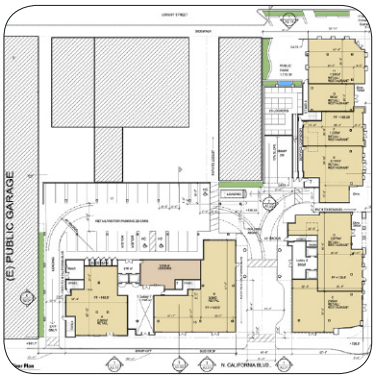

1500 N. California Boulevard Project Draft EIR

Volume I

City of Walnut Creek

SCH# 2012082070

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4.13 TRANSPORTATION AND TRAFFIC

This section describes the existing conditions in the Project vicinity and evaluates the potential impacts from development of the proposed Project related to transportation and traffic. Included in this discussion are the roadway and transit networks, intersection and freeway operations, parking, and pedestrian and bicycle facilities. The discussion also describes the assumptions, methodologies, and data used to quantify transportation and traffic impacts due to the proposed Project.

4.13.1 ENVIRONMENTAL SETTING

VEHICULAR CIRCULATION

The location of the Project site in relation to the surrounding road network is shown in Figure 4.13-1. The site is bounded by Locust Street on the east, Bonanza Street on the south, and N. California Boulevard on the west. The classification of the roadways as Routes of Regional Significance, arterial, collector road or local street is highlighted in Figure 4.13-1.

Routes of Regional Significance

Routes of Regional Significance are major roadways and freeway corridors that serve regional traffic, as identified in Action Plans adopted by the Contra Costa Transportation Authority (CCTA) under the Measure C program (discussed under Section 4.13.2, Regulatory Setting).

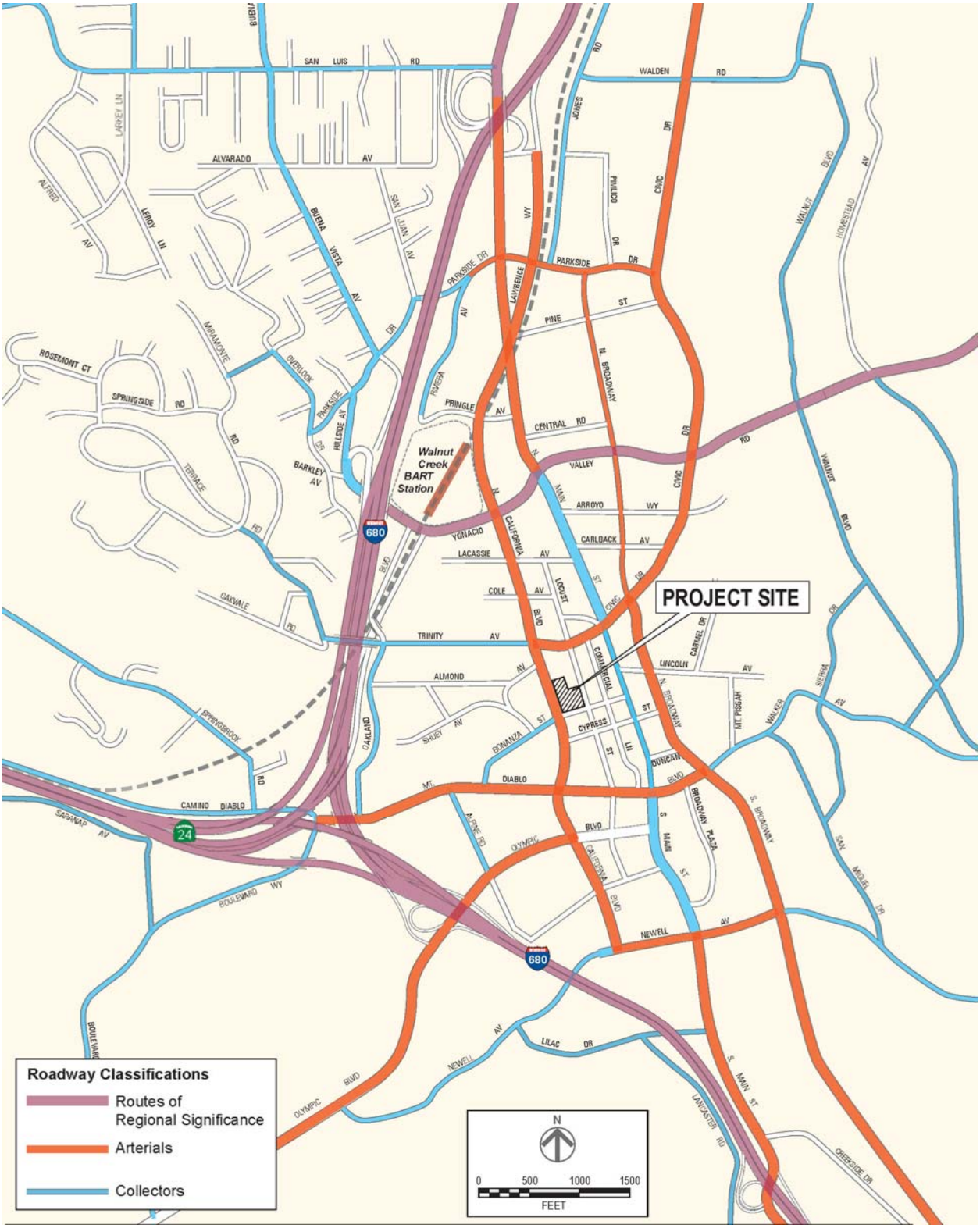
Interstate 680 (I-680) is oriented primarily in a north-south direction through Contra Costa and Alameda Counties and connects with I-80 in Fairfield. I-680 generally provides five to six freeway lanes in each direction. The closest interchange to the Project site is on Olympic Boulevard, about 0.5 mile southwest of the Project site.

State Route 24 (SR-24) is oriented primarily in an east-west direction between Walnut Creek and Oakland, and generally provides five lanes in each direction. SR-24 connects to I-680 in close proximity to the Project site. Access between the Project site and SR-24 is available via Mount Diablo Boulevard, about 0.5 mile southwest of the Project site.

Ygnacio Valley Road is oriented primarily in an east-west direction and location about 0.5 mile north of the Project site. The road generally provides three lanes in each direction with no on-street parking. Exclusive short left turn lanes or short channelized right turns are generally provided on the approaches to most major intersections. Ygnacio Valley Road is the primary continuous east-west roadway through the heart of the City of Walnut Creek and is effectively used as the sole access road to the City's Bay Area Rapid Transit (BART) station and the freeways discussed above from the residential areas to the east.

Arterials/Collectors

California Boulevard is a divided arterial oriented in a north-south direction through downtown Walnut Creek from Newell Avenue to North Main Street. North (N.) California Boulevard, as the roadway is identified north of Mount Diablo Boulevard, bounds the west side of the Project site. N. California Boulevard generally provides two traffic lanes and an adjacent on-street parking lane in each direction.



Source: AECOM 2012

Figure 4.13-1 Project Vicinity Roadways

Exclusive left turn lanes are provided on the approaches to most major intersections, and channelized right turn lanes are provided on both approaches to Ygnacio Valley Road and Mount Diablo Boulevard, and the northbound approaches to Civic Drive and North Main Street. The primary vehicular access to the proposed Project would be provided from N. California Boulevard.

Mount Diablo Boulevard divides N. California Boulevard from South (S.) California Boulevard. S. California Boulevard exhibits similar characteristics to N. California Boulevard on the block between Mount Diablo and Olympic Boulevards, with two traffic lanes in each direction and channelized right-turn lanes approaching both intersections, but no parking lanes. Double left turn lanes are provided on the northbound approach to Mount Diablo Boulevard.

S. California Boulevard is approximately 65 feet wide, providing two travel lanes in both directions, with some on-street parking on the block between Botelho Drive and Newell Avenue. Left turn lanes are provided at intersections, with double left turn lanes on the approach to Olympic Boulevard. A dedicated right turn lane is provided on the southbound approach to Newell Avenue. Traffic volumes along California Boulevard vary from 15,200 average daily traffic (ADT) between Ygnacio Valley Road and Civic Drive, to 22,700 ADT between Mount Diablo and Olympic Boulevards (City of Walnut Creek 2010).

Main Street is oriented in a north-south direction through downtown Walnut Creek, two blocks east of the Project site. It is classified as a collector between Newell Avenue and Ygnacio Valley Road, and as an arterial to the north and south of those points, respectively. The street connects Walnut Creek to the neighboring communities of Pleasant Hill to the north and Alamo to the south. Mount Diablo Boulevard divides North Main Street from South Main Street. North of Arroyo Way (one block south of Ygnacio Valley Road), North Main Street provides two traffic lanes in each direction; north of Ygnacio Valley Road, the street widens to approximately 75 feet. On-street parking is provided on both sides of the street; however, generally only in mid-block locations. The number of northbound traffic lanes increases to three as North Main Street approaches Lawrence Way, then returns to two north of Lawrence Way. The southbound lanes approaching the I-680 interchange are joined by the two lanes of the I-680 southbound off-ramp, providing a cross section of four southbound lanes until the two rightmost lanes diverge to form the southbound lanes of N. California Boulevard. North of the I-680 interchange, N. Main Street is classified as a Route of Regional Significance.

South of Arroyo Way, North Main Street provides one traffic lane and a parking lane in each direction, and exclusive left turn lanes are also provided between Arroyo Way and Civic Drive. Exclusive left turn lanes are provided only at either end of the segment of North Main Street between Civic Drive and Mount Diablo Boulevard, with an exclusive right turn lane on the southbound approach to Mount Diablo Boulevard as well. This segment of North Main Street narrows to approximately 50 feet in width and is characterized by street front retail and restaurants, with frequent marked pedestrian crossings.

South Main Street connects downtown Walnut Creek to an interchange with I-680 to the south, generally providing two traffic lanes in each direction and widening up to approximately 75 feet. Parking lanes are provided on the block between Mount Diablo Boulevard and Olympic Boulevard; on the southbound side between Olympic Boulevard and Botelho Drive, and between Broadway Plaza and Lilac Avenue; and on the northbound side between Newell Avenue and Creekside Drive. Traffic volumes along Main Street within the study area vary from 12,200 ADT between Mount Diablo Boulevard and Newell Avenue, to 22,000 ADT between N. California Boulevard and Ygnacio Valley Road (City of Walnut Creek 2010).

Civic Drive is an arterial generally oriented in a north-south direction from the north end of downtown Walnut Creek. The southern end of the street loops to connect with N. California Boulevard one block north of the Project site. The Civic Drive roadway varies between 50 and 75 feet in width south of Parkside Drive. North of this intersection it maintains a width of approximately 60 feet. Two traffic lanes in each direction are provided between N. California Boulevard and Ygnacio Valley Road. The roadway widens to accommodate a left-turn lane and two right-turn lanes at the Ygnacio Valley Road intersection. Between Ygnacio Valley Road and Parkside Drive, a central turning lane is provided. North of Parkside Drive, two travel lanes in each direction are provided. Traffic volumes along Civic Drive vary from 10,800 ADT between N. California Boulevard and N. Main Street, to 29,700 ADT between N. Broadway and Ygnacio Valley Road (City of Walnut Creek 2010).

Mount Diablo Boulevard is an arterial street oriented in an east-west direction through downtown Walnut Creek, connecting between SR-24 and the neighborhood east of downtown. Mount Diablo Boulevard generally provides two traffic lanes in each direction. West of California Boulevard, the street measures approximately 80 feet in width, with parking lanes on both sides. East of California Boulevard, Mount Diablo Boulevard narrows to a width of about 60 feet, and parking is only provided on the eastbound approach to Main Street, and on the westbound side of the street on either side of Mount Pisgah Road and on the approach to N. California Boulevard. A center turn lane is generally provided along Mount Diablo Boulevard's entire length, with double left turn lanes at the westbound approach to Boulevard Way and a shared left turn/through lane on the eastbound approach to North Broadway. A dedicated right turn lane is provided on the eastbound approach to South California Boulevard and a channelized right turn onto Camino Diablo. Traffic volumes along Mount Diablo Boulevard vary from 14,500 ADT between Broadway and San Miguel Drive, to 27,400 ADT between Oakland Boulevard and Bonanza Street (City of Walnut Creek 2010).

Olympic Boulevard is an arterial street generally oriented in an east-west direction, connecting between downtown Walnut Creek and the neighboring city of Lafayette, and provides access to I-680. Between I-680 and South California Boulevard, Olympic Boulevard provides two general traffic lanes and a bike lane in each direction, with a width of approximately 80 feet. East of South California Boulevard, the street narrows to about 40 feet, with one traffic lane in each direction and no bike lanes. Parking lanes are only provided on the block between Locust and Main Streets. Left turn pockets are provided at all intersections between I-680 and South California Boulevard, with double left turn lanes on the eastbound approach to South California Boulevard. A dedicated right turn lane is provided for westbound traffic accessing I-680 in both the northbound and southbound directions. The traffic volume along Olympic Boulevard is reported to be 25,700 ADT between I-680 and S. California Boulevard (City of Walnut Creek 2010).

Broadway is an arterial street oriented in a north-south direction between Parkside Drive and Rudgear Road; Mount Diablo Boulevard divides North Broadway from South Broadway. North Broadway serves the commercial areas north of the Core Area. Between Parkside Drive and Ygnacio Valley Road, North Broadway is approximately 40 feet wide and provides one travel lane and one parking lane in each direction. South of Ygnacio Valley Road, North Broadway widens about 60 feet and provides two travel lanes and a parking lane in each direction. In addition, left turn lanes are provided at intersections, except at Arroyo Way and Carlback Avenue. Dedicated right turn lanes also are provided on the northbound approach to Civic Drive and on the southbound approach to Mount Diablo Boulevard.

South Broadway connects downtown Walnut Creek with neighborhoods to the south, and to an interchange with I-680. Between Mount Diablo Boulevard and Newell Avenue, the street is approximately 85 feet in width and provides two traffic lanes and a parking lane in each direction. South of Newell Avenue, South Broadway narrows to a width of about 35 feet and one lane in each direction, with no parking on either side. At the intersections between Mount Diablo Boulevard and Newell Avenue, left turn pockets are provided. A right turn lane is provided on the southbound approach to Newell Avenue, and there are channelized right turns on the northbound approaches to Newell Avenue and to Mount Diablo Boulevard. Traffic volumes along Broadway vary from 9,900 ADT between Parkside Drive and Ygnacio Valley Road, to 21,000 ADT between Civic Drive and Mount Diablo Boulevard (City of Walnut Creek 2010).

Hillside Avenue is a collector street that functions as a continuation of Ygnacio Valley Road west of I-680. As such, it connects westbound Ygnacio Valley Road to westbound SR-24 via a loop ramp. Traveling west through an underpass beneath I-680, Ygnacio Valley Road's three travel lanes expand to two left-turn lanes (to I-680 southbound), a through lane (Hillside Avenue), and the SR-24 westbound loop ramp. In the opposite direction of travel, a receiving lane is provided for eastbound left turns from Hillside Avenue to the SR-24 on-ramp. Westbound from this point, Hillside Avenue provides one travel lane and one parking lane in each direction. In the eastbound direction, the parking lane continues nearly to the underpass, where it becomes a right turn lane to enter the I-680 southbound on-ramp. One travel lane continues to the east side of the underpass, then widens to three lanes. The traffic volume along Hillside Avenue is reported to be 9,300 ADT between Parkside Drive and Ygnacio Valley Road (City of Walnut Creek 2010).

Oakland Boulevard is a collector street oriented in a north-south direction about 0.5 mile west of the Project site. Between Mount Diablo Boulevard and Trinity Avenue, Oakland Boulevard is approximately 40 feet wide, providing one traffic lane in each direction and on-street parking on both sides of the street. Between Ygnacio Valley Road and Trinity Avenue, Oakland Boulevard is a one-way facility approximately 20 feet wide. One traffic lane in the southbound direction and on-street parking on the west side of the street are provided. The traffic volume along Oakland Boulevard is reported to be 25,700 ADT between I-680 and S. California Boulevard (City of Walnut Creek 2010).

Trinity Avenue is a collector street oriented in an east-west direction, continuing from the intersection of Civic Drive and N. California Boulevard to connect to the neighborhood west of I-680. Crossing I-680, the roadway is about 25 feet wide and one lane is provided in each direction. East of the bridge, Trinity Avenue widens to approximately 40 feet and provides a parking lane in addition to a travel lane in each direction. At the eastbound approach to N. California Boulevard, a dedicated left turn and a shared left, through and right turn lane are provided. Trinity Avenue is mostly abutted by multi-family residential uses. The traffic volume along Trinity Avenue is reported to be 4,700 ADT between I-680 and N. California Boulevard (City of Walnut Creek 2010).

Newell Avenue is an arterial street between S. California Boulevard and S. Broadway and a collector west of California and east of Broadway. Newell Avenue is oriented in an east-west direction through downtown Walnut Creek, connecting between Olympic Boulevard and the neighborhood east of downtown. Between the I-680 underpass and South Broadway, the street is approximately 60 feet wide and provides two travel lanes in each direction. A center left turn lane or left turn pockets are provided along this section of Newell Avenue, and dedicated right turn lanes are provided on the approaches to

South Main Street and on the westbound approach to South California Boulevard. Traffic volumes along Newell Avenue vary from 2,100 ADT between Olympic Boulevard and S. California Boulevard, to 22,300 ADT between S. Main Street and S. Broadway (City of Walnut Creek 2010).

Local Streets

Lacassie Avenue is an undivided local street oriented in an east-west direction between North Main Street and a cul-de-sac adjacent to the northbound I-680 Off-Ramp, three blocks north of the Project site. Lacassie Avenue is approximately 40 feet wide, and provides one traffic lane in each direction and on-street parking on each side of the street.

Bonanza Street is generally oriented in an east-west direction through downtown Walnut Creek, and borders the Project site on the south. The roadway is designated a collector between N. California and Mount Diablo Boulevards, and a local street east of N. California Boulevard. The street is approximately 45 feet wide and provides one travel lane and a parking lane in each direction. A left turn lane is provided on the eastbound approach to N. California Boulevard and a right turn lane is provided on the westbound approach to Mount Diablo Boulevard. The traffic volume along the collector portion of Bonanza Street is reported to be 5,500 ADT (City of Walnut Creek 2010).

Locust Street is a local street generally oriented in a north-south direction through the downtown Core Area, and borders the Project site on the east. One lane is provided in each direction along the length of the street. North of Mount Diablo Boulevard, the street's width is about 60 feet and on-street parking is provided as angled parking. South of Mount Diablo Boulevard, the street narrows to approximately 40 feet, and on-street parking is provided as parallel parking. Dedicated turning lanes along Locust Street are limited to a left turn lane on the southbound approach to Mount Diablo Boulevard and a right turn lane on the southbound approach to Olympic Boulevard. The traffic volume along Locust Street is reported to be 4,300 ADT between Civic Drive and Mount Diablo Boulevard (City of Walnut Creek 2010).

Cypress Street is a local street generally oriented in an east-west direction through the downtown Core Area, one block south of the Project site. The street is approximately 40 feet wide and provides one travel lane and a parking lane in each direction. No dedicated turning lanes are provided along Cypress Street; however, the westbound approach to N. California Boulevard is right-turn only.

Cole Avenue is oriented in an east-west direction, providing local access on two blocks on either side of N. California Boulevard in the north end of downtown Walnut Creek. The street is about 35 feet wide and provides one travel lane and a parking lane in each direction. No dedicated turning lanes are provided along Cole Avenue. The west end of the street ends in a cul-de-sac.

Alpine Road is generally oriented in a north-south direction on the west side of the Core Area. The roadway is designated a collector between Mount Diablo and Olympic Boulevards, and a local street south of Olympic Boulevard. The street varies between 30 and 40 feet in width, providing one travel lane in each direction and generally a parking lane in one direction only. A channelized right turn is provided on the northbound approach to Mount Diablo Boulevard.

