
3.12 - Transportation

3.12.1 - Introduction

This section describes the existing transportation setting and potential effects from implementation on of the Specific Plan on the Specific Plan area and its surroundings. Descriptions and analysis in this section are based on information contained in the North Camino Ramon Specific Plan traffic analysis, prepared by Kimley-Horn and Associates, Inc. and included in this EIR as Appendix E.

3.12.2 - Environmental Setting

Overview

The City of San Ramon is located within Contra Costa County in the San Francisco Bay Area region. The City is bounded by Alameda County to the west, the Town of Danville and unincorporated Contra Costa County to the north, unincorporated Contra Costa County to the east, and the City of Dublin/Alameda County to the south. The City of San Ramon is the southernmost incorporated jurisdiction within Contra Costa County.

The North Camino Ramon Specific Plan area is located adjacent to Interstate 680 (I-680), and extends from the City's northern boundary with the Town of Danville to portions of Executive Parkway in the center of the Bishop Ranch Business Park. The Specific Plan area is generally bounded by Fostoria Way to the north; Iron Horse Trail, Alcosta Boulevard, Camino Ramon to the east; the I-680 freeway to the west; and private property and Executive Parkway to the south. It contains approximately 255 acres, including existing roadways, and is characterized by a wide range of uses including retail, service commercial, professional offices, and warehouses.

Roadway System

This existing circulation network comprises interstates, arterials, collector streets, and local streets. The state freeway and some of the City's arterial streets are designated as Routes of Regional Significance by the Contra Costa Transportation Authority (CCTA) and the Tri Valley Transportation Council (TVTC). Exhibit 3.12-1 illustrates the existing roadway system within the Specific Plan boundaries.

Regional Access

I-680, Bollinger Canyon Road, and Crow Canyon Road provide access to the Specific Plan area at the regional level. Bollinger Canyon Road and Crow Canyon Road are the only two arterials with major interchanges at I-680 within the vicinity of the Specific Plan area. While I-680 serves San Ramon and the Tri-Valley area, it connects I-80 to the north with U.S. 101 and I-280 to the south. South of San Ramon, I-680 also connects to I-580, an east-west freeway extending from U.S. 101 in Marin County to I-5 in Stanislaus County.

Local Access

Roadways including San Ramon Valley Boulevard, Crow Canyon Road, Norris Canyon Road, Alcosta Boulevard, and Camino Ramon, as well as the local streets identified above provide access to the land uses within the Specific Plan area at the local level. These roadways connect the study area to the greater San Ramon area as well as adjacent cities and towns such as Danville, Alamo, Walnut Creek, Dublin, Pleasanton, and Sunol.

Routes of Regional Significance

Routes of Regional Significance are major arterials and freeways that primarily serve regional traffic as designated by the CCTA and the TVTC. A Route of Regional Significance is required to meet designated Traffic Service Objectives (TSOs) as mandated by Contra Costa Measure J and included in the Tri-Valley Transportation Plan and Action Update. Within the vicinity of the Specific Plan area, the freeway segments and arterials below are identified as Routes of Regional Significance.

Interstate 680 (I-680)

I-680 is a north-south freeway serving San Ramon and the Tri-Valley. It connects San Jose in the south to I-80 in Solano County in the north. Within the study area, I-680 has three mixed flow lanes and one high occupancy vehicle (HOV) lane in each direction. There are two full-access interchanges on I-680 within the vicinity of the Specific Plan area: at Crow Canyon Road and Bollinger Canyon Road. One auxiliary lane exists between Crow Canyon Road and Bollinger Canyon Road on I-680 in both directions.

