,690	0.97	E
3	SR-134 Freeway west of Central Ave	EB	10,000	8,520	0.85	D
		WB	10,000	10,670	1.07	F(0)
4	SR-134 Freeway east of Central Ave	EB	10,000	6,670	0.67	C
		WB	10,000	10,580	1.06	F(0)
5	SR-134 Freeway east of Brand Blvd	EB	10,000	8,850	0.89	D
		WB	10,000	11,080	1.11	F(0)

Source: Linscott, Law & Greenspan, Engineers

**Table 4.6-6  
Existing Weekday Freeway PM Peak Hour Levels of Service**

No.	Freeway Segment	Direction	Peak Hour Capacity	Demand	D/C	LOS
1	I-5 Freeway north of Colorado St	NB	10,000	9,780	0.98	E
		SB	10,000	8,490	0.85	D
2	I-5 Freeway south of Colorado St	NB	10,000	9,530	0.95	E
		SB	10,000	8,280	0.83	D
3	SR-134 Freeway west of Central Ave	EB	10,000	10,490	1.05	F(0)
		WB	10,000	8,130	0.81	D
4	SR-134 Freeway east of Central Ave	EB	10,000	8,480	0.85	D
		WB	10,000	6,590	0.66	C
5	SR-134 Freeway east of Brand Blvd	EB	10,000	10,890	1.09	F(0)
		WB	10,000	8,450	0.85	D

Source: Linscott, Law & Greenspan, Engineers

## Weekend

### *Intersections*

Manual counts of vehicular turning movements were conducted at each of the 26 study intersections on Saturday, November 8, 2003 from 11:00 AM to 3:00 PM. **Table 4.6-7, Existing Weekend Volume to Capacity Ratios and Levels of Service**, summarizes the existing mid-day weekend peak hour LOS at each of the 26 existing study intersections.

As shown on **Table 4.6-7**, 23 intersections are presently operating at LOS D or better during the weekend mid-day peak hour. The three exceptions are as follows:

- Brand Boulevard and Colorado Street;
- Glendale Avenue and Monterey Road; and
- Glendale Avenue and East Colorado Street.

### *Freeway*

**Table 4.6-8, Existing Weekend Freeway Mid-day Peak Hour Levels of Service**, summarizes the existing mid-day peak hour LOS at five key freeway segments. As shown on the table, the majority of freeway segments, with the exception of the SR-134 Freeway segment east of Brand Boulevard in the eastbound direction, are presently operating at LOS D or better during the mid-day peak hour.

**Table 4.6-7  
Existing Weekend Volume to Capacity Ratios and Levels of Service**

No.	Intersection	Volume to Capacity Ratio	Level of Service
1	Colorado Street Freeway Extension/ I-5 Ramps and West Colorado Street	0.754	C
2	Pacific Avenue and SR-134 Freeway WB Ramps	0.825	D
3	Pacific Avenue and SR-134 Freeway EB Ramps	0.773	C
4	Pacific Avenue and West Broadway	0.573	A
5	Pacific Avenue and West Colorado Street	0.900	D
6	Central Avenue and SR-134 Freeway WB On-Ramp/Goode Avenue	0.704	B
7	Central Avenue and SR-134 Freeway EB Off-Ramp/Sanchez Drive	0.713	C
8	Central Avenue and West Broadway	0.824	D
9	Central Avenue and West Harvard Street	0.494	A
10	Central Avenue and West Colorado Street	0.857	D
11	Central Avenue and West Chevy Chase Drive	0.628	B
12	Orange Street and West Broadway	0.616	B
13	Orange Street and West Harvard Street	0.398	A
14	Orange Street and West Colorado Street	10.5 <sup>1</sup>	B
15	Brand Boulevard and SR-134 Freeway WB Off-Ramp/Goode Avenue	0.743	C
16	Brand Boulevard and SR-134 Freeway EB On-Ramp/Sanchez Drive	0.674	B
17	Brand Boulevard and Broadway	0.759	C
18	Brand Boulevard and Harvard Street	0.745	C
19	Brand Boulevard and Colorado Street	0.980	E
20	Brand Boulevard and Chevy Chase Drive	0.766	C
21	SR-134 Freeway WB Ramps and Monterey Road	0.606	B
22	Glendale Avenue and Monterey Road	1.011	F
23	Glendale Avenue and SR-134 Freeway EB Ramps	0.767	C
24	Glendale Avenue and East Broadway	0.858	D
25	Glendale Avenue and East Harvard Street	0.725	C
26	Glendale Avenue and East Colorado Street	0.950	E

Source: Linscott, Law & Greenspan, Engineers

<sup>1</sup> Unsignalized intersection – intersection delay in seconds based on HCM method. LOS based on HCM method.

**Table 4.6-8  
Existing Weekend Freeway Mid-day Peak Hour Levels of Service**

No.	Freeway Segment	Direction	Peak Hour Capacity	Demand	D/C	LOS
1	I-5 Freeway north of Colorado St	NB	10,000	8,560	0.86	D
		SB	10,000	7,430	0.74	C
2	I-5 Freeway south of Colorado St	NB	10,000	8,340	0.83	D
		SB	10,000	7,250	0.73	C
3	SR-134 Freeway west of Central Ave	EB	10,000	9,180	0.92	D
		WB	10,000	7,110	0.71	C
4	SR-134 Freeway east of Central Ave	EB	10,000	7,420	0.74	C
		WB	10,000	5,770	0.58	C
5	SR-134 Freeway east of Brand Blvd	EB	10,000	9,530	0.95	E
		WB	10,000	7,390	0.74	C

Source: Linscott, Law & Greenspan, Engineers.

## Public Transit Service

The Los Angeles County Metropolitan Transportation Authority (MTA) and the City of Glendale Beeline currently provide local public transit service in the vicinity of the project site. The following is a description of the services provided by each transit provider.

### *MTA Metro Bus Transit Services*

MTA provides bus transit service along major roadways within the traffic analysis study area: Brand Boulevard, Broadway, Central Avenue, Chevy Chase Drive, Colorado Street, Glendale Avenue and Pacific Avenue. MTA operates eight local Metro Bus transit routes in the immediate vicinity of the project site. Most of the MTA local bus transit routes provide headways of one to five buses per hour during the morning and afternoon peak hours.

### *City of Glendale Bus Transit Services*

The City of Glendale provides bus transit service within the study area with its Beeline shuttle bus service. In the Glendale Town Center area, Glendale Beeline service is provided along Brand Boulevard, Broadway, Central Avenue, Chevy Chase Drive, Colorado Street, Glendale Avenue and Pacific Avenue. Glendale Beeline also provides express service to the Glendale Transportation Center (GTC) along Brand Boulevard. Glendale Beeline operates seven local transit routes in the immediate vicinity of the project

site. Most of the Beeline transit routes provide headways of three to four buses per hour during the morning and afternoon peak hours.

## ENVIRONMENTAL IMPACTS

### Thresholds of Significance

The following thresholds for determining the significance of impacts related to transportation/traffic are contained in the environmental checklist form contained in Appendix G of the most recent update of the California Environmental Quality Act (CEQA) *Guidelines*. The *Guidelines* state that a significant impact would occur if the project would:

- cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).
- exceed, either individually or cumulatively, a Level of Service standard established by the county congestion management agency for designated roads or highways.
- result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks (**Section 5.0, Effects Found Not to be Significant**).
- substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- result in inadequate emergency access.
- result in inadequate parking capacity.
- conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

The CEQA *Guidelines* do not provide a definition for “substantial increase” in number of vehicle trips, the volume to capacity ratio, or congestion at intersections. As such, the following thresholds of significance have been applied based on impact criteria provided by the City of Glendale Traffic and Transportation Staff. The City of Glendale defines significant traffic impacts at intersections as follows:

- Signalized Intersections – If the project increases the volume to capacity (V/C) ratio by 0.02 or greater and the intersection is projected to operate at Level of Service (LOS) D, E or F with the project, the increase is deemed significant.
- Unsignalized Intersections – If the project-related traffic increases the intersection delay by more than three seconds and the intersection is projected to operate at LOS D, E or F with the project, the increase is deemed significant.

In addition, freeway segments have been evaluated in accordance with the standards included in the 2002 *Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, June 2002. A significant impact on the freeway system is defined as follows:

- For purposes of the CMP, a significant impact occurs when the proposed project increases traffic demand on a CMP facility 2 percent of capacity ( $V/C$  greater than or equal to 0.02), causing LOS F ( $V/C > 1.00$ ); if the facility is already LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2 percent of capacity ( $V/C$  greater than or equal to 0.02).

The CMP document also states the following:

- Calculation of LOS based on  $D/C$  ratios is a surrogate for the speed-based LOS used by Caltrans for traffic operational analysis. LOS F(1) through F(3) designations are assigned where severely congested (less than 25 MPH) conditions prevail for more than one hour, converted to an estimate of peak hour demand in the table above. Note that calculated LOS F traffic demands may therefore be greater than observed traffic volumes.

## Impact Analysis

**Threshold:** Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).

## Construction Impacts

### Impact Analysis:

Peak Construction Worker Demand – A maximum of 800 construction workers are anticipated at the project site during peak construction activity and are likely to work in a single shift (i.e., during the overlap between the foundation and building shell and finish construction phases). In general, the majority of the construction workers are expected to arrive and depart the project site during off-peak hours (i.e., arrive prior to 7:00 AM and depart after 7:00 PM) thereby avoiding vehicle trip generation during the 7:00 to 9:00 AM and 4:00 to 6:00 PM peak commuter traffic periods. The current City of Glendale Municipal Code allows construction between the hours of 7:00 AM and 7:00 PM.

The project applicant would also request approval of extended work hours (e.g., starting at 6:00 AM and ending at 7:00 PM on weekdays and from 6:00 AM to 7:00 PM on Saturdays). Under this scenario, two construction shifts are anticipated. The first shift, which comprises the majority of workers (approximately 600 workers), would commence work at 6:00 AM and end their day at approximately 2:30

PM. The second shift, comprising a much smaller work force (approximately 200 workers), would arrive at the site near 10:00 AM and work until 7:00 PM. This schedule assures that an overlap in construction worker traffic during shift changes will not occur (i.e., the departure of the first shift construction workers will not occur during the arrival of the second shift construction workers). The longer workday further ensures that the construction worker related traffic will not occur during the peak commuter traffic periods.