INTERSECTION OPERATIONS

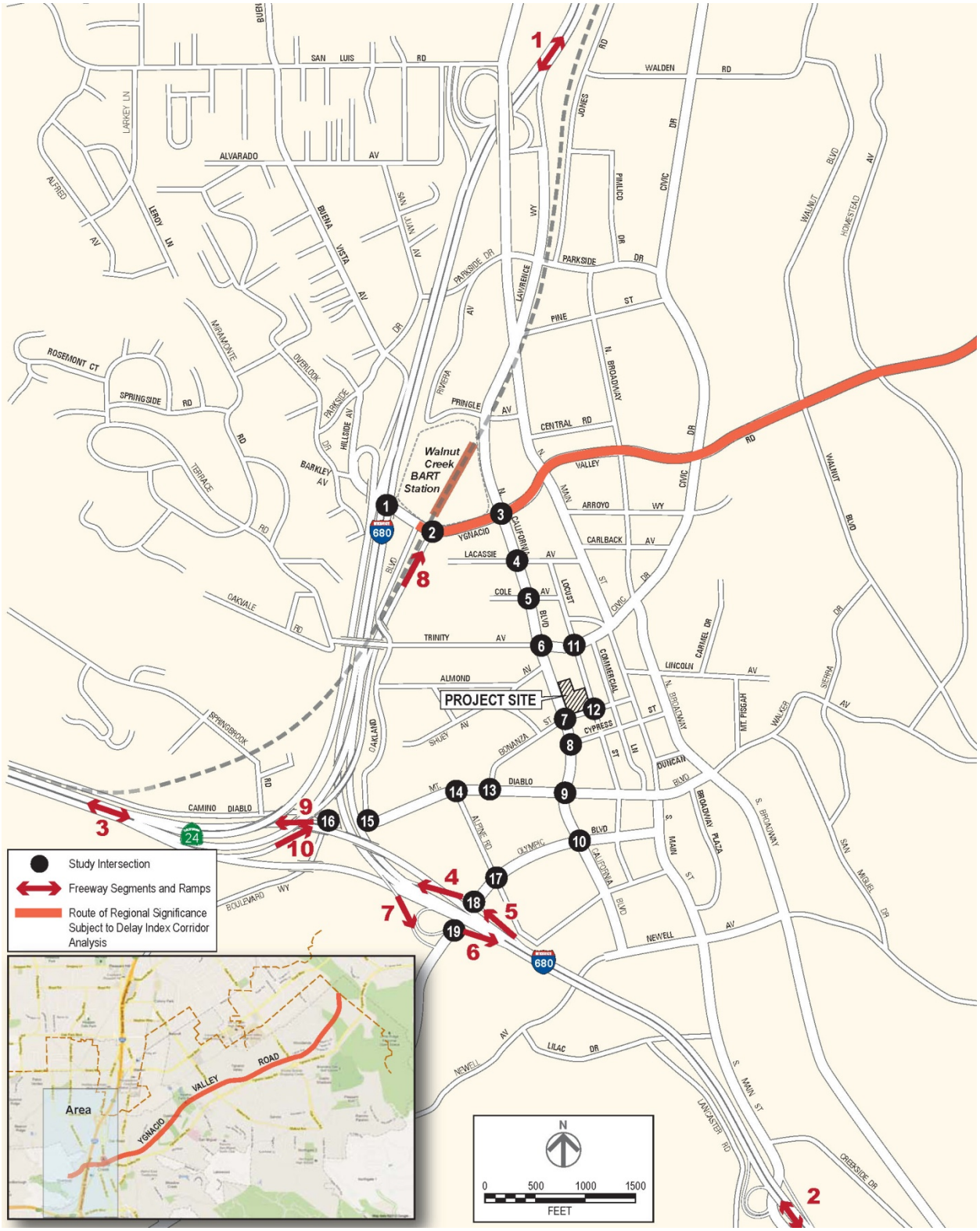
Study Locations

Selected intersections were analyzed based on proximity to the Project site and their locations between the Project site and freeway access points. Preliminary trip assignments were anticipated to determine where Project trips could potentially affect operations and to assist in determining the study locations. Specifically, the following 19 intersections were selected as study intersections, in consultation with City of Walnut Creek staff (the existing traffic control is noted in parentheses):

1. Ygnacio Valley Road/I-680 On-Ramp (signalized)
2. Ygnacio Valley Road/I-680 Off-Ramp/BART Access/Oakland Boulevard (signalized)
3. N. California Boulevard/Ygnacio Valley Road (signalized)
4. N. California Boulevard/Lacassie Avenue (signalized)
5. N. California Boulevard/Cole Avenue (two-way stop-controlled)
6. N. California Boulevard/Trinity Avenue/Civic Drive (signalized)
7. N. California Boulevard/Bonanza Street (signalized)
8. N. California Boulevard/Cypress Street (one-way stop-controlled)
9. N. California Boulevard/Mount Diablo Boulevard (signalized)
10. N. California Boulevard/Olympic Boulevard (signalized)
11. Locust Street/Civic Drive (signalized)
12. Locust Street/Bonanza Street (signalized)
13. Mount Diablo Boulevard/Bonanza Street (signalized)
14. Mount Diablo Boulevard/Alpine Road (signalized)
15. Mount Diablo Boulevard/Oakland Boulevard (signalized)
16. Mount Diablo Boulevard/SR-24 Westbound (WB) On-Ramp/Camino Diablo/Boulevard Way (signalized)
17. Olympic Boulevard/Alpine Road (signalized)
18. Olympic Boulevard/I-680 Northbound (NB) On- and Off-Ramp (signalized)
19. Olympic Boulevard/I-680 Southbound (SB) Off-Ramp/Paulson Lane (signalized)

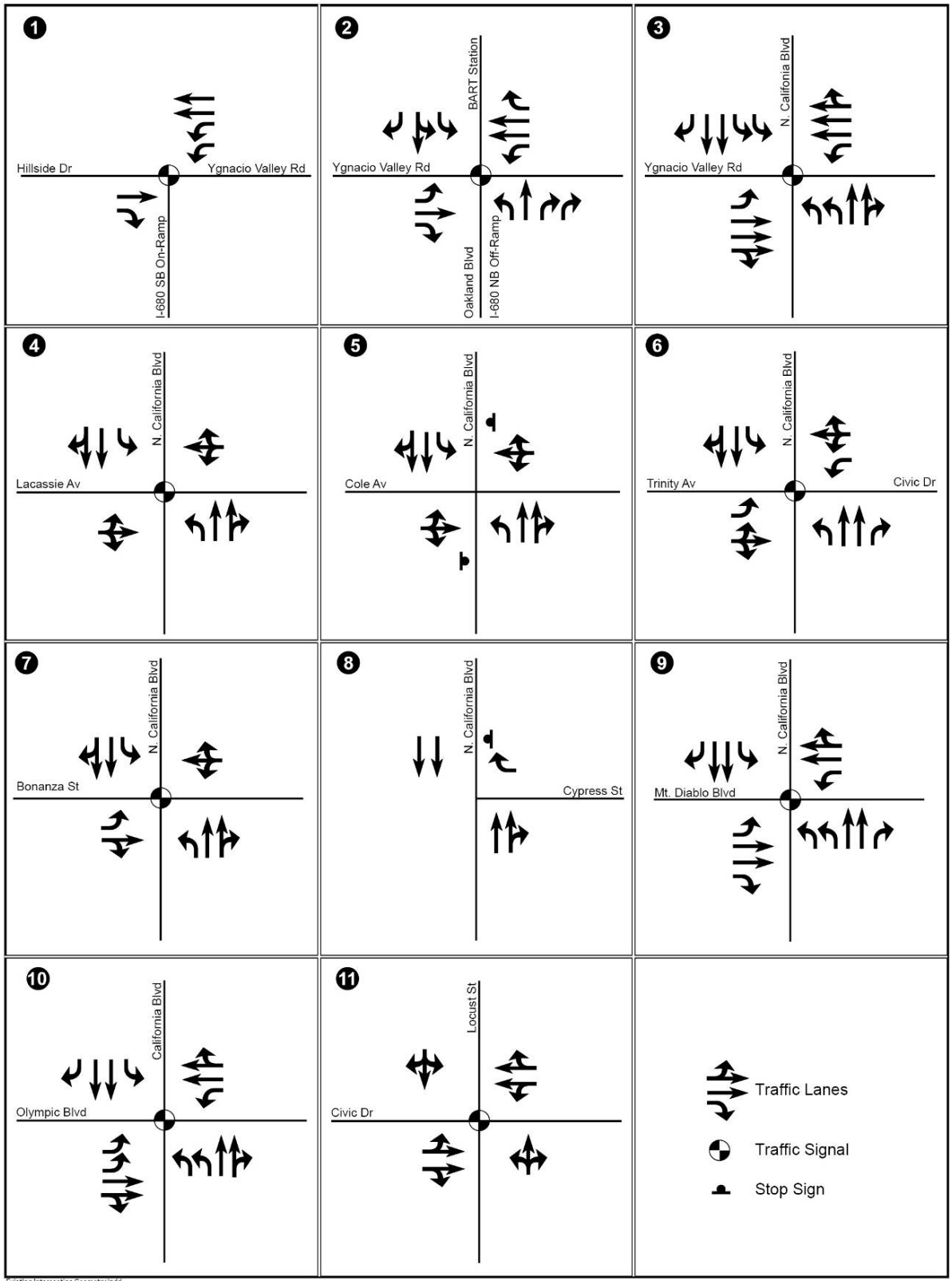
Study Intersection 2 (Ygnacio Valley Road/I-680 Off-Ramp/BART Access/Oakland Boulevard) and Study Intersection 3 (N. California Boulevard/Ygnacio Valley Road) are evaluated as part of a “delay index” corridor analysis. Also, it is noted that Study Intersection 1 (Ygnacio Valley Road/I-680 On-Ramp) and Study Intersection 2 (Ygnacio Valley Road/I-680 Off-Ramp/BART Access/Oakland Boulevard) are under joint California Department of Transportation (Caltrans) and City of Walnut Creek jurisdiction.

The location of each study intersection is illustrated in Figure 4.13-2. The lane configurations and traffic control types of the 19 study intersections, as well as the existing AM and PM peak hour intersection turning movement volumes, are provided in Appendix I.1 and I.2. The existing study intersection geometries are shown in Figure 4.13-3.



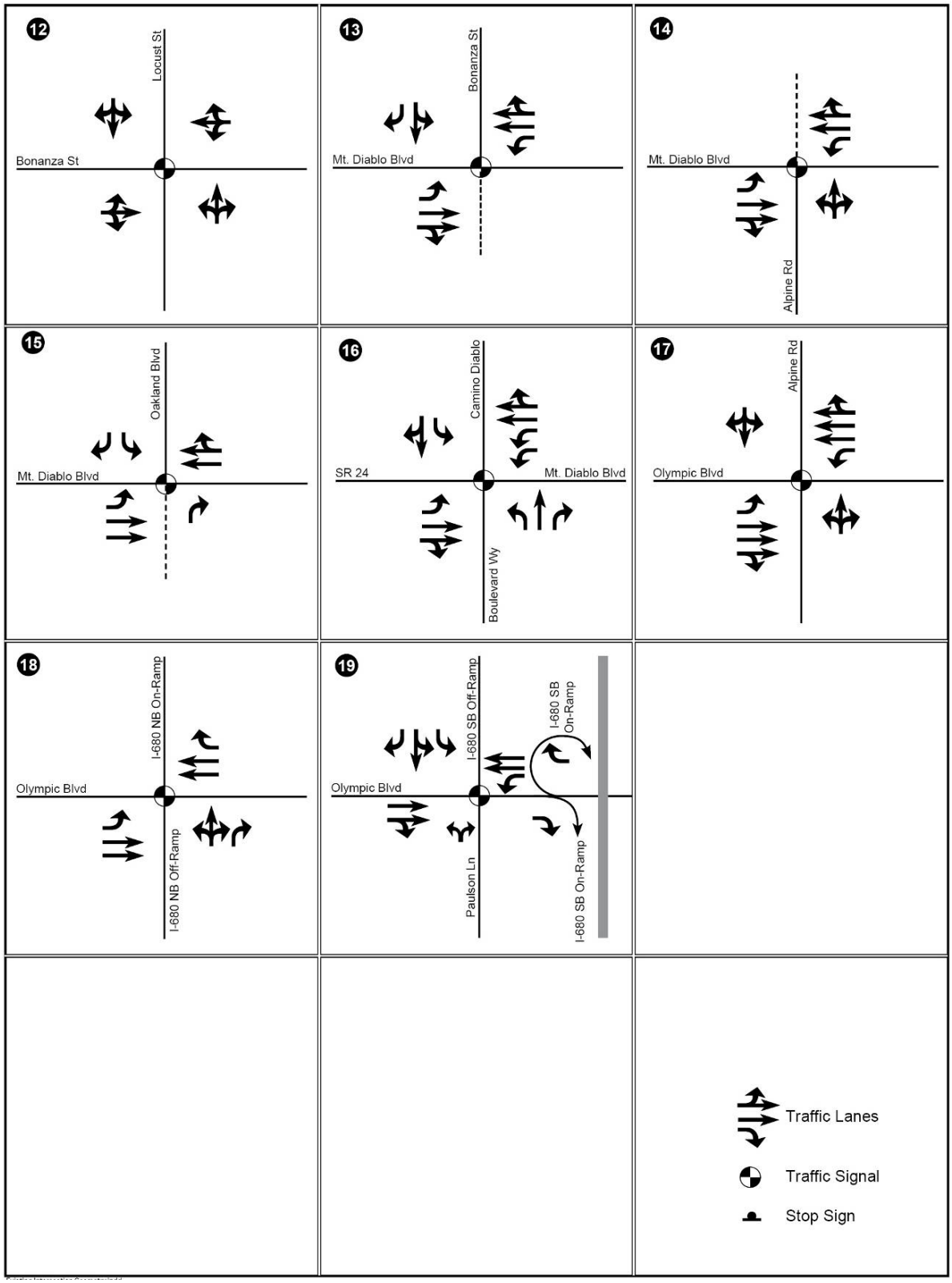
Source: AECOM 2012

Figure 4.13-2 Study Intersections for the 1500 N. California Boulevard EIR



Source: AECOM 2012

Figure 4.13-3 Study Intersection Geometry (Study Intersections 1–11)



Source: AECOM 2012

Figure 4.13-3 Study Intersection Geometry (Study Intersections 12-19)

Intersection Analysis Methodology

Intersection turning movement counts were collected during the hours of 7:00–9:00 a.m. and 4:00–6:00 p.m., and intersection analyses were performed for the peak 60-minute segment within each of these data collection periods (i.e., the AM peak hour, and the PM peak hour).

The Level of Service (LOS) concept qualitatively characterizes traffic conditions associated with varying levels of traffic. A LOS determination is a measure of congestion, which is the principal measure of roadway service. LOS ranges from LOS A, which indicates a free-flow condition, to LOS F, which indicates a congested or overloaded condition, with extremely long delays.

In general, operations at LOS E or LOS F are considered to be undesirable. However, per the City's Standards of Significance (discussed in Section 4.13.3, Environmental Impact Analysis and Mitigation Measures), operations up to LOS E with a volume-to-capacity ratio of 0.94 or lower are allowable for "Core Area Roadways and Intersections." Study Intersections 4, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, and 18 would be subject to this standard. For intersections outside of the Core Area, LOS A through LOS D operations are considered acceptable. Study Intersections 1, 16, and 19 would be subject to this standard. For unsignalized intersections, LOS F operations on the worst stop-controlled approach would trigger further study to determine whether the operation would then be considered unacceptable. This criterion is explained in greater detail in Section 4.13.3. Study Intersections 5 and 8 would be subject to this standard.

Intersections along Ygnacio Valley Road would not be subject to LOS calculations, as the Routes of Regional Significance "Delay Index" criteria are applied instead. Study Intersections 2 and 3 would be subject to the Delay Index evaluation.

Signalized Intersections

The operations analysis for each study intersection was undertaken using the computer software package Traffix. Signalized intersections were evaluated with *Traffix* using the CCTA methodology. The CCTA methodology analysis calculates the LOS of signalized intersections based on the volume-to-capacity (v/c) ratio of the intersection. The CCTA LOS methodology, adopted by the City of Walnut Creek General Plan 2025 (General Plan 2025) (2006), was derived from a modified Circular 212 analysis methodology and follows procedures outlined in the Final Technical Procedures Update (CCTA 2006). Level of Service definitions for signalized intersections are described in Table 4.13-1.

Unsignalized Intersections

The 2000 Highway Capacity Manual (HCM) methodology was used to evaluate unsignalized intersections, consistent with City practice.

The LOS of unsignalized intersections is calculated based on the average delay per vehicle. Operations are defined by the average control delay per vehicle (measured in seconds) for each stop-controlled movement or movement that must yield the right-of-way. At four-way stop-controlled intersections, the control delay is calculated for the entire intersection and for each approach. The delays and corresponding LOS for the entire intersection are reported. At one-way and two-way stop-controlled intersections, the movement with the highest delay and LOS is reported. Level of Service definitions for unsignalized intersections are described in Table 4.13-2.

Table 4.13-1 Signalized Intersection Level of Service Definitions		
Level of Service	**Description**	**CCTA Method (v/c ratio)**
A	Little or no delay	<0.6
B	Short traffic delay	0.61 to 0.70
C	Average traffic delay	0.71 to 0.80
D	Long traffic delay	0.81 to 0.90
E	Very long traffic delay	0.91 to 1.00
F	Extreme traffic delay	> 1.00

Notes:

CCTA Method = Contra Costa Transportation Authority's Level of Service methodology; v/c = volume-to capacity (City-adopted method)

Sources: Transportation Research Board 2000, CCTA 2006

Table 4.13-2 Unsignalized Intersection Level of Service Definitions		
LOS	**Description**	**2000 HCM Method (Delay in seconds per vehicle)**
A	Little or no delay	≤ 10.0
B	Short traffic delay	> 10.0 and ≤ 15.0
C	Average traffic delay	> 15.0 and ≤ 25.0
D	Long traffic delay	> 25.0 and ≤ 35.0
E	Very long traffic delay	> 35.0 and ≤ 50.0
F	Extreme traffic delay	> 50.0

Note:

HCM = Highway Capacity Manual

Source: Transportation Research Board 2000

Intersection Levels of Service

Existing traffic volumes, based on intersection turning movement counts collected during the peak 60-minute periods during the weekday AM and PM commute periods in September 2012, are provided in Appendix I.2. The LOS under existing conditions for each study intersection is summarized in Table 4.13-3, and. intersection LOS calculation worksheets are provided in Appendix I.3. Seventeen of the 19 intersections operate at LOS A or B during the weekday AM and PM peak hours, but Study Intersection 5 (N. California Boulevard and Cole Avenue) operate at LOS E during the AM and PM peak, and Study Intersection 18 (Olympic Boulevard and I-680 NB Ramps) operates at LOS E during the PM peak hour.

Table 4.13-3
Intersection Operations—Existing (2012) Conditions

Signalized Intersections		AM Peak		PM Peak	
		LOS	v/c	LOS	v/c
1	Ygnacio Valley Road and I-680 SB On-Ramp	A	0.336	A	0.483
2	Ygnacio Valley Road/I-680 NB Off-Ramp/BART Access/Oakland Boulevard	Performance standard on Ygnacio Valley Road is based on Delay Index			
3	Ygnacio Valley Road and N. California Boulevard	Performance standard on Ygnacio Valley Road is based on Delay Index			
4	N. California Boulevard and Lacassie Avenue	A	0.319	A	0.468
6	N. California Boulevard/Trinity Avenue/Civic Drive	A	0.462	A	0.492
7	N. California Boulevard and Bonanza Street	A	0.368	A	0.537
9	N. California Boulevard and Mount Diablo Boulevard	A	0.440	A	0.585
10	South California Boulevard and Olympic Boulevard	A	0.423	A	0.527
11	Locust Street and Civic Drive	A	0.204	A	0.357
12	Locust Street and Bonanza Street	A	0.118	A	0.255
13	Mount Diablo Boulevard and Bonanza Street	A	0.196	A	0.434
14	Mount Diablo Boulevard and Alpine Road	A	0.530	B	0.647
15	Mount Diablo Boulevard and Oakland Boulevard	B	0.650	B	0.673
16	Mount Diablo Boulevard/SR-24 Ramps/Camino Diablo/Boulevard Way	A	0.483	A	0.554
17	Olympic Boulevard and Alpine Road	A	0.408	A	0.530
18	Olympic Boulevard and I-680 NB Ramps	A	0.598	E	0.916
19	Olympic Boulevard/I-680 SB Ramps/Paulson Lane	B	0.646	A	0.505
Unsignalized Intersections		**AM Peak**		**PM Peak**	
		LOS	**Delay (seconds)**	**LOS**	**Delay (seconds)**
5	N. California Boulevard and Cole Avenue	E	37.3	E	42.2
8	N. California Boulevard and Cypress Street	A	9.9	B	13.6

Note:

v/c = volume-to-capacity

Source: AECOM 2012

Delay Index—Ygnacio Valley Road

The intersections along Ygnacio Valley Road are subject to the significance criteria for Routes of Regional Significance, which are based on "delay index" calculations. Delay index calculations were established as part of the Measure C growth management program followed by the General Plan 2025 (City of Walnut Creek 2006). The delay index is expressed as the ratio of "congested" travel time divided by "uncongested" travel time. A significant impact is deemed to occur if either (1) the delay index increases to above 2.0 caused by the addition of proposed Project traffic, or (2) the average travel speed along the corridor falls below 15 miles per hour.

