

Section 4.4: Transportation and Circulation

A Trip Generation Study, dated January 2009, has been prepared by RK Engineering Group to estimate the trip generation of future residential development under the proposed Amendment and to compare the estimated trips with those of planned office uses under the Guasti Plaza Specific Plan and proposed office and retail uses under the Project Area Plan (PAP) for the site. Since a Traffic Study has been prepared for the PAP, which contains a full traffic analysis, the Trip Generation Study for the proposed Specific Plan Amendment builds upon the Traffic Study by providing a trip generation comparison between future residential development and the currently allowed commercial development. The findings of the Trip Generation Study are summarized below, and the complete study is provided in Appendix D of this SEIR. The Traffic Study for the PAP and the Addendum to the Traffic Study are also provided in Appendix D.

4.4.1 Environmental Setting

The Guasti Plaza Specific Plan area is bounded by the I-10 Freeway on the north, Turner Avenue on the east, Archibald Avenue on the west, and the UPRR tracks on the south. The project site is located just south of New Guasti Road, west of Turner Avenue, and north of the UPRR tracks.

Roadway Network

The San Bernardino (I-10) Freeway is an east-west freeway running through the northern section of the City of Ontario. Near the site, this freeway has four travel lanes and one high occupancy vehicle (HOV) lane in each direction. It carried approximately 264,000 vehicle trips daily and 17,300 peak hour trips in 2007 between Archibald Avenue and Haven Avenue. In 2009, it carried approximately 261,000 vehicle trips daily and 17,700 peak hour trips.

Haven Avenue is a major arterial roadway that provides north-south access through the City of Ontario. It starts at Edison Avenue at the southern end of Ontario and goes through City extending north beyond the City limits through Rancho Cucamonga and ending at the foothills of the San Gabriel Mountains. South of the I-10 Freeway, it is an 8-lane divided roadway, with on- and off-ramps at the I-10 Freeway and a railroad overcrossing. East of the project site, this roadway has a right-of-way of approximately 150 feet, with a raised median, and sidewalks and parkways on each side. It carried approximately 48,640 vehicles per day in 2005.

Archibald Avenue is also a major arterial roadway that provides north-south access throughout the City of Ontario. It starts at Riverside County on the south extends north to Mission Boulevard, just south of the Ontario International Airport. It begins again at Airport Drive and extends north through Rancho Cucamonga, ending at the foothills of the San Gabriel Mountains. South of the I-10 Freeway, it is a 6-lane divided arterial and with on- and off-ramps at the I-10 Freeway, with a pedestrian bridge and a railroad overcrossing across the roadway. This segment of Archibald Avenue provides direct access to the airport and has a right-of-way of approximately 120 to 300 feet, with a raised median, and sidewalks and parkways on each side. This roadway segment carried approximately 15,980 vehicles per day in 2005.

Turner Avenue is a 2-lane undivided roadway with an approximately 30-foot wide pavement along the eastern boundary of the site and the Specific Plan area. It has a cul-de-sac at the northern end by the I-10 Freeway and ends at the UPRR tracks at the southeastern corner of the site. Overhead power lines on wooden poles run along the west side of Turner Avenue. A concrete-lined open storm drain channel runs along the east side at 2 different places, with sidewalks and parkways north of New Guasti Road and dirt shoulders south of New Guasti Road. A four-way stop sign controls traffic at the intersection of Turner Avenue and New Guasti Road.

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New Guasti Road is a 4-lane collector roadway that was recently built to provide access to the office and retail buildings built near the I-10 Freeway and to implement the Specific Plan. This road has a right-of-way of 88 feet, with a painted median, and a meandering sidewalk and landscaped parkway on each side. It extends west from Guasti Road (east of Turner Avenue) and bends slightly southwest to join Guasti Road west of Archibald Avenue.

Old Guasti Road is a 2-lane roadway with an approximately 25-foot wide pavement and soft shoulders. This road runs east-west from Turner Avenue to just east of Archibald Avenue along the southern section of the site and Specific Plan area. Near Archibald Avenue, it bends and joins New Guasti Road to the north.

Levels of Service (LOS)

The Level of Service (LOS) is a qualitative and quantitative measure used to describe the operational conditions within a traffic stream and a motorist's and/or passenger's perception of the roadway's performance. LOS is designated a letter from A to F, with LOS A representing free flowing traffic conditions. LOS B represents stable flow, but with restrictions and operating speeds beginning to be affected by traffic volume. LOS C represents stable flow, with more restrictions and with speed and maneuverability closely controlled by higher traffic volumes. LOS D represents high density but stable flow, with traffic volumes severely restricting traffic flow. LOS E represents operating conditions at or near capacity level, with low but relatively uniform speeds. LOS F represents forced or breakdown flow, with many stops and low operating speeds.

While LOS along roadway segments may also be measured, roadway performance is controlled by the performance of intersections, and more specifically, by intersection performance during peak traffic periods. This is because traffic control at intersections interrupts traffic flow that would otherwise be relatively unimpeded. Thus, LOS is typically dependent on the quantity of traffic flow at the intersection. The Highway Capacity Manual methodology expresses LOS in terms of delay time, based on intersection controls, as shown in Table 4.4-1, *Levels of Service*, below.

TABLE 4.4-1
LEVELS OF SERVICE

Level of Service (LOS)	Average Delay Per Vehicle (seconds/vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 and ≤ 20.0	> 10.0 and ≤ 15.0
C	> 20.0 and ≤ 35.0	> 15.0 and ≤ 25.0
D	> 35.0 and ≤ 55.0	> 25.0 and ≤ 35.0
E	> 55.0 and ≤ 80.0	> 35.0 and ≤ 50.0
F	> 80.0	> 50.0

Source: Highway Capacity Manual, 2000

Roadway Intersection Analysis

The Guasti Plaza Specific Plan area is largely undeveloped and planned internal streets and intersections have not been built, except for the existing roadways: Turner Avenue and Old Guasti Road, and the recently completed New Guasti Road. Roads that formerly served the

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Guasti community (i.e., Brookside Avenue, Sycamore Lane, and Pepper Tree Lane) have also been removed.

The City's Development Impact Fee (DIF) program collects fees from new development and major redevelopment to fund infrastructure and public facility construction and upgrades needed to serve these developments. The DIF includes street impact fees, which are placed into a separate account for use in the improvement of the City's roadway transportation network. These funds are earmarked for the construction of specific traffic improvements within the City, as identified in the Nexus Study prepared for the DIF program. As roadway improvements are needed, as enough DIF money is collected, and as other funding becomes available, the City constructs various roadway capital improvements using these funds. These fees would also be used for the improvement of regional roadways and intersection improvements, such as those needed for Archibald Avenue, Haven Avenue and the I-10 Freeway. Thus, no analysis of the regional freeway system or arterial roadway system is needed for the proposed Amendment.

With limited traffic on local streets due to the lack of development within the site and the surrounding area, the abandonment of former streets, and the recent construction of New Guasti Road, traffic volumes on area streets have constantly changed and are expected to still change as streets are built and structures are occupied within the Guasti Plaza Specific Plan area. Also, with planned streets still to be built, existing levels of service cannot be readily calculated. Thus, the roadway intersection analysis below is based on previous studies completed for the area, supported by a trip generation study for the proposed Amendment.

Existing Traffic Volumes and LOS

Based on a Traffic Study prepared for the Project Area Plan, existing traffic volumes on roadways and intersections within Guasti Plaza are relatively low due to the lack of development in the area. Currently, vehicles mainly use New Guasti Road to pass through the site, with a few vehicles on Turner Avenue and Old Guasti Road.