In general, it is anticipated that construction workers would arrive and depart the site during off-peak hours and that construction-related traffic would be largely freeway oriented. Construction workers would likely arrive and depart via nearby on- and off-ramps serving the SR-134 Freeway and the I-5 Freeway. The most commonly used freeway ramps would be nearest the project site, including the I-5 Freeway Ramps at Colorado Street and the SR-134 Freeway Ramps at Central Avenue and Brand Boulevard. The construction work force would likely be generated from all parts of the Los Angeles region and is assumed to arrive from all directions.

Since construction worker trips would occur outside of the AM and PM peak hours, construction impacts from this particular type of construction activity source would be less than significant.

***Project Design Features:***

PDF 4.6-1(a) The construction contractor shall maintain existing access for land uses in proximity to the project site; schedule receipt of construction materials during non-peak travel periods, to the extent possible; coordinate deliveries to reduce the potential of trucks waiting to unload for extended periods of time, prohibit parking by construction workers on adjacent streets, and direct construction workers to available parking as determined in conjunction with City staff.

***Level of Significance Before Mitigation:*** Less than significant.

***Mitigation Measures:*** None are required.

***Level of Significance After Mitigation:*** Less than significant.

***Impact Analysis:***

Peak Construction Truck Demand – A maximum of 50 concrete trucks and 30 other trucks are anticipated to be generated to the project site during peak construction activities. All delivery trucks/construction equipment would be brought onto the project site and be stored within the perimeter fence of the construction site, thus, no staging is expected to occur on the perimeter public streets. Therefore, detours around the construction site would not be required. Flagmen, however, would be used to control traffic movement during the ingress or egress of trucks and heavy equipment from the construction site.

Approvals required by the City of Glendale for implementation of the proposed project include a Truck Haul Route program approved by the City of Glendale Department of Public Works. Based on current plans, haul trucks and delivery trucks would access the site via three locations: (1) full access at the Central Avenue and Harvard Street intersection, (2) full access at the Brand Boulevard and Harvard Street intersection, and (3) partial access at the Brand Boulevard and New Street intersection. Construction haul route access is proposed to be provided at each of these locations; however, such haul route access shall be limited to ingress and egress to and from the south only. Haul routes shall begin from the project access points on Central Avenue and Brand Boulevard to Colorado Street. At Colorado Street, trucks shall either turn west to access the I-5 Freeway (or turn north on San Fernando Road to access the Eastbound Route 134 Freeway), or turn east to access the State Route 2 Freeway.

Since construction truck trips would occur along major roadways with the number of trips during the AM and PM peak hours being relatively limited, construction impacts from this particular type of construction activity source would be less than significant.

***Project Design Features:***

PDF 4.6-1(b) The construction contractor shall prepare a Truck Haul Route Program to be submitted to the City of Glendale for approval prior to the commencement of construction activities.

***Level of Significance Before Mitigation:*** Less than significant.

***Mitigation Measures:*** None are required.

***Level of Significance After Mitigation:*** Less than significant.

**Mitigation Measures:**

Construction of Off Site – Construction of the project-related mitigation measures at off-site intersections (once approved) will be coordinated through the City of Glendale Department of Public Works. In addition, based on a preliminary review of the proposed mitigation measures, construction of many of the off-site mitigation measures is anticipated to be short term in nature ranging from two to three weeks in duration. Construction of a few of the off-site mitigation measures is anticipated to be two to three months in duration. Overall, impacts are considered to be less than significant.

**Project Design Features:** None are required.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** None are required.

**Level of Significance After Mitigation:** Less than significant.

**Operational Impacts**

To determine the potential impact of the Glendale Town Center on each study intersection, proposed project traffic volumes were added to existing traffic conditions and assigned to the local roadway system based on trip distribution patterns developed in consultation with City of Glendale staff.

**Impact Analysis:**

Project Trip Generation, Weekday – Traffic volumes expected to be generated by the proposed project during the AM and PM peak hours, as well as on a daily basis, were estimated using rates published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*, 6th Edition, 1997. The proposed project is expected to generate 426 net new vehicle trips (192 inbound and 234 outbound) during the AM peak hour. During the PM peak hour, the proposed project is expected to generate 1,643 net new vehicle trips (924 inbound and 718 outbound). Over a 24-hour period, the proposed project is forecast to generate 20,005 net new daily trips during a typical weekday. Refer to **Appendix 4.6** of this EIR for a detailed breakdown of project generated trips during the weekdays.

Project Trip Generation, Weekend – Traffic volumes expected to be generated by the proposed project during the mid-day peak hour, as well as on a daily basis, were estimated using rates published in the

Institute of Transportation Engineer's (ITE) *Trip Generation Manual*, 6th Edition, 1997. The proposed project is expected to generate 2,398 net new vehicle trips (1,373 inbound and 1,025 outbound) during the mid-day peak hour. Over a 24-hour period, the proposed project is forecast to generate 23,186 net new daily trips during a weekend. Refer to **Appendix 4.6** of this EIR for a detailed breakdown of project generated trips during the weekends.

***Impact Analysis:***

Intersection Analysis, Weekday – **Table 4.6-9, Existing Plus Project Weekday Volume to Capacity Ratios and Levels of Service** summarizes the existing plus project AM and PM peak hour LOS at each of the study intersections. As shown on the table, nine study intersections would be significantly impacted by the proposed Glendale Town Center project. The remainder of the intersections will experience incremental, but not significant changes in V/C ratios. The nine intersections that are significantly impacted during the weekday PM peak hour are as follows:

- Central Avenue and SR-134 Freeway westbound on-ramp/Goode Avenue;
- Central Avenue and West Broadway;
- Central Avenue and West Colorado Street;
- Brand Boulevard and Broadway;
- Brand Boulevard and Harvard Street;
- Brand Boulevard and East Colorado Street;
- Brand Boulevard and Chevy Chase Drive;
- Glendale Avenue and East Broadway; and
- Glendale Avenue and East Colorado Street.

**Table 4.6-9  
Existing Plus Project Weekday Volume to Capacity Ratios and Levels of Service**

No.	Intersection	AM or PM	V/C	LOS	Change V/C	Significant?
1	Colorado Street Freeway Extension/ I-5 Ramps and West Colorado Street	AM	0.609	B	0.007	NO
		PM	0.724	C	0.029	NO
2	Pacific Avenue and SR-134 Freeway WB Ramps	AM	0.757	C	0.003	NO
		PM	0.833	D	0.009	NO
3	Pacific Avenue and SR-134 Freeway EB Ramps	AM	0.851	D	0.002	NO
		PM	0.991	E	0.000	NO
4	Pacific Avenue and West Broadway	AM	0.466	A	0.001	NO
		PM	0.704	B	0.052	NO
5	Pacific Avenue and West Colorado Street	AM	0.889	D	- 0.004	NO
		PM	0.969	E	0.012	NO
6	Central Avenue and SR-134 WB On-Ramp/Goode Avenue	AM	0.627	B	0.005	NO
		PM	0.918	E	0.031	YES
7	Central Avenue and SR-134 EB Off-Ramp/Sanchez Drive	AM	0.751	C	0.002	NO
		PM	0.783	C	0.018	NO
8	Central Avenue and West Broadway	AM	0.522	A	0.027	NO
		PM	0.835	D	0.076	YES
9	Central Avenue and West Harvard Street	AM	0.347	A	- 0.005	NO
		PM	0.543	A	0.059	NO
10	Central Avenue and West Colorado Street	AM	0.661	B	0.009	NO
		PM	0.931	E	0.063	YES
11	Central Avenue and West Chevy Chase Drive	AM	0.573	A	- 0.003	NO
		PM	0.725	C	0.008	NO
12	Orange Street and West Broadway	AM	0.328	A	0.013	NO
		PM	0.647	B	0.075	NO
13	Orange Street and West Harvard Street	AM	N/A	N/A	N/A	NO
		PM	N/A	N/A	N/A	NO
14	Orange Street and West Colorado Street	AM	0.438	A	--	NO
		PM	0.547	A	--	NO
15	Brand Boulevard and SR-134 WB Off-Ramp/Goode Ave	AM	0.853	D	- 0.001	NO
		PM	0.914	E	0.008	NO
16	Brand Boulevard and SR-134 EB On-Ramp/Sanchez Drive	AM	0.782	C	0.000	NO
		PM	0.756	C	0.006	NO
17	Brand Boulevard and Broadway	AM	0.566	A	0.012	NO
		PM	0.854	D	0.151	YES
18	Brand Boulevard and Harvard Street	AM	0.405	A	0.008	NO
		PM	0.818	D	0.194	YES
19	Brand Boulevard and Colorado Street	AM	0.760	C	0.004	NO
		PM	0.993	E	0.083	YES
20	Brand Boulevard and Chevy Chase Drive	AM	0.740	C	0.006	NO
		PM	0.854	D	0.029	YES
21	SR-134 Freeway WB Ramps and Monterey Road	AM	0.802	C	0.000	NO
		PM	0.766	C	0.004	NO
22	Glendale Avenue and Monterey Road	AM	1.043	F	0.000	NO
		PM	0.981	E	0.017	NO
23	Glendale Avenue and SR-134 Freeway EB Ramps	AM	0.692	B	0.003	NO
		PM	1.012	F	0.010	NO
24	Glendale Avenue and East Broadway	AM	0.766	C	0.017	NO
		PM	0.965	E	0.067	YES

No.	Intersection	AM or PM	V/C	LOS	Change V/C	Significant?
25	Glendale Avenue and East Harvard Street	AM	0.631	B	0.004	NO
		PM	0.771	C	0.037	NO
26	Glendale Avenue and East Colorado Street	AM	0.854	D	0.003	NO
		PM	0.997	E	0.039	YES

Source: Linscott, Law & Greenspan, Engineers, 2003.

N/A – Intersection eliminated by project.

--- = A traffic signal is planned to be installed as part of the project. Thus improvements in the overall intersection operation are anticipated to occur.