Travel times along the Ygnacio Valley Road corridor are collected during the weekday AM and PM peak hours. The "congested" travel time is measured as the average travel time during the congested AM and PM peak hours. The "uncongested" travel time is chosen based on the lowest surveyed travel time during the weekday AM and PM peak hours. Although it is intuitive that a singular uncongested off-peak travel time would be collected and applied to each peak hour congested travel time (e.g., a travel time run collected at 3:00 a.m., when traffic volumes may be at their lowest), the use of such a time would produce inaccurate results. This is because signals along Ygnacio Valley Road are coordinated to serve different types of flow at different times of the day. During the AM peak hour, signals along Ygnacio Valley Road are optimized to focus flow westbound. During the PM peak hour, signals along Ygnacio Valley Road are optimized to focus flow eastbound. At other times throughout the day, signals are actuated, meaning that the amount of green time experienced at each approach to an intersection can vary depending on traffic volumes. Thus, during off-peak times, Ygnacio Valley Road signals do not optimize flow along the corridor in a specific direction. As a result, even with lower volumes along the corridor during off-peak times, a motorist traveling along the extents of Ygnacio Valley Road will encounter more red lights and experience more delay than during peak periods.

The resulting Existing (2012) Conditions delay index during both AM and PM peak hours and in both eastbound and westbound directions is presented in Table 4.13-4. Detailed delay index output is provided in Appendix I.4.

Table 4.13-4 shows that the delay index along Ygnacio Valley Road is below 2.0, and that the average speed along this corridor is above 15 miles per hour.

Table 4.13-4
Ygnacio Valley Road Delay Index Summary—Existing (2012) Conditions

Scenario	Eastbound		Westbound	
	Delay Index	Average Speed (mph)	Delay Index	Average Speed (mph)
AM Peak Hour	1.26	24	1.05	32
PM Peak Hour	1.15	26	1.59	23

Note:
mph = miles per hour
Source: AECOM 2012

FREEWAY OPERATIONS

Freeway Facilities

The Guide for the Preparation of Traffic Impact Studies (Caltrans 2002) calls for projects generating 1 to 49 peak hour trips on state highway facilities to evaluate operations on all affected state highway facilities experiencing LOS E or F conditions. For purposes of this analysis and to best identify Project-related effects on the freeways, locations are identified in each direction of travel where the proposed Project's effect on state highway facilities would be the greatest, assessing impacts at those locations only. For example, the I-680 segment north of N. Main Street was selected for analysis because it is reasonable to assume that all proposed Project-generated traffic to/from I-680 north of the Project site would be represented at this point. If the I-680 segment between Ygnacio Valley Road and N. Main Street was selected instead, proposed Project trips that may use the N. Main Street ramps would be excluded from the freeway segment analysis. The location of each freeway segment and ramp in the analysis is shown in Figure 4.13-2.

Freeway Operations

Operations on the I-680 and SR-24 freeways have been evaluated using the methodology set forth in the Caltrans Guide for the Preparation of Traffic Impact Studies, 2002. Merge and diverge analyses are primarily used to evaluate the performance of freeway mainline segments and on-ramps and off-ramps, respectively, by calculating an average density on a freeway section and assigning a LOS designation based on the density in the study segment. This method is a representation of both congestion and speed.

Table 4.13-5 presents the criteria for the freeway level of service and for merge and diverge level of service based on the methodologies described above.

Table 4.13-5
Freeway Level of Service Definitions

LOS	Freeway Segment Density (passenger cars/hour/lane)	Ramp Merge-Diverge Density (passenger cars/hour/lane)
A	≤ 11.0	≤ 10.0
B	> 11.0 and ≤ 18.0	> 10.0 and ≤ 20.0
C	> 18.0 and ≤ 26.0	> 20.0 and ≤ 28.0
D	> 26.0 and ≤ 35.0	> 28.0 and ≤ 35.0
E	> 35.0 and ≤ 45.0	> 35.0
F	> 45.0 (Demand exceeds capacity)	Demand exceeds capacity when queues begin to form

Source: Caltrans 2002

The existing freeway mainline and ramp volumes that have been evaluated are provided in Appendix I.5. Table 4.13-6 summarizes the Existing (2012) freeway operations of the freeway mainline segments and ramp segments that have been evaluated. Detailed freeway mainline segment and ramp segment LOS calculations are provided in Appendix I.6. The table shows the following freeway mainline segments and ramps are projected to operate unacceptably:

- I-680 NB On-Ramp from Olympic Boulevard during both the AM and PM peak hours
- I-680 SB Off-Ramp to Olympic Boulevard during the PM peak hour
- I-680 NB Off-Ramp to Ygnacio Valley Road during both the AM and PM peak hours

Table 4.13-6
Freeway Operations—Existing (2012) Conditions

Freeway Facility			AM Peak		PM Peak	
Mainline Segments			**LOS**	**Density**	**LOS**	**Density**
1	I-680: North of North Main Street	NB	C	22.3	D	30.9
		SB	C	24.1	C	19.7
2	I-680: South of SR-24	NB	C	24.8	C	21.6
		SB	C	22.2	C	24.1
3	SR-24: West of I-680	EB	B	15.3	D	30.6
		WB	D	35.0	B	17.0
Ramp Junctions			**LOS**	**Density**	**LOS**	**Density**
4	I-680: NB On-Ramp from Olympic Boulevard		F	43.9	F	30.4
5	I-680: NB Off-Ramp to Olympic Boulevard		C	26.8	C	22.8
6	I-680: SB On-Ramp from Olympic Boulevard		B	19.9	C	23.0
7	I-680: SB Off-Ramp to Olympic Boulevard		D	30.3	E	36.3
8	I-680: NB Off-Ramp to Ygnacio Valley Road		F	62.5	F	43.9
9	SR-24: WB On-Ramp from Mount Diablo Boulevard		C	25.7	B	12.1
10	SR-24: EB Off-Ramp to Mount Diablo Boulevard		B	13.4	C	24.1

Notes:

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

Density is based on passenger cars per hour per travel lane (pc/h/ln).

Source: AECOM 2012

PUBLIC TRANSIT

BART

The Walnut Creek BART station is located about 0.5 mile northwest of the Project site and is served by the Pittsburg/Bay Point line, providing direct service to downtown Oakland and San Francisco. Services operate approximately between the hours of 4:00 a.m. to midnight on weekdays, 6:00 a.m. to midnight on Saturdays, and 8:00 a.m. to midnight on Sundays. Service headways at the Walnut Creek BART station are presented in Table 4.13-7.

According to 2012 BART ridership data, the Walnut Creek BART station has an average daily ridership of 12,400. During the AM peak hour, 1,178 boardings and 318 alightings are made; during the PM peak hour, 466 boardings and 1,122 alightings are made.

Table 4.13-7
Walnut Creek BART Station Services—Aggregate Headways

Period	Walnut Creek to Downtown San Francisco	Downtown San Francisco to Walnut Creek
Weekday Morning		
6:00–7:00 a.m.	8-9 minutes[1]	15 minutes
7:00–7:50 a.m.	5 minutes	10 minutes
7:50–8:30 a.m.	8 minutes	8 minutes
Weekday Evening		
4:00–5:00 p.m.	15 minutes	12 minutes
5:00–5:30 p.m.	7-8 minutes	7-8 minutes
5:30–6:30 p.m.	15 minutes	6 minutes
6:30–7:30 p.m.	15 minutes	10 minutes
Weekday Off-Peak		
before 6:00 a.m.	15 minutes	15 minutes
8:30 a.m.–4 p.m.	15 minutes	15 minutes
7:30–8:30 p.m.	20 minutes	15 minutes
after 8:30 p.m.	20 minutes	20 minutes
Saturday		
all day	20 minutes	20 minutes
Sunday		
all day	20 minutes	20 minutes

Note:

[1] Every other service terminates at Montgomery Street Station

Sources: BART 2012, AECOM 2012

Bus Services

County Connection, Wheels Transit, and Solano Transit operate bus services in Walnut Creek and the surrounding area. A map illustrating the existing bus routes serving downtown Walnut Creek is shown in Figure 4.13-4.

County Connection, formally known as Central Contra Costa County Transit Authority (CCCTA), currently operates a total of 30 fixed-route bus routes on weekdays throughout central Contra Costa County, which includes the majority of bus services to and from downtown Walnut Creek.

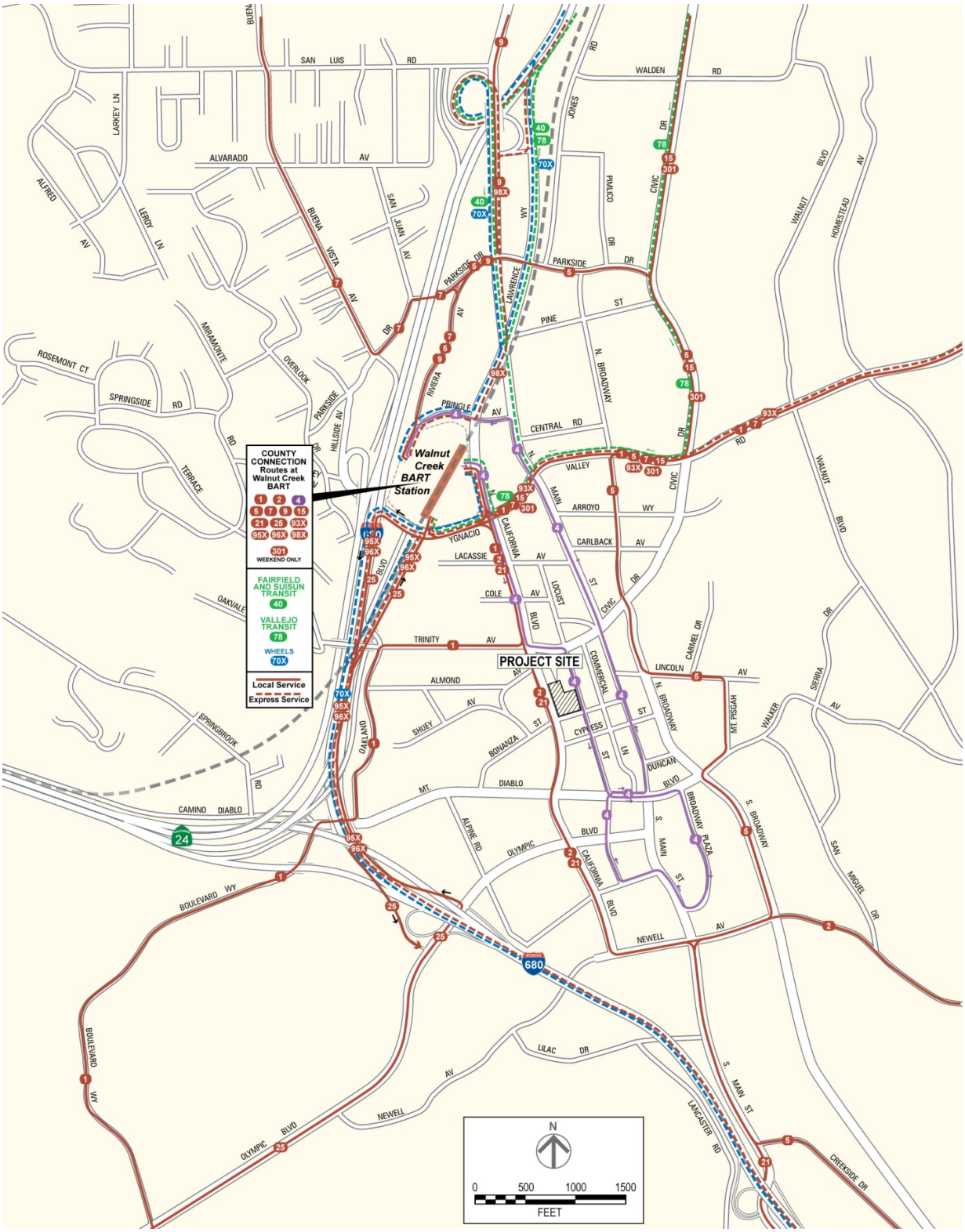
The Project site is directly served by County Connection Routes 2, 4, and 21. Routes 1 and 5 operate within a few blocks of the site. The Route 2 and 21 stops are located on N. California Boulevard, with one located north of Bonanza Street immediately adjacent the Scott Valley Bank building for northbound buses, and another across N. California Boulevard south of Bonanza Street for southbound buses. Southbound Route 4 buses stop on Locust Street, just south of Bonanza Street, and northbound buses stop on Main Street, just north of Bonanza Street.

Additionally, the Walnut Creek BART station functions as a hub of local bus service, and is located about 0.5 mile northwest of the Project site. The following nine weekday bus routes provide direct connections to and from the Walnut Creek BART station: 1, 2, 4, 5, 7, 9, 15, 21, and 25. The following four peak period-only express routes also serve the Walnut Creek BART station: 93X, 95X, 96X and 98X.

The bus services to and from the BART station are scheduled at varying frequencies and during varying operating periods. Weekday service on the non-express routes begins between 5:30 and 7:30 a.m. and ends between 6:30 and 11:20 p.m., with peak hour frequencies at 30, 40, 45, or 60 minutes except for the free downtown shuttle, Route 4, which operates every 15 minutes on weekdays and every 20 minutes on weekends. Table 4.13-8 summarizes the weekday and weekend bus route services operated by County Connection that serve the Walnut Creek BART station. Single ride adult bus fares are $2 and transfers from BART are $1, and discount passes are available for regular patrons.

The City of Walnut Creek subsidizes **County Connection Route 4 (Downtown Shuttle)**, which operates between the Walnut Creek BART station and downtown between approximately 7:10 a.m. and 9:30 p.m. on weekdays, and between 9:10 a.m. and 6:40 p.m. on weekends. The free shuttle departs and arrives at Walnut Creek BART station every 15 minutes throughout the day on weekdays and every 20 minutes throughout the day on weekends. Southbound trips from the BART station to Broadway Plaza take 13-14 minutes; return trips take 16-17 minutes. The vehicles used on the route are designed to look like historic trolleys.

As shown in Figure 4.13-4, the route operates one-way along adjacent streets within the downtown district. Accordingly, local shoppers and employees can travel to and from the BART station via a more direct route, by boarding and alighting from the bus from different locations, which may be at most one to two blocks apart. The stops nearest to the Project site are at Locust and Bonanza Streets (southbound to Broadway Plaza) and North Main and Bonanza Streets (northbound to BART). Table 4.13-9 summarizes existing weekday bus ridership on County Connection bus services operating to and from the Walnut Creek BART station.



Source: AECOM 2012

Figure 4.13-4 Existing Bus Routes in the Project Vicinity

Table 4.13-8
County Connection—Existing Bus Routes and Frequencies

Route	Service Description	Approx. Hours of Service	Frequency	
			Peak	Off-Peak
Weekday Routes				
1	Rossmoor Shopping Center, Walnut Creek BART, Ygnacio Valley Road, John Muir Medical Center, Shadelands	5:55 a.m.–7:30 p.m.	60 min	60 min
2	Walnut Creek BART, Kaiser Permanente Medical Center, Trotter Way	6:40 a.m.–6:45 p.m.	60 min	90 min
4	Free Shuttle–Walnut Creek BART, Broadway Plaza	7:10 a.m.–9:30 p.m.	15 min	15 min
5	Walnut Creek BART, South Broadway, Kaiser Permanente Medical Center, Creekside Drive	6:50 a.m.–7:30 p.m.	45 min	90 min
7	Walnut Creek BART, Mitchell Park and Ride, Shadelands, Bancroft Road, Treat Boulevard, Buena Vista Avenue, Pleasant Hill/Contra Costa Centre BART	6 - 10:30 a.m., 4 - 8:40 p.m.	40 min	–
9	Diablo Valley College, Sun Valley Mall, JFK University, Crescent Plaza, Pleasant Hill/Contra Costa Centre BART, North Main Street, Walnut Creek BART	6:00 a.m.–10:45 p.m.	30 min	60 min
15	Concord BART, Treat Boulevard, Pleasant Hill/Contra Costa Centre BART, Walnut Creek BART	5:45 a.m.–8:45 p.m.	60 min	60 min
21	Walnut Creek BART, Alamo, Danville Boulevard, Danville Park and Ride, San Ramon Transit Center	5:30 a.m.–11:20 p.m.	30 min	60 min
25	Lafayette BART, Mount Diablo Boulevard, Walnut Creek BART	7:30 a.m.–6:30 p.m.	60 min	60 min
Express Routes				
93X	Kirker Pass Express: Hillcrest Park and Ride, John Muir Medical Center, Walnut Creek BART	5:05 a.m.–7:40 p.m.	30-60 min	–
95X	San Ramon Express: San Ramon Transit Center to Walnut Creek BART	6:30–9 a.m., 4–7 p.m.	30 min	–
96X	Bishop Ranch Express, North: Walnut Creek BART to Bishop Ranch	5:35 a.m.–7:50 p.m.	20 min	–
98X	Martinez/Walnut Creek Express: Amtrak, Concord, Walnut Creek BART	5:40 a.m.–7:20 p.m.	30-60 min	–

Table 4.13-8 County Connection—Existing Bus Routes and Frequencies				
Route	**Service Description**	**Approx. Hours of Service**	**Frequency**	
			Peak	**Off-Peak**
Weekend Routes				
4	Free Shuttle–Walnut Creek BART, Broadway Plaza	9:10 a.m.–6:40 p.m.	20 min all day	
301	Walnut Creek BART, Trinity Avenue, Boulevard Way, Tice Valley Boulevard	9:25 a.m.–6:20 p.m.	90 min all day	
311	Concord BART, Pleasant Hill/Contra Costa Centre BART, Walnut Creek BART	7:20 a.m.–7:00 p.m.	80 min all day	
321	Walnut Creek BART, Danville Boulevard, San Ramon Valley Boulevard, San Ramon Transit Center	7:45 a.m.–10:30 p.m.	120 min, 60 min midday	
Source: CCCTA 2012				

Table 4.13-9 Existing County Connection Weekday Bus Ridership—Walnut Creek BART Station								
	All Day		**AM Peak**		**Midday Peak**		**PM Peak**	
Route	**Board**	**Alight**	**Board**	**Alight**	**Board**	**Alight**	**Board**	**Alight**
1	191	141	47	22	80	56	35	29
2	30	16	10	7	10	7	9	2
4	487	359	50	22	222	118	137	136
5	21	30	5	19	5	6	9	2
7	77	58	31	24	5	6	37	27
9	97	63	12	13	27	20	36	15
15	59	55	4	12	25	23	23	7
21	244	161	80	32	64	47	46	36
25	19	14	3	2	8	6	6	4
93X	73	43	0	8	0	0	69	0
95X	67	77	39	17	0	0	28	61
96X	297	213	228	17	17	10	30	125
98X	130	129	37	26	49	52	34	25
Total	**1,792**	**1,359**	**546**	**221**	**512**	**351**	**499**	**469**
Source: CCCTA 2011								

The shuttle service is well-coordinated with trains arriving from Pittsburg/Bay Point during the AM peak period, with the shuttle leaving the station five minutes after southbound trains arrive. However, the shuttle leaves eleven minutes after the arrival of northbound trains from San Francisco and Oakland during the AM peak period. During the PM peak period, the shuttle is scheduled to arrive at the BART station three minutes before southbound trains depart. Shuttles generally arrive six minutes before northbound trains toward Pittsburg/Bay Point depart.

Wheels Transit, formally known as Livermore Amador Valley Transit Authority, primarily operates bus services in the Tri-Valley cities of Dublin, Livermore and Pleasanton. Wheels Transit also operates one express service, Route 70X, from the Walnut Creek and Pleasant Hill/Contra Costa Centre BART stations to the Dublin/Pleasanton BART station, with continuing service to Hacienda Business Park. Route 70X operates every 30 minutes during the AM and PM peak periods, making a total of 14 daily round trips. Approximately 210 passengers boarded the service on average each weekday during the 2011/12 fiscal year. Approximately 50 percent of passengers travel to/from the Walnut Creek BART station.

The majority of ridership on this line is directional, with passengers primarily traveling southbound during the AM peak period and northbound during the PM peak period. Single ride adult fares for Wheels Transit match those of County Connection ($2; $1 transfer from BART).

Fairfield and Suisun Transit (FAST) provides bus service between Fairfield and Vacaville and to regional destinations. Route 40 operates between Vacaville and the Walnut Creek BART station, with stops in Fairfield, Benicia and at the Pleasant Hill/Contra Costa Centre BART station. Nine roundtrips are provided daily; four during the morning and five during the afternoon and evening. Approximately 175 passengers boarded the service on average each weekday during the 2011/12 fiscal year. FAST does not record boarding information by stop, so boardings and alightings at the Walnut Creek BART station are not readily known. Fares to and from the Walnut Creek BART station range between $3.75 and $6.75, depending on the distance of the trip.