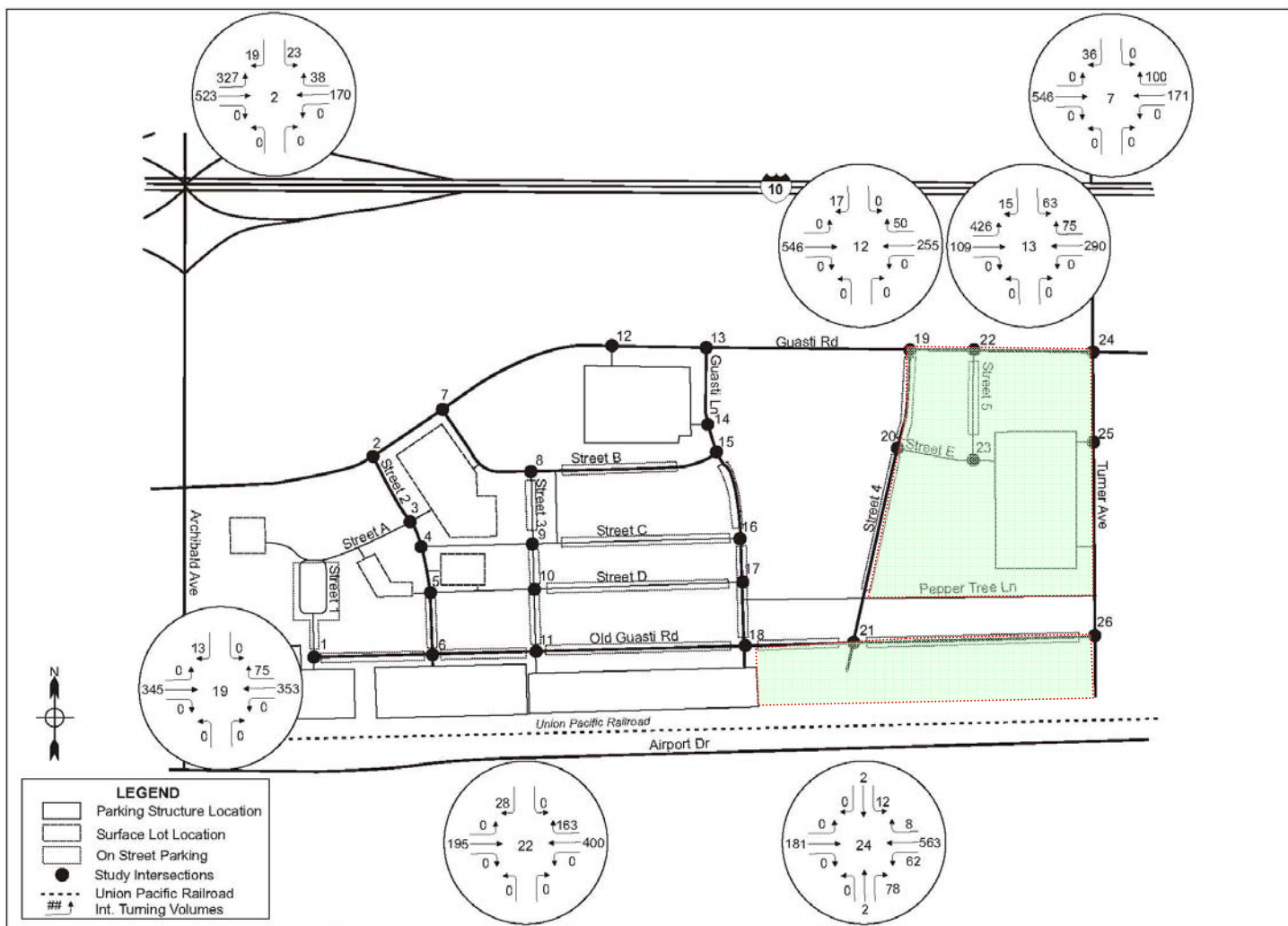
Existing traffic volumes on nearby roads and intersections were derived from projections of traffic circulation assuming planned developments north of New Guasti Road have been completed and are in use.

Figure 4.4-1, *Existing (2005) AM Peak Hour Volumes*, and Figure 4.4-2, *Existing (2005) PM Peak Hour Volumes*, show the estimated traffic volumes near the site assuming the office and hotel uses within the Airport Towers (Planning Area 1 of the Specific Plan) are in use. Two of these buildings are complete and are expected to be occupied shortly.

Levels of service are projected to be at LOS C or better during the AM and PM peak hours, as shown in Table 4.4-2, *Existing Levels of Service*. This assumes that New Guasti Road is developed as a 4-lane roadway, with traffic signals at Turner Avenue, Villa Lane (former Guasti Lane), and Winery Road.

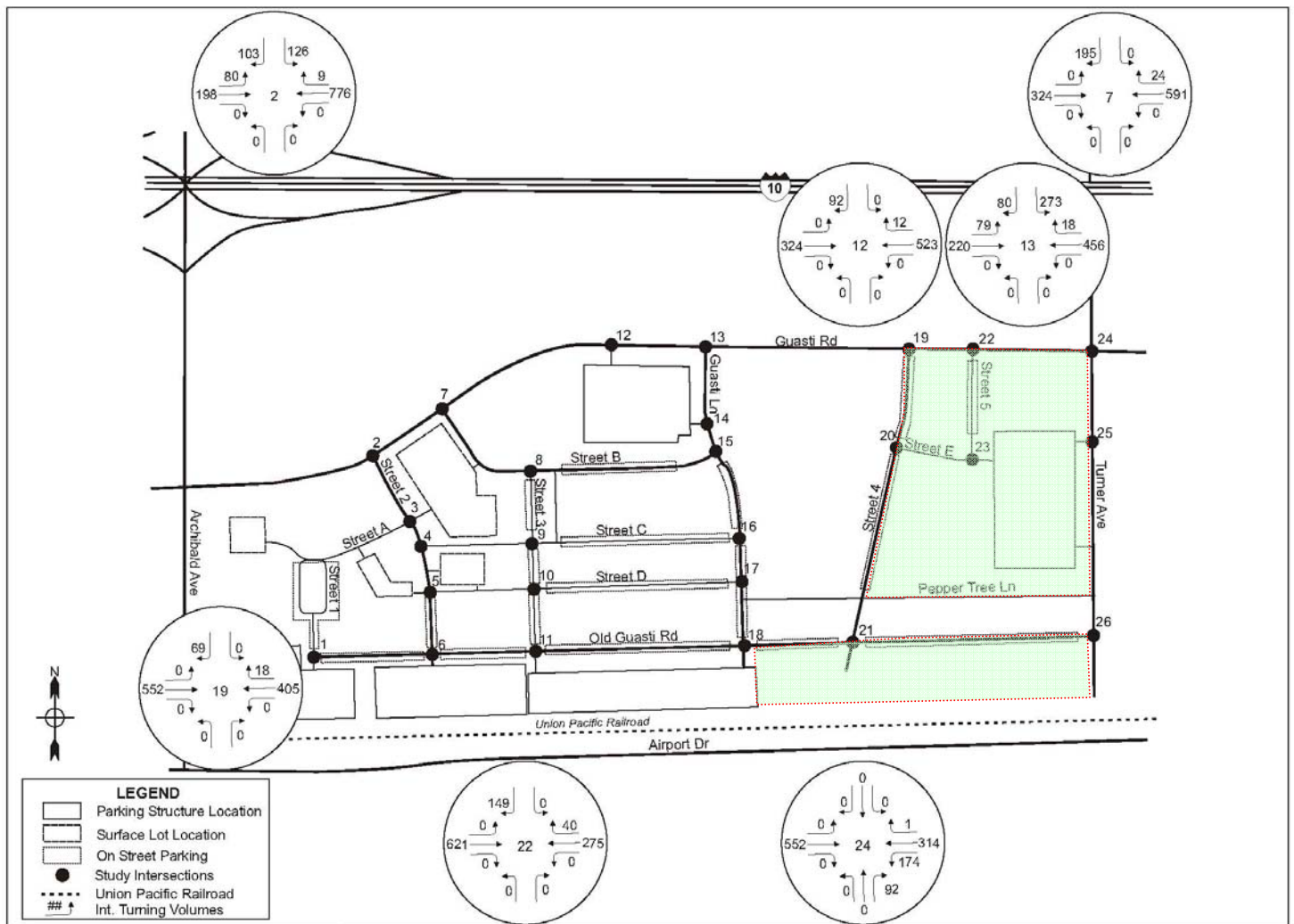
Transportation Demand Management

The City's Trip Reduction Ordinance (Section 9-1.3050 of the Ontario Development Code) requires new development to provide site improvements and facilities to promote the use of alternative modes of transportation and reduce vehicle trips. New multi-family dwelling and condominium projects containing 10 or more units are required to provide one bicycle rack with



Source: PAP Traffic Study

Figure 4.4-1
Existing (2005) AM Peak Hour Traffic Volumes
 Guasti Plaza Specific Plan Amendment
 Supplemental EIR



Proposed Residential Overlay Zone

Source: PAP Traffic Study

Figure 4.4-2
Existing (2005) PM Peak Hour Traffic Volumes
 Guasti Plaza Specific Plan Amendment
 Supplemental EIR

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three bicycle parking spaces for every 30 vehicle parking spaces; sidewalks from public streets to each building; a passenger loading area along the building entrance for at least 5 vehicles; and transit facilities, such as bus shelters, bus pullouts, and bus pads, if needed to serve the development.