**Project Design Features:** None are required.

**Level of Significance Before Mitigation:** Significant.

**Mitigation Measures:** The following mitigation measures are proposed to reduce traffic and circulation impacts associated with each of the impacted intersections during the weekday:

- 4.6-1(a) The project applicant shall install a westbound right-turn only lane at Intersection No. 8, Central Avenue and Broadway. Approximately six feet of roadway widening along the north side of West Broadway, east of Central Avenue, roadway restriping and the relocation of the existing bike rack would be required.
- 4.6-1(b) The applicant shall complete the following at Intersection No. 10, Central Avenue and Colorado Street:
- Install an additional westbound through lane.
  - Install an exclusive westbound right-turn only lane.
  - Convert the existing eastbound right-turn only lane to a combination through-right turn lane.
  - Widen the north side of Colorado Street, east of Central Avenue, by approximately 20 feet.
  - Widen the south side of West Colorado Street, east of Central Avenue, by approximately 2 to 3 feet to Brand Boulevard.

An option to the eastbound improvement (as listed above) at Intersection No. 10, Central Avenue and Colorado Street is to convert the southbound right-turn only lane to a combination through-right turn lane in addition to the westbound improvement. This optional measure would require the removal of up

to four on-street parking spaces along the west side of Central Avenue, between Colorado Street and Elk Street.

**Mitigation Measure 4.6-1(b)** would require the removal of approximately three metered on-street parking spaces along the south side of West Colorado Street, between Central Avenue to Brand Boulevard. These spaces are limited to two hour parking between 9:00 AM and 6:00 PM. Off-site parking is available for commercial uses located immediately adjacent to the proposed parking spaces.

4.6-1(c) The applicant shall install a northbound right-turn only lane and an additional southbound through lane at Intersection No. 17, Brand Boulevard and Broadway. This measure will require roadway widening along the east and west sides of Brand Boulevard, south of Broadway. The east side widening is approximately 7 feet in width for a distance of approximately 35 feet. The proposed widening along the west side of Brand Boulevard consists of approximately 7 feet in width for a distance of approximately 130 feet.

**Mitigation Measure 4.6-1(c)** would also require the removal of approximately 15 on-street angled parking spaces along the east side of Brand Boulevard; however, approximately 7 parallel on-street parking spaces could be installed, thus resulting in the overall loss of 8 on-street parking spaces. It should be noted that parking for commercial uses along the east side of Brand Boulevard is provided within close proximity in the Marketplace parking garage located near the intersection of Harvard Street and Maryland Avenue.

4.6-1(d) The applicant shall install a southbound right-turn only lane at Intersection No. 18, Brand Boulevard and Harvard Street.

**Mitigation Measure 4.6-1(d)** would require the removal of 15 on-street angled parking spaces along the west side of Brand Boulevard, north of Harvard Street, along the project frontage. The commercial uses adjacent to the parking removals are planned to be removed as part of the project.

4.6-1(e) The applicant shall install northbound and southbound right-turn only lanes at Intersection No. 19, Brand Boulevard and Colorado Street.

**Mitigation Measure 4.6-1(e)** with the institution of the northbound right-turn only lane will require the removal of two 30-minute angled on-street parking spaces and seven 3-hour on-street angled parking spaces along the east side of Brand Boulevard. Parallel parking could be reinstated along the east side

resulting in a net loss of four spaces. The southbound right-turn only lane will be a continuation of an additional lane along the project frontage. It is anticipated that between Harvard Street and Colorado Street 11 angled parking spaces would be removed along the west side of Brand Boulevard, north of Colorado Street to allow for the installation of the southbound right-turn only lane. The commercial uses adjacent to the required parking removal along the west side of Brand Boulevard between Harvard Street and Colorado Street are planned to be removed as part of the development of the project site. Parking for the Glendale Town Center project development is planned to be provided on the project site.

4.6-1(f) The applicant shall install a northbound right-turn only lane at Intersection No. 20, Brand Boulevard and Chevy Chase Drive. Currently, the exterior northbound travel lane is approximately 30 feet in width.

**Mitigation Measure 4.6-1(f)** requiring the installation of a northbound right-turn only lane would require roadway restriping as well as the removal of nine angled parking spaces along the east side of Brand Boulevard, adjacent to the used car dealership. Approximately six on-street parallel parking spaces could be provided thereby creating an overall loss of only three parking spaces. It is important to note that some off-street parking is available at the dealership. In addition, on-street parking is also provided along the west side of Brand Boulevard, south of Chevy Chase Drive, along the east side of Brand Boulevard, south of the proposed parking removals, and on both the north and south sides of Chevy Chase Drive, east of Brand Boulevard.

4.6-1(g) The applicant shall install an additional northbound through lane at Intersection No. 24, Glendale Avenue and East Broadway. The northbound through-right turn lane could be installed through roadway restriping and the restriction of some on-street parking along the east side of Glendale Avenue, south of East Broadway, during the PM peak hour (i.e., between the peak commuter hours of 4:00 and 6:00 PM).

Approximately nine on-street parking spaces would be restricted between the peak commuter hours of 4:00 and 6:00 PM under **Mitigation Measure 4.6-1(g)**. It is important to note that on-street parking is already restricted along the east side of Glendale Avenue between East Broadway and Wilson during the PM peak commuter hours.

4.6-1(h) The applicant shall install a northbound right-turn only lane at Intersection No. 26, Glendale Avenue and East Colorado Street. This measure would be accomplished by restriping Glendale Avenue and widening along the east side of Glendale Avenue by up to 2 feet.

Currently, on-street parking is already prohibited along the east side of Glendale Avenue, between East Colorado Street and Elk Street.

*Level of Significance After Mitigation:* Impacts at Intersection Nos. 8, 10, 18, 19, 20, 24, and 26 would be reduced to a less than significant level.

At Intersection No. 6, mitigation is not feasible due to limited right-of-way and the proximity of the bridge structure over the SR-134 Freeway. If additional right-of-way were available along the west side of Central Avenue, north of Goode Avenue, a southbound right-turn only lane could be added to mitigate the significant impact forecast at this location. Due to the proximity of existing buildings on the northwest corner of the intersection, right-of-way is not considered available. As such, weekday impacts would remain significant and unavoidable at this intersection.

As for Intersection No. 17, while proposed mitigation is expected to improve operations, the measure would not reduce the project-related weekday impact to a less than significant level. A review was conducted of other improvements that could fully mitigate the project's significant impact on Intersection No. 17. It was determined that installation of an additional eastbound through lane on Broadway would mitigate the significant impact, however, adequate right-of-way does not currently exist. Therefore, the installation of the additional eastbound through lane was considered infeasible. As such, weekday impacts would remain significant and unavoidable at this intersection.

*Impact Analysis:*

Intersection Analysis, Weekend – **Table 4.6-10, Existing Plus Project Weekend Volume to Capacity Ratios and Levels of Service** summarizes the existing plus project weekend mid-day peak hour LOS at each of the study intersections. As shown on the table, ten study intersections would be significantly impacted by the proposed Glendale Town Center project. The remainder of the intersections will experience incremental, but not significant changes in V/C ratios. The ten intersections that are significantly impacted during the mid-day peak hour are as follows:

- Colorado Street Freeway Extension/I-5 Ramps and West Colorado Street;
- Pacific Avenue and West Colorado Street;
- Central Avenue and West Broadway;
- Central Avenue and West Colorado Street;
- Brand Boulevard and Broadway;

- Brand Boulevard and Harvard Street;
- Brand Boulevard and Colorado Street;
- Brand Boulevard and Chevy Chase Drive;
- Glendale Avenue and East Broadway; and
- Glendale Avenue and East Colorado Street.

Given these existing conditions, the project has the potential to substantially increase traffic in relation to existing traffic load and capacity of the street system by increasing volume to capacity ratios at study intersections.

**Table 4.6-10  
Existing Plus Project Weekend Volume to Capacity Ratios and Levels of Service**

No.	Intersection	V/C	LOS	Change V/C	Significant?
1	Colorado Street Freeway Extension/ I-5 Ramps and West Colorado Street	0.818	D	0.064	YES
2	Pacific Avenue and SR-134 Freeway WB Ramps	0.838	D	0.013	NO
3	Pacific Avenue and SR-134 Freeway EB Ramps	0.786	C	0.013	NO
4	Pacific Avenue and West Broadway	0.610	B	0.037	NO
5	Pacific Avenue and West Colorado Street	0.933	E	0.033	YES
6	Central Avenue and SR-134 FWB On-Ramp/Goode Avenue	0.753	C	0.049	NO
7	Central Avenue and SR-134 EB Off-Ramp/Sanchez Drive	0.747	C	0.034	NO
8	Central Avenue and West Broadway	0.925	E	0.101	YES
9	Central Avenue and West Harvard Street	0.793	C	0.299	NO
10	Central Avenue and West Colorado Street	0.987	E	0.130	YES
11	Central Avenue and West Chevy Chase Drive	0.645	B	0.017	NO
12	Orange Street and West Broadway	0.677	B	0.061	NO
13	Orange Street and West Harvard Street	N/A	N/A	N/A	NO
14	Orange Street and West Colorado Street	0.511	A	--	NO
15	Brand Boulevard and SR-134 WB Off-Ramp/Goode Avenue	0.765	C	0.022	NO
16	Brand Boulevard and SR-134 EB On-Ramp/Sanchez Drive	0.704	B	0.030	NO

**Table 4.6-10 (continued)**  
**Existing Plus Project Weekend Volume to Capacity Ratios and Levels of Service**

No.	Intersection	V/C	LOS	Change V/C	Significant?
17	Brand Boulevard and Broadway	0.944	E	0.185	YES
18	Brand Boulevard and Harvard Street	1.024	F	0.279	YES
19	Brand Boulevard and Colorado Street	1.163	F	0.183	YES
20	Brand Boulevard and Chevy Chase Drive	0.815	D	0.049	YES
21	SR-134 Freeway WB Ramps and Monterey Road	0.606	B	0.000	NO
22	Glendale Avenue and Monterey Road	1.011	F	0.000	NO
23	Glendale Avenue and SR-134 Freeway EB Ramps	0.783	C	0.016	NO
24	Glendale Avenue and East Broadway	0.946	E	0.088	YES
25	Glendale Avenue and East Harvard Street	0.785	C	0.060	NO
26	Glendale Avenue and East Colorado Street	1.013	F	0.063	YES

Source: Linscott, Law & Greenspan, Engineers

N/A – Intersection eliminated by project.