BICYCLE NETWORK

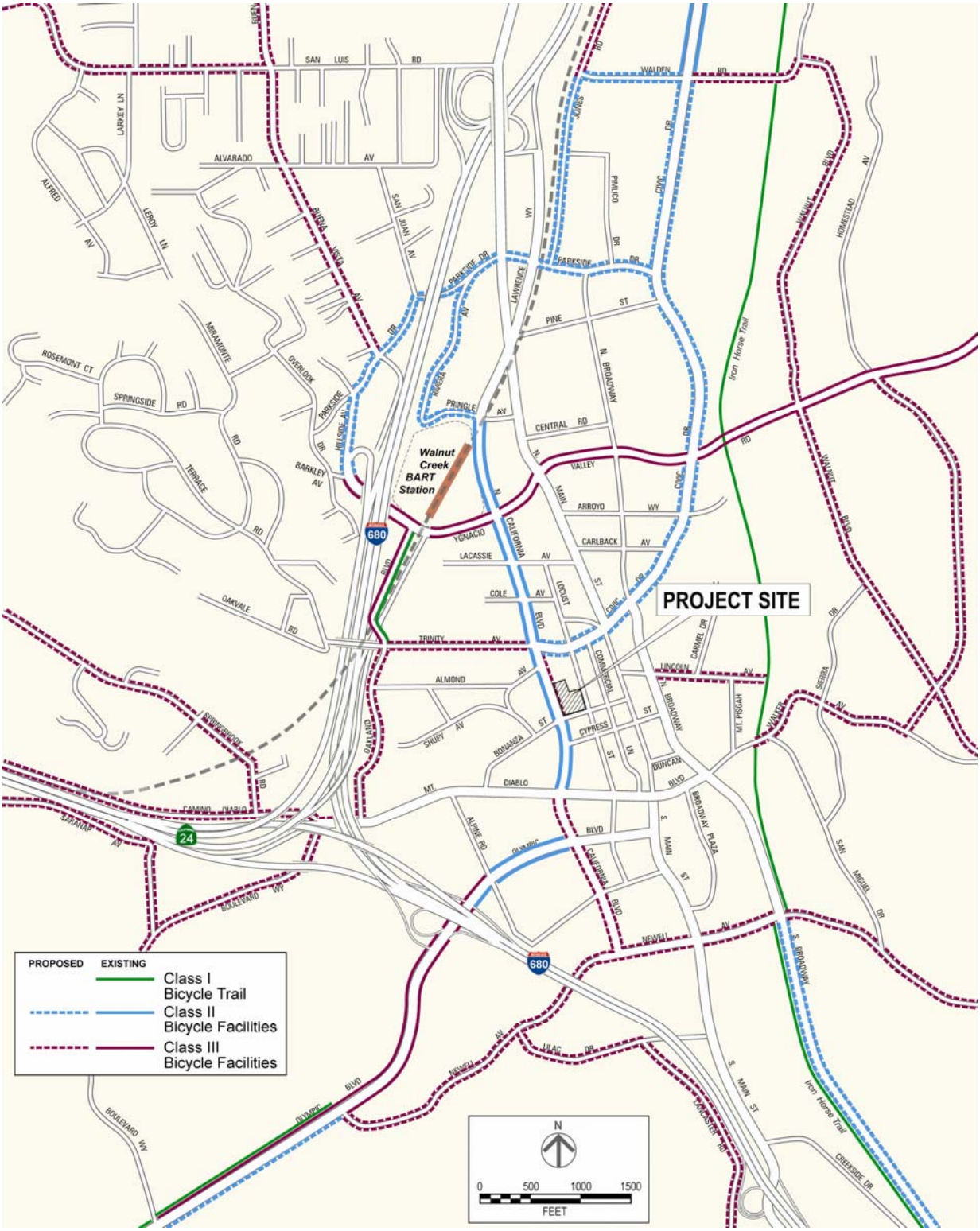
Bicycle paths, lanes and routes are typical examples of bicycle transportation facilities, which are defined by the following three classes in Chapter 1000 of the Caltrans Highway Design Manual (Caltrans 2012b):

Class I – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.

Class II – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.

Class III – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.

Bicycle facilities in or near downtown Walnut Creek, as identified in the 2011 City of Walnut Creek Bicycle Plan (Bicycle Plan), are shown in Figure 4.13-5. Of these, the Class II bike lanes on N. California Boulevard provide the closest access to the Project site.



Source: AECOM 2012

Figure 4.13-5 Bicycle Facilities in the Project Vicinity

The Iron Horse Trail (Class I) is oriented north-south, about 0.5 mile east of the Project site, and the Class III facilities along east-west Ygnacio Valley Road are located 0.5 mile north of the Project site.

The Bicycle Plan also proposes new Class II and III bicycle facilities, as shown in Figure 4.13-5.

PEDESTRIAN CIRCULATION

Pedestrian activity in the vicinity of the Project site is moderate, with the highest activity occurring along Locust Street. The existing pedestrian facilities are considered adequate for current needs, with fully improved streets providing sidewalks and lighting on all sides of the Project site.

The City of Walnut Creek adopted the Americans with Disability Act (ADA) Transition Plan Amendment (Plan) in 2005. The Plan identified the Downtown Pedestrian Retail Area, where the Project site is located, to be a Priority 1 area for accessibility project implementation. Since the adoption of the Plan, the City has continued to make investments towards accessibility improvements, such as removing sidewalk obstructions and installing curb ramps in the priority areas. Thus, all streets that serve this area include raised, concrete sidewalks, marked crosswalks at all intersections, pedestrian signals, and countdown timers to indicate how much time is allotted for pedestrians to cross the roadway. Sidewalks and crosswalks are provided at all approaches to the intersections of N. California Boulevard and Bonanza Street as well as to Locust Street and Bonanza Street and surroundings.

Multiple, wide curb cuts are present along the frontage of all three Project site parcels. Conflicts between pedestrians and vehicles were not observed during the study.

Pedestrian facilities connecting the Project site to BART and the transit hub are complete and in good condition.

PARKING CONDITIONS

The three Project site parcels provide off-street parking for existing uses. The parcel fronting Bonanza and Locust Streets is currently used as a paid, off-street public parking facility providing 35 parking spaces.

The majority of on-street parking spaces in the immediate vicinity of the Project site is subject to time limits and metered parking fees. This ensures that these on-street parking spaces are used for their intended purpose of servicing abutting residential or commercial land uses. Metered parking in the Project area costs $1.00 per hour and is limited to 2 hours.

In residential areas, parking is generally regulated by a program designed to protect the quality of life in residential neighborhoods adjacent to active commercial areas. The City of Walnut Creek's Preferential Residential Permit Parking (PRPP) program allows residents of qualified neighborhoods to obtain special permits which exempt them and their guests from certain parking time limits or prohibitions. Within the immediate area of the Project site, PRPP has been applied to the majority of the public streets with the Almond/Shuey residential neighborhood. Observations of on-street parking patterns in the vicinity of the Project site found that on-street parking is generally well utilized throughout the day, with increased demand towards the conclusion of the PM peak hour at 6:00 p.m., which coincides with the conclusion of the time period for which paid and limited on-street parking is in effect.

BASELINE AND FUTURE BASELINE CONDITIONS

Traffic conditions under two baseline scenarios are evaluated in this section, as summarized below:

- **Baseline (2015) Conditions**: Existing conditions with the addition of any projects that will be constructed between the time that existing data was collected in September 2012 and June 2015, the earliest point at which the proposed Project is expected to generate trips

- **Future Baseline (2030) Conditions**: Future conditions, including projected population and employment growth, as well as planned transportation system improvements contained in the latest CCTA travel demand model for the 2030 Baseline Cumulative Scenario

A comparison of both baseline conditions to scenarios that include the addition of proposed Project traffic is evaluated in Section 4.13.3, Environmental Impact Analysis and Mitigation Measures, enabling a determination of whether the proposed Project would cause significant impacts to either Baseline scenario.

A list of planned development projects provided by the City of Walnut Creek, including their locations and proposed land uses, is summarized below in Table 4.13-10. A subset of projects anticipated to be completed by June 2015 is included as part of the Baseline Conditions scenario. These projects, as well as those anticipated to be completed after June 2015, are included as part of the Future Baseline scenario.

Baseline (2015) Conditions

Baseline Conditions are made up of a combination of existing traffic data and traffic that would be generated by locally approved projects to be constructed by June 2015. As shown in Table 4.13-10, 17 projects are anticipated to be completed by June 2015. Total vehicle trip generation and trip assignment for these projects was determined using a combination of:

- trip generation rates from the Institute of Transportation Engineers (ITE) guide;

- Trip Generation (ITE 2008); and

- traffic distribution assumptions similar to those used for proposed Project trips.

In addition, the following improvements to study intersections and intermediate roadway segments are scheduled to be completed under Baseline Conditions:

- the east/west split of the phasing of Study Intersection 10 (S. California Boulevard and Olympic Boulevard) will be replaced with concurrent phasing; and

- bike lanes will be striped on S. California Boulevard.

Table 4.13-10 Baseline and Future Projects in the Project Vicinity		
Project	**Address**	**Land Use**
Baseline Projects (*Projects anticipated to be constructed and occupied by June 2015*)		
Walden Park Commons	El Paseo Circle and Oak Road	65 residential units
Brooks Street Duplex	1513 Brooks Street	2 residential units
Almond Station	1960 & 1972 Almond Avenue, 1600 Oakland Boulevard	9 residential units
Camelot Apartments (additional units)	2330 Westcliffe Lane	8 residential units
Paragon Apartments	141 North Civic Drive	300 residential units
The Arroyo Apartments	1250 Arroyo Way	100 residential units
Holcomb Court Condos	15 Holcomb Court	5 residential units
North Main Apartments	1960 North Main Street	126 residential units
Community of Christ Church	1786 Second Avenue	5.7 KSF church building
The Village	1500 Newell Avenue	37.0 KSF retail, 49 residential units
La Soie Bridal Salon and Office Building	1401 Cypress Street	4.1 KSF retail
Progressive Insurance Claims Building	2860 North Main Street	17.2 KSF office
1500 Mount Diablo Boulevard	1500 Mount Diablo Boulevard	8.6 KSF retail/restaurant
Co-op Site Retail Development	1504-30 Geary Road	45.0 KSF retail
Encina Grande Shopping Center Addition and Remodel	2895 Ygnacio Valley Road	6.4 KSF retail
Centre Place South	1271 South California Boulevard	22.4 KSF retail, 24 residential units
24-Hour Fitness/Chick-fil-A	2750 North Main Street	46.6 KSF retail
Future Baseline Projects (*Scenario includes Baseline Projects, as well as the following future projects anticipated to be constructed after June 2015*)		
Walnut Creek Transit Village	200 Ygnacio Valley Road	30.0 KSF commercial, 596 residential units
Springbrook Lofts Condominiums	1250 Springbrook Road	9 residential units
E'lan	1605 Riviera Avenue	48 residential units
Villagewalk Condos	1735-1727 Lacassie Avenue	13 residential units
Bonanza Heritage Condominiums	1874 & 1882 Bonanza Street, 1826 Sharpe Avenue	15 residential units
235 Ygnacio Valley Road	235 Ygnacio Valley Road	11 residential units
Walker-Sierra Townhomes	1241 Walker Avenue	4 residential units
Overlook Homes	2245 Overlook Drive	9 residential units
Third Avenue Apartments	2618 Baldwin Lane	48 residential units

Table 4.13-10 Baseline and Future Projects in the Project Vicinity		
Project	**Address**	**Land Use**
Future Baseline Projects (*Scenario includes Baseline Projects, as well as the following future projects anticipated to be constructed after June 2015*) (continued)		
Cole Terrace Condominiums	1756 Cole Avenue	12 residential units
Cobble Lane Small Lot SFRs	2155 Overlook Drive	4 residential units
Parkview Condominiums	1665 Carmel Drive	8 residential units
Geary/Hall Residential Development	1579 Geary Road	13 residential units
Homestead Terrace Homes	1279 Homestead Avenue	12 residential units
Overlook Townhomes	2725 Overlook Drive	7 residential units
Pleasant Creek Homes	1935 Barkley Avenue	10 residential units
Almond/Oakland Condominiums	1526 Oakland Boulevard	12 residential units
Block C Redevelopment	Locust Street and Mount Diablo Boulevard	29.6 KSF retail
Broadway Plaza Master Plan	Broadway Plaza	300 KSF retail
Shadelands Gateway Specific Plan	Ygnacio Valley and Oak Grove Roads	246 KSF retail
Locust Street / Mount Diablo Boulevard Specific Plan	N. California and Mount Diablo Boulevards	Office, retail, residential
Note: KSF = 1,000 square feet Source: City of Walnut Creek 2012		

Intersection Operations. The resulting Baseline traffic volumes at each of the 19 study intersections are provided in Appendix I.2. The LOS under Baseline Conditions for each of the 19 study intersections is summarized in Table 4.13-11. Detailed intersection LOS calculation worksheets are provided in Appendix I.3. As shown in the table, all intersections would be expected to operate at acceptable conditions during the weekday AM and PM peak hours under Baseline Conditions. Each intersection would experience a minimal increase in average delay associated with the addition of traffic generated by "Baseline Projects." However, none of the intersections would deteriorate to unacceptable operating conditions.

Ygnacio Valley Road Delay Index. The intersections along Ygnacio Valley Road are subject to the significance criteria for Routes of Regional Significance. The delay index, expressed as the ratio of "congested" travel time divided by "uncongested" travel time, was derived using Synchro software, and the results are presented below in Table 4.13-12. Detailed delay index output is provided in Appendix I.4.

Table 4.13-12 shows that the delay index along Ygnacio Valley Road would remain below 2.0 under Baseline Conditions. Synchro also projects that the average speed along this corridor would remain above 15 miles per hour in both peak hours. Overall, the Ygnacio Valley Road corridor would experience a minimal reduction in average speed, and a minimal increase in travel time associated with the addition of traffic generated by "Baseline Projects." However, the corridor would continue to operate acceptably.

Table 4.13-11
Intersection Operations—Baseline (2015) Conditions

		AM Peak		PM Peak	
Signalized Intersections		**LOS**	**v/c**	**LOS**	**v/c**
1	Ygnacio Valley Road and I-680 SB On-Ramp	A	0.445	A	0.492
2	Ygnacio Valley Road/I-680 NB Off-Ramp/BART Access/Oakland Boulevard	Performance standard on Ygnacio Valley Road is based on Delay Index			
3	Ygnacio Valley Road and N. California Boulevard	Performance standard on Ygnacio Valley Road is based on Delay Index			
4	N. California Boulevard and Lacassie Avenue	A	0.322	A	0.473
6	N. California Boulevard/Trinity Avenue/Civic Drive	A	0.473	A	0.503
7	N. California Boulevard and Bonanza Street	A	0.371	A	0.540
9	N. California Boulevard and Mount Diablo Boulevard	A	0.447	A	0.598
10	South California Boulevard and Olympic Boulevard	A	0.440	A	0.555
11	Locust Street and Civic Drive	A	0.204	A	0.359
12	Locust Street and Bonanza Street	A	0.130	A	0.269
13	Mount Diablo Boulevard and Bonanza Street	A	0.201	A	0.443
14	Mount Diablo Boulevard and Alpine Road	A	0.537	B	0.661
15	Mount Diablo Boulevard and Oakland Boulevard	B	0.660	B	0.697
16	Mount Diablo Boulevard/SR-24 Ramps/Camino Diablo/Boulevard Way	A	0.489	A	0.565
17	Olympic Boulevard and Alpine Road	A	0.415	A	0.544
18	Olympic Boulevard and I-680 NB Ramps	B	0.607	E	0.937
19	Olympic Boulevard/I-680 SB Ramps/Paulson Lane	A	0.469	A	0.510
Unsignalized Intersections		**LOS**	**Delay (second)**	**LOS**	**Delay (second)**
5	N. California Boulevard and Cole Avenue	E	38.6	E	45.7
8	N. California Boulevard and Cypress Street	A	9.9	B	13.7

Source: AECOM 2012

Table 4.13-12
Ygnacio Valley Road Delay Index Summary—Baseline (2015) Conditions

	Eastbound		Westbound	
Scenario	**Delay Index**	**Average Speed**	**Delay Index**	**Average Speed**
AM Peak Hour	1.26	24	1.06	32
PM Peak Hour	1.16	26	1.60	23

Source: AECOM 2012

Freeway Operations. The operations of Caltrans facilities under Baseline Conditions have been evaluated using the methodology set forth in the Caltrans Guide for the Preparation of Traffic Impact Studies, 2002. Table 4.13-13 summarizes the Baseline operations of the freeway mainline segments and ramp segments that have been evaluated. Detailed freeway mainline segment and ramp segment LOS calculations are provided in Appendix I.6. The table shows the following freeway mainline segments and ramps are projected to operate unacceptably at LOS E or F:

- SR-24 WB west of I-680 during the AM peak hour
- I-680 NB On-Ramp from Olympic Boulevard during both the AM and PM peak hours
- I-680 SB Off-Ramp to Olympic Boulevard during the PM peak hour
- I-680 NB Off-Ramp to Ygnacio Valley Road during both the AM and PM peak hours

Overall, the freeway segments and ramp facilities would experience minimal increases in density associated with the addition of traffic generated by "Baseline Projects." However, a reduction in LOS would occur along SR-24 WB west of I-680 during the AM peak hour.

Future Baseline (2030) Conditions

This scenario evaluates intersection operations and freeway operations under a scenario that includes traffic volumes projected for the future year (2030), but does not include the proposed Project.

Under this scenario, the improvements to study intersections and intermediate roadway segments included under Baseline Conditions are considered. In addition, the following improvements are programmed to be completed under Future Baseline Conditions:

- the signal at Study Intersection 13 (Mount Diablo Boulevard and Bonanza Street) will be modified; and
- a southbound right turn pocket will be added at Study Intersection 6 (N. California Boulevard/Trinity Avenue/Civic Drive).

No improvements to the freeway mainline segments or ramps are programmed under Future Baseline (2030) Conditions.

The CCTA model was used to forecast these Future Baseline (2030) traffic volumes. The projections include all past and present projects (existing development and projects under construction), and all approved, pending, and reasonably foreseeable future projects through 2030, as well as increased traffic on roadway facilities associated with regional growth as shown in Table 4.13-10.

Table 4.13-13
Freeway Operations Baseline (2015) Conditions

Freeway Facility			AM Peak		PM Peak	
Mainline Segments			**LOS**	**Density**	**LOS**	**Density**
1	I-680: North of North Main Street	NB	C	22.4	D	31.5
		SB	C	24.4	C	20.2
2	I-680: South of SR-24	NB	C	24.9	C	21.7
		SB	C	22.4	C	24.2
3	SR-24: West of I-680	EB	B	15.4	D	31.0
		WB	E	35.4	B	17.2
Ramp Junctions			**LOS**	**Density**	**LOS**	**Density**
4	I-680: NB On-Ramp from Olympic Boulevard		F	44.4	F	30.9
5	I-680: NB Off-Ramp to Olympic Boulevard		C	26.9	C	22.9
6	I-680: SB On-Ramp from Olympic Boulevard		B	20.0	C	23.2
7	I-680: SB Off-Ramp to Olympic Boulevard		D	30.4	E	36.7
8	I-680: NB Off-Ramp to Ygnacio Valley Road		F	62.6	F	44.2
9	SR-24: WB On-Ramp from Mount Diablo Boulevard		C	25.9	B	12.5
10	SR-24: EB Off-Ramp to Mount Diablo Boulevard		B	13.5	C	24.3

Notes:

EB = Eastbound; WB = Westbound

Density is based on passenger cars per hour per travel lane (pc/h/ln). Bold indicates a significant impact.

Source: AECOM 2012

The "Furness" method was used to develop all turning movements at each of the 19 study intersections to be consistent with the methodology set forth in the Final Technical Procedures Update (CCTA 2006). This methodology is described in the Final Technical Procedures Update which includes using inputs such as existing traffic counts, existing model link volumes, and future model link volumes to develop the Future Baseline intersection volumes.

Intersection Operations. The projected Future Baseline traffic volumes at each of the 19 study intersections are provided in Appendix I.2. The LOS under Future Baseline Conditions for each of the 19 study intersections is summarized in Table 4.13-14. Compared to Existing Conditions and Baseline Conditions, each intersection would experience an increase in average delay associated with the addition of traffic generated by "Future Baseline Projects." However, Study Intersection 18 (Olympic Boulevard/ I-680 NB Ramps) would operate at an unacceptable LOS F during the weekday PM peak hour.