TABLE 4.4-2
EXISTING LEVELS OF SERVICE

Intersection	AM Peak Hour				PM Peak Hour			
	Delay		Level of Service		Delay		Level of Service	
	Average	Poorest Movement	Average	Poorest Movement	Average	Poorest Movement	Average	Poorest Movement
Unsignalized Intersections								
Street B at Guasti Rd	0.4	9.2	A	A	2.2	12.6	A	B
Guasti Rd at Pkg Structure 1	0.2	9.3	A	A	1.0	10.8	A	B
Street 4 at Guasti Rd	0.2	9.7	A	A	0.7	10.0	A	B
Street 5 at Guasti Rd	0.4	10.3	A	B	1.4	10.1	A	B
Signalized Intersections	Delay		Level of Service		Delay		Level of Service	
Guasti Rd at Street 2	9.8		A		14.5		B	
Guasti Lane at Guasti Rd	19.6		B		20.2		C	
Turner Ave at Guasti Rd	10.7		B		15.6		B	
Note: Delay based on seconds per vehicle average. N/A= Not Applicable. Poorest movement does not apply for four-way stop intersections. Source: Traffic Study and Addendum for Guasti Specific Plan Project, 2007 and 2008								

Public Transit

Bus Transit - Omnitrans provided public bus transit services in the San Bernardino County. Omnitrans Bus Route 61 runs at 15-minute frequencies along Archibald Avenue, west of the site with stops north and south of New Guasti Road. Less than 500 passengers boarded and alighted at these stops from July to October 2008, but this line is one of the busiest with 27.7 passengers per revenue hour. Omnitrans Bus Route 81 runs along Haven Avenue, east of the site, with a stop just south of the I-10 Freeway. There were less than 5 boardings and alightings at this stop in May 2008. Routes 63, 75, 80, 82, and 83 also run in the City. Omnitrans estimates that a total of approximately 424 persons boarded and 4 persons alighted from the buses that stopped in the City of Ontario during the AM peak hour in September 2008. This number is likely to be reversed for the PM peak hour.

Passenger Train - The Metrolink trains do not pass through the site, but use the railroad lines running along the south side of the Ontario International Airport. The closest Metrolink station to the project site is the East Ontario Station at 3330 E. Francis Street, approximately 2 miles south of the site. In September 2008, a total of 112,177 passengers used the Metrolink's Riverside Line that runs south of the airport and runs 6 inbound and 6 outbound trains each day. Of the average daily boardings of 2,173 persons using this line, approximately 325 persons boarded at the Ontario station.

Amtrak trains use the tracks south of the site, with the nearest station at Plum Avenue, approximately 3.5 miles west of the site. Two Amtrak trains per day on 3 days per week run along the project site boundaries.

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Truck Routes – Designated truck routes near the site include Archibald Avenue to the west and Haven Avenue to the east.

Alternative Transportation Modes

Union Pacific Railroad - The Union Pacific Railroad (UPRR) tracks run along the southern boundary of the site, with an average of approximately 42 freight trains and 1 passenger train (Amtrak) using this track per day. Local trains have an average of 5 to 7 cars, while regional trains can have up to 100 cars. However, the UPRR trains do not stop or idle at the site or near the site. Railroad crossings at Archibald Avenue and Haven Avenue have grade separations, with the roadways running under the tracks. The trains operate at all hours and all days, traveling at a maximum speed of 70 miles per hour on this track.

Ontario International Airport - The Ontario International Airport is a commercial airport owned by the City of Los Angeles Department of Airports. It serves commercial aircraft, air taxis, alternates, military aircraft and general aviation. The airport occupies 1,741 acres south of the I-10 Freeway and west of the I-15 Freeway in the City of Ontario. It has 4 runways and serves over 427,000 passengers and 40,000 tons of cargo through 4,905 flight operations per month. In 2007, a total of 7.2 million passengers and 533,000 tons of cargo passed through the airport on approximately 148,000 flights. Passengers and cargo have been increasing through the years, with flight operations decreasing slightly.

Bikeways - A bikeway is a facility that is provided primarily for bicycle travel. Class 1 Bikeways or Bike Paths are separated rights-of-way for the exclusive use of bicycles and pedestrians with minimum crossflow with vehicles. Class 2 Bikeways or Bike Lanes are striped lanes for one-way bike travel on a street or highway. Class 3 Bikeways or Bike Routes are streets for shared use with pedestrian or motor vehicle traffic and are often designated by Bike Route signs. There are no bikeways on or near the site. No trails or bikeways are proposed on or near the site or Specific Plan area as shown in the Multi-purpose Trails and Bikeways Corridor Plan in TOP.

Metro Gold Line Extension - The Los Angeles County Metropolitan Transportation Authority is proposing to extend the Metro Gold Line for approximately 24 miles from its current terminus at the Sierra Madre Villa station in the City of Pasadena to the Montclair Transcenter. Proposed stations along this extension will be located within the cities of Arcadia, Monrovia, Duarte, Irwindale, Azusa, Glendora, San Dimas, La Verne, Pomona, and Claremont. A strategic planning study funded by the San Bernardino Associated Governments and the Southern California Association of Governments recommended a link from the Montclair Transcenter to the Ontario International Airport, along the Cucamonga Creek alignment (west of Archibald Avenue) with a possible station on Airport Drive, just west of Archibald Avenue. No funding or schedule for the implementation of this project has been identified.

California High Speed Rail – Proposition 1A was approved by voters on November 2008 for the construction of a high speed rail system to link California's major population centers. The California High-Speed Rail Authority has begun planning an 800-mile high-speed train system that will serve Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego. The high-speed train system will be capable of speeds up to 220 miles per hour to provide commuters with easy access across the State. The Ontario International Airport is highlighted as a station along the rail system's preferred alignment, with completion anticipated in the 2020's.

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Congestion Management Program

The San Bernardino County Congestion Management Program (CMP), developed by the San Bernardino Associated Governments (SANBAG), addresses County-wide traffic congestion through the interrelation of transportation, land use, and air quality programs. The CMP sets level of service standards for the County's CMP-designated highway system and implements an enhanced transportation management program to ensure that the designated roadways and intersections meet set standards.

The San Bernardino County CMP sets a standard of LOS E for roadway intersections and freeway interchanges in the County's CMP-designated highway system. If the 1992 LOS is F, a 10% degradation is considered a deficiency. In addition, signalized intersections are considered deficient if the overall volume/capacity ratio is equal to or more than 1.0, even if the LOS defined by vehicle delay is below the LOS standard. The I-10 and I-15 Freeways, Archibald Avenue north of the I-10 Freeway, Haven Avenue north of the I-10 Freeway, and Holt Boulevard west of Archibald Avenue are part of the CMP Road System.

The CMP also outlines the requirements for Traffic Impact Analysis (TIA) needed for proposed development projects. Projects that would generate 250 or more peak hour trips or that would add 50 or more vehicle trips to a State highway must prepare a TIA. However, jurisdictions that have implemented qualifying development mitigation programs that include development contribution requirements established by the SANBAG Development Mitigation Nexus Study are not required to prepare TIA reports.

The City of Ontario adopted a Development Impact Fee (DIF) program that complies with SANBAG Development Mitigation Nexus Study and thus, individual projects in the City are not required to prepare TIAs in accordance with CMP guidelines. The City's DIF program requires fair share fees from new developments to help fund the needed transportation facilities in the City, including regional transportation projects.

4.4.2 Threshold of Significance

According to Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on traffic and circulation, if its implementation results in any of the following:

- Causes an increase in traffic which 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);
- Exceeds, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- Results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increases hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Results in inadequate emergency access;
- Results in inadequate parking capacity; or,
- Conflicts with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

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The Ontario Plan sets the intersection LOS standard at E or better and requires development to mitigate its traffic impacts.

4.4.3 Environmental Impacts

The US Post Office generates nominal vehicle trips on area roadways. Future development on the site would generate new vehicle trips that would add to existing traffic volumes on roadways and intersections near the site.

Traffic Increase and Roadway Capacity (Would the project cause an increase in traffic which 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)?

While there are existing buildings in Planning Areas 2 and 3, these structures are not in use, except for the US Post Office trailer. The proposed Amendment would allow residential uses on the site, which would generate vehicle trips that would add to current traffic volumes on Turner Avenue, New Guasti Road, Old Guasti Road, Archibald Avenue, Haven Avenue, the I-10 Freeway, and other nearby streets. These trips could add to congestion and adversely affect operating levels of service.

Trip Generation

Planned office and commercial uses are estimated to generate a net total of 8,287 daily vehicle trips. Future residential development consisting of 500 units would generate approximately 2,993 net trips daily. Table 4.4-3, *Difference in Trip Generation*, shows the AM and PM peak hours and daily trip generation of the alternative development scenarios.

TABLE 4.4-3
DIFFERENCE IN TRIP GENERATION

Land Use	Units	Peak Hour Trips				Daily Trips
		AM		PM		
		In	Out	In	Out	
Office 5, 6, 7	354,000 sf	381	49	89	439	3,898
Bldg 21, 22, 23						
Office	53,820 sf	73	10	13	67	593
Retail	26,370 sf	8	10	31	40	1,169
Fast Food	3,060 sf	81	54	41	39	2,191
Restaurant	6,750 sf	40	37	45	29	858
Total	444,000 sf	683	178	220	614	8,708
Internal Capture – 10%		-13	-10	-12	-11	-422
	Net Total	670	168	208	603	8,287
Apartments	500 du	50	205	200	110	3,325
Internal Capture – 10%		-5	-21	-20	-11	-333
	Net Total	45	185	180	99	2,993
	Difference	-625	+16	-28	-504	-5,294

sf – square feet

du – dwelling units

Source: Trip Generation Study, 2009

As shown, planned office uses would generate 5,294 more vehicle trips daily than proposed residential uses.