--- = A traffic signal is planned to be installed as part of the project. Thus improvements in the overall intersection operation are anticipated to occur.

**Project Design Features:** None are required.

**Level of Significance Before Mitigation:** Significant.

**Mitigation Measures:** The following mitigation measures are proposed to reduce traffic and circulation impacts associated with each of the impacted intersections during the weekend:

In addition to the installation of a westbound right-turn only lane as proposed for the weekday conditions at Intersection No. 8 (See **Mitigation Measure 4.6-1(a)**), mitigation for this intersection would require:

- 4.6-1(i) The applicant shall install a northbound right-turn only lane. The installation of the northbound right-turn only lane would require roadway widening of approximately 4 feet along the east side of Central Avenue, south of West Broadway.

No on-street parking removals will be required as parking is currently prohibited along the east side of Central Avenue, south of West Broadway.

In addition to the mitigation measures proposed for the weekday conditions at Intersection No. 10 (See **Mitigation Measure 4.6-1(b)**), the weekend mid-day mitigation for this intersection would include:

4.6-1(j) The applicant shall install a traffic signal modification to provide a southbound right-turn overlap phase with the eastbound left-turn protected phase.

In addition to the mitigation measures proposed for the weekday condition at Intersection No. 18 (See **Mitigation Measure 4.6-1(d)**), the weekend mid-day mitigation for this intersection would include:

4.6-1(k) The applicant shall install a southbound through travel lane, a northbound right-turn only lane, a westbound right-turn only lane, and a traffic signal modification to provide a southbound right-turn overlap phase with the eastbound phase. These additional measures will require additional roadway widening along the east and west sides of Brand Boulevard. Removal of some on-street angled parking spaces on Brand Boulevard, south of Harvard Street will be required. Parallel parking could be reinstated along the east side of Brand Boulevard (south of Harvard Street), thus minimizing the net loss of parking spaces. Some on-street parking removals on the north and south sides of Harvard Street, east of Brand Boulevard will also be necessary.

**Mitigation Measure 4.6-1(k)** installation of a southbound through lane will require the removal of 22 angled parking spaces along the west side of Brand Boulevard, south of Harvard Street. The commercial uses adjacent to the required on-street parking removal (along the west side of Brand Boulevard, south of Harvard Street) are planned to be removed as part of the development of the project site. The northbound right-turn only lane will require the removal of 17 angled parking spaces along the west side of Brand Boulevard, south of Harvard Street. Up to 8 parallel parking spaces could be reinstated along the east side of Brand Boulevard (south of Harvard Street), thus resulting in the net loss of nine parking spaces. The installation of the westbound right-turn only lane will require roadway restriping as well as the removal of three (i.e., two 3-minute limit spaces and one 30-minute limit space) on-street parking spaces along the north side of Harvard Street, east of Brand Boulevard. In addition, the existing loading zone located immediately east of Brand Boulevard will be removed. It is important to note that an existing curbside loading zone is provided along the north side of Harvard Street, approximately 175 feet east of Brand Boulevard. It is important to note that additional parking is provided in close proximity

within the Market Place parking structure located near the intersection of Harvard Street and Maryland Avenue.

In addition to the mitigation measures proposed for the weekday conditions at Intersection No. 19 (See **Mitigation Measure 4.6-1(e)**), the weekend mid-day mitigation for this intersection would include:

4.6-1(l) The applicant shall install an eastbound right-turn only lane. The additional measures would require roadway widening along the south side of Colorado Street, west of Brand Boulevard.

In addition to the mitigation measures proposed for the weekday conditions at Intersection No. 24 (See **Mitigation Measure 4.6-1(g)**), the weekend mid-day mitigation for this intersection would include:

4.6-1(m) The applicant shall install a southbound right-turn only lane. The installation of the southbound right-turn only lane may require roadway widening of approximately 2 feet along the west side of Glendale Avenue, north of East Broadway.

**Mitigation Measure 4.6-1(m)**, as part of the installation of the southbound right-turn only lane, would require the removal of two on-street parking spaces which are limited to two hours for City-related vehicles only.

*Level of Significance After Mitigation:* The combination of weekday and weekend mitigation measures would reduce impacts to less than significant levels for Intersections Nos. 8, 10, 18, and 24. Mitigation proposed for the weekday condition impacts would reduce impacts under weekend conditions at Intersection Nos. 20 (See **Mitigation Measure 4.6-1(f)**) and 26 (See **Mitigation Measure 4.6-1(h)**) to less than significant. Intersection No. 19 is not fully mitigated with a combination of weekday and weekend measures.

Based on a review of the current Intersection No. 1 geometry, as well as discussions with City staff, adequate right-of-way does not currently exist to accommodate the installation of a physical improvement measure (i.e., roadway restriping or roadway widening). Thus, no feasible mitigation has been identified for this location due to limited right-of-way. As such, impacts under weekend conditions would remain significant and unavoidable at this intersection.

A review was conducted of improvement measures to reduce the potentially significant weekend mid-day project-related impact at Intersection No. 5 to less than significant levels. It was determined that the

installation of a westbound right-turn only lane would mitigate the significant impact forecast at this location. Currently, the curb side travel lanes in both the eastbound and westbound directions are approximately 14 feet in width with the interior through travel lanes being 11 feet in width. On the north side of Colorado Street, the existing sidewalk is approximately 8 feet in width east of Pacific Avenue and 5 feet in width west of Pacific Avenue. The westbound right-turn only lane installation would require roadway restriping, as well as roadway widening along Colorado Street. Based on discussions with City staff, as well as a review of the current intersection geometry, adequate right-of-way does not currently exist to accommodate the installation of a westbound right-turn only lane. Thus, no feasible weekend mid-day peak hour mitigation has been identified for this location. As such, impacts under weekend conditions would remain significant and unavoidable at this intersection.

As for Intersection No. 17, while proposed mitigation under weekday conditions is expected to improve operations, the measure would not reduce the project-related weekend impact to a less than significant level. A review was conducted of other improvements to more than fully mitigate the project's significant impact on Intersection No. 17. It was determined that installation of an additional eastbound through lane on Broadway would mitigate the significant impact, however, adequate right-of-way does not currently exist. Therefore, the installation of the additional eastbound through lane was considered infeasible. As such, weekday impacts would remain significant and unavoidable at this intersection. Impacts under weekend conditions would remain significant and unavoidable at this intersection.

***Impact Analysis:***

Freeway Analysis, Weekday – The maximum increase in the freeway mainline traffic during the weekday AM peak hour time period is estimated to be 19 vehicles on a portion of the I-5 Freeway (northbound, north of Colorado Street) and 14 vehicles on a portion of State Route 134 Freeway (westbound, east of Brand Boulevard). These increases in overall mainline freeway traffic volumes correspond to a D/C increase ranging from 0.001 to 0.002, or less than one percent of the total capacity of the segments included in the analysis. This impact is less than the threshold, which is 0.2 percent of freeway capacity, and thus results in a less than significant impact.

The maximum increase in the freeway mainline traffic during the PM peak hour time period is estimated to be 74 vehicles on a portion of the I-5 Freeway (southbound, north of Colorado Street) and 65 vehicles on a portion of the State Route 134 Freeway (westbound, west of Brand Boulevard). These increases in overall mainline freeway traffic volumes correspond to a D/C increase of 0.007, or less than one percent of the total capacity of the segments included in the analysis. This impact is less than the threshold, which is 0.2 percent of freeway capacity, and thus results in a less than significant impact.

**Project Design Features:** None are required.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** None are required.

**Level of Significance After Mitigation:** Less than significant.

**Impact Analysis:**

Freeway Analysis, Weekend – Existing weekend mid-day peak hour traffic volumes on the identified segments along both the I-5 (Golden State) Freeway and the State Route 134 (Ventura Freeway) are not provided in the data published in the 2002 Traffic Volumes on California State Highways, State of California Department of Transportation (Caltrans), June 2003. Therefore, for purposes of estimating the weekend mid-day peak hour traffic volumes on the identified freeway mainline segments a comparison between the weekday PM peak hour traffic volumes and the weekend mid-day peak hour traffic volumes was conducted for the Brand Boulevard and Central Avenue intersections adjacent to the State Route 134 Freeway. Based on the comparison, on average, the weekend mid-day peak hour volumes represent approximately 87.5 percent of the PM peak hour volumes. Thus, the weekend mid-day peak hour volumes on the freeway mainline segments were derived by multiplying the PM peak hour freeway mainline traffic volumes by 87.5 percent.

The maximum increase in the freeway mainline traffic during the PM peak hour time period is estimated to be 110 vehicles on a portion of the I-5 Freeway (southbound, north of Colorado Street) and 96 vehicles on a portion of the State Route 134 Freeway (westbound, west of Brand Boulevard). These increases in overall mainline freeway traffic volumes correspond to a D/C increase ranging from 0.010 to 0.011, or approximately one percent of the total capacity of the segments included in the analysis. This impact is less than the threshold, which is 0.2 percent of freeway capacity, and thus results in a less than significant impact.

It should be noted that the forecast operations (LOS) on all of the study freeway segments for the weekend mid-day peak hour are better than those forecast for the weekday PM peak hour.

**Project Design Features:** None are required.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** None are required.

**Level of Significance After Mitigation:** Less than significant.

**Threshold:** Exceed, either individually or cumulatively, a Level of Service standard established by the county congestion management agency for designated roads or highways.

### ***Congestion Management Program***

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system. In Los Angeles County, the CMP is administered by the Los Angeles County Metropolitan Transportation Authority. The transportation impact analysis procedures outlined in the 2002 *Congestion Management Program for Los Angeles County* require that, when an environmental impact report is prepared for a project, a traffic impact assessment (TIA) be prepared to determine potential impacts on designated monitoring locations on the CMP highway system.

#### ***Impact Analysis:***

Intersections – The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the AM or PM weekday peak periods. There are no CMP arterial intersection monitoring locations in the vicinity of the proposed project. Furthermore, the proposed project will not add 50 or more trips during either the AM or PM weekday peak hours (i.e., of adjacent street traffic) at CMP monitoring intersections, as stated in the CMP manual as the threshold criteria for a traffic impact assessment. Therefore, no CMP traffic assessment at CMP monitoring intersections is required for the proposed Glendale Town Center project.

**Project Design Features:** None are required.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** None are required.