Table 4.13-14
Intersection Operations—Future Baseline (2030) Conditions

		AM Peak		PM Peak	
Signalized Intersections		**LOS**	**v/c**	**LOS**	**v/c**
1	Ygnacio Valley Road and I-680 SB On-Ramp	A	0.555	A	0.578
2	Ygnacio Valley Road/I-680 NB Off-Ramp/BART Access/Oakland Boulevard	Performance standard on Ygnacio Valley Road is based on Delay Index			
3	Ygnacio Valley Road and N. California Boulevard	Performance standard on Ygnacio Valley Road is based on Delay Index			
4	N. California Boulevard and Lacassie Avenue	A	0.431	A	0.561
6	N. California Boulevard/Trinity Avenue/Civic Drive	B	0.604	B	0.620
7	N. California Boulevard and Bonanza Street	A	0.484	B	0.681
9	N. California Boulevard and Mount Diablo Boulevard	A	0.514	C	0.758
10	South California Boulevard and Olympic Boulevard	A	0.497	B	0.678
11	Locust Street and Civic Drive	A	0.245	A	0.410
12	Locust Street and Bonanza Street	A	0.161	A	0.367
13	Mount Diablo Boulevard and Bonanza Street	A	0.434	B	0.630
14	Mount Diablo Boulevard and Alpine Road	B	0.655	C	0.797
15	Mount Diablo Boulevard and Oakland Boulevard	C	0.767	D	0.809
16	Mount Diablo Boulevard/SR-24 Ramps/Camino Diablo/Boulevard Way	B	0.651	C	0.777
17	Olympic Boulevard and Alpine Road	A	0.521	B	0.622
18	Olympic Boulevard and I-680 NB Ramps	E	0.940	**F**	**1.243**
19	Olympic Boulevard/I-680 SB Ramps/Paulson Lane	D	0.883	B	0.649
Unsignalized Intersections		**LOS**	**Delay (sec)**	**LOS**	**Delay (sec)**
5	N. California Boulevard and Cole Avenue	**F**	**93.1**	**F**	**471.3**
8	N. California Boulevard and Cypress Street	B	10.4	C	16.3

Source: AECOM 2012

The worst approach to stop-controlled Study Intersection 5 (N. California Boulevard/Cole Avenue) would operate at LOS F, and the criteria of the California Manual on Uniform Traffic Control Devices (CA MUTCD) (Caltrans 2012a), Peak Hour Traffic Volume Signal Warrant[1] would be met during both the AM and PM peak hours under Future Baseline Conditions. All other intersections would operate acceptably.

The intersections along Ygnacio Valley Road are subject to the significance criteria for Routes of Regional Significance. The delay index under Future Baseline Conditions during both AM and PM peak hours and in both eastbound and westbound directions is presented below in Table 4.13-15. Detailed delay index output is provided in Appendix I.4.

Table 4.13-15 shows that the delay index along Ygnacio Valley Road would remain below 2.0. Synchro also projects that the average speed along this corridor would remain above 15 miles per hour in both peak hours under Future Baseline Conditions. Compared to Existing Conditions and Baseline Conditions, the Ygnacio Valley Road corridor would experience a reduction in average speed, and an increase in travel time associated with the addition of traffic generated by "Future Baseline Projects." However, the corridor would continue to operate acceptably.

Table 4.13-15
Ygnacio Valley Road Delay Index Summary—Future Baseline (2030) Conditions

Scenario	Eastbound		Westbound	
	Delay Index	Average Speed	Delay Index	Average Speed
AM Peak Hour	1.55	20	1.17	30
PM Peak Hour	1.42	22	1.86	20

Source: AECOM 2012

Freeway Operations. The operations of the following Caltrans facilities under the Future Baseline scenario have been evaluated using the methodology set forth in the Caltrans Guide for the Preparation of Traffic Impact Studies (Caltrans 2002). Table 4.13-16 summarizes the Future Baseline operations of the freeway mainline segments and ramp segments that have been evaluated; the following freeway mainline segments and ramps are forecasted to operate unacceptably at LOS E or F:

- I-680 NB north of North Main Street during the PM peak hour
- SR-24 eastbound (EB), west of I-680 during the PM peak hour
- SR-24 WB west of I-680 during the AM peak hour
- I-680 NB On-Ramp from Olympic Boulevard during both the AM and PM peak hours
- I-680 SB Off-Ramp to Olympic Boulevard during both the AM and PM peak hours
- I-680 NB Off-Ramp to Ygnacio Valley Road during both the AM and PM peak hours
- SR-24 WB On-Ramp from Mount Diablo Boulevard during the AM peak hour

[1] The CA MUTCD establishes criteria based on peak hour traffic volumes which, when met, would satisfy a traffic signal warrant.

Table 4.13-16
Freeway Operations—Future Baseline (2030) Conditions

Freeway Facility			AM Peak		PM Peak	
Mainline Segments			**LOS**	**Density**	**LOS**	**Density**
1	I-680: North of North Main Street	NB	C	26.0	E	38.0
		SB	D	28.4	C	22.3
2	I-680: South of SR-24	NB	D	28.2	C	25.6
		SB	C	25.9	D	26.5
3	SR-24: West of I-680	EB	C	18.3	E	41.0
		WB	F	46.8	C	20.7
Ramp Junctions			**LOS**	**Density**	**LOS**	**Density**
4	I-680: NB On-Ramp from Olympic Boulevard		F	49.3	F	50.5
5	I-680: NB Off-Ramp to Olympic Boulevard		D	29.2	D	29.0
6	I-680: SB On-Ramp from Olympic Boulevard		C	21.4	C	26.3
7	I-680: SB Off-Ramp to Olympic Boulevard		E	39.1	F	41.6
8	I-680: NB Off-Ramp to Ygnacio Valley Road		F	77.7	F	56.1
9	SR-24: WB On-Ramp from Mount Diablo Boulevard		F	32.2	C	21.1
10	SR-24: EB Off-Ramp to Mount Diablo Boulevard		B	16.8	C	27.9

Notes:

Density is based on passenger cars per hour per travel lane (pc/h/ln).

Source: AECOM 2012

4.13.2 REGULATORY SETTING

STATE

California Department of Transportation

Caltrans is responsible for planning, design, construction and maintenance of all state highways. Caltrans' jurisdiction includes improvements to the interchange ramps serving area freeways. The Guide for the Preparation of Traffic Impact Studies provides consistent guidance for Caltrans staff who review local development and land use change proposals. The Guide also informs local agencies about the information needed for Caltrans to analyze the traffic impacts to state highway facilities which include freeway segments, on- or off-ramps, and signalized intersections. Caltrans facilities in the Project area include I-680, SR-24, and the on- and off-ramps from these state facilities.

LOCAL

Contra Costa County: Measures C and J

The local Congestion Management Program (CMP) requires each jurisdiction to identify existing and future transportation facilities that would operate below an acceptable service level, and to provide mitigation where future growth would degrade that service level.

Standards for roadway operations in Walnut Creek are defined on a countywide basis. In 1988, Contra Costa County voters passed Measure C, which raised the sales tax to provide funding for regional transportation improvements. Measure C requires local jurisdictions to adopt and implement a growth control program to receive their share of funds for transportation projects, including maintenance.

Measure J, approved by the voters in 2004, authorized the extension of Measure C and establishes the Transportation Sales Tax Expenditure Plan, which extends the transportation sales tax initially authorized by the passage of Measure C.

The Measure C Growth Management Program establishes a cooperative, multi-jurisdictional planning process requiring participation from all cities and towns and the County in managing the impacts of growth in Contra Costa County. This Program sets standards for regional and non-regional routes in Contra Costa County, which the City of Walnut Creek has incorporated into its General Plan 2025 (2006). These standards are tied to land use, and provide for a tiered system, using different standards for different types of streets.

The CCTA was established to implement Measure C and its overall goals. Local jurisdictions work through their respective Regional Transportation Planning Committees. For central Contra Costa County, the Transportation Partnership and Cooperation Committee (TRANSPAC) developed the Central Contra Costa Action Plan for Routes of Regional Significance (CCTA 2009b), which have identified multi-modal transportation service objectives (MTSOs) for routes of regional significance (RRS), including Ygnacio Valley Road in the City of Walnut Creek. The CCTA updated the Action Plans and incorporated them into its Countywide Transportation Plan Update (CCTA 2009a).

The transportation analysis in this document was prepared in accordance with CCTA's Technical Procedures, which were developed to assist local agencies in implementing the Growth Management Program.

City of Walnut Creek General Plan 2025

The General Plan 2025 contains the following goals, policies, and action statements related to transportation and traffic.

Chapter 2, Quality of Life

Goal 8. Make Walnut Creek a community accessible to all.

> Action 8.1.2. As part of the City's project review processes, consider the needs of persons of all abilities.

Chapter 4, Built Environment

Goal 10. Coordinate the location, intensity, and mix of land uses with transportation resources.

- Policy 10.2. For specific sites where traffic congestion could be significantly improved and view corridors would not be adversely impacted, consider supporting a change to Measure A height limits.

Goal 11. Create a balanced, safe, and efficient regional and subregional transportation system.

- Policy 11.2. Implement Measure C and plan for the implementation of Measure J.

  Action 11.2.1. Demonstrate compliance with all components of the Measure C (1988) and Measure J (2004) Growth Management Program.

  Action 11.2.2. At a minimum, comply with the Measure C adopted standards for Level of Service at intersections along Basic Routes.

- Policy 11.3. Require that new development pay its share of costs associated with growth.

  Action 11.3.1. Implement TRANSPAC's Regional Transportation Mitigation Program with respect to new regional development and its impacts on Walnut Creek roadways.

  Action 11.3.2. Assess a traffic impact fee on new development.

  Action 11.3.3. Apply the Transportation Authority's travel demand model (as updated from time to time) in analyzing developments that exceed Measure J thresholds.

Goal 12. Make more efficient use of the regional and subregional transportation system.

- Policy 12.1. Promote the use of carpools and vanpools.

  Action 12.1.3. Encourage transportation demand management (TDM) programs in new development.

- Policy 12.2. Support infill and redevelopment in existing urban areas.

Goal 19. Enhance the urban design quality of the Core Area[2] and its subareas.

- Policy 19.2. Improve directional signage for pedestrians and vehicles in the Core Area.

[2] The extent of the Core Area is shown in Figure 4.13-6.

Chapter 5, Transportation

Goal 3. Maintain a transportation network that provides mobility for all ages and abilities and for all areas of the community.

- Policy 3.1. Maintain the level of service standards for roadways shown in Figure 2 of the Walnut Creek General Plan for the City's transportation network.

Goal 6. Provide a safe and attractive walking environment accessible to all.

- Policy 6.1. Provide safe and attractive pedestrian routes along arterials and collectors leading to schools, along arterials or collectors that carry high traffic volumes, on all downtown streets, along major streets leading to the downtown, and on all streets leading to transit facilities.
- Policy 6.2. Require full-frontage curb and sidewalk improvements in all commercial areas.
- Policy 6.4. Facilitate use of public sidewalks and walkways throughout the city.

Goal 7. Increase transit ridership and service to employment, schools, shopping, and recreation.

- Policy 7.3. Link high-density residential developments, schools, employment centers, and shopping areas via transit.
- Policy 7.5. Develop a comprehensive plan with County Connection (CCCTA) to install public transit amenities such as benches, passenger shelters, and walkways.

  Action 7.5.4. Require, where appropriate, that new developments provide transit amenities as a condition of project approval.

Goal 8. Serve as a model for other cities by providing a comprehensive TDM program that strives to decrease the use of the automobile and reduce peak-period traffic congestion.

- Policy 8.2. Seek new and innovative methods and programs that address peak-period congestion.
- Policy 8.3. Manage employee parking supply and demand in all commercial areas.
- Policy 8.5. Link high-density residential developments, employment centers, and shopping areas via transit, bikeways, and walkways.

Goal 9. Provide a pedestrian-friendly downtown.

Goal 12. Provide convenient and adequate parking.

Goal 13. Provide convenient and adequate loading facilities in the Core Area.

City of Walnut Creek Zoning Ordinance: Parking and Loading Requirements

The Walnut Creek Zoning Ordinance prescribes the required parking ratios and loading spaces for both residential and commercial uses in most zoning districts. The proposed Project is located within the

Pedestrian-Retail District. Within this district, residential parking requirements are established by the Planning Commission in the course of considering each proposed development's Conditional Use Permit (CUP). Accordingly, the number of parking spaces that would be required of the proposed Project's residential component would be determined by the Planning Commission during the CUP consideration process. However, the Project site is within 0.5 mile of the Walnut Creek BART station, and therefore, is within an area where BART-proximate parking standards generally are extended to residential development.

Similar to the parking requirements, the overall provision for residential and retail off-street loading spaces would be subject to the City of Walnut Creek's Municipal Code. Per Section 10-2.3.206, Table B of the Municipal Code, for "Group I" land uses between 10,000 and 50,000 square feet, one loading space would be required. For "Group I" land uses larger than 50,000 square feet, two loading spaces would be required.

The bicycle parking requirements are summarized in Section 10-2.3.202 of the Walnut Creek Municipal Code. Section G-2 states that "the number of bicycle parking spaces shall be ten percent of the requirement for automobile spaces…"

City of Walnut Creek Zoning Ordinance: Traffic Impact Fees

In August 1989, the Walnut Creek City Council passed an ordinance establishing a Traffic Impact Fee (TIF) program (Walnut Creek Municipal Code, Section 10-5.101, et seq.). The purpose of the TIF is to collect sufficient funds for the construction of transportation improvements that will mitigate cumulative traffic impacts caused by new development.

The TIF is charged for all new development, with the exception of low-income housing, public parks, public open space, schools, day care facilities, public libraries, and places of religious assembly. It is determined by dividing the cost of transportation projects that mitigate new development's fair share of the impacts by the projected number of net new PM peak hour vehicle trips. Before issuance of either a building permit or certificate of occupancy, as the case may be, project applicants pay TIF funds into a separate interest-bearing account. Funds collected via the TIF program are earmarked for use for the construction of specific public improvements identified in the list of TIF eligible projects, which is approved by the City Council on a biennial basis.

4.13.3 Environmental Impact Analysis and Mitigation Measures

Standards of Significance

In accordance with CEQA, the effects of a project are evaluated to determine whether they will result in a significant adverse impact on the environment. In addition to CEQA significance criteria, the City of Walnut Creek's significance criteria, which are outlined in the General Plan 2025 (City of Walnut Creek 2006), were used to determine if the proposed Project would result in significant impacts. The significance criteria applied for this analysis are consistent with those established by the TRANSPAC, the regional transportation planning committee for Central Contra Costa County, and the City of Walnut Creek.

CEQA Significance Criteria

The thresholds for determining the significance of impacts in this analysis are consistent with the environmental checklist in Appendix G of the State CEQA Guidelines. The proposed Project would have a significant impact on transportation and traffic if it would:

1. conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

2. conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;

3. 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;

4. substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

5. result in inadequate emergency access; or

6. conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The Project site is not located within the vicinity of an airport. Thus, no impact related to air traffic patterns would occur, and Criterion 3 is not discussed further in this Draft EIR.

City of Walnut Creek Significance Criteria

According to the City of Walnut Creek's significance criteria, the proposed Project would have a significant impact on traffic if it would:

- cause the delay index to exceed 2.0 or the average travel speed to reduce to below 15 mph along Ygnacio Valley Road, which is classified as a Route of Regional Significance;

- result in a deterioration in intersection operation to high LOS E or worse (v/c ratio of 0.95 or higher) for the study intersections located east of I-680 and not on Ygnacio Valley Road (within the Core Area Roadways and Intersections boundary) (Intersections already operating at a v/c ratio greater than 0.95 under the baseline scenario would result in a significant impact if the v/c ratio increases by 0.05 (5 percent) or greater);

- result in deterioration in intersection operation to high LOS D or worse (v/c ratio of 0.85 or higher) for the study intersections located west of I-680 (on collector roads) (Intersections already operating at a v/c ratio of greater than 0.85 under the baseline scenario would result in a significant impact if the v/c ratio increases by 0.05 (5 percent) or greater); or

- exceed, either individually or cumulatively, a level of service standard established by the Contra Costa Transportation Authority for designated roads or highways (The Central Contra Costa Updated Action Plan identifies a significant impact as occurring when project-generated traffic causes the delay index on a Route of Regional Significance to exceed 2.0, or the average travel speed on a Route of Regional Significance to fall below 15 miles per hour.)

The Contra Costa Congestion Management Program establishes a standard of LOS F for intersections on Ygnacio Valley Road between I-680 northbound ramps and Walnut Boulevard.

Table 4.13-17 and Figure 4.13-6 summarize the relevant significance criteria for each study intersections. The "Core Area Roadways and Intersections" area extends to all signalized study intersections bounded by I-680, Iron Horse Regional Trail, and Walden Road. These criteria have been applied to Study Intersections 4, 6, 7, 9 through 15, 17, and 18. Study Intersections 2 and 3 are within the "Core Area Roadways and Intersections" area, but also are located on Ygnacio Valley Road. Accordingly, the Routes of Regional Significance criteria are applicable and have been used for these intersections. Study Intersections 1, 16, and 19 are located west of I-680 and on arterial roads; therefore, the applicable significance criteria have been used to evaluate these intersections.

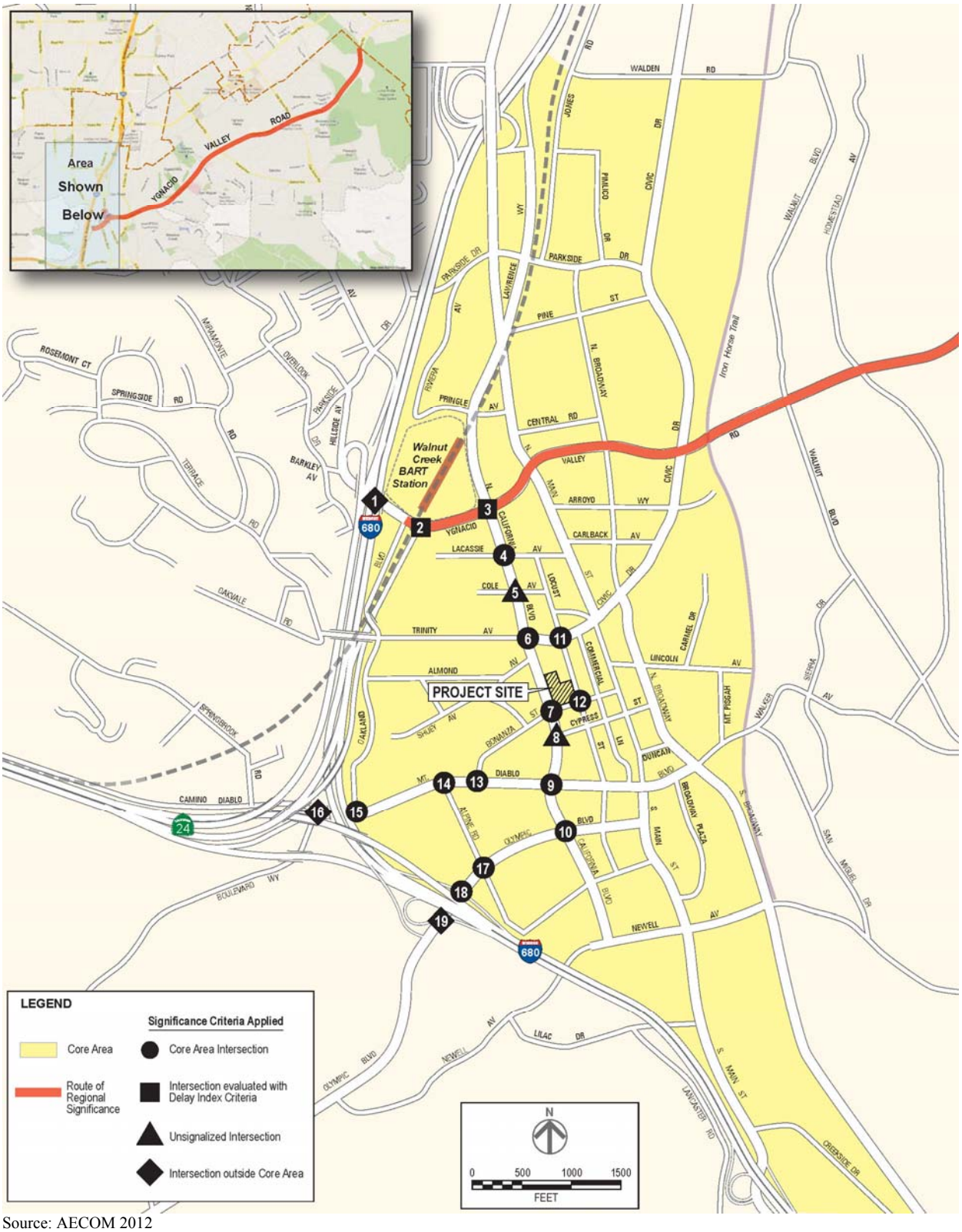
Table 4.13-17
Signalized Intersection Operation Significance Criteria

Intersection Location (Roadway Classification)	Intersection Operation	
	Before Project	With Project-Generated Traffic Volumes
On an Arterial Road outside of the Core Area	LOS A to high D	LOS E or worse (v/c of 0.90 or higher)
	LOS E or F	v/c increase of 0.05 or more
Core Area Roadways and Intersections	LOS A to low LOS E (v/c of 0.94 or lower)	High LOS E or worse (v/c of 0.95 or higher)
	High LOS E to F	v/c increase of 0.05 or more
On a Route of Regional Significance (Ygnacio Valley Road)	If Delay Index exceeds 2.0 or if peak hour average travel speed falls below 15 mph	

Note:

Delay Index is the ratio of "congested" travel time (average travel time during the congested AM and PM peak hours) to "uncongested" travel time (lowest surveyed travel time during the AM and PM peak hours).