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Change in Trip Generation

The Trip Generation Study analyzed if the replacement of 450,000 square feet of office uses with 500 dwelling units would result in a higher trip generation than what was considered in the Guasti Plaza Specific Plan and the Project Area Plan (PAP).

The 1995 traffic study prepared for the Guasti Plaza Specific Plan estimated that buildout of the Specific Plan area would generate 3,807 trips during the AM peak hour and 3,733 trips during the PM peak hour. A total of 28,525 daily trips would also be expected. This traffic study utilized very general land use categories and ITE trip generation factors have changed since then.

Using the most current ITE factors for the proposed residential development scenario under the Amendment would result in approximately 27,818 daily trips from the Specific Plan area, with 2,631 AM peak hour trips and 3,187 PM peak hour trips. This was derived by removing the trips from 360,000 square feet of office uses and 90,000 square feet of office park uses and replacing them with trips from 500 dwelling units. This shows that the trip generation of the Specific Plan area would decrease by 707 vehicle trips per day, 1,176 AM peak hour trips, and 546 pm peak hour trips, over the 1995 estimates if residential uses are developed on the site.

If the trip generation of the land uses planned under the adopted Specific Plan and the proposed Amendment are compared using the same and current ITE factors, a reduction in AM and PM peak hours trips would also occur. However, the total daily trips would increase from 3,187 trips anticipated from the office and office park uses to 3,325 trips from proposed residential uses (an increase of 138 daily trips).

A 2008 Traffic Study and Addendum was prepared as part of the PAP, which provided more specific information on proposed structures and land uses within the Guasti Plaza Specific Plan area. This study estimated a total of 52,689 daily trips with 4,106 AM peak hour trips and 4,443 PM peak hour trips from future office, retail, and restaurant uses within the Guasti Plaza Specific Plan area.

The project site was planned for 354,000 square feet of office uses within 3 buildings, a 7-level parking structure (with 2,065 spaces), and future development consisting of a mix of office, retail and restaurant uses with a total of 264,900 square feet of floor area. This shows that a total of 618,900 square feet of new development was planned for the project site. In addition, historic structures would be reused for recreational or cultural purposes, which include 4 residential cottages, 2 relocated homes, a fire station, and an existing market.

With the proposed overlay in the Amendment, it is assumed that approximately 440,000 square feet of office and retail uses (within Buildings 5, 6, 7, 21, 22, and 23 of the PAP) could be replaced by 500 dwelling units. This assumes that the 18,900 square feet of commercial uses planned for the site would be developed elsewhere in the Specific Plan area.

With the Amendment, an estimated net total of 8,287 daily vehicle trips from office and retail uses could be reduced to only 2,993 net trips from the proposed residential uses. This is a decrease of 5,294 daily trips between commercial and residential uses. The projected AM and PM peak hour trips would also decrease by 609 and 532 vehicles per hour, respectively, over the commercial development planned under the PAP.

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“Without Project” Conditions

A number of roadway and intersection improvements were identified in the 2008 Traffic Study Addendum, which would have to be constructed to allow roadways and intersections within the Guasti Plaza Specific Plan area to operate at acceptable levels of service. Table 4.4-4, *Roadway Improvements*, identifies the needed roadway and intersection improvements that would have to accompany future commercial development within the Guasti Plaza Specific Plan area. Figure 4.4-3, *Proposed Roadway Circulation System at Buildout*, shows the configuration of proposed streets and intersections.

**TABLE 4.4-4
ROADWAY IMPROVEMENTS**

Roadway	Improvement	Intersection	Improvement
Garrett Square	At least two 14-foot travel lanes (one per direction), divided by a striped median. Minimum width of 28 feet, plus space required for on-street parking. If standard parallel parking is provided along the street, a minimum width of 40 feet. The width required for angled parking would be based on the degree of angles, while maintaining a minimum of 24 feet for travel lanes.	Garrett Square at Old Guasti Road	<ul style="list-style-type: none"> • Stop sign • Northbound approach: One shared right-through lane • Southbound approach: One shared left-through lane • Westbound approach: One shared left-right lane
Winery Road	At least four 12-foot travel lanes (two per direction), divided by a median. Minimum width of 48 feet for travel access. On street parking is not recommended along this section of road.	Winery Road at Guasti Road	<ul style="list-style-type: none"> • Traffic signal • Northbound approach: Two left turn lanes and one shared right-through lane • Southbound approach: One left turn lane and one shared right-through lane • Eastbound approach: One left turn lane, two through lanes, and one right turn lane • Westbound approach: One left turn lane, two through lanes, and one shared right-through lane.
		Winery Road at Brookside Road	<ul style="list-style-type: none"> • Stop sign on the eastbound and westbound approaches • Northbound approach: One shared left-through lane and one shared right-through lane • Southbound approach: One shared left-through lane and one shared right-through lane • Eastbound approach: One all way lane

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**TABLE 4.4-4
ROADWAY IMPROVEMENTS**

Roadway	Improvement	Intersection	Improvement
			<ul style="list-style-type: none"> Westbound approach: One all way lane
Gertrude Lane	At least two 12-foot travel lanes (one per direction), divided a median striped centerline. Minimum width of 24 feet for travel access, plus space required for on-street parking. If standard parallel parking is provided along the street, a minimum width of 40 feet.	Gertrude Lane at North Winery Road	<ul style="list-style-type: none"> Stop sign on the northbound approach Northbound approach: One left turn lane Westbound approach: One shared left-through lane and one through lane
		Gertrude Lane at South Winery Road	<ul style="list-style-type: none"> Stop sign on the northbound and southbound approaches Northbound approach: One shared right-through lane Southbound approach: One shared left-through lane Eastbound approach: One shared left-through lane and one shared right-through lane
		Gertrude Lane at Old Guasti Road	<ul style="list-style-type: none"> Stop sign on the eastbound approach Northbound approach: One shared left-through lane Southbound approach: One shared right-through lane Eastbound approach: One shared left-right lane
Secundo Lane/Luisa Lane	At least two 12-foot travel lanes (one per direction), divided by a median striped centerline. Minimum width of 24 feet for travel access, plus space required for on-street parking. If standard parallel parking is provided, a minimum width of 40 feet. The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum of 24 feet for travel lanes.	Secundo Lane at Brookside Road	<ul style="list-style-type: none"> Stop sign on the northbound approach Northbound approach: One all way lane Eastbound approach: One all way lane Westbound approach: One all way lane
		Secundo Lane at North Winery Road	<ul style="list-style-type: none"> Stop sign on the southbound approach Southbound approach: One right turn lane Westbound approach:

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**TABLE 4.4-4
ROADWAY IMPROVEMENTS**

Roadway	Improvement	Intersection	Improvement
			One shared right-through lane
		<i>Luisa Lane at South Winery Road</i>	<ul style="list-style-type: none"> • Stop sign on the northbound approach • Northbound approach: One right turn lane • Eastbound approach: One through lane and one right turn lane
		<i>Luisa Lane at Old Guasti Road</i>	<ul style="list-style-type: none"> • Stop sign on the northbound approach • Northbound approach: One all way lane • Southbound approach: One all way lane • Westbound approach: One all way lane
<i>Parking Structure 1</i>		<i>Parking Structure 1 at Guasti Road</i>	<ul style="list-style-type: none"> • Stop sign on the northbound and southbound approaches • Northbound approach: One right-left turn lane • Southbound approach: One right turn lane • Eastbound approach: One through lane and one shared right-through lane • Westbound approach: One left turn lane and two through lanes
		<i>Parking Structure 1 Brookside Road</i>	<ul style="list-style-type: none"> • Stop sign on the southbound approach • Southbound approach: One shared left-right lane • Eastbound approach: One shared left-through lane • Westbound approach: One shared right-through lane
<i>Villa Lane</i>	At least four 12-foot travel lanes (two per direction), divided by a broken raised median. South of Brookside Road, Villa Lane shall provide two 12-foot travel lanes (one per direction), divided by a median striped centerline. Minimum width of 24 feet for travel access south of Brookside Road, plus space required for on-street parking. If standard parallel parking is	<i>Villa Lane at Guasti Road</i>	<ul style="list-style-type: none"> • Traffic signal • Northbound approach: One left turn lane and one shared right-through lane • Southbound approach: One left turn lane and one shared right-through lane • Eastbound approach: One left turn lane, one through lane, and one shared right-through lane