**Level of Significance After Mitigation:** Less than significant.

***Impact Analysis:***

Freeways – The following two CMP freeway monitoring locations in the vicinity of the project have been identified:

<u>CMP Station</u>	<u>Intersection</u>
No. 1005	I-5 Freeway south of Colorado Street extension, and
No. 1055	State Route 134 Freeway east of Central Avenue.

The CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the AM or PM weekday peak hours. The proposed project will not add 150 or more trips (in either direction) during either the AM or PM weekday peak hours at CMP mainline freeway-monitoring locations, which is the threshold for preparing a traffic impact assessment. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

***Project Design Features:*** None are required.

***Level of Significance Before Mitigation:*** Less than significant.

***Mitigation Measures:*** None are required.

***Level of Significance After Mitigation:*** Less than significant.

***Impact Analysis:***

Transit – As required by the 2002 Congestion Management Program for Los Angeles County, a review has been made of the CMP transit service. As previously discussed, public transit service is currently provided in the project area, thus, necessitating a transit impact review.

The proposed project trip generation was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. The proposed project is forecast to generate a demand for 21 net new transit trips (9 inbound trips and 12 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is anticipated to generate a demand for 81 net new transit trips (46 inbound trips and 35

outbound trips). Over a 24-hour period the proposed project is forecast to generate a demand for 980 net new daily transit trips.

Approximately 15 transit lines currently provide service in the immediate vicinity of the proposed project. These MTA and Beeline routes provide approximately 83 buses during the AM peak hour and 82 buses during the PM peak hour. Therefore, the transit ridership increase due to the development of the proposed project is less than one transit rider per bus and just over one transit trip per bus during the AM and PM peak hours, respectively. It is anticipated that the existing transit service in the project area will be able to accommodate the proposed project and, thus, no impacts on existing or future transit services in the project area are expected to occur.

*Project Design Features:* None are required.

*Level of Significance Before Mitigation:* Less than significant.

*Mitigation Measures:* None are required.

*Level of Significance After Mitigation:* Less than significant.

**Thresholds:** Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

**Result in inadequate emergency access.**

*Impact Analysis:* The proposed Glendale Town Center will be designed to utilize the existing network of regional and local roadways located in the vicinity of the project site. As described in **Section 3.0, Project Description**, major design changes proposed by the project include the vacation of portions of Harvard Street and Orange Street, and the creation of a new street from Orange Street to Brand Boulevard between Harvard Street and Colorado Street. Furthermore, access to the site will be provided via the intersections of Central Avenue and Harvard Street, Brand Boulevard and Harvard Street, Orange Street and Colorado Street and via the proposed new street.

Access to the above-grade parking structure on the northern portion of the project site is planned to be provided via two access points on the remaining sections of Harvard street not vacated as part of the project. Access to the subterranean residential parking structure located south of Harvard Street between Brand Boulevard and Central Avenue is planned to be provided via two locations, the proposed new street and Central Avenue. Access to the subterranean residential parking structure located in the

southeast corner of the Glendale Town Center site on Brand Boulevard is planned to be provided via the north-south alleyway that spans between Colorado Street and the proposed new street.

As discussed earlier in this section, the proposed density and land uses associated with the Glendale Town Center will increase traffic traveling to and from the site. To prevent potential conflicts with pedestrians and other vehicles, and allow for adequate emergency access, the project will incorporate several traffic design features. To begin, access to the site via the new street will be limited to right-turn in/right-turn out vehicular movements at Brand Boulevard (i.e., no left-turns permitted). Due to its proximity to the intersection of Brand Boulevard and Colorado Street, the north-south alleyway and Colorado Street intersection will also be limited to right-turn in/right-turn out vehicular turning movements. In addition, the proposed driveway on Central Avenue, south of Harvard Street, will be limited to right-turn in/right-turn out vehicular turning movements to/from Central Avenue. Finally, a new traffic signal would be installed at the intersection of Colorado Street and Orange Street upon completion of the Town Center. These roadway improvements would be designed to adhere to standard engineering practices and requirements by the City of Glendale Public Work and Fire Department.

As for pedestrian safety, sidewalks surrounding the project site will be buffered by trees planted along the side of the street. In addition, crosswalks leading to the site will be signalized and textured, thus highlighting the presence of pedestrians to motorists.

Given these precautions, design features associated with the proposed project will not substantially increase traffic hazards associated with the project site.

*Project Design Features:* None are required.

*Level of Significance Before Mitigation:* Less than significant.

*Mitigation Measures:* None are required.

*Level of Significance After Mitigation:* Less than significant.

**Threshold:** Result in inadequate parking capacity.

## ***Construction Impacts***

### ***Impact Analysis:***

During months one through nine all construction workers will park on site. For months 10 through 26, parking will be provided via a combination of on-site areas and off-premises parking facilities yet to be determined. Such off-site parking spaces shall be located within walking distance of the project site or shuttle services will be provided by the project applicant between the off-site parking area/areas and the project site. The maximum projected off-site parking demand is 400 spaces. Sufficient parking is available in the City of Glendale to accommodate construction worker parking demand. There is currently an adequate supply of parking space within City owned Orange Street Garage and Marketplace Garage to accommodate construction workers. The impact is therefore considered to be less than significant.

### ***Project Design Features:***

PDF 4.6-2(b) The City of Glendale will provide for construction worker parking in either City owned Orange Street Garage and Marketplace Garage or other appropriate.

***Level of Significance Before Mitigation:*** Less than significant.

***Mitigation Measures:*** None are required.

***Level of Significance After Mitigation:*** Less than significant.

## ***Operational Impacts***

### ***Impact Analysis:***

City of Glendale Municipal Code Parking Requirement – The City of Glendale Code parking rates applicable to the retail-commercial component of the proposed project (excluding the cinema use) indicate a requirement of one parking space per 200 square feet of floor area for any combination of uses contained in three or more separate occupancies and 5,000 or more square feet of floor area located on a lot where such uses occupy more than 40 percent of the floor area. The Code parking rates applicable to the cinema portion of the retail-commercial component of the proposed project indicate a requirement of one parking space per each five (5) fixed seats. The Code parking rates applicable to the residential component of the proposed project indicate a requirement of two parking spaces per efficiency, one

bedroom and two bedroom dwelling units, a requirement of 2.5 spaces per three bedroom dwelling unit, and a requirement of three spaces per dwelling unit greater than 1,600 square feet. In addition, the Code requires that guest parking be provided at a rate of 0.25 parking space per dwelling unit.

The Code parking requirements applicable to the Glendale Town Center project are shown in **Table 4.6-11, Summary of Parking Code Requirement and Parking Supply**. As shown, the retail-commercial component of the project (excluding cinema use) has a Code requirement of 2,025 parking spaces. The cinema portion of the retail-commercial component of the project has a Code parking requirement of 700 spaces. Thus, based on the City Code, a total of 2,725 parking spaces are required for the retail-commercial component of the project.

**Table 4.6-11  
Summary of Parking Code Requirement and Parking Supply**

Land Use	Size	Code Requirement <sup>1</sup>	Spaces Required	Proposed Parking Supply	Parking Surplus/ (Deficiency)
<b>Retail-Commercial</b>					
Cinema <sup>2</sup>	3,500 Seats	1.0/5 Seats	700		
Retail/Restaurant <sup>3</sup>	405,000 SF	1.0/200 SF	2,025		
<b>Subtotal</b>			<b>2,725</b>	<b>2,588</b>	<b>(137)</b>
<b>Residential<sup>4</sup></b>					
- Condominium: 2 bedroom	100 DU	2.0/DU	200		
- Apartment: 3 bedroom	12 DU	2.5/DU	30		
- Apartment: 1 or 2 bedroom	226 DU	2.0/DU	452		
- Guest Spaces	338 DU	0.25/DU	85		
<b>Subtotal</b>			<b>767</b>	<b>618</b>	<b>(149)</b>
<b>Project Total</b>			<b>3,492</b>	<b>3,206</b>	<b>(286)</b>

Source: Linscott, Law & Greenspan, Engineers

<sup>1</sup> Based on City of Glendale Municipal Code parking requirements.

<sup>2</sup> Cinema Code parking requirement:

- 1.0 space per each (5) fixed seats, or 35 square feet of floor area where there are no fixed seats.

<sup>3</sup> Retail Code parking requirement:

- 1.0 space per 200 square feet for any combination of uses contained in 3 or more separate occupancies and 5,000 or more square feet of floor area located on a lot where such uses occupy more than 40 percent of the floor area.

<sup>4</sup> Residential Code parking requirement:

- 2.0 spaces per unit for efficiency, 1 bedroom and 2 bedroom

- 2.5 spaces per unit for 3 bedroom

- 3.0 spaces per unit > 1,600 square feet

- 0.25 spaces per unit for guest spaces.

It is assumed that approximately 60 percent of the apartment dwelling units are one-bedroom units, 35 percent (35%) are two-bedroom units, and five percent are three-bedroom units based on information provided by the project applicant. All of the condominium dwelling units are proposed to be two-bedroom units. As shown in **Table 4.6-11**, based on the City Code, a total of 682 non-guest spaces are

required for the residential units. In addition, approximately 85 guest parking spaces are required for the residential component of the proposed project based on City Code parking rates. Thus, a total of 767 parking spaces (682 spaces for the residents and 85 guest parking spaces) are required for the residential component of the proposed project based on the City Code parking rates. In summary, a total of 3,492 parking spaces are required based on the strict application of City Code parking rates to the retail-commercial and residential components of the proposed Glendale Town Center Parking Supply.

Proposed Glendale Town Center Parking Supply – As discussed in **3.0, Project Description**, in this EIR, a total of 2,588 parking spaces within the 2,700 space parking structure will be provided to accommodate the retail-commercial component of the proposed project (i.e., the retail, restaurant, and cinema uses). In addition, a total of 618 parking spaces (112 spaces nested in the 2,700 space parking structure and 506 spaces in the two subterranean parking structures) will be provided for the residential units and guest parking as part of the proposed project. Thus, a total of 3,206 parking spaces are proposed to be provided within the Glendale Town Center site.