Source: City of Walnut Creek 2006



Source: AECOM 2012

Figure 4.13-6 Applicable Significance Criteria for Study Intersections

The City of Walnut Creek has not adopted significance criteria specifically for unsignalized intersections, Study Intersections 5 and 8. However, Section 3-5.402(b) of the Walnut Creek Municipal Code (2012a) states that the City Traffic Engineer shall ascertain and determine the locations where traffic signals are required by making field observations, conducting traffic counts, and relying on other relevant traffic information. The Municipal Code further requires that the City Traffic Engineer make his or her determination in accordance with the traffic engineering and safety standards.

The CA MUTCD establishes criteria which, when met, would satisfy a traffic signal warrant. However, as the CA MUTCD expressly provides in Section 4C.01.02 (Caltrans 2012a), "the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal." Rather, per Section 4C.01.01, "an engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of a traffic control signal is justified at a particular location."

Thus, for the purposes of this analysis, significant impacts at unsignalized intersections are identified when the worst stop-controlled approach to the intersection operates at LOS F, the criteria of the CA MUTCD Peak Hour Traffic Volume Signal Warrant are met, and an engineering study considering the factors set forth has determined the need to adopt further traffic control measures.

Caltrans Significance Criterion

The proposed Project would have a significant impact on Caltrans freeway facilities if it would:

- fail to maintain operations at or above the LOS D threshold, or in cases where the freeway is already projected to operate deficiently at LOS E or F without the Project, failure to maintain the existing measure of effectiveness (MOE).

NON-CEQA TRANSPORTATION ANALYSIS

The following analyses are provided for information purposes only. The transportation issues addressed are of general interest and inform the public about the effects of the proposed Project. However, for the reasons cited below, CEQA significance conclusions are not applicable.

Parking Analysis

Off-Street Parking Spaces. Parking impacts are not changes to the physical environment; rather, parking conditions change over time as travel patterns change, and unmet parking demand created by a project is not considered a significant environmental impact under CEQA unless it would cause significant secondary effects.[3] Moreover, the December 2009 amendments to the State CEQA Guidelines (which became effective March 18, 2010) removed parking from the State's Environmental Checklist (Appendix G of the State CEQA Guidelines) as an environmental factor to be considered under CEQA. Parking supply/demand varies by time of day, day of week, and seasonally. As parking demand increases faster than the supply, parking prices rise to reach equilibrium between supply and demand. Decreased availability and increased costs result in changes to trip mode and pattern of travel. However, in its review of the proposed Project, the City of Walnut Creek wants to ensure that the provision of parking spaces along with measures to decrease parking demand (by encouraging the use of non-auto travel modes)

[3] *San Franciscans Upholding the Downtown Plan* v. *the City and County of San Francisco*, 102 Cal.App.4th 656, 2002.

would result in minimal adverse effects to proposed Project residents, workers, and visitors, and that any secondary effects would be minimized. Therefore, although not required by CEQA, and because no evidence exists that any parking shortage would occur that would result in secondary environmental impacts, parking conditions are evaluated in this document as a non-CEQA topic for informational purposes.

Parking deficits may be associated with secondary physical environmental impacts, such as air quality and noise effects caused by congestion resulting from motorists circling as they look for parking places. However, the absence of a ready supply of parking spaces combined with available alternatives to auto travel (e.g., transit, shuttles, taxis, bicycles, or walking) may induce motorists to shift to other modes of travel or change their usual travel habits.

In addition, regarding potential secondary effects, the scenario of motorists circling and looking for parking places in areas of limited parking supply typically is a temporary condition, often offset by a reduction in vehicle trips because of others who are aware of constrained parking conditions in a given area. Over time, motorists would be likely to become accustomed to using other parking facilities with availability in the area, as they become aware of any parking deficits in the immediate Project vicinity. Reductions in parking supply can be accommodated by the North Locust Garage, located directly north of the Project site, as well as the South Locust Garage, Broadway Garage, and Public Library Garage, located within four blocks of the Project site.

In summary, changes in parking conditions typically are considered to be social impacts rather than impacts on the physical environment. Accordingly, the following parking analysis is presented for informational purposes only about the existing on-street and proposed Project parking.

The proposed Project would provide the following parking:

- **Residential parking**: 182 spaces (including four ADA-compliant spaces)
- **Retail parking**: 28 spaces (including three ADA-compliant spaces)

Overall provision of residential and retail parking spaces is subject to the City of Walnut Creek's Municipal Code, which identifies parking requirements governing most zoning districts. The Municipal Code project parking requirements are as follows:

- **Residential Uses:** BART-proximate parking regulations would apply to the proposed Project's residential uses, as the proposed Project would be located within 0.5 mile of the Walnut Creek BART station. Per Section 10-2.3.206, Table C of the Municipal Code, the parking space requirements would be 1.0 for studio units, 1.25 for one-bedroom units, 1.5 for two-bedroom units, and 2.0 for three-bedroom units.
- **Commercial Uses:** Per Section 10-2.3.204(A) of the Municipal Code, the parking space requirements for the proposed Project's retail uses would be 1.0 per 300 square feet of rentable floor area.
- **Parking Reduction Zone:** Per Section 102-2.3.203(C) of the Municipal Code, the Project site also is located within two parking reduction zones—Zone B (which qualifies the Project for a 15-stall reduction) and Zone E (19-stall reduction).

The required number of parking spaces per the Municipal Code is summarized in Table 4.13-18. Reflecting the applicable Parking Reduction Zone credits, the Project Applicant is proposing an underground parking garage with 182 spaces for residential use (including four ADA-disabled spaces) and 28 off-street surface parking spaces (including three ADA-disabled spaces) for retail/visitor use, for a total of 210 on-site parking spaces.

Table 4.13-18
Proposed Parking Supply versus General Requirements

Land Use	Size	Municipal Code Parking Calculation		Project Parking Supply
		Code	Total	
Residential				
Studio	*14 units*	*1.0 per unit*	*14*	----
1-Bedroom	*85 units*	*1.25 per unit*	*106*	----
2-Bedroom	*42 units*	*1.5 per unit*	*63*	----
3-Bedroom	----	*2.0 per unit*	----	----
Subtotal	141 units	----	184	182
Retail				
	18,250 NSF	1.0 per 300 SF	61	28
Parking Reduction Zone B credits			(15)	
Parking Reduction Zone E credits			(19)	
Total	**----**	**----**	**210**	**210**
Source: AECOM 2012				

Loading Spaces. Pursuant to the City of Walnut Creek Municipal Code, Section 10-2.3.206, the proposed Project should provide three off-street loading spaces. The proposed Project would satisfy vehicular loading for commercial and residential purposes by providing spaces at three locations: 1) at a single dock loading area located just north of the entrance to the underground parking garage; 2) at the one-way egress driveway along the northern property line; and 3) on the street frontage along N. California Boulevard.

Bicycle Spaces. At this time, the total required parking has not been established, but the Project proposes to satisfy the requirement of 10 percent of the vehicular parking spaces proposed and the facilities are identified on the proposed Project plans (see Figure 3-3 and Figure 3-8).

On-Street Parking. The proposed Project would result in a reduction of three on-street parking spaces on N. California Boulevard. The existing on-street parking spaces abutting the Project site on N. California Boulevard have been observed to have high peak occupancies. This loss of on-street parking supply may be offset by nearby off-street parking facilities. Additionally, the proposed Project would result in a reduction of four on-street parking spaces near the Locust Street/Bonanza Street intersection. However, these four spaces would be replaced along Bonanza Street.

BART Analysis

An assessment of conditions on BART and at the Walnut Creek Station facilities has been undertaken, even though neither BART nor the City has any formal significance criteria with respect to transportation measures of effectiveness to determine significant impacts (Criterion 1 of the State CEQA Guidelines, Appendix G for transportation and traffic). As a result, the following analysis is for informational purposes only and considers:

- BART Load Factor, by examining the increase of BART passengers per car; and
- BART Faregate Capacity, by examining queue delays at the station faregates.

Existing ridership data was obtained from BART (2012). The data provides detailed information of commuter origins and destinations by hour for an average weekday.

Faregate Queues. Site observations were conducted at the Walnut Creek BART station faregates during the peak periods to determine the extent of current queues at the station faregates and to approximate the maximum delays occurring. The number of faregates open in each direction during the peak periods was also observed to provide an estimate of total faregate capacity.

The Walnut Creek BART station has an average daily ridership of 12,400. During the AM peak hour, 1,178 boardings and 318 alightings are made; during the PM peak hour, 466 boardings and 1,122 alightings are made. Site observations indicate that the greatest delays at the station faregates currently occur during the PM peak period when passengers are exiting the station.

For a conservative analysis of traffic impacts, all proposed Project trips have been assumed as vehicle trips. However, if a mode split of 20 percent is assumed for BART, the proposed Project would generate about 15 AM peak hour trips and 23 PM peak hour trips. Because approximately 10 trains are operated in the peak direction during the peak hour, the proposed Project would add an average of one or two passengers to each peak hour train, having a negligible effect on faregate queues.

Load Factor. Future increases in BART ridership generated by the proposed Project have been estimated based on the projected total trip generation and mode split calculations. Future (2030) background increases in BART ridership (non-Project related) were estimated using growth rates determined from the BART Ridership Model. The travel demand models estimate BART ridership on the Pittsburg/Bay Point line during the peak periods for an existing scenario and a future 2030 scenario.

Total boardings and alightings at the Walnut Creek BART station are projected to increase by approximately 30 percent between 2011 and 2030, from 12,400 to 16,150. Assuming boardings and alightings during the peak hours increase in proportion to overall ridership, 1,534 boardings and 414 alightings would be expected during the AM peak hour, and 607 boardings and 1,461 alightings would be expected during the PM peak hour in Future Baseline (2030) Conditions. By 2030, BART expects to reduce base headways from 15 minutes to 12 minutes on the Pittsburg/Bay Point Line, resulting in a 25 percent increase in service frequency. As noted above, the proposed Project would generate about 15 AM peak hour trips and 23 PM peak hour trips.

Because approximately 12 trains are expected to operate in the peak direction during the peak hour in 2030, the proposed Project would add an average of one or two passengers to each peak hour train, having a negligible effect on capacity. In summary, proposed Project-generated BART trips would be accommodated within expected capacity in Future Baseline (2030) Conditions.

Bus Analysis

Existing ridership data for each County Connection bus route has been collected. Future increases to bus ridership generated by the proposed Project have been estimated based on the predicted total trip generation and mode split calculations. Because neither County Connection nor the City has any formal significance criteria with respect to transportation measures of effectiveness to determine significant impacts (Criterion 1 of the State CEQA Guidelines, Appendix G, for transportation and traffic), determinations of impact significance cannot be made. Nevertheless, a qualitative assessment of conditions on bus facilities is provided.

For a conservative analysis of traffic impacts, all trips have been assumed as vehicle trips. However, the proposed Project is expected to generate some bus trips, given that three bus routes stop immediately adjacent to the Project site and that additional routes serve the Walnut Creek BART station, about 0.5 mile away. If a mode split of 3 percent is assumed for bus trips, the proposed Project would be expected to generate about 2 or 3 bus trips during each of the peak hours. Because this rate of trip generation would add an average of less than one passenger to any peak hour bus service, these trips would be accommodated within the existing capacity.

The Project site is served by three bus routes, and no changes to the number of transit stops or level of transit service would occur related to the proposed Project. The proposed Project would relocate the existing County Connection bus stop for northbound buses located north of Bonanza Street immediately adjacent to the Scott Valley Bank building, north of the right-in-right-out driveway providing site access. The proposed Project would maintain transit access and would not conflict with any transit plans, including the City of Walnut Creek's Climate Action Plan (CAP).

CEQA Assessment Methodology

Analysis Scenarios

The following analysis of proposed Project traffic impacts examines five analysis scenarios:

Existing (2012) Conditions: conditions as they existed at the time the data in question was collected in September 2012.

Baseline (2015) Conditions: existing conditions *plus* projects that anticipated to be constructed between the time that existing data was collected in September 2012 and June 2015, the earliest date when the proposed Project is expected to generate trips.

Baseline (2015) Plus the Proposed Project: existing conditions, with the addition of anticipated projects, plus the full implementation of the proposed Project.

Future Baseline (2030) Conditions: future conditions, including projected population and employment growth, as well as planned transportation system improvements contained in the latest CCTA travel demand model for the 2030 baseline cumulative scenario.

Future Baseline (2030) Conditions Plus the Proposed Project: future conditions plus the full implementation of the proposed Project. Existing traffic volume data and a list of projects and their land uses was provided by the City of Walnut Creek and is presented in Table 4.13-10. The projected peak hour traffic volumes generated by these projects was estimated to develop a reasonable baseline analysis scenario.

Project Trip Generation

Total trips expected to be generated by the projects were determined using ITE's Trip Generation (2008). A methodology incorporating non-primary trip reductions and internal trip capture was used to estimate mode split for each land use type to estimate vehicle trip generation, which was distributed onto the roadway network. Because of the proposed Project's downtown location near a variety of uses within walking and biking distance, many trips to and from the Project site's residential and retail uses are expected to be made via pedestrian and bicycle modes. Furthermore, many of these trips would be made via transit because several bus routes operate near the Project site and BART service is available within 0.5 mile. However, for a conservative analysis of traffic impacts, all projected trips are assumed to be vehicle trips. This assumption was made in collaboration with City staff.

The detailed Travel Demand Assumptions Memorandum, approved by the City of Walnut Creek, that discusses the assumptions used to estimate proposed Project trip generation is provided in Appendix I.7. A summary discussion of the processes used in projecting total trip generation and trip distribution is presented below.

Total trip generation estimates for the proposed Project land uses are based on rates from the ITE's Trip Generation (2008). Trip generation estimates for the residential portion of the proposed Project are calculated using the Apartment land use category (ITE Code 220). Trip generation estimates for the commercial portion of the proposed Project are calculated using the Shopping Center land use category (ITE Code 820), and a methodology recommended for commercial trip generation in downtown Walnut Creek. This commercial "Shopping Center" trip generation is an amalgamation of multiple land use categories, including the Retail, Restaurant, and Bank land use categories, which takes into account the characteristics of this area.

For the purposes of calculating transportation impacts, the City of Walnut Creek allows for vehicle trip reductions for the removal of existing and approved land uses on the Project site. The vehicle trip generation of existing land uses is calculated using the same methodology as described in the above section, for the amalgamated Shopping Center land use category (ITE Code 820), recommended for commercial trip generation in downtown Walnut Creek. The existing site trips were verified by counts conducted on Tuesday, September 11, 2012 by Quality Counts, LLC. The calculated vehicle trip generation is then subtracted from the total project vehicle trip generation, by peak hour and directionality, resulting in the net new project vehicle trip generation as presented in Table 4.13-19. As shown in Table 4.13-19, before the application of trip reductions associated with the removal of the existing land uses on the Project site (the Scott Valley Bank and the surface parking lot), the proposed Project would generate a total of 1,532 vehicle trips over the course of a day, including 84 during the

weekday AM peak hour (typically between the hours of 7:00 and 9:00 a.m.) and 150 during the weekday PM peak hour (typically between the hours of 4:00 and 6:00 p.m.).

After applying the trip reductions associated with the removal of active land uses on the Project site, the net new vehicle trips would be 1,160 vehicle trips for weekday daily, including 76 during the AM peak hour, and 113 during the PM peak hour.

As outlined in the Travel Demand Assumptions Memorandum provided in Appendix I.7, the trip reductions based on existing site uses were validated based on observations of existing driveway activity.

Table 4.13-19
Proposed Project Trip Generation Summary

Land Use	Size	Daily	Vehicle Trip Generation					
			Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Total	In	Out	Total
Proposed Project								
Residential	141 DU	978	15	58	73	62	33	95
Retail	18,250 NSF	554	7	4	11	27	28	55
Project Subtotal		1,532	22	62	84	89	61	150
Existing								
Existing Uses to be Removed[1]	12,253 SF	(372)	(5)	(3)	(8)	(18)	(19)	(37)
Net New Project Trips		1,160	17	59	76	71	42	113

Notes:

DU = dwelling units; NSF = net square feet; SF = square feet

1. Existing uses include a bank and a parking lot. Trip generation associated with these uses are calculated using Shopping Center land use category (ITE Code 820), with Downtown Walnut Creek specific methodology. Existing site trips were verified by counts made on Tuesday, September 11, 2012 by Quality Counts, LLC.

Source: AECOM 2012

Project Trip Distribution

Trip distribution (assignment of the projected vehicle trips generated by the proposed Project land uses) was derived from the Contra Costa Travel Demand Model, using the specific project land uses. The model considers vehicle trips generated by the residential land uses onto the external road network and vehicle trips generated by surrounding residents to the proposed Project retail land uses, as well as vehicle trips reassigned because of the closure of the existing surface parking lots.

Because of the predominantly residential nature of the proposed Project and the expectation that its commercial component is not expected to be “destination retail,” the same trip distribution percentages for both the residential and retail land uses were used. These two land uses were modeled as an aggregate in the CCTA Travel Demand Model; the development of a separate set of trip distribution percentages for each type of land use is not possible without performing successive regression analyses or performing multiple model runs.

Furthermore, the proposed Project's land uses, site, and adjacent transportation network are not distinctly unique to result in different trip distribution percentages for trips originating from and destined to the proposed Project.

The resulting trip distribution onto the external road network for both inbound and outbound vehicles is as follows:

- I-680 south: 27 percent
- I-680 north: 22 percent
- SR-24 west: 33 percent
- North Main Street: 1 percent
- Civic Drive: 1 percent
- South Broadway: 2 percent
- Ygnacio Valley Road: 3 percent
- Local streets within downtown Walnut Creek Core Area: 6 percent
- Local streets south of downtown Walnut Creek Core Area: 4 percent

Project Trip Assignment

The assignment of the peak hour vehicle trips onto the roadway network and through the 19 study intersections is provided in Appendix I.2.

PROJECT IMPACTS DISCUSSION

Traffic operations were evaluated for the Baseline Conditions scenario with the addition of proposed Project trips to determine the proposed Project impacts on the study intersections and freeway segments.

Although CEQA calls for an analysis of a project's effect on existing conditions, the proposed Project is not expected to generate trips until after June 2015. Consequently, an Existing plus Project scenario to identify effects to intersection operations, corridor operations on Ygnacio Valley Road, and freeway operations would not be a realistic portrayal of the proposed Project's effects, since these effects would not materialize until June 2015 at the earliest. Instead, a Baseline Conditions scenario serves as a more accurate basis for assessing impacts and developing mitigation measures associated with the proposed Project. Nonetheless, for informational purposes, existing conditions plus the proposed Project intersection operations, Ygnacio Valley Road delay index, and freeway operations are calculated and summarized in Appendix I.8.

TR-1. Construction vehicle traffic and construction activities related to the proposed Project would not affect the Project vicinity circulation (Criterion 1). (Less than Significant)

The proposed Project would be constructed over a period of 1.5 years. Development of the proposed Project would involve demolition of the existing structures and associated on-site surface parking on the site, and construction of various components.

During the demolition and construction period, a construction fence would be erected along the perimeter of the site, resulting in the temporary loss of approximately seven on-street parking spaces along Locust Street, four spaces along Bonanza Street, and three along N. California Boulevard. This reduction in non-street parking supply could be accommodated by the North Locust Garage directly north of the Project site, as well as the South Locust Garage, Broadway Garage, and Public Library Garage within four blocks of the Project site.

Demolition of the approximately 5,272-square-foot, vacant one-story restaurant and 25-space surface parking lot, the 6,981-square-foot, two-story Scott Valley Bank, ATM kiosk, and the 35-space surface parking lot currently on the Project site would take place over a period of approximately 6 working days, and site preparation would be completed in approximately 25 working days. An estimated 32,745 cubic yards of debris—including approximately 3,995 cubic yards of demolition debris from the existing buildings, 750 cubic yards of asphalt surface material, and 28,000 cubic yards of grading and excavation soil—would be off-hauled for disposal in accordance with the Walnut Creek Construction Debris Ordinance. Demolition activities are expected to amount to 68 daily tractor trailer, dump truck, or concrete truck trips; 5 daily delivery truck/van trips; and 6 daily personal vehicle trips.

During the approximately 18-month construction period, there would be an average of approximately 150 workers on site daily. The need for backfill soil import is not anticipated; import of roadway base material for surface lots and adjacent street repairs is estimated to total less than 100 cubic yards, or ten truck trips.