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**TABLE 4.4-4
ROADWAY IMPROVEMENTS**

Roadway	Improvement	Intersection	Improvement
	provided, a minimum width of 54 feet. The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum of 38 feet for travel lanes.		<ul style="list-style-type: none"> Westbound approach: One left turn lane, one through lane, and one shared right-through lane
		<i>Villa Lane at Parking Structure 1</i>	<ul style="list-style-type: none"> Stop sign on the eastbound approach Northbound approach: One shared left-through lane and one through lane Southbound approach: One right lane and one through lane Eastbound approach: One left lane and one shared left-right lane
		<i>Villa Lane at Brookside Road</i>	<ul style="list-style-type: none"> Stop sign on the eastbound and westbound approaches Northbound approach: One all way lane Southbound approach: One shared left-through lane and one right lane Eastbound approach: One all way lane Westbound approach: One all way lane
		<i>Villa Lane at North Winery Road</i>	<ul style="list-style-type: none"> Westbound one-way travel Northbound approach: One shared left-through lane Southbound approach: One shared right-through lane
		<i>Villa Lane at South Winery Road</i>	<ul style="list-style-type: none"> Stop sign on the eastbound approach Northbound approach: One through lane Southbound approach: One through lane Eastbound approach: One shared left-right lane
		<i>Villa Lane at Old Guasti Road</i>	<ul style="list-style-type: none"> All-way stop sign Northbound approach: One left lane and one shared right-through lane Southbound approach: One all way lane Eastbound approach:

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**TABLE 4.4-4
ROADWAY IMPROVEMENTS**

Roadway	Improvement	Intersection	Improvement
			<ul style="list-style-type: none"> One all way lane Westbound approach: One all way lane
Biane Lane	At least two 12-foot travel lanes (one per direction), divided by a striped median. Minimum width of 24 feet for travel access, plus space required for on-street parking. If standard parallel parking, a minimum width of 40 feet. The width required for singled parking would be based on the degree of angles, but would need to preserve a minimum of 24 feet for travel lanes.	Biane Lane at Guasti Road	<ul style="list-style-type: none"> A stop sign on the northbound approach Northbound approach: One right-left turn lane Eastbound approach: One through lane and one shared right-through lane Westbound approach: One left turn lane and two through lanes
		Biane Lane at Brookside Road	<ul style="list-style-type: none"> Stop sign on the eastbound and westbound approaches Northbound approach: One all way lane Southbound approach: One all way lane Eastbound approach: One all way lane Westbound approach: One all way lane
		Biane Lane at Old Guasti Road	<ul style="list-style-type: none"> Stop sign on the northbound and southbound approaches Northbound approaches: One all way lane Southbound approaches: One all way lane Eastbound approaches: One all way lane Westbound approaches: One all way lane
Street 5	At least two 12-foot travel lanes (one per direction), divided by a striped median. Minimum width of 24 feet for travel access, plus space required for on-street parking. If standard parallel parking is provided, a minimum width of 40 feet. The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum of 24 feet for travel lanes.	Street 5 at Guasti Road	<ul style="list-style-type: none"> A stop sign on the northbound and southbound approaches Northbound approaches: One right-left turn lane Southbound approaches: One right turn lane Eastbound approaches: One through lane and one shared right-through lane Westbound approaches: One left turn lane, one

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**TABLE 4.4-4
ROADWAY IMPROVEMENTS**

Roadway	Improvement	Intersection	Improvement
			through land and one shared right-through lane
		Street 5 at Brookside Road	<ul style="list-style-type: none"> • All-way stop • Southbound approach: One all-way lane • Eastbound approach: One shared left-through lane • Westbound approach: One shared right-through lane
Turner Avenue	At least two 12 foot travel lanes (one per direction), divided by a two-way left turn lane. Minimum width of 38 feet for travel access.	Turner Avenue at Guasti Road	<ul style="list-style-type: none"> • Traffic signal • Northbound approach: One left turn lane and one shared right-through lane • Southbound approach: One left turn lane and one shared right-through lane • Eastbound approach: One left turn lane, one through lane, and one shared right-through lane • Westbound approach: One left turn lane, one through lane, and one shared right-through lane
		Turner Avenue at Parking Structure 4	<ul style="list-style-type: none"> • Stop sign on the eastbound approach • Northbound approach: One left lane (due to two way left turn lane) and one through lane • Southbound approach: One shared right-through lane • Eastbound approach: One shared left-right lane
		Turner Avenue at Old Guasti Road	<ul style="list-style-type: none"> • Stop sign on the eastbound and westbound approaches • Northbound approach: One all way lane • Southbound approach: One all way lane • Eastbound approach: One all way lane • Westbound approach: One all way lane
Brookside Road	At least two 12-foot travel lanes (one per direction),		

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**TABLE 4.4-4
ROADWAY IMPROVEMENTS**

Roadway	Improvement	Intersection	Improvement
	divided by a striped median. Minimum width of 24 feet for travel access, plus space required for on-street parking. If standard parallel parking is provided, a minimum width of 40 feet. The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum of 24 feet for travel lanes.		
North Winery Road	The portion of North Winery Road from Brookside Road to Secundo Lane shall have at least two 12-foot travel lanes (for westbound traffic), divided by a dashed stripe lane line. Minimum width of 24 feet for travel lanes. If standard parallel parking is provided, a minimum width of 40 feet. The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum of 24 feet for travel lanes. The remaining portion of North Winery Road from Secundo Lane to Villa Lane shall have at least one 12-foot travel lane (for westbound traffic). Minimum width of 12 feet for travel access, plus space required for on-street parking. If standard parallel parking is provided, a minimum width of 24 feet. The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum of 12 feet for the travel lane.		
South Winery Road	The portion of South Winery Road from Brookside Road to Luisa Lane shall have at least two 12-foot travel lanes (for eastbound traffic), divided by a dashed stripe lane line. Minimum width of 24 feet for travel access, plus space		

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**TABLE 4.4-4
ROADWAY IMPROVEMENTS**

Roadway	Improvement	Intersection	Improvement
	<p>required for on-street parking. If standard parallel parking is provided, a minimum width of 40 feet.</p> <p>The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum for 24 feet for travel lanes.</p> <p>The portion of South Winery Road from Luisa Lane to Villa Lane shall have at least one 12-foot travel lane (for westbound traffic).</p> <p>Minimum width of 12 feet for travel access, plus space required for on-street parking. If standard parallel parking is provided, a minimum width of 24 feet. The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum of 12 feet for the travel lane.</p>		
Old Guasti Road	<p>Improved to City standards to provide a minimum of two 12-foot travel lanes (one per direction), divided by a striped median.</p> <p>Minimum width of 24 feet for travel access, plus space required for on-street parking. If standard parallel parking is provided, a minimum width of 40 feet.</p> <p>The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum of 24 feet for travel lanes.</p>		

Source: Addendum to the Traffic Study for the Guasti Specific Plan Project, 2008

These same improvements would be needed to serve future residential uses.

With the construction of these roadways and intersection improvements, levels of service within the Specific Plan area are expected to be at LOS D or better, which would meet the City's standard for roadway intersections of LOS E. Table 4.4-5, *Projected Levels of Service*, shows the LOS at various intersections within the Specific Plan Area at buildout of the PAP.

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**TABLE 4.4-5
PROJECTED LEVELS OF SERVICE**

Intersection	AM Peak Hour				PM Peak Hour			
	Delay		Level of Service		Delay		Level of Service	
	Average	Poorest Movement	Average	Poorest Movement	Average	Poorest Movement	Average	Poorest Movement
Unsignalized Intersections								
Garrett Sq at Old Guasti Rd	3.7	11.3	A	B	1.7	11.1	A	B
Winery Rd at Brookside Rd	3.8	26.8	A	D	7.0	26.6	A	D
Gertrude Ln at North Winery Rd	3.7	9.1	A	A	5.1	10.0	A	B
Gertrude Ln at South Winery Rd	1.8	11.6	A	B	5.0	12.2	A	B
Gertrude Ln at Old Guasti Rd	1.6	9.9	A	A	4.1	10.2	A	B
Secundo Lane at Brookside Rd	0.5	9.3	A	A	0.5	9.1	A	A
Secundo Lane at North Winery Rd	0.0	0.0	A	A	0.0	0.0	A	A
Luisa Ln at South Winery Rd	1.5	9.1	A	A	1.2	8.9	A	A
Luisa Ln at Old Guasti Rd	7.0	10.1	A	B	3.8	9.8	A	A
Guasti Rd at Pkg Structure 1	0.7	24.8	A	C	1.4	17.9	A	C
Villa Ln at Pkg Structure 1	2.8	17.1	A	C	5.6	20.9	A	C
Brookside Rd at Pkg Structure 1	5.4	8.7	A	A	6.0	9.1	A	A
Villa Ln at Brookside Rd	2.7	20.9	A	C	3.0	22.3	A	C
Villa Ln at North Winery Rd	1.3	8.6	A	A	1.7	8.4	A	A
Villa Ln at South Winery Rd	2.5	14.9	A	B	2.2	15.8	A	C
Villa Ln at Old Guasti Rd	20.0	N/A	C	N/A	27.2	N/A	D	N/A
Biane Ln at Guasti Rd	1.7	10.9	A	B	2.1	21.2	A	C
Biane Ln at Brookside Rd	4.7	11.7	A	B	4.2	11.3	A	B
Biane Ln at Old Guasti Rd	3.5	10.1	A	B	3.5	10.3	A	B
Street 5 at Guasti Rd	0.2	12.8	A	B	0.5	22.3	A	C
Street 5 at Brookside Rd	7.5	N/A	A	N/A	7.3	N/A	A	N/A
Turner Ave at Pkg Structure 4	1.5	11.3	A	B	4.7	12.5	A	B
Turner Ave at Old Guasti Rd	2.8	9.4	A	A	5.8	9.9	A	A
Signalized Intersections								
Guasti Rd at Winery Rd	14.7		B		23.3		C	
Villa Ln at Guasti Rd	35.1		D		53.9		D	
Turner Ave at Guasti Rd	16.8		B		26.3		C	