Parking Supply and Code Comparison – The summary of the comparison between the proposed parking Code requirement and the proposed parking supply is also presented in **Table 4.6-11**. Based on the comparison of the Code requirement and the proposed parking supply, a deficiency of 137 parking spaces is forecast for the retail-commercial component of the proposed project. A deficiency of 149 parking spaces is forecast for the residential component of the proposed project. Thus, a total deficiency of 286 parking spaces is calculated based on the strict application of the City Code parking rates.

### ***Shared Parking***

The concept of shared parking is widely recognized within the transportation planning industry and accounts for the fluctuations in parking demand over time for different types of land uses within a mixed-use project. Shared parking analyses are used to determine peak parking demand for a combination of uses that might share parking spaces (i.e., retail, restaurant, and cinema uses). The shared parking analysis accounts for hourly variations in parking demand, while the City Code parking requirements sum the peak parking demand for each use to determine the required number of parking spaces. The shared parking analysis has been prepared for the project and is based on information contained in *Shared Parking*, published by the Urban Land Institute (ULI).

The shared parking analysis for the Glendale Town Center was prepared for two days: one during the week and another for the weekend. The shared parking analyses were prepared only for the retail-commercial portion of the project. The peak shared parking demand for the retail-commercial

component on a typical weekday occurs at 8:00 PM when 2,506 parking spaces are expected to be needed. the peak shared parking demand for the retail-commercial component on the weekend also occurs at 8:00 PM when 2,506 parking spaces are expected to be needed.

A comparison of the proposed retail-commercial parking supply and the peak shared retail-commercial parking demand for both a weekday and a weekend day indicates that the proposed supply of 2,588 spaces would result in a surplus of 82 spaces. It is important to note that this comparison does not include a parking reduction to reflect multiple trips made by project patrons (refer to the **Project Traffic Generation** section of this report). Consideration of internal capture trips or multiple trips by project patrons in the parking analysis is discussed in the following paragraphs.

Internal Capture Trips (Multiple Trips) – The concept of internal capture trips or multiple trips within mixed-use developments is widely recognized within the transportation planning industry. Internal capture trips are trips made within a mixed-use development (e.g., between residential and commercial components) and reflect the interaction of land uses. This results in lower trip generation and parking demand associated with mixed-use developments.

Although internal capture could be considered between the retail-commercial land uses of the project (e.g., between the restaurant and cinema components of the project), this parking analysis only considers the internal capture between the project's residents and the project's retail, restaurant, and cinema uses. As such, this parking analysis reflects a conservative assumption that ten percent of the project's residents (i.e., the 682 Code required residential spaces) would also patronize the project's retail, restaurant, and/or cinema uses. Thus, the parking for the project commercial uses could be reduced by 68 spaces. With this consideration for internal capture trips between only the residential and retail-commercial components of the project, the peak parking demand for the retail-commercial uses would be further reduced to 2,438 spaces ( $2,506 - 68 = 2,438$  spaces). Therefore, the large retail-commercial parking structure can accommodate the remaining parking requirement associated with the residential component. As previously mentioned, a total of 767 parking spaces (682 spaces for the residents and 85 guest parking spaces) are required for the residential component of the proposed project based on the City Code parking rates.

Parking Conclusions – A total of 3,205 parking spaces (767 residential parking spaces + 2,438 retail-commercial parking spaces) required for the proposed project based on the application of City Code parking rates to the residential component, consideration of shared parking for the retail-commercial component of the proposed project, and application of a conservative forecast of internal capture trips between only the residential tenants and the retail-commercial component of the project.

Based on the comparison of the above parking requirement (3,205 spaces) and the proposed parking supply (3,206 spaces), a surplus of one parking space is forecast for the proposed project. Thus, it can be concluded that adequate parking will be provided as part of the project, recognizing the shared parking concept (i.e., fluctuations in parking demand over time for different types of uses) and internal capture (i.e., multi-purpose trip making) that is evident with development projects of this nature.

*Project Design Features:* None are required.

*Level of Significance Before Mitigation:* Less than significant.

*Mitigation Measures:* None are required.

*Level of Significance After Mitigation:* Less than significant.

**Threshold: Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).**

There are a number of goals and policies set forth by the City of Glendale General Plan that relate to alternative transportation. An analysis of the consistency of these applicable goals and policies with the proposed Glendale Town Center is provided in **Section 4.1, Land Use and Planning**. As discussed in **Section 4.1**, the project does not conflict with applicable General Plan goals and policies related to alternative transportation. In addition, as discussed in **Section 4.7, Air Quality**, the project shall implement appropriate Trip Reduction and Travel Demand Measures, per the Glendale Municipal Code, which include bus turnouts, bicycle racks, and provision of vanpool parking. As such, the project would not conflict with adopted policies, plans, or programs supporting alternative transportation, and impacts would be less than significant.

*Project Design Features:* None are required.

*Level of Significance Before Mitigation:* Less than significant.

*Mitigation Measures:* None are required.

*Level of Significance After Mitigation:* Less than significant.

## Cumulative Impacts

The following cumulative analysis evaluates the impact of the proposed project and Related Projects on traffic and circulation, as discussed in **Section 4.0, Environmental Impact Assessment**. Each applicable threshold is listed below in bold followed by an analysis of the cumulative impact of the project and Citywide Projects, and their potential significance.

**Threshold:** Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).

**Impact Analysis:**

Construction – It is anticipated that construction of the Related Projects would result in periods of heavy truck traffic as a result of the delivery of construction materials and the hauling of demolition materials. Although the time frame for construction of these projects is uncertain, as well as the degree to which construction of these projects will overlap and the location at which impacts could occur, it is possible that the construction of these Related Projects could affect roadway segments and intersections, which could result in a significant cumulative impact. However, as discussed under project impacts, the project would prepare and implement a truck haul route plan and workers would be traveling to the project site during non-peak hours. Consequently, the project's contribution is not cumulatively considerable and thus, less than significant.

**Project Design Features:** None are required.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** None are required.

**Level of Significance After Mitigation:** Less than significant.

Operational – The project's operational impacts were determined by applying an ambient growth factor to existing conditions and then adding the forecast of Related Projects trip generation. The project's impact was then determined by adding the project weekday and weekend trip generation to these conditions.

### *Ambient Traffic Growth*

Application of the annual ambient growth factor allows for a conservative worst case forecast of future traffic volumes in the area. Several sources of data were reviewed in conjunction with City of Glendale staff relative to the rate of future ambient traffic growth. Specifically, a review was conducted of background traffic growth estimates published in the 2002 *Congestion Management Program for Los Angeles County*. This data indicates that existing traffic volumes would be expected to increase at an annual rate of approximately 1.0 percent to the year 2006 (i.e., anticipated year of project build-out). Therefore, existing traffic volumes were increased at an annual rate of one percent per year to the year 2006.

#### *Impact Analysis:*

Related Projects – Traffic volumes expected to be generated by the Related Projects during the weekday and weekend were estimated using rates published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*, 6th Edition, 1997.

Related Projects during the weekday are expected to generate 1,756 net new vehicle trips (1,322 inbound and 434 outbound) during the AM peak hour. During the PM peak hour, the Related Projects are expected to generate 1,943 net new vehicle trips (631 inbound and 1,312 outbound). Over a 24-hour period, the Related Projects are forecast to generate 18,095 net new daily trips during a typical weekday. Refer to **Appendix 4.6** of this EIR for a detailed breakdown of the Related Projects' weekday trip generation.

Related Projects during the weekend are expected to generate 1,661 net new vehicle trips (941 inbound and 720 outbound) during the mid-day peak hour. Over a 24-hour period, the Related Projects are forecast to generate 15,657 net new daily trips during a typical weekend. Refer to **Appendix 4.6** of this EIR for a detailed breakdown of the Related Projects weekend trip generation.

Future Plus Project Conditions Impact, Weekday – As indicated in **Table 4.6-12, Future Plus Project Weekday Volume to Capacity Ratios and Levels of Service**, application of the City's threshold criteria to the Future Plus Project scenario indicates that the same nine intersections impacted under the Existing Plus Project scenario would be significantly impacted under cumulative conditions. Incremental but not significant changes in V/C ratios are noted at the remaining 17 intersections. The changes in the V/C ratios presented in **Table 4.6-12** are the project's contribution to the cumulative impact. Given these results, the proposed project would result in a significant contribution to cumulative impacts at nine intersections according to the City's impact criteria during the AM and PM peak hours.

**Table 4.6-12  
Future Plus Project Weekday  
Volume to Capacity Ratios and Levels of Service**

No.	Intersection	AM or PM	V/C	LOS	Change V/C	Significant?
1	Colorado Street Fwy. Extension/ I-5 Ramps and West Colorado Street	AM	0.632	B	0.007	NO
		PM	0.764	C	0.042	NO
2	Pacific Avenue and SR-134 Freeway WB Ramps	AM	0.777	C	0.003	NO
		PM	0.855	D	0.008	NO
3	Pacific Avenue and SR-134 Freeway EB Ramps	AM	0.873	D	0.002	NO
		PM	1.018	F	0.000	NO
4	Pacific Avenue and West Broadway	AM	0.486	A	0.001	NO
		PM	0.727	C	0.052	NO
5	Pacific Avenue and West Colorado Street	AM	0.915	E	-0.004	NO
		PM	1.003	E	0.013	NO
6	Central Avenue and SR-134 WB On-Ramp/Goode Avenue	AM	0.663	B	0.005	NO
		PM	1.005	F	0.031	YES
7	Central Avenue and SR-134 EB Off-Ramp/Sanchez Drive	AM	0.949	E	0.002	NO
		PM	0.904	D	0.017	NO
8	Central Avenue and West Broadway	AM	0.613	B	0.027	NO
		PM	0.906	E	0.054	YES
9	Central Avenue and West Harvard Street	AM	0.369	A	-0.005	NO
		PM	0.609	B	0.066	NO
10	Central Avenue and West Colorado Street	AM	0.717	C	0.009	NO
		PM	1.017	F	0.065	YES
11	Central Avenue and West Chevy Chase Drive	AM	0.602	A	-0.003	NO
		PM	0.763	C	0.007	NO
12	Orange Street and West Broadway	AM	0.340	A	0.014	NO
		PM	0.680	B	0.074	NO
13	Orange Street and West Harvard Street	AM	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A
14	Orange Street and West Colorado Street	AM	0.453	A	--	NO
		PM	0.570	A	--	NO
15	Brand Boulevard and SR-134 WB Off-Ramp/Goode Avenue	AM	0.934	E	-0.001	NO
		PM	0.944	E	0.012	NO
16	Brand Boulevard and SR-134 Freeway EB On-Ramp/ Sanchez Drive	AM	0.845	D	-0.001	NO
		PM	0.851	D	0.007	NO
17	Brand Boulevard and Broadway	AM	0.609	B	0.012	NO
		PM	0.933	E	0.150	YES
18	Brand Boulevard and Harvard Street	AM	0.428	A	-0.008	NO
		PM	0.851	D	0.194	YES
19	Brand Boulevard and Colorado Street	AM	0.792	C	0.004	NO
		PM	1.043	F	0.070	YES
20	Brand Boulevard and Chevy Chase Drive	AM	0.767	C	0.006	NO
		PM	0.890	D	0.029	YES