New asphalt paving on adjacent streets may entail one-tenth acre of paving; on-site paving is anticipated to use concrete and/or pavers, no asphalt. Trips generated during construction would vary according to the type of activity:

- Construction of the concrete podium, anticipated to take place over a period of 105 working days, is expected to generate 11 daily tractor trailer, dump truck, or concrete truck trips; four daily delivery truck/van trips; and 18 daily personal vehicle trips;
- Wood framing, anticipated to take place over a period of 95 working days, is expected to generate seven daily delivery truck/van trips; and 22 daily personal vehicle trips;
- Construction of the exterior envelope and rough-in of building interiors, anticipated to take place over a period of 168 working days, is expected to generate six daily delivery truck/van trips; and 30 daily personal vehicle trips;
- Interior finishing, anticipated to take place over a period of 84 working days, is expected to generate 5 daily delivery truck/van trips; and 30 daily personal vehicle trips;

- Courtyard hardscaping and landscaping, anticipated to take place over a period of 84 working days, is expected to generate 1 daily tractor trailer, dump truck, or concrete truck trip; four daily delivery truck/van trips; and 18 daily personal vehicle trips; and

- Sidewalk and exterior flatwork activities, anticipated to take place over a period of 21 working days, is expected to generate one daily tractor trailer, dump truck, or concrete truck trips; five daily delivery truck/van trips; and 18 daily personal vehicle trips.

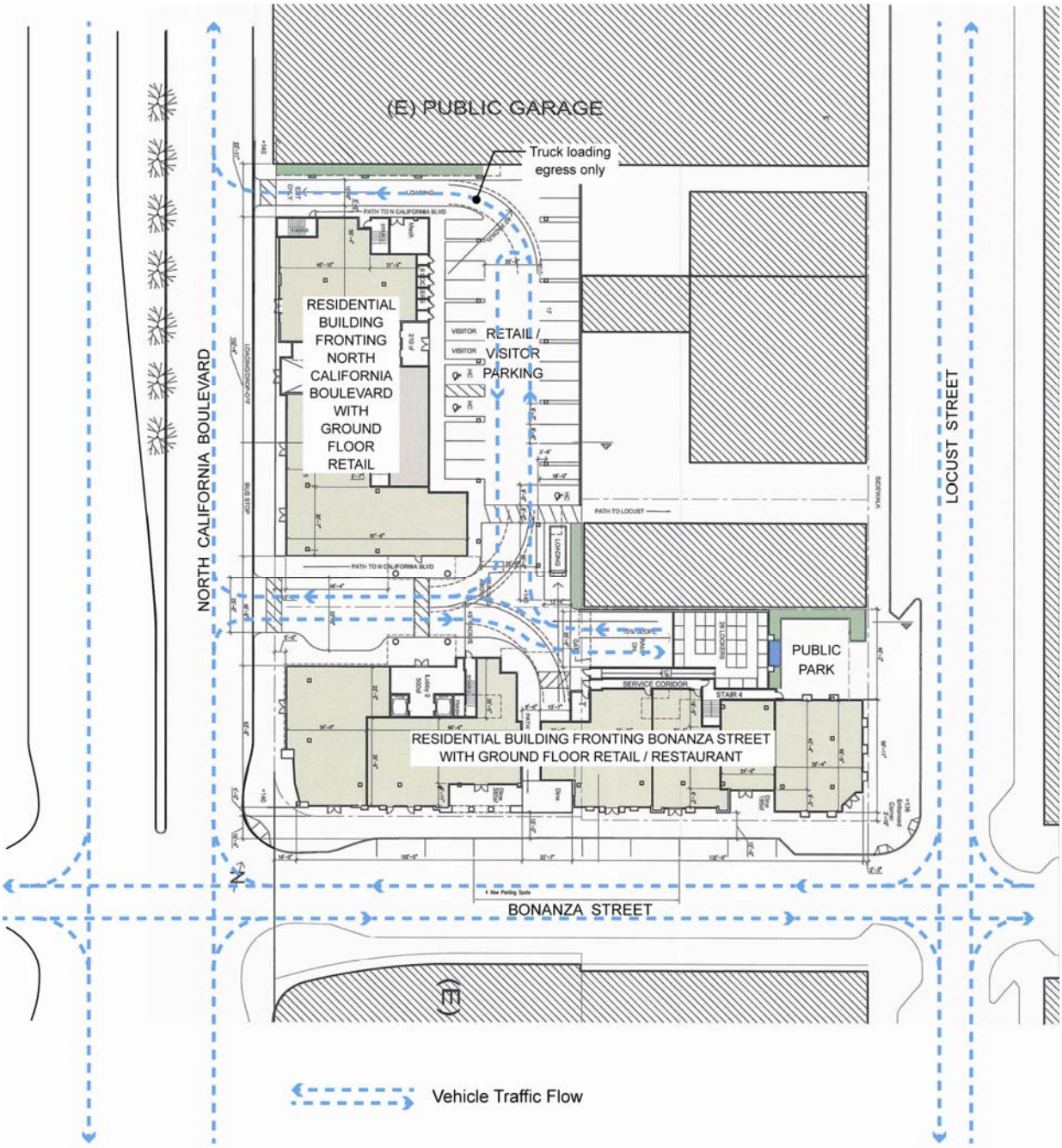
Truck traffic would access the site during the construction period via N. California Boulevard, entering through a gate in the northwestern corner of the Project site. Truck traffic leaving the site would exit at the same location, turning north on N. California Boulevard. The proportion of truck traffic entering and exiting the site expected during the peak periods is estimated to be fairly low, so that the impact of traffic related to construction on northbound N. California Boulevard would be *less than significant*. To further reduce construction traffic impacts on local streets and intersections, the following improvement measure is recommended.

Improvement Measure TR-1.1: Develop a construction management plan. The Project Applicant and construction contractor(s) shall meet with appropriate City staff to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this Project and other nearby projects that could be simultaneously under construction. The Project Applicant shall develop a construction management plan for review and approval by the City.

Implementation:	Project Applicant and construction contractor(s)
Timing:	Develop plan before construction activities; implement plan during construction
Enforcement:	City of Walnut Creek

TR-2. The proposed Project would generate new vehicle trips but the proposed ingress and egress would not adversely affect local circulation around the Project site (Criterion 1). (Less than Significant)

The existing site circulation provides two ingress-only and two egress-only driveways along Bonanza Street, each providing access from both directions of travel. In addition, two right-out egress driveways and one right-in-right-out access to northbound N. California Boulevard are provided. The proposed Project would result in the elimination of all four access points along Bonanza Street, and the provision of one right-in-right-out access point and one right-out for truck loading egress only driveway along northbound N. California Boulevard. The right-in-right-out access point would serve as the access to/from the retail/visitor parking and the underground resident parking. The proposed on-site vehicle circulation routes are shown in Figure 4.13-7.



Sources: Kwan Henmi and Laconia 2012, AECOM 2012

Figure 4.13-7 Proposed Project Vehicle Circulation

From the right-in-right-out driveway, patrons of the proposed Project's retail component would enter the site and park by driving 150 feet (i.e., six car lengths) to the retail/visitor parking lot. Retail parking would operate on a first-come, first-served basis. Patrons of the proposed Project's retail component would exit the site by returning to the right-in-right-out access driveway. Residents would enter the site and park by driving 175 feet (i.e., seven car lengths) from the right-in-right-out access driveway to enter the proposed Project's underground resident parking, and exit by returning to the right-in-right-out access driveway.

The proposed Project would generate as many as 22 inbound vehicle trips during the weekday AM peak hour (corresponding to one arrival every 3 minutes) and 89 inbound vehicle trips during the weekday PM peak hour (corresponding to 1.5 arrivals per minute). This level of vehicular ingress would be unlikely to generate internal queuing large enough to reach N. California Boulevard, as the time associated with parking maneuvering (approximately 5 to 20 seconds per vehicle) would be less than the AM and PM peak hour arrival rates. Similarly, vehicular ingress would be unlikely to affect traffic operations along N. California Boulevard, as the east-most lane adjacent to the primary driveway would be 18 feet wide, allowing sufficient space for inbound driveway maneuvering without negatively affecting flow along northbound N. California Boulevard.

The proposed Project would generate as many as 62 outbound vehicle trips during the weekday AM peak hour (corresponding to approximately one departure per minute) and 61 outbound vehicle trips during the weekday PM peak hour (corresponding to approximately one departure per minute). This level of vehicular activity would not be expected to have a substantial effect on traffic circulation, as the signal at the N. California Boulevard/Bonanza Street intersection would create sufficient gaps in northbound traffic to allow outbound Project trips to enter N. California Boulevard from the right-in-right-out access driveway without disrupting operations.

Therefore, the proposed Project would not affect vehicle circulation with respect to vehicular access to the Project site. The impact would be *less than significant.*

TR-3. The proposed Project would generate new vehicle trips that would affect the study intersections; however, each signalized and unsignalized study intersection would continue to operate at acceptable levels under the Baseline Conditions plus proposed Project scenario (Criterion 1). (Less than Significant)

Because the proposed Project is not expected to generate trips until after June 2015, the "Baseline Conditions" scenario, rather than the "Existing Conditions" scenario, serves as the basis for assessing impacts and developing mitigation measures with respect to intersection operations. The calculated trips are added to the Baseline Conditions intersection turning movement volumes. The Baseline plus the proposed Project traffic volumes at each of the 19 study intersections are provided in Appendix I.2. The LOS under Baseline Conditions plus the proposed Project for each of the 19 study intersections is summarized in Table 4.13-20, and provides a comparison with the LOS under the Baseline Conditions, which was presented earlier in Table 4.13-11. The comparison enables an evaluation of which intersections would experience a significant impact as a result of the Baseline Conditions plus proposed Project trips.

Table 4.13-20
Intersection Operations—Baseline Plus Proposed Project

		AM Peak			PM Peak		
Signalized Intersections		**LOS & v/c**			**LOS & v/c**		
		Baseline	**Baseline+ Project**	**v/c incr.**	**Baseline**	**Baseline+ Project**	**v/c incr.**
1	Ygnacio Valley Road and I-680 SB On-Ramp	A 0.445	A 0.445	0.000	A 0.492	A 0.492	0.000
2	Ygnacio Valley Road/I-680 NB Off-Ramp/BART Access/Oakland Boulevard	Performance standard on Ygnacio Valley Road is based on Delay Index					
3	Ygnacio Valley Road and N. California Boulevard	Performance standard on Ygnacio Valley Road is based on Delay Index					
4	N. California Boulevard and Lacassie Avenue	A 0.322	A 0.323	0.001	A 0.473	A 0.475	0.002
6	N. California Boulevard/Trinity Avenue/Civic Drive	A 0.473	A 0.494	0.021	A 0.503	A 0.505	0.002
7	N. California Boulevard and Bonanza Street	A 0.371	A 0.384	0.013	A 0.540	A 0.570	0.030
9	N. California Boulevard and Mount Diablo Boulevard	A 0.447	A 0.456	0.009	A 0.598	B 0.620	0.022
10	South California Boulevard and Olympic Boulevard	A 0.440	A 0.443	0.003	A 0.555	A 0.569	0.014
11	Locust Street and Civic Drive	A 0.204	A 0.210	0.006	A 0.359	A 0.364	0.005
12	Locust Street and Bonanza Street	A 0.130	A 0.139	0.009	A 0.269	A 0.277	0.008
13	Mount Diablo Boulevard and Bonanza Street	A 0.201	A 0.202	0.001	A 0.443	A 0.449	0.006
14	Mount Diablo Boulevard and Alpine Road	A 0.537	A 0.538	0.001	B 0.661	B 0.668	0.007
15	Mount Diablo Boulevard and Oakland Boulevard	B 0.660	B 0.664	0.004	B 0.697	C 0.710	0.013
16	Mount Diablo Boulevard/SR-24 Ramps/Camino Diablo/Boulevard Way	A 0.489	A 0.495	0.006	A 0.565	A 0.569	0.004
17	Olympic Boulevard and Alpine Road	A 0.415	A 0.421	0.006	A 0.544	A 0.548	0.004
18	Olympic Boulevard and I-680 NB Ramps	B 0.607	B 0.616	0.009	E 0.937	E 0.948	0.011
19	Olympic Boulevard/I-680 SB Ramps/Paulson Lane	A 0.469	A 0.470	0.001	A 0.510	A 0.510	0.000
Unsignalized Intersections		**LOS & delay**			**LOS & delay**		
		Base	**Base+P**	**delay incr.**	**Base**	**Base+P**	**delay incr.**
5	N. California Boulevard and Cole Avenue	E 38.6	E 39.0	0.4	E 45.7	E 46.9	1.2
8	N. California Boulevard and Cypress Street	A 9.9	A 10.0	0.1	B 13.7	B 14.1	0.4

Note:

Bold indicates a significant impact.

Source: AECOM 2012

As shown in Table 4.13-20, the addition of proposed Project-generated traffic would not result in any of the study intersections exceeding the City's established standards of significance. Each signalized study intersection located within the City's "Core Area" would remain at LOS E or better, with a volume-to-capacity ratio lower than 0.95. Each signalized study intersection located along an arterial outside of the City's "Core Area" would remain at LOS D or better, with a volume-to-capacity ratio lower than 0.90. Each unsignalized study intersection would remain at LOS E or better, and the criteria of the CA MUTCD Peak Hour Traffic Volume Signal Warrant would not be met.

Since each signalized and unsignalized study intersection would continue to operate at acceptable levels under the Baseline Conditions plus proposed Project scenario, the proposed Project effects on study intersections would be *less than significant*.

TR-4. The proposed Project would generate new vehicle trips that would affect operations along Ygnacio Valley Road; however, the delay index would remain below 2.0 and the average speed along this corridor would remain above 15 miles per hour under Baseline plus proposed Project conditions (Criterion 1). (Less than Significant)

The intersections located on the Ygnacio Valley Road corridor are subject to the significance criteria for Routes of Regional Significance. Accordingly, significant impact evaluations are based on the delay index calculations, which is expressed as the ratio of "congested" travel time divided by "uncongested" travel time. A significant impact is deemed to occur if the delay index increases to above 2.0 because of the addition of proposed Project traffic or if the average travel speed along Ygnacio Valley Road were to fall below 15 miles per hour.

Using Synchro software, the delay index was determined for Baseline and Baseline plus proposed Project scenarios. The resulting delay index for each scenario during both AM and PM peak hours and in both eastbound and westbound directions is presented below in Table 4.13-21. Detailed delay index output is provided in Appendix I.4.

Table 4.13-21 shows that under each scenario, the delay index along Ygnacio Valley Road would remain below 2.0. Synchro also projects that the average speed along this corridor would remain above 15 miles per hour in both scenarios. Therefore, corridor operations along Ygnacio Valley Road would not be adversely affected under the Baseline plus proposed Project Conditions, and the effect to this road would be *less than significant*.

Table 4.13-21 Ygnacio Valley Road Delay Index Summary—Baseline Conditions Scenarios				
	Eastbound		Westbound	
Scenario	Delay Index	Average Speed	Delay Index	Average Speed
AM Peak Hour				
Baseline	1.26	24	1.06	32
Baseline plus 1500 N. California Boulevard Project	1.26	24	1.06	32
PM Peak Hour				
Baseline	1.16	26	1.60	23
Baseline plus 1500 N. California Boulevard Project	1.16	26	1.60	23
Source: AECOM 2012				

TR-5. The proposed Project would generate new vehicle trips that could impact freeway operations; however, based on the significance criteria for each facility type, the proposed Project would not create a significant impact with regard to the operation of the surrounding freeway mainline and ramp facilities under Baseline plus proposed Project conditions. (Less than Significant) Under Existing plus proposed Project scenario, which the City determines is highly unlikely to ever transpire, the proposed Project would create a potentially significant impact than cannot be mitigated (Criterion 1).

Because the proposed Project is not expected to generate trips until June 2015, the "Baseline Conditions" scenario, rather than the "Existing Conditions" scenario, serves as the basis for assessing impacts and developing mitigation measures with respect to freeway operations.[4] The vehicle trips expected to be generated by the proposed Project are routed onto the freeway facilities and added onto the Baseline traffic volumes calculated for the Caltrans freeway facilities being evaluated.

The operations of the Caltrans freeway mainline and ramp facilities under the Baseline plus proposed Project scenario are summarized in Table 4.13-22 and provide a comparison with the projected operations under the Baseline Conditions, which were presented in Table 4.13-16.

[4] As noted above, the City has determined that June 2015, not Existing Conditions (2012), is the relevant Baseline against which to assess the Project's potential environmental impacts. While the addition of the proposed Project to the Baseline (2015) would not cause a significant impact to freeway operations, the data in Appendix I.8 forecast that the addition of the proposed Project to Existing Conditions (2012) would cause a change in LOS from D to E, which would be a significant impact. Such an impact is highly unlikely ever to occur given the development of other projects around the City between the time data for this document was collected in September 2012 and the time the Project would be constructed and contributing traffic to the freeway in 2015, i.e., the addition of the projects within the Baseline period. The data in Appendix I.8 shows that the change in LOS from D to E will occur with the addition of 20 trips. This threshold would be reached prior to the completion of construction of the proposed Project. The City maintains that the June 2015 Baseline is indeed the relevant point of comparison, but in the interest of full disclosure, denotes this scenario as a significant and unavoidable impact.

The table shows the following freeway mainline segments and ramps are projected to operate unacceptably at LOS E or F under Baseline conditions:

- SR-24 WB west of I-680 during the AM peak hour
- I-680 NB On-Ramp from Olympic Boulevard during both the AM and PM peak hours
- I-680 SB Off-Ramp to Olympic Boulevard during the PM peak hour
- I-680 NB Off-Ramp to Ygnacio Valley Road during both the AM and PM peak hours

The addition of proposed Project-related traffic is expected to result in increases in density of the freeway mainline and ramp segments. One of the freeway mainline segments and three ramp junctions are projected to operate at an unacceptable LOS E or F under Baseline Conditions, with and without the addition of proposed Project-related traffic. However, the freeway mainline segment and three ramp junctions that are projected to operate unacceptably under the Baseline Conditions would maintain their existing MOE and would not have a degradation in LOS. Therefore, based on the significance criteria for each facility type, the proposed Project would not create a significant impact on the operations of the surrounding freeway mainline and ramp facilities. In summary, the impacts of the Baseline plus proposed Project Conditions on freeway operations would be *less than significant*.

Table 4.13-22
Freeway Operations—Baseline Plus Proposed Project

Freeway Facility			AM Peak		PM Peak	
			Baseline	Baseline + Project	Baseline	Baseline + Project
Mainline Segments			**LOS and Density**			
1	I-680: North of North Main Street	NB	C 22.4	C 22.5	D 31.5	D 31.5
		SB	C 24.4	C 24.4	C 20.2	C 20.2
2	I-680: South of SR-24	NB	C 24.9	C 24.9	C 21.7	C 21.8
		SB	C 22.4	C 22.4	C 24.2	C 24.3
3	SR-24: West of I-680	EB	B 15.4	B 15.5	D 31.0	D 31.1
		WB	E 35.4	E 35.5	B 17.2	B 17.2

Table 4.13-22 Freeway Operations—Baseline Plus Proposed Project					
Freeway Facility		AM Peak		PM Peak	
		Baseline	Baseline + Project	Baseline	Baseline + Project
Ramp Junctions		LOS and Density			
4	I-680: NB On-Ramp from Olympic Boulevard	F 44.4	F 44.5	F 30.9	F 30.9
5	I-680: NB Off-Ramp to Olympic Boulevard	C 26.9	C 26.9	C 22.9	C 23.0
6	I-680: SB On-Ramp from Olympic Boulevard	B 20.0	C 20.1	C 23.2	C 23.3
7	I-680: SB Off-Ramp to Olympic Boulevard	D 30.4	D 30.4	E 36.7	E 36.8
8	I-680: NB Off-Ramp to Ygnacio Valley Road	F 62.6	F 62.8	F 44.2	F 44.3
9	SR-24: WB On-Ramp from Mount Diablo Boulevard	C 25.9	C 26.1	B 12.5	B 12.6
10	SR-24: EB Off-Ramp to Mount Diablo Boulevard	B 13.5	B 13.6	C 24.3	C 24.4

Notes:

Density is based on passenger cars per hour per travel lane (pc/h/ln).

Bold indicates a significant impact.

Source: AECOM 2012

TR-6. The proposed Project would not conflict with the CCTA congestion management program (Criterion 2). (Less than Significant)

The CCTA is the county's designated Congestion Management Agency, responsible for putting programs in place to keep traffic levels manageable. The CCTA Action Plan designates Ygnacio Valley Road as a Route of Regional Significance, and City of Walnut Creek corridor performance standards for Ygnacio Valley Road have been established in coordination with the CCTA and regional congestion management initiatives. As described under TR-4, the proposed Project would have a less-than-significant impact on the study intersections and the Ygnacio Valley Road corridor, because the delay index would remain below 2.0 and travel speeds would remain above 15 miles per hour under the Baseline plus proposed Project scenarios. Therefore, the impact would be *less than significant*.

TR-7. The proposed Project could increase hazards due to a design feature, resulting in conflicts between pedestrians and vehicles. In particular, pedestrians crossing the right-out-only egress-only driveway may not be visible to motorists exiting from that location (Criterion 4). (Potentially Significant)

As shown in Figure 4.13-8, the proposed Project would maintain existing pedestrian routes on the sidewalks along N. California Boulevard, Bonanza Street, and Locust Street. The proposed Project also would increase the width of the sidewalk on Locust Street. This feature would provide pedestrians with additional room on the sidewalk, and would reduce the distance to the opposite side of the street. In addition, the proposed Project would introduce new pedestrian connections through the Project site, including potential improvements to a privately owned walkway from the retail/visitor parking area to Locust Street.