Note: Delay based on seconds per vehicles average.

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N/A=Not applicable.

Poorest movement does not apply for four-way stop intersections

Source: Addendum to the Traffic Study for the Guasti Specific Plan Project, 2008

“With Project” Conditions

As discussed above, a reduction in AM and PM peak hour trips would occur with future residential development over the planned office uses under the Guasti Specific Plan trip estimate and a reduction in AM and PM peak hour and daily trips would occur over the PAP trip estimate with planned commercial uses. Thus, future residential development under the proposed Amendment would result in less traffic impacts than those analyzed for commercial uses in the PAP and summarized in Table 4.4-5 above. The same roadway and intersection improvements and mitigation measures identified in the 2008 Traffic Study Addendum would be needed to ensure that local intersections operate at LOS E or better. These improvements would have to be implemented by future residential development under the proposed Amendment, as listed above.

While intersection operations are projected to be LOS E or better, very few of the streets and intersections are in place at this time. Thus, construction and occupancy of the 500 dwelling units or the planned commercial uses would result in significant adverse impacts on the existing street system. This is considered a significant adverse impact.

Impact 4.4-1: Future development would generate vehicle trips that would require street and intersection improvements on and near the site.

Future development would have to be accompanied by street and intersection improvements, as outlined in the 2008 Traffic Study for the PAP and as approved by the City's Traffic Engineer. Roadway and intersection improvements in other areas within the Specific Plan are expected to be constructed as part of planned commercial uses that are in the plan check stage, prior to development of the site.

For area-wide impacts, future residential development would need to pay fair share fees for the improvement of roadways and intersections in the City, including those that could be adversely impacted by development, as required under the City's DIF program. In addition, the project would be required to provide the street improvements along the site boundaries, as planned by the City in its Functional Roadway Classification Plan and as identified in the Guasti Plaza Specific Plan.

Level of Service Standard under Congestion Management Program (CMP) *(Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?)*

The San Bernardino County CMP by SANBAG sets a standard of LOS E for roadway intersections and freeway interchanges in the County's CMP-designated highway system. The City standards are LOS E for intersections and LOS D for roadway segments.

New vehicles trips on the I-10 Freeway and Congestion Management Program (CMP)-designated highways, such as Archibald and Haven Avenues, and Holt Boulevard would change existing levels of service. However, the Traffic Study shows that local intersections would operate at LOS D or better, which exceed the CMP standard of LOS E. With a potential for further reduction in daily vehicle trips (by 5,294 trips) from the replacement of office uses

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with residential uses but with the same roadway network, operating levels of service are expected to be even better. Thus, no exceedance with the LOS standard of the CMP is expected with the proposed Amendment or future residential development on the site.

SANBAG has identified regional transportation projects in its Development Mitigation Nexus Study, along with project costs and cost allocations from new developments in the region. The Nexus Study serves as the deficiency plan that identifies the needed roadway improvements, cost and funding for these projects, and future implementation. SANBAG calls for local jurisdictions to develop and implement a development mitigation program that includes payment of fair share fees for the needed roadway system improvements.

The City of Ontario has adopted a DIF program that accounts for the implementation of regional transportation projects and payment of fair share fees by new development. Since Archibald and Haven Avenues, and Holt Boulevard are arterials that are included in the SANBAG Nexus Study, any improvement to intersections along these arterials are anticipated to be funded by DIF funds from the City and other DIF funds from participating adjacent jurisdictions. Thus, projects that pay their fair share fees are considered consistent with the CMP. Since future residential development would pay fair share fees under the City's DIF program, it is considered consistent with the CMP and no conflict is expected with the proposed Amendment.

The Comprehensive Transportation Plan (CTP) identifies needed roadway improvements to serve future development in the region. The City's development impact fees include funding for regional transportation projects, such as those that may be included in the CTP. As stated, future residential development would be required to pay development impact fees and would contribute to the implementation of the CTP. No conflict with the CTP is expected and no significant adverse impacts are expected.

Air Traffic Patterns *(Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that result in substantial safety risks?)*

The Ontario International Airport is located south of the site. The proposed Amendment would not directly affect air traffic volumes and future residential development on-site would not be directly served by air transportation. Thus, no impact on air traffic patterns at the Ontario International Airport would occur with the Amendment.

The project site is located outside the approach zones and clear zones for the Ontario International Airport. The Specific Plan Amendment states that residential building heights would be restricted by the Airport Height Restrictions. Future development would be subject to review and approval by the Federal Aviation Administration for compliance with height restrictions near the airport, as regulated under the Code of Federal Regulations Title 14, Part 77. Thus, no direct impact on air traffic patterns would occur with the proposed Amendment.

Noise and safety issues related to the Ontario International Airport are addressed in Section 4.6, *Noise*, and Section 4.13, *Human Health and Hazards*, of this SEIR.

Traffic Hazards *(Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?)*

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Traffic hazards associated with the increase in vehicles coming to and from the site may occur with future residential uses, which may include a potential for traffic accidents and conflicts between pedestrian and vehicle traffic.

Future residential development would be accompanied by the construction of needed roadways and intersection improvements on and near the site. These street improvements would facilitate emergency access to the site and the project area and improve future traffic flows. Future development within the Specific Plan area would need to implement roadway and intersection improvements, as outlined in Table 4.4-4 above.

During construction of the needed roadway improvements, traffic flows along internal and abutting streets may be affected as travel lanes are temporarily blocked to construct the streets and utility lines. Roadwork would lead to the temporary obstruction of traffic flows along Turner Avenue, Old Guasti Road, New Guasti Road, and Biane Lane. The length of construction would be highly dependent on the contractor personnel and equipment, weather, timing, temporary work stoppages, and other factors and cannot be predicted with any reliability. However, utility lines have been installed on New Guasti Road and very few vehicles currently use Turner Avenue and Old Guasti Road. Should adjacent areas be developed prior to the construction of residential uses on the site, traffic obstruction would be greater on the roads and access driveways of abutting uses.

As required by Title 7, Chapter 3 – Public Rights-of-Way of the City's Municipal Code, an encroachment permit is needed for all work within public rights-of-way. Any work that would obstruct traffic flow also requires a Traffic Control Permit that prohibits encroachment into travel lanes during the peak hours and requires signs, temporary striping, alternative walkways and other pedestrian safety and flagger control guidelines in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). In addition, construction work within public roadway would have to be conducted in accordance with the City's Traffic/Transportation Construction Specifications and the Standard Specifications for Public Works Construction (Greenbook), which provide guidelines to maintain public convenience and safety, regulations for pavement striping/markings, driveway access, pedestrian traffic street closures, detours and barricades, required signage, use of flaggers, removal and replacement of striping, marking and markers, and restoration of traffic signal loop detectors. Thus, no significant adverse impacts on traffic flows, emergency response, or evacuation are expected during construction.

Conflicts between vehicular traffic and other forms of travel (bicyclists and pedestrians) may also cause traffic hazards. Future residential development would need to provide traffic signs, driveway controls, pedestrian walkways, vision clearance areas, and internal circulation controls, in accordance with the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) and Title 4, Chapter 6 (Traffic) of the City's Municipal Code, as well as the standards for traffic and circulation in the Ontario Development Code and the Guasti Plaza Specific Plan.

Sight distance at access driveways will be reviewed and approved by the City at the time of preparation of the final grading, landscape, and street improvement plans. This will allow the City to verify that the roads and driveways do not include any sharp turns, blind spots, or unnecessary landscaping or brush that might result in a safety hazard. Impacts are expected to be less than significant.