**Table 4.6-12 (continued)**  
**Future Plus Project Weekday**  
**Volume to Capacity Ratios and Levels of Service**

No.	Intersection	AM or PM	V/C	LOS	Change	
					V/C	Significant?
21	SR-134 Freeway WB Ramps and Monterey Road	AM	0.824	D	0.000	NO
		PM	0.797	C	0.014	NO
22	Glendale Avenue and Monterey Road	AM	1.075	F	0.000	NO
		PM	1.014	F	0.017	NO
23	Glendale Avenue and SR-134 Freeway EB Ramps	AM	0.711	C	0.003	NO
		PM	1.047	F	0.010	NO
24	Glendale Avenue and East Broadway	AM	0.815	D	0.018	NO
		PM	1.012	F	0.067	YES
25	Glendale Avenue and East Harvard Street	AM	0.651	B	0.004	NO
		PM	0.794	C	0.038	NO
26	Glendale Avenue and East Colorado Street	AM	0.881	D	0.003	NO
		PM	1.029	F	0.039	YES

Source: Linscott, Law & Greenspan, Engineers.

N/A – Intersection eliminated by project.

--- = A traffic signal is planned to be installed as part of the project. Thus improvements in the overall intersection operation are anticipated to occur.

**Project Design Features:** None are required.

**Level Of Significance Before Mitigation:** Significant.

**Mitigation Measures:** Implementation of project-specific **Mitigation Measures 4.6-1(a)** through **4.6-1(m)** for cumulative conditions.

**Level of Significance After Mitigation:** Implementation of **Mitigation Measures 4.6-1(a)** through **4.6-1(m)** would reduce the project's contribution to cumulative impacts to less than significant at seven of the intersection locations. As shown in **Table 4.6-13, Future Plus Project Weekday Conditions with Mitigation Measures – Volume to Capacity Ratios and Levels of Service**, with the incorporation of the mitigation measures, volume to capacity ratios at the following intersections would be reduced to less than significant levels at the following intersections:

- Central Avenue and West Broadway;
- Central Avenue and West Colorado Street;
- Brand Boulevard and Harvard Street;
- Brand Boulevard and Colorado Street;
- Brand Boulevard and Chevy Chase Drive;

- Glendale Avenue and East Broadway; and
- Glendale Avenue and East Colorado Street.

The remaining two intersections would have significant and unavoidable cumulative impacts of which the project's contribution would be considerable.

**Table 4.6-13  
Future Plus Project Weekday Conditions with Mitigation Measures  
Volume to Capacity Ratios and Levels of Service**

No.	Intersection	AM or PM	V/C	LOS	Change V/C	Mitigated?
1	Colorado Street Fwy. Extension/ I-5 Ramps and West Colorado Street	AM	0.632	B	0.007	---
		PM	0.764	C	0.042	---
2	Pacific Avenue and SR-134 Freeway WB Ramps	AM	0.777	C	0.003	---
		PM	0.855	D	0.008	---
3	Pacific Avenue and SR-134 Freeway EB Ramps	AM	0.873	D	0.002	---
		PM	1.018	F	0.000	---
4	Pacific Avenue and West Broadway	AM	0.486	A	0.001	---
		PM	0.727	C	0.052	---
5	Pacific Avenue and West Colorado Street	AM	0.915	E	-0.004	---
		PM	1.003	E	0.013	---
6	Central Avenue and SR-134 WB On-Ramp/Goode Avenue	AM	0.663	B	0.005	---
		PM	1.005	F	0.031	NO
7	Central Avenue and SR-134 EB Off-Ramp/Sanchez Drive	AM	0.949	E	0.002	---
		PM	0.904	D	0.017	---
8	Central Avenue and West Broadway	AM	0.581	A	-0.005	---
		PM	0.851	D	-0.001	YES
9	Central Avenue and West Harvard Street	AM	0.369	A	-0.005	---
		PM	0.609	B	0.066	---
10	Central Avenue and West Colorado Street	AM	0.624	B	-0.084	---
		PM	0.915	E	-0.037	YES
11	Central Avenue and West Chevy Chase Drive	AM	0.602	A	-0.003	---
		PM	0.763	C	0.007	---
12	Orange Street and West Broadway	AM	0.340	A	0.014	---
		PM	0.680	B	0.074	---
13	Orange Street and West Harvard Street	AM	N/A	N/A	N/A	---
		PM	N/A	N/A	N/A	---
14	Orange Street and West Colorado Street	AM	0.453	A	N/A	---
		PM	0.570	A	N/A	---
15	Brand Boulevard and SR-134 WB Off-Ramp/Goode Avenue	AM	0.934	E	-0.001	---
		PM	0.944	E	0.012	---
16	Brand Boulevard and SR-134 Freeway EB On-Ramp/ Sanchez Drive	AM	0.845	D	-0.001	---
		PM	0.851	D	0.007	---
17	Brand Boulevard and Broadway	AM	0.581	A	0.016	---
		PM	0.871	D	0.088	NO

**Table 4.6-13 (continued)**  
**Future Plus Project Weekday with Mitigation Measures**  
**Volume to Capacity Ratios and Levels of Service**

No.	Intersection	AM or PM	V/C	LOS	Change V/C	Mitigated?
18	Brand Boulevard and Harvard Street	AM	0.428	A	-0.008	---
		PM	0.786	C	0.129	YES
19	Brand Boulevard and Colorado Street	AM	0.777	C	-0.011	---
		PM	0.990	E	0.017	YES
20	Brand Boulevard and Chevy Chase Drive	AM	0.767	C	0.006	---
		PM	0.825	D	-0.036	YES
21	SR-134 Freeway WB Ramps and Monterey Road	AM	0.824	D	0.000	---
		PM	0.797	C	0.014	---
22	Glendale Avenue and Monterey Road	AM	1.075	F	0.000	---
		PM	1.104	F	0.017	---
23	Glendale Avenue and SR-134 Freeway EB Ramps	AM	0.711	C	0.003	---
		PM	1.047	F	0.010	---
24	Glendale Avenue and East Broadway	AM	0.815	D	0.018	---
		PM	0.934	E	-0.011	YES
25	Glendale Avenue and East Harvard Street	AM	0.651	B	0.004	---
		PM	0.794	C	0.038	---
26	Glendale Avenue and East Colorado Street	AM	0.881	D	0.003	---
		PM	0.983	E	-0.007	YES

Source: Linscott, Law & Greenspan Engineers

N/A – Intersection eliminated by project.

**Future Plus Project Conditions Impact, Weekend** – As indicated in **Table 4.6-14, Future Plus Project Weekend Volume to Capacity Ratios and Levels of Service**, application of the City's threshold criteria to the Future Plus Project indicates that the same ten intersections impacted under the Existing Plus Project would be significantly impacted under cumulative conditions. In addition, the project under cumulative condition would create significant impacts at three additional intersections during weekends. These include:

- Central Avenue and SR-134 EB Off-Ramp;
- Central Avenue and West Harvard Street; and
- Glendale Avenue and East Harvard Street.

Incremental but not significant changes in V/C ratios are noted at the remaining 13 intersections. The change in the V/C ratios presented in **Table 4.6-13** is the project contribution to the cumulative impact. Given these results, the proposed project would result in significant contributions to cumulative impacts at 13 intersections according to the City's impact criteria during the AM and PM peak hours.

**Table 4.6-14  
Future Plus Project Weekend  
Volume to Capacity Ratios and Levels of Service**

No.	Intersection	V/C	LOS	Change	
				V/C	Significant?
1	Colorado Street Fwy. Extension/ I-5 Ramps and West Colorado Street	0.849	D	0.064	YES
2	Pacific Avenue and SR-134 Freeway WB Ramps	0.860	D	0.013	NO
3	Pacific Avenue and SR-134 Freeway EB Ramps	0.806	D	0.013	NO
4	Pacific Avenue and West Broadway	0.626	B	0.037	NO
5	Pacific Avenue and West Colorado Street	0.967	E	0.041	YES
6	Central Avenue and SR-134 WB On-Ramp/Goode Avenue	0.799	C	0.039	NO
7	Central Avenue and SR-134 EB Off-Ramp/Sanchez Drive	0.943	E	0.034	YES
8	Central Avenue and West Broadway	1.025	F	0.100	YES
9	Central Avenue and West Harvard Street	0.830	D	0.294	YES
10	Central Avenue and West Colorado Street	1.081	F	0.162	YES
11	Central Avenue and West Chevy Chase Drive	0.695	B	0.017	NO
12	Orange Street and West Broadway	0.696	B	0.062	NO
13	Orange Street and West Harvard Street	N/A	N/A	N/A	NA
14	Orange Street and West Colorado Street	0.528	A	--	NO
15	Brand Boulevard and SR-134 WB Off-Ramp/Goode Avenue	0.836	D	0.019	NO
16	Brand Boulevard and SR-134 EB On-Ramp/Sanchez Drive	0.764	C	0.030	NO
17	Brand Boulevard and Broadway	1.010	F	0.197	YES
18	Brand Boulevard and Harvard Street	1.045	F	0.250	YES
19	Brand Boulevard and Colorado Street	1.224	F	0.194	YES
20	Brand Boulevard and Chevy Chase Drive	0.860	D	0.049	YES

**Table 4.6-14 (continued)**  
**Future Plus Project Weekend**  
**Volume to Capacity Ratios and Levels of Service**

No.	Intersection	V/C	LOS	Change V/C	Significant?
21	SR-134 Freeway WB Ramps and Monterey Road	0.623	B	0.000	NO
22	Glendale Avenue and Monterey Road	1.042	F	0.000	NO
23	Glendale Avenue and SR-134 Freeway EB Ramps	0.810	D	0.016	NO
24	Glendale Avenue and East Broadway	0.996	E	0.088	YES
25	Glendale Avenue and East Harvard Street	0.808	D	0.061	YES
26	Glendale Avenue and East Colorado Street	1.044	F	0.065	YES

Source: Linscott, Law & Greenspan, Engineers.