The sidewalk on Bonanza Street currently is crossed by two ingress driveways and two egress driveways. With construction of the proposed Project, these driveways would be eliminated.

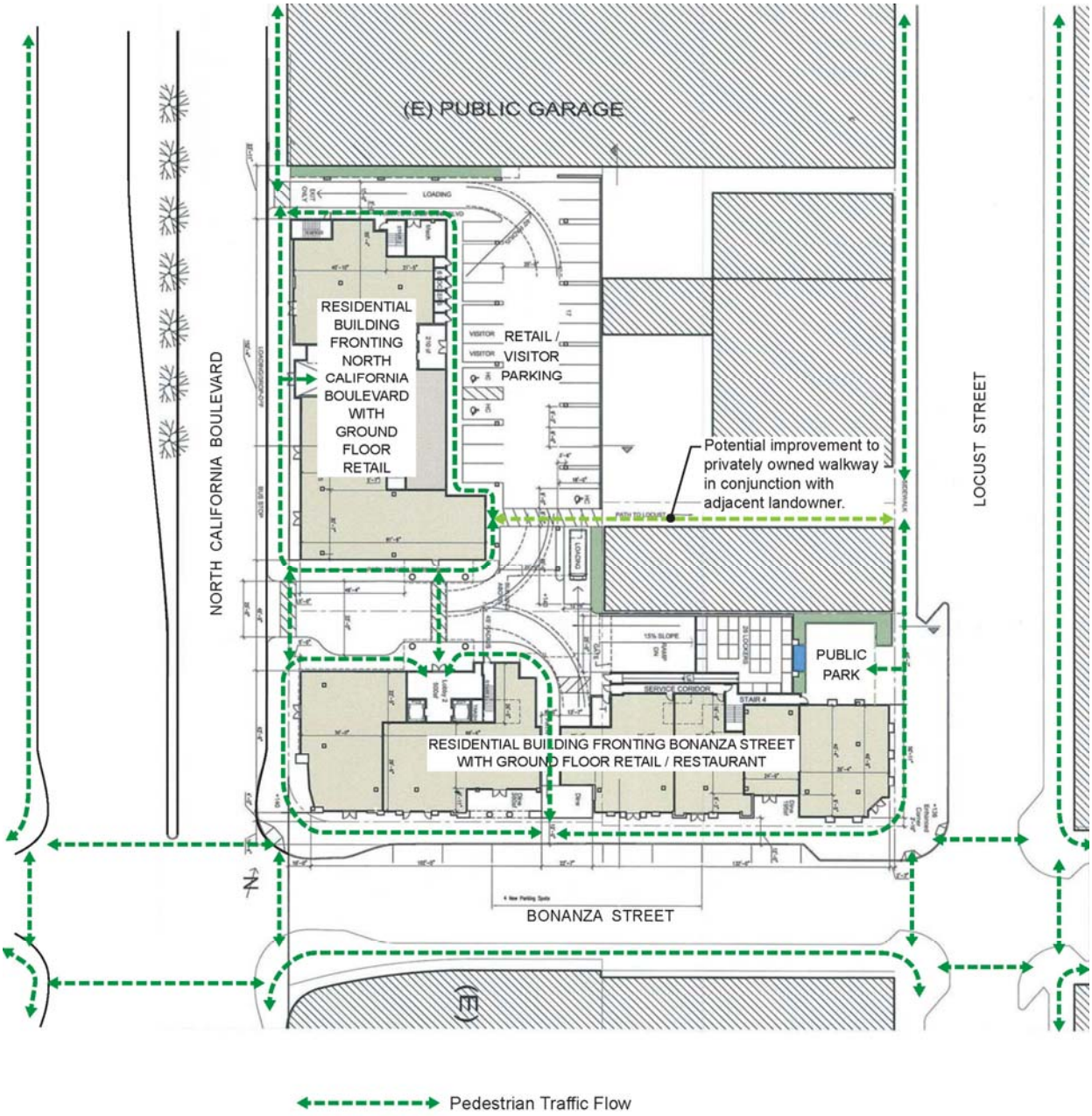
The sidewalk on N. California Boulevard is currently crossed by one right-in, right-out driveway and two right-out-only driveways. With the proposed Project, these driveways would be replaced with one right-in-right-out driveway providing site access, as well as an additional truck loading only, right-out egress driveway. As shown in Figure 4.13-8, the new driveways would be marked with striping and would be more visible than the existing driveways.

The greater intensity of proposed Project land uses would increase the amount of driveway traffic activity along N. California Boulevard and could result in potential conflicts between pedestrians and vehicles. Outbound trips are expected to predominate during the AM peak hour, and inbound trips during the PM peak hour. Approximately 75 percent of all peak hour trips are expected to be related to the residential uses and would therefore start or end in the underground residential parking garage, with the remaining trips related to the retail uses and making use of the surface retail/visitor parking lot.

Approximately 84 vehicles would enter and exit via the right-in-right-out access driveway during the AM peak hour. Thus, a vehicle would cross the pedestrian route along N. California Boulevard using the right-in-right-out access driveway about every 45 seconds during the AM peak hour.

About 150 vehicles would enter and exit via the right-in-right-out access driveway during the PM peak hour. Thus, a vehicle would cross the pedestrian route along N. California Boulevard using the right-in-right-out access driveway an average of every 25 seconds during the PM peak hour.

The greatest amount of driveway activity would be about twice a minute during the PM peak hour. This would cause little delay to pedestrians using the sidewalk along N. California Boulevard. Striping of the pedestrian driveway crossings as proposed would enhance their visibility and reduce the potential for conflicts between pedestrians and vehicles.



Sources: Kwan Henmi and Laconia 2012, AECOM 2012

Figure 4.13-8 Proposed Project Pedestrian Circulation

As the right-out, egress-only driveway at the north end of the site along northbound N. California Boulevard would be designated for truck loading traffic only, vehicles would cross the pedestrian route along N. California Boulevard at this point infrequently. However, because of the existing conditions of the adjacent North Locust Street Garage and its proximity to the Project site, a vehicle using the right-out, egress-only driveway may not be visible to pedestrians until the vehicle has partially entered the pedestrian route. Such a condition would represent a potentially hazardous condition, and therefore the impact of the right-out, egress-only driveway on pedestrian safety would be *potentially significant*.

Mitigation Measure TR-7.1: Install a pedestrian warning light and an audio warning device at the right-out, egress-only driveway to alert pedestrians of oncoming, exiting vehicles.

Implementation: Project Applicant

Timing: On operation of the right-out, egress-only driveway

Enforcement: City of Walnut Creek

Residual Effect: Implementation of Mitigation Measure TR-7.1 would reduce the potentially significant impact related to pedestrian and vehicle conflicts at the right-out, egress-only driveway to a *less-than-significant* level by providing pedestrians with sufficient warning of oncoming vehicles, thus avoiding collisions.

TR-8. The proposed Project would not result in inadequate emergency access (Criterion 5). (Less than Significant)

Emergency vehicle access would be provided from N. California Boulevard via the driveways and internal roadway located on the ground level. Development of the proposed Project would not reduce or eliminate the travel lanes on N. California Boulevard or Bonanza Street and emergency access to the Project vicinity would remain unchanged from existing conditions. Therefore, the impact would be *less than significant*.

TR-9. The proposed Project would not conflict with adopted policies, plans, or programs related to public transit (Criterion 6). (Less than Significant)

Given that the General Plan, through its Transportation Element and specifically Goal 7, seeks to increase transit ridership, the proposed Project's BART-proximate location and easy access to transit stops is anticipated to help facilitate achievement of this goal. For a conservative analysis of traffic impacts, all trips have been assumed as vehicle trips. However, the proposed Project is expected to generate some bus and BART trips, given that three bus routes stop immediately adjacent to the Project site and that additional routes serve the Walnut Creek BART station, about 0.5 mile away.

If a mode split of 3 percent is assumed for bus trips, the proposed Project would be expected to generate about 2 or 3 bus trips during each of the peak hours. Because this rate of trip generation would add an average of less than one passenger to any peak hour bus service, these trips would be accommodated within the existing capacity.

The Project site is served by three bus routes, and no changes to the number of transit stops or level of transit service would occur related to the proposed Project. The proposed Project would relocate the existing County Connection bus stop for northbound buses located north of Bonanza Street immediately adjacent to the Scott Valley Bank building, north of the right-in-right-out driveway providing site access. Relocation of the bus stop would maintain the Project site's accessibility to transit services.

If a mode split of 20 percent is assumed for BART, the proposed Project would generate about 15 AM peak hour trips and 23 PM peak hour trips. Because approximately 10 trains are operated in the peak direction during the peak hour, the proposed Project would add an average of one or two passengers to each peak hour train, having a negligible effect on both capacity utilization and queuing delays. Therefore, proposed Project-generated BART trips would be accommodated within existing capacity.

The proposed Project would maintain transit access, increase transit ridership, and would not conflict with any transit plans, including the City of Walnut Creek's Climate Action Plan (CAP). Therefore, the impact of the proposed Project on adopted plans related to transit would be *less than significant*.

TR-10. The proposed Project would not affect bicycle conditions; it would not conflict with adopted policies, plans, or programs related to bicycle facilities (Criteria 1 and 6). (No Impact)

The proposed Project would not result in any changes to the local bicycle network as shown in Figure 4.13-5. Currently, the Class II bicycle lanes along N. California Boulevard are discontinuous in the northbound direction on the block adjacent to the Project site (between Bonanza Street and Civic Drive). As shown in Figure 4.13-5, Class II bicycle lanes along the block adjacent to the Project site are proposed to be constructed in the future. The Project proposes reconfiguration of the driveways accessing N. California Boulevard; however, this would have no effect on the lack of a bicycle lane along this block and would allow for construction of these facilities in the future along N. California Boulevard. Parking for bicycles is proposed to serve the proposed Project's residential and retail uses, in the form of bicycle lockers and racks. Subsection G of Section 10-2.3.202 of the Walnut Creek Municipal Code defines the bicycle parking requirements for new developments. Essentially, bicycle parking amounting to 10 percent of the requirement for automobile parking must be provided. The inclusion of bicycle facilities as part of the proposed Project would satisfy the Municipal Code's requirements and support the goals of the City of Walnut Creek's CAP. Thus, the proposed on-site bicycle parking meets City code, is considered adequate for these land uses, and would provide bicycle parking spaces. Therefore, the impact would be *less than significant*.

CUMULATIVE IMPACTS DISCUSSION

Traffic operations are evaluated for the Future Baseline (2030) scenario with the addition of proposed Project trips to determine whether the proposed Project results in significant impacts on the study intersections and freeway segments. Projections of bus ridership, bicycle conditions, or pedestrian conditions in 2030 are not available; therefore, cumulative project impacts with respect to these transportation topics are not addressed.

TR-CU-1. The Future Baseline (2030) plus proposed Project conditions would result in two intersections operating at unacceptable levels during the AM and PM peak hours; however, both intersections operate at unacceptable levels even without the proposed Project. (Less than Significant)

The calculated project trips are added to the Future Baseline intersection turning movement volumes. The resulting Future Baseline (2030) plus proposed Project traffic volumes at each of the 19 study intersections are provided in Appendix I.2.

The LOS under Future Baseline (2030) Conditions plus the proposed Project for each of the 19 study intersections is summarized in Table 4.13-23, and provides a comparison with the LOS under Future Baseline (2030) Conditions, which was presented earlier in Table 4.13-14. The comparison enables an evaluation of which intersections would experience a significant impact as a result of the proposed Project under Future Baseline (2030) Conditions. As shown in Table 4.13-23, all of the intersections except Study Intersections 18 and 5 would operate an acceptable LOS during the weekday AM and PM peak hours with and without the addition of the proposed Project under Future Baseline (2030) conditions.

Study Intersection 18 (Olympic Boulevard/I-680 NB Ramps) would operate at an unacceptable LOS F during the weekday PM peak hour, with and without the addition of proposed Project-generated traffic. Per the City's established standards of significance, the proposed Project would result in an impact at this location if the volume-to-capacity ratio increase was more than 0.05. Since the addition of Project-related traffic would increase the volume-to-capacity ratio increase by 0.011, this impact is considered less than significant at this location.

Study Intersection 5 (N. California Boulevard/Cole Avenue) would also operate at an unacceptable LOS F, with and without the addition of proposed Project-generated traffic. The delays at this intersection would meet the criteria of the CA MUTCD Peak Hour Traffic Volume Signal Warrant. The proposed Project's incremental contribution to this delay would be 1.6 seconds in the AM peak and 18 seconds in the PM peak. This represents a 3.7 percent increase in the PM peak; this de minimis increase is not a cumulatively considerable contribution. The proposed Project's cumulative impact is therefore *less than significant*.

Table 4.13-23
Intersection Operations—Future Baseline (2030) Plus Proposed Project

		AM Peak			PM Peak		
Signalized Intersections		**LOS & v/c**			**LOS & v/c**		
		Future Baseline	**Future Baseline+ Project**	**v/c incr.**	**Future Baseline**	**Future Baseline+ Project**	**v/c incr.**
1	Ygnacio Valley Road and I-680 SB On-Ramp	A 0.555	A 0.556	0.001	A 0.578	A 0.579	0.001
2	Ygnacio Valley Road/I-680 NB Off-Ramp/BART Access/Oakland Boulevard	Performance standard on Ygnacio Valley Road is based on Delay Index					
3	Ygnacio Valley Road and N. California Boulevard	Performance standard on Ygnacio Valley Road is based on Delay Index					
4	N. California Boulevard and Lacassie Avenue	A 0.431	A 0.432	0.001	A 0.561	A 0.563	0.002
6	N. California Boulevard/Trinity Avenue/Civic	B 0.604	B 0.625	0.021	B 0.620	B 0.622	0.002

Table 4.13-23
Intersection Operations—Future Baseline (2030) Plus Proposed Project

		AM Peak			PM Peak		
	Drive						
7	N. California Boulevard and Bonanza Street	A 0.484	A 0.497	0.013	B 0.681	C 0.711	0.030
9	N. California Boulevard and Mount Diablo Boulevard	A 0.514	A 0.519	0.005	C 0.758	C 0.779	0.021
10	South California Boulevard and Olympic Boulevard	A 0.497	A 0.500	0.003	B 0.678	B 0.692	0.014
11	Locust Street and Civic Drive	A 0.245	A 0.254	0.009	A 0.410	A 0.415	0.005
12	Locust Street and Bonanza Street	A 0.161	A 0.170	0.009	A 0.367	A 0.374	0.007
13	Mount Diablo Boulevard and Bonanza Street	A 0.434	A 0.438	0.004	B 0.630	B 0.636	0.006
14	Mount Diablo Boulevard and Alpine Road	B 0.655	B 0.657	0.002	C 0.797	D 0.803	0.006
15	Mount Diablo Boulevard and Oakland Boulevard	C 0.767	C 0.770	0.003	D 0.809	D 0.822	0.013
16	Mount Diablo Boulevard/SR-24 Ramps/Camino Diablo/Boulevard Way	B 0.651	B 0.656	0.005	C 0.777	C 0.780	0.003
17	Olympic Boulevard and Alpine Road	A 0.521	A 0.527	0.006	B 0.622	B 0.626	0.004
18	Olympic Boulevard and I-680 NB Ramps	E 0.940	E 0.949	0.009	**F 1.243**	**F 1.254**	**0.011**
19	Olympic Boulevard/I-680 SB Ramps/Paulson Lane	D 0.883	D 0.883	0.000	B 0.649	B 0.649	0.000
Unsignalized Intersections		**LOS & delay**		**delay incr.**	**LOS & delay**		**delay incr.**
		FB	**FB+P**		**FB**	**FB+P**	
5	N. California Boulevard and Cole Avenue	**F 93.1**	**F 94.7**	**1.6**	**F 471.3**	**F 489.8**	**18.5**
8	N. California Boulevard and Cypress Street	B 10.4	B 10.4	0.0	C 16.3	C 16.9	0.6

Note:

Bold indicates a significant impact.

Source: AECOM 2012

TR-CU-2. The addition of project-generated traffic under Future Baseline (2030) Plus Proposed Project Conditions would not increase the delay index along Ygnacio Valley Road. (Less than Significant)

The delay index for the Ygnacio Valley Road corridor for each Future Baseline (2030) Conditions scenario during both AM and PM peak hours and in both eastbound and westbound directions is presented in Table 4.13-24. Table 4.13-24 shows that under each the Future Baseline (2030) and Future Baseline (2030) plus proposed Project scenarios, the delay index along Ygnacio Valley Road would remain below 2.0. Synchro also projects that the average speed along this corridor would remain above 15 miles per hour with and without the proposed Project. As a result, the cumulative effects of the Future Baseline plus proposed Project conditions would be *less than significant* on the study intersections and the Ygnacio Valley Road corridor.

Table 4.13-24 Ygnacio Valley Road Delay Index Summary—Future Baseline (2030) Conditions without and with the Proposed Project				
	Eastbound		Westbound	
Scenario	Delay Index	Average Speed	Delay Index	Average Speed
AM Peak Hour				
Future Baseline (2030)	1.55	20	1.17	30
Future Baseline (2030) plus proposed Project	1.55	20	1.17	30
PM Peak Hour				
Future Baseline (2030)	1.42	22	1.86	20
Future Baseline (2030) plus proposed Project	1.42	22	1.87	20
Source: AECOM 2012				

TR-CU-3. The addition of proposed Project-generated traffic under Future Baseline (2030) Plus Proposed Project Conditions would not affect the operation of the surrounding freeway mainline and ramp facilities. (Less than Significant)

The vehicle trips expected to be generated by the proposed Project are routed onto the freeway facilities and added onto the Future Baseline (2030) traffic volumes calculated for the Caltrans freeway facilities being evaluated.

The operations of the Caltrans freeway mainline and ramp facilities under the Future Baseline (2030) plus proposed Project scenario are summarized in Table 4.13-25 and provide a comparison with the projected operations under the Future Baseline (2030) Conditions, which were presented earlier in Table 4.13-16. The table shows the following freeway mainline segments and ramps are projected to operate unacceptably:

- I-680 NB north of North Main Street in the PM peak hour
- SR-24 west of I-680 EB in the PM peak hour and WB in the AM peak hour
- I-680 NB On-Ramp from Olympic Boulevard during both the AM and PM peak hours
- I-680 SB Off-Ramp to Olympic Boulevard during both the AM and PM peak hours
- I-680 NB Off-Ramp to Ygnacio Valley Road during both the AM and PM peak hours
- SR-24 WB On-Ramp from Mount Diablo Boulevard in the AM peak hour

One of the freeway mainline segments and three ramp junctions are projected to operate at an unacceptable LOS E or F under Future Baseline (2030) Conditions, with and without the addition of proposed Project-related traffic. However, the marginal increases in density at each of these locations as a result of proposed Project-related traffic are not cumulatively considerable. Therefore, the proposed Project would result in a *less-than-significant* cumulative impact on the operation of the surrounding freeway mainline and ramp facilities.

Table 4.13-25
Freeway Operations—Future Baseline (2030) Plus Proposed Project

Freeway Facility			AM Peak		PM Peak	
			Future Baseline	Future Baseline + Project	Future Baseline	Future Baseline + Project
Mainline Segments			**LOS and Density**			
1	I-680: North of North Main Street	NB	C 26.0	C 26.0	E 38.0	E 38.0
		SB	D 28.4	D 28.4	C 22.3	C 22.3
2	I-680: South of SR-24	NB	D 28.2	D 28.2	C 25.6	C 25.6
		SB	C 25.9	C 26.0	D 26.5	D 26.5
3	SR-24: West of I-680	EB	C 18.3	C 18.3	E 41.0	E 41.3
		WB	F 46.8	F 47.0	C 20.7	C 20.8
Ramp Junctions			**LOS and Density**			
4	I-680: NB On-Ramp from Olympic Boulevard		F 49.3	F 49.4	F 50.5	F 50.6
5	I-680: NB Off-Ramp to Olympic Boulevard		D 29.2	D 29.2	D 29.0	D 29.1
6	I-680: SB On-Ramp from Olympic Boulevard		C 21.4	C 21.5	C 26.3	C 26.4
7	I-680: SB Off-Ramp to Olympic Boulevard		E 39.1	E 39.2	F 41.6	F 41.7
8	I-680: NB Off-Ramp to Ygnacio Valley Road		F 77.7	F 77.9	F 56.1	F 56.2
9	SR-24: WB On-Ramp from Mount Diablo Boulevard		F 32.2	F 32.4	C 21.1	C 21.2
10	SR-24: EB Off-Ramp to Mount Diablo Boulevard		B 16.8	B 16.8	C 27.9	C 27.9

Note:
Density is based on passenger cars per hour per travel lane (pc/h/ln).
Bold indicates a significant impact.
Source: AECOM 2012

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