Parking Capacity (*Would the project result in inadequate parking capacity?*)

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Future residential development under the proposed Amendment would be required to provide parking spaces in accordance with the development standards in the amended Specific Plan and the City's Development Code. Planned parking structures on adjacent lots and on-street parking would also be available to future residential development. Thus, parking impacts would not be significant.

Emergency Access *(Would the project result in inadequate emergency access?)*

The proposed Amendment would not change the planned street system that would serve the site or the Specific Plan area. Future residential development would have access on Turner Avenue, New Guasti Road, and Old Guasti Road. Biane Lane is also proposed along the western boundary of the site. Street improvements that would accompany future development are expected to facilitate emergency access to the site and the project area and to improve traffic flow for emergency vehicles. Fire Department review of the site plan would ensure that fire emergency vehicle access is provided to all structures, as part of future residential development. Impacts would be less than significant.

During roadway and infrastructure construction, closure of travel lanes may occur. Any road work along the site would have to be conducted in accordance with the Standard Specifications for Public Works Construction (Greenbook) and City regulations. Thus, construction activities on and near the site are not expected to have significant adverse impacts on traffic flows for emergency response or evacuation.

The project site is not used for emergency response to or evacuation of adjacent areas. The site is surrounded by chainlink fencing and does not serve as an evacuation area for nearby residents or land uses. Future residential development would not interfere with the City's emergency response and evacuation plans for the area. The I-10 Freeway and Haven Avenue (north of the I-10 Freeway) are designated evacuation routes in the City. Future residential development is not expected to adversely impact emergency access and evacuation on Haven Avenue. Impacts relating to emergency access and evacuation would be less than significant.

Alternative Transportation *(Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks?)*

In compliance with Section 9-1.3050, Trip Reduction Requirements, of the City's Development Code, future residential development would have to provide one bicycle rack with three bicycle parking spaces for every 30 vehicle parking spaces; sidewalks from public streets to each building; a passenger loading area along the building entrance for at least 5 vehicles; and transit facilities, such as bus shelters, bus pullouts, and bus pads, if needed to serve the development. Future commercial development would have to provide bicycle racks, pedestrian walkways, a passenger loading area, shower facility, preferential parking for carpool/vanpool vehicles, transit facilities, such as bus shelters, bus pullouts, and bus pads, and on-site video conferencing facilities. Compliance with the City's Trip Reduction Ordinance would reduce vehicle trips and promote bus transit and bicycle use.

Omnitrans Bus Routes 61 and 81 run on Archibald and Haven Avenues, respectively. Future residential development under the proposed Amendment could lead to an increase in the use of public transit buses by future residents of the site. Omnitran has indicated that they recommend intensified land uses along transit stations and corridors. This includes Archibald Avenue, which is

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used by Route 61 - the busiest route in their system. Increased ridership on Route 61 may necessitate additional transit services from Omnitrans, requiring increased bus trip frequencies and services. They did not identify any issues related to transit services but identified infrastructure needs (bus turnouts, bus stop amenities and pedestrian traffic signals) to more effectively serve bus riders. This is considered a significant adverse impact.

Impact 4.4 -2: Future development will result in increased use of bus transit services.

Omnitrans has recommended the provision of bus turnouts on the far side of New Guasti Road on Archibald Avenue. The bus stops should be provided with amenities, such as passenger landing areas, pedestrian connections, curb ramps, shelters with lighting, bus benches and trash receptacle. Omnitrans also calls for a signalized pedestrian crosswalk at the New Guasti Road and Archibald Avenue to passengers coming to and from the Specific Plan area. However, a pedestrian bridge is present approximately 250 feet south of this intersection. Provision of the turnout and bus stop improvements would promote the use of bus transit and the safety of bus riders. Omnitrans has bus stop design guidelines that may be used in the design of these improvements.

As provided in the TOP, no multi-purpose trails or bikeways are proposed on or near the site or Specific Plan area I the City's Multi-purpose Trails and Bikeways Corridor Plan. No impacts on bikeways or trails are expected from the proposed Amendment.

Future residential development would not generate a direct demand of rail transportation, as may be provided by the nearby UPRR tracks. Also, future residents or employees are not expected to require rail or air transportation primarily due to their residence at the site. Safety impacts related to train operations and aircraft operations are discussed in Section 4.13, *Human Health and Hazards*, of this SEIR.

No impacts to the Metro Gold Line and California High Speed Rail systems are expected with the proposed Amendment. The proposed Amendment or future development on the site would not interfere with the railroad rights-of-way and buildout of the proposed rail systems is not known at this point, in terms of proposed locations for stations, parking lots and other support facilities.

4.4.4 Previous Analysis

To the extent applicable, this Supplemental EIR tiers off previous environmental documents relating to the development of the project site, which include the EIR for the Guasti Plaza Specific Plan and the EIR for the Guasti Redevelopment Plan. The following discussion summarizes the similarities/differences in potential impacts between the previous documents and this Supplemental EIR and, where similar impacts are present, applicable policies, standard conditions or mitigation measures in the previous documents are identified for incorporation or implementation by the current project, where appropriate.

Guasti Plaza Specific Plan EIR

The EIR for the Guasti Plaza Specific Plan indicated that future development within the Specific Plan area would generate vehicle trips and increase existing traffic volumes on local roadways and freeways. The analysis estimated 28,528 new vehicle trips from new development to achieve buildout (which utilized a different methodology and trip generation factors). Implementation of mitigation measures outlined in the previous EIR included fair share contributions to needed arterial and freeway improvements; a transportation demand

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management program; and traffic impact analyses for future development. Impacts were considered acceptable after mitigation. The EIR indicated that increases in traffic volumes on nearby streets and freeways would lead to a greater potential for traffic collisions and violations. However, these impacts were not considered significant. Archibald and Haven Avenues would be utilized to access the regional freeway system and the rest of the arterial system in the City would not be adversely impacted. Emergency access is readily available and review of access drives by the City Fire Department would ensure adequate access. The EIR did not identify any adverse impacts to air traffic patterns at the Ontario International Airport or parking provision.

Consistent with the EIR for the Specific Plan, no direct increase or decrease in air traffic at the nearby airport is expected with the proposed Amendment. No significant adverse impacts related to traffic hazards or parking provision is expected. Future residential development is also not expected to cause significant adverse impacts related to emergency access, and would still be subject to review by the Ontario Fire Department for the provision of adequate emergency access and evacuation. However, a decrease in trip generation is expected from future residential uses, which could replace planned office uses on the site. Payment of development impact fees would help fund intersection improvements needed in the project area.

A number of mitigation measures were provided in the EIR for Guasti Plaza Specific Plan:

1. Prior to development Advisory Board approval of any Planning Area Plan (PAP) for the Project, the City shall establish, and the developer shall agree to, a fair share contribution payment and payment schedule for freeway and arterial improvements. Freeway improvements will consist of creating high occupancy vehicle (HOV) lanes or the addition of another general purpose lane for the segments near capacity. Improvements to the I-10 Freeway segment between Mountain Avenue and Haven Avenue also may be added to the calculation of fair share contribution. Arterial improvements will consist of widening and/or restriping on Vineyard Avenue to provide additional lanes.

This mitigation remains applicable to future residential development under the proposed Amendment.

2. Prior to Development Advisory Board approval of any PAP for the Project, the City shall establish, and the developer shall agree to, participation in a TDM program. A TDM program will be required to meet Congestion Management Plan (CMP) requirements and can also be used to reduce project impacts on the surrounding roadway system. Goal of the TDM program should be to comply with the 1.5 average vehicle ridership (AVR) of the regional air quality plan. Given that the project has over two million square feet of office planned, an excellent opportunity exists to provide substantial peak hour trip reduction through various means of ridersharing and travel demand management. By achieving a 1.5 AVR, the project would reduce its projected trips by approximately 17 percent.

The proposed Amendment would reduce trips with the location of commercial, office, and residential uses near one another. However, this mitigation remains applicable to future non-residential development under the Specific Plan.

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3. Prior to Development Advisory Board (DAB) approval of any PAP for the Project, the applicant shall prepare a TIA for that portion of the Project encompassed by the TIA. The TIA shall be prepared to City specifications. Appropriate mitigation measures, as determined by the City, will be placed on the Project prior to DAB approval.

This mitigation has been implemented as part of the Supplemental EIR preparation, with the findings summarized above and the complete study provided in Appendix D.