N/A – Intersection eliminated by project.

--- = A traffic signal is planned to be installed as part of the project. Thus improvements in the overall intersection operation are anticipated to occur.

**Project Design Features:** None are required.

**Level Of Significance Before Mitigation:** Significant.

**Mitigation Measures:** Implementation of project-specific **Mitigation Measures 4.6-1(a)** through **4.6-1(m)** under cumulative conditions. In addition, the following mitigation measure is required to reduce project-specific impacts under cumulative conditions to less than significant at Intersection No. 9:

- 4.6-2(a) Installation of the northbound right-turn only lane would require roadway widening adjacent to the project frontage along the east side of Central Avenue, south of West Harvard Street. To further improve operations at this intersection, as well as to better accommodate the additional project-related traffic on Central Avenue, the installation of an additional southbound through travel lane on Central Avenue has been required by the City of Glendale Traffic & Transportation Section.

Some on-street parking removals may be required along the east side of Central Avenue, south of West Harvard Street. However, off-street parking is provided with the proposed project.

The following mitigation measure is required to reduce project-specific impacts under cumulative conditions to less than significant at Intersection No. 25.

4.6-2(b) Installation of a westbound left-turn lane through roadway restriping of East Harvard Street, east of Glendale Avenue.

Implementation of **Mitigation Measure 4.6-2(b)** would require on-street parking removals on Harvard Street, east of Glendale Avenue. Two on-street parking spaces along the north side of Harvard Street (designated for limited parking by green curb) and two on-street parking spaces along the south side of Harvard Street will require removal. Off-street parking is available for those commercial uses located immediately adjacent to the proposed parking removals.

*Level of Significance After Mitigation:* Implementation of **Mitigation Measures 4.6-1(a)** through **4.6-1(m)** would reduce the project's contribution to cumulative impacts to less than significant levels at eight of the intersections. As shown in **Table 4.6-15, Future Plus Project Weekend with Mitigation Measures Volume to Capacity Ratios and Levels of Service**, with the incorporation of the mitigation measures, the volume to capacity ratios at the following intersections would be reduced to less than significant levels:

- Central Avenue and West Broadway;
- Central Avenue and West Harvard;
- Central Avenue and West Colorado Street;
- Brand Boulevard and Harvard Street;
- Brand Boulevard and Chevy Chase Drive;
- Glendale Avenue and East Broadway;
- Glendale Avenue and East Harvard Street; and
- Glendale Avenue and East Colorado Street.

The remaining five intersections would have significant and unavoidable cumulative impacts of which the project's contribution would be considerable.

**Table 4.6-15  
Future Plus Project Weekend with Mitigation Measures  
Volume to Capacity Ratios and Levels of Service**

No.	Intersection	V/C	LOS	Change	
				V/C	Mitigated?
1	Colorado Street Fwy. Extension/ I-5 Ramps and West Colorado Street	0.849	D	0.064	NO
2	Pacific Avenue and SR-134 Freeway WB Ramps	0.860	C	0.013	---
3	Pacific Avenue and SR-134 Freeway EB Ramps	0.806	D	0.013	---
4	Pacific Avenue and West Broadway	0.626	B	0.037	---
5	Pacific Avenue and West Colorado Street	0.967	E	0.041	NO
6	Central Avenue and SR-134 WB On-Ramp/Goode Avenue	0.799	C	0.039	---
7	Central Avenue and SR-134 EB Off-Ramp/Sanchez Drive	0.943	E	0.034	NO
8	Central Avenue and West Broadway	0.909	E	- 0.016	YES
9	Central Avenue and West Harvard Street	0.798	C	0.262	YES
10	Central Avenue and West Colorado Street	0.936	E	0.017	YES
11	Central Avenue and West Chevy Chase Drive	0.695	B	0.017	---
12	Orange Street and West Broadway	0.696	B	0.062	---
13	Orange Street and West Harvard Street	N/A	N/A	N/A	---
14	Orange Street and West Colorado Street	0.528	A	N/A	---
15	Brand Boulevard and SR-134 WB Off-Ramp/Goode Avenue	0.836	D	0.019	---
16	Brand Boulevard and SR-134 EB On-Ramp Sanchez Drive	0.764	C	0.030	---
17	Brand Boulevard and Broadway	0.927	E	0.114	NO
18	Brand Boulevard and Harvard Street	0.799	C	0.004	YES
19	Brand Boulevard and Colorado Street	1.194	F	0.164	NO
20	Brand Boulevard and Chevy Chase Drive	0.812	D	0.001	YES
21	SR-134 Freeway WB Ramps and Monterey Road	0.623	B	0.000	---
22	Glendale Avenue and Monterey Road	1.042	F	0.000	---
23	Glendale Avenue and SR-134 Freeway EB Ramps	0.810	D	0.016	---

**Table 4.6-15 (continued)**  
**Future Plus Project Weekend with Mitigation Measures**  
**Volume to Capacity Ratios and Levels of Service**

No.	Intersection	V/C	LOS	Change	
				V/C	Mitigated?
24	Glendale Avenue and East Broadway	0.886	D	-0.022	YES
25	Glendale Avenue and East Harvard Street	0.784	C	0.037	YES
26	Glendale Avenue and East Colorado Street	0.987	E	0.008	YES

Source: Linscott, Law & Greenspan.

N/A – Intersection eliminated by project.

**Threshold:** Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

**Impact Analysis:** By its nature, the Los Angeles County Congestion Management Program (CMP) is a cumulative scenario that considers the impact of single projects in the context of cumulative traffic demand on CMP roadways. The CMP defines regional project impacts as significant (in terms of contribution to cumulative impact) if a project results in an increase in the demand to capacity ratio by more than 0.02 (two percent) and the final LOS is F. It is possible that traffic impacts created by Related Projects and cumulative growth could combine to exceed CMP standards of significance, and to the extent that occurs, a significant impact would result. However, even if that occurs the CMP guidelines require that freeway monitoring locations must be examined if the proposed project would add 150 or more trips (in either direction) during either the AM or PM weekday peak hours. The proposed project would not add 150 or more trips (in either direction) during either the AM or PM weekday peak hours at CMP mainline freeway-monitoring locations, which is the threshold for preparing a traffic impact assessment. Consequently, the project does not meet the criteria to be analyzed and the project's contribution is, thus, not cumulatively considerable. This impact is considered to be less than significant. Refer to the Freeway Impact Analysis Section of **Appendix 4.6** of the EIR for further information.

**Project Design Features:** None are required.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** None are required.

**Level of Significance After Mitigation:** Less than significant.

**Thresholds:** Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

**Result in inadequate emergency access.**

**Impact Analysis:** It is anticipated that the Related Projects would be required to adhere to standard engineering practices and requirements, and would be subject to planning and design review by the City of Glendale to avoid traffic hazards created by design features and land use incompatibilities, or inadequate emergency access. For this reason, and because such impacts (if and when they occur) are relatively site specific, cumulative impacts associated with such hazards are less than significant. All design development associated with the project would include the use of standard engineering practices to avoid design elements that would increase roadway hazards or inadequate emergency access. Moreover, the project would not result in land use incompatibilities that would lead to the creation of traffic hazards, or emergency access. Consequently, the project impacts would not be cumulatively considerable and would not be less than significant.

**Project Design Features:** None are required.

**Level of Significance Before Mitigation:** Less than significant.

**Mitigation Measures:** None are required.

**Level of Significance After Mitigation:** Less than significant.

**Threshold:** Result in inadequate parking capacity.

**Impact Analysis:** In accordance with the City of Glendale requirements, it is anticipated that the Related Projects would either accommodate construction workers on site or through other suitable means to reduce impacts to surrounding parking facilities. For these reasons, cumulative construction activity associated with the Related Projects would be less than significant. As discussed under the project impacts section of the EIR, the project would also accommodate workers on site and provide parking within walking distance of the project site or shuttle construction workers to the project site and thus impacts would be less than significant. Consequently, the project impacts would not be cumulatively considerable and would not be less than significant.

Under the City of Glendale Municipal Code, the Related Projects would be required to provide adequate on-site parking as conditions of development approval, and thus it is unlikely that the Related Projects would have a significant cumulative effect on parking demand in the area. In addition, as illustrated on **Figures 4.0-1 and 4.0-2**, most of the Related Projects are a sufficient distance from one another to reduce

the potential for parking shortages at any one location from having an effect elsewhere. It is further anticipated that onsite parking at many of the Related Project sites would be regulated by monthly permits and user fees (generally limited to building tenants and visitors), validations by merchants and other businesses. For these reasons, cumulative impacts are not anticipated. As previously stated under project impacts, the project is anticipated to provide sufficient parking to accommodate the shared parking demand for the retail-commercial and residential uses in light of the expected synergy between the proposed land uses. Consequently, the project impacts would not be cumulatively considerable and would not be less than significant.

*Project Design Features:* None are required.

*Level of Significance Before Mitigation:* Less than significant.

*Mitigation Measures:* None are required.

*Level of Significance After Mitigation:* Less than significant.

**Threshold:** Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

*Impact Analysis:* It is anticipated that Related Projects would result in an increased demand for alternative transportation, although due to the locations of various Related Projects, it is expected that cumulative increases in demand would be distributed among the various bus routes that serve the area. It is possible that ridership demand on a particular bus route associated with Related Projects could be significant when compared to existing condition and result in a cumulative impacts. Impacts on alternative transportation during the weekday and weekend were considered to be less than significant since it was concluded that existing transit service in the project area would be able to accommodate the project. Consequently, the project impacts would not be cumulatively considerable and would not be less than significant.

*Project Design Features:* None are required.

*Level of Significance Before Mitigation:* Less than significant.

*Mitigation Measures:* None are required.

*Level of Significance After Mitigation:* Less than significant.