Guasti Redevelopment Plan EIR

The EIR for the Guasti Redevelopment Plan indicated that approximately 69,747 new vehicle trips are expected from buildout of the Project Area. This would increase freeway and arterial roadway traffic volumes in the area. Roadway improvements needed to maintain acceptable levels of service are identified, but intersection operation at the Archibald Avenue/Airport Drive intersection is expected to remain at LOS F. The EIR stated that emergency access is readily available and impacts related to emergency response or evacuation would be less than significant. Still, mitigation is provided for review of access drives, compliance with building codes and standards, and upgrade of the fire main system. The EIR did not identify any adverse impacts to air traffic patterns at the Ontario International Airport, potential traffic hazards, parking capacity, alternative transportation, transit services, or bikeways.

Trip generation from future residential uses would be less than those from office uses that are planned for the site. Payment of development impact fees would help fund intersection improvements needed in the project area, while on-site circulation system improvements that would be made part of future development would ensure acceptable LOS on internal roadways and intersections.

Consistent with the EIR for the Redevelopment Plan, no direct increase or decrease in air traffic at the nearby airport is expected with the proposed Amendment. Future residential development is not expected to cause significant adverse impacts related to traffic hazards or parking provision. However, the proposed Amendment could have a significant adverse impact to bus transit services, and mitigation is provided below to reduce adverse impacts. No adverse impacts to other alternative transportation systems are expected.

A number of mitigation measures were provided in the EIR for Guasti Redevelopment Plan:

1. Existing Conditions
Addition of a second eastbound left turn lane at Haven Avenue/Guasti Road would result in improvement of Project Impact to LOS B during the PM Peak hour.
2. 2020 Conditions
Addition of a second eastbound left turn lane at Archibald Avenue/Guasti Road would result in LOS C during the PM peak hour.
3. 2020 Conditions
Addition of a second eastbound left turn lane at Haven Avenue/Guasti Road would result in improvement of Project Impact to LOS B during the PM peak hour.

Future residential development would pay development impact fees to help fund the implementation of these mitigation measures.

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4.4.5 Standard Conditions and Mitigation Measures

Standard Conditions

The implementation of the following standard conditions would prevent adverse impacts on area roadways:

Standard Condition 4.4.1: Future residential development shall pay development impact fees, which will help fund intersection and roadway improvements near the site.

Standard Condition 4.4.2: Future residential development shall improve perimeter roadways that would be dedicated to the City of Ontario in accordance with the City's roadway standards.

Standard Condition 4.4.3: Future residential development shall provide internal circulation improvements in accordance to City standards for the location of traffic signs, minimum drive aisle widths, turning radii, sight distances/vision clearances, pedestrian walkways/crosswalks, etc.

Standard Condition 4.4.4: Future residential development shall implement traffic safety measures, in accordance with the guidelines in the Manual on Uniform Traffic Control Devices (MUTCD), Title 4, Chapter 6 (Traffic) of the City's Municipal Code, as well as the standards for traffic and circulation in the Ontario Development Code and the Guasti Plaza Specific Plan.

Standard Condition 4.4.5: Construction work on public rights-of-way shall be performed in accordance with City regulations, including the Standard Specifications for Public Works Construction (Greenbook), Title 7 - Chapter 3 (Public Rights-of-Way) of the Ontario Municipal Code, MUTCD, and the City's Traffic/Transportation Construction Specifications and as approved by the City Traffic Engineer.

Standard Condition 4.4.6: Future residential development shall comply with City's Trip Reduction Ordinance requirements, through the provision of bike racks, sidewalks from public streets to each building; a passenger loading area; and transit facilities, such as bus shelters, bus pullouts, and bus pads.

Standard Condition 4.4.7: Future residential development shall be subject to review and approval by the Ontario Fire Department for the provision of adequate emergency access and evacuation routes.

Mitigation Measures

Implementation of the mitigation measures below would prevent significant adverse impacts on traffic circulation and bus transit services:

Mitigation Measure 4.4.1: On-site and perimeter roadways and intersection improvements shall be constructed as part of future residential development, as outlined in the Traffic Study for the PAP and listed in Table 4.4-4, as approved by the City's Traffic

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Engineer. These include, but are not limited to, construction of the following roadways and intersection improvements:

Old Guasti Road - Improved to City standards to provide a minimum of two 12-foot travel lanes (one per direction), divided by a striped median. Minimum width of 24 feet for travel access, plus space required for on-street parking. If standard parallel parking is provided, a minimum width of 40 feet. The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum of 24 feet for travel lanes.

Turner Avenue - At least two 12 foot travel lanes (one per direction), divided by a two-way left turn lane. Minimum width of 38 feet for travel access.

Biane Lane - At least two 12-foot travel lanes (one per direction), divided by a striped median. Minimum width of 24 feet for travel access, plus space required for on-street parking. If standard parallel parking, a minimum width of 40 feet. The width required for singled parking would be based on the degree of angles, but would need to preserve a minimum of 24 feet for travel lanes.

Street 5 (North-South Street between Turner Avenue and Biane Lane) - At least two 12-foot travel lanes (one per direction), divided by a striped median. Minimum width of 24 feet for travel access, plus space required for on-street parking. If standard parallel parking is provided, a minimum width of 40 feet. The width required for angled parking would be based on the degree of angles, but would need to preserve a minimum of 24 feet for travel lanes.

Biane Lane at Guasti Road

- A stop sign on the northbound approach
- Northbound approach: One right-left turn lane
- Eastbound approach: One through lane and one shared right-through lane
- Westbound approach: One left turn lane and two through lanes

Street 5 at Guasti Road

- A stop sign on the northbound and southbound approaches
- Northbound approaches: One right-left turn lane
- Southbound approaches: One right turn lane
- Eastbound approaches: One through lane and one shared right-through lane
- Westbound approaches: One left turn lane, one through land and one shared right-through lane

Street 5 at Brookside Road

- All-way stop
- Southbound approach: One all-way lane
- Eastbound approach: One shared left-through lane
- Westbound approach: One shared right-through lane

Turner Avenue at New Guasti Road

- Traffic signal
- Northbound approach: One left turn lane and one shared right-through lane

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- *Southbound approach: One left turn lane and one shared right-through lane*
- *Eastbound approach: One left turn lane, one through lane, and one shared right-through lane*
- *Westbound approach: One left turn lane, one through lane, and one shared right-through lane*

Turner Avenue at Old Guasti Road

- *Stop sign on the eastbound and westbound approaches*
- *Northbound approach: One all way lane*
- *Southbound approach: One all way lane*
- *Eastbound approach: One all way lane*
- *Westbound approach: One all way lane*

Biane Lane at Old Guasti Road

- *Stop sign on the northbound and southbound approaches*
- *Northbound approaches: One all way lane*
- *Southbound approaches: One all way lane*
- *Eastbound approaches: One all way lane*
- *Westbound approaches: One all way lane*

Biane Lane at Brookside Road

- *Stop sign on the eastbound and westbound approaches*
- *Northbound approach: One all way lane*
- *Southbound approach: One all way lane*
- *Eastbound approach: One all way lane*
- *Westbound approach: One all way lane*

Villa Lane at Old Guasti Road

- *All-way stop sign*
- *Northbound approach: One left lane and one shared right-through lane*
- *Southbound approach: One all way lane*
- *Eastbound approach: One all way lane*
- *Westbound approach: One all way lane*

Mitigation Measure 4.4.2: Bus turnouts and bus shelters shall be provided along Archibald Avenue, as part of future development within the Specific Plan area and in coordination with Omnitrans.

4.4.6 Unavoidable Significant Adverse Impacts

Future residential development under the proposed Amendment would generate new vehicle trips that would utilize the surrounding street system. The standard conditions and mitigation measures above would ensure that an adequate roadway circulation system is provided to serve the site and adjacent developments. Compliance with the City's Trip Reduction Ordinance and mitigation for greenhouse gas emissions (MM 4.15.1) would reduce vehicle use from future residential development. These would reduce impacts on traffic and circulation.

While on-site and perimeter roadway improvements would accompany future development within the Specific Plan Area, payment of fair share fees for off-site improvements would not

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immediately lead to the construction of roadway improvements that would reduce traffic congestion nearby intersections. Also, not all roadways at Guasti Plaza have been built. Thus, traffic at local intersections may operate worse than LOS E until the proposed roadway system for Guasti Plaza is fully built out and other area-wide improvements are implemented by the City. Thus, a short-term significant adverse impact on traffic would occur with future development under the Amendment.

As development occurs west of the site (within the Specific Plan area) and accompanying roadway improvements are made and as the needed area-wide roadway improvements become fully funded and the City implements these projects under the DIF program, area intersections are expected to operate at LOS E or better. At that time, impacts would be less than significant.

While internal and abutting roadways would be improved as part of future residential development on the site and planned commercial uses to the west would provide roadway improvements as part of that development, the City would also be implementing roadway and intersection improvements as part of the its ongoing signal warrant analysis and capital improvement program. However, there is no specific time frame for the implementation of the needed off-site intersection improvements at this time. Thus, unavoidable significant adverse impacts related to traffic are expected with the proposal in the near term.