Crow Canyon Road

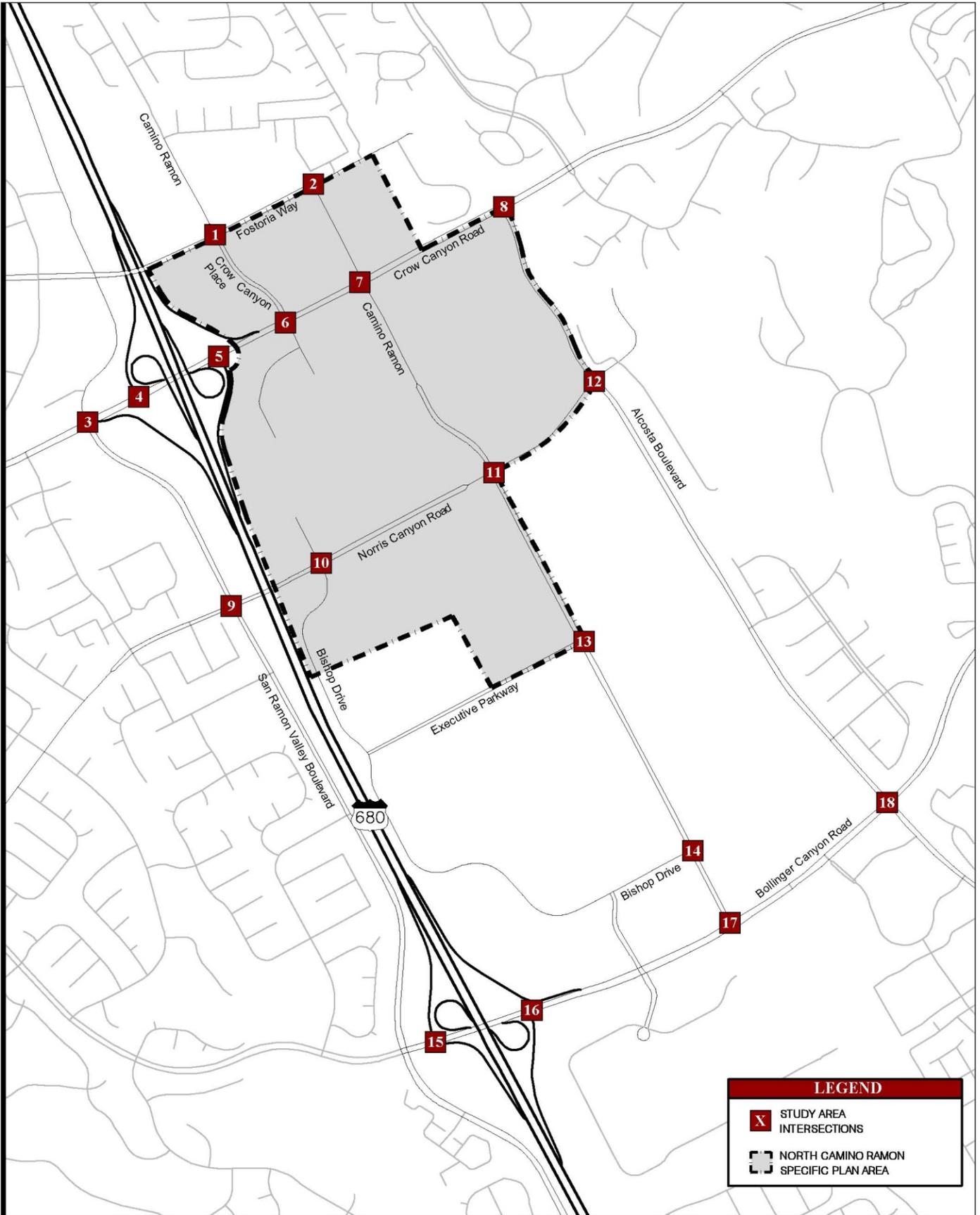
Ranging from a two-lane rural road to a four- to eight-lane arterial, Crow Canyon Road connects I-580 in Castro Valley to Camino Tassajara in Danville. Through the Specific Plan area, Crow Canyon Road runs in an east–west orientation, across the I-680 interchange to Alcosta Boulevard, and continuing east to Dougherty Road and Camino Tassajara. The posted speed limit is 40 miles per hour (mph) and no on-street parking is permitted on either side of the street.

Bollinger Canyon Road

An east–west arterial roadway located south of Specific Plan area connecting Crow Canyon Road to Dougherty Road. Between the I-680 interchange and Dougherty Road, Bollinger Canyon Road varies from eight to six lanes. The posted speed limit is 40 mph and no on-street parking is permitted on either sides of the street.

San Ramon Valley Boulevard

A north-south arterial roadway located west of the Specific Plan area, west of I-680. It connects SR-84 (in Sunol) in the south and Walnut Creek in the north. South of I-580, it is known as Foothill Road, and north of Diablo Road in Danville it is known as Hartz Avenue, then Danville Boulevard, and then South Main Street. The posted speed limit is 35 mph north of Norris Canyon Road and 40 mph south of Norris Canyon Road. No on-street parking is permitted on either side of the street.



Source: Kimley-Horn and Associates, Inc., 2012.



Michael Brandman Associates

Exhibit 3.12-1 Study Area and Intersection Locations

Arterials

As identified in the General Plan, the function of arterial roadways is to accommodate high traffic volumes and intra-city circulation. These streets are used to travel to major activity centers, facilitate freeway access, and connect to other arterials. They also serve adjacent residential land uses via arterial and collector connections. Within the vicinity of the Specific Plan area, the streets below are identified as Arterial Streets:

Alcosta Boulevard

A four-lane, north–south arterial roadway located on the east side of the Iron Horse Trail. At its southern point, Alcosta Boulevard connects to I-680 and at its northern terminus connects to Crow Canyon Road. Alcosta Boulevard serves a combination of residential, commercial, and office land uses. The posted speed limit is between 30 to 40 mph and no on-street parking is permitted on either sides of the street within the Specific Plan area.

Collector Streets

Collector Streets are used to travel within and between neighborhoods. They collect traffic from local streets and channel it to arterial streets. Within the vicinity of the Specific Plan area, the streets below are identified as Collector Streets.

Fostoria Way

A four-lane, east-west collector roadway located at the north end of the Specific Plan area that provides a direct connection between the North Camino Ramon and Crow Canyon Specific Plan areas. The posted speed limit is 30 mph, and no on-street parking is permitted on either side of the street within the Specific Plan area.

Camino Ramon

A four-lane, north–south collector roadway that approximately bisects the Specific Plan area in east and west portions. At its southern point, Camino Ramon ends at Bollinger Canyon Road and at its northern terminus connects to Sycamore Valley Road in Danville. The southern end of Camino Ramon provides a direct link the City Center area. Camino Ramon serves a combination of residential, commercial, and office land uses. The posted speed limit is 30 mph north of Norris Canyon Road and 40 mph south of Norris Canyon Road. No on-street parking is permitted on either side of the street within the Specific Plan area.

Norris Canyon Road

A four-lane, east-west collector roadway that approximately bisects the Specific Plan area in its north and south portions. At its western point, Norris Canyon Road connects Crow Canyon Road in Castro Valley and terminates at the east end of the Specific Plan area at Alcosta Boulevard. The posted speed limit is 40 mph and no on-street parking is permitted on either side of the street.

Local Roadways

Roadways including San Ramon Valley Boulevard, Crow Canyon Road, Norris Canyon Road, Alcosta Boulevard, and Camino Ramon, as well as the local streets identified above provide access to the land uses within the Specific Plan area at the local level. These roadways connect the study area to the greater San Ramon area as well as adjacent cities and towns such as Danville and Dublin.

Executive Parkway

A two-lane, east-west local street within the Specific Plan area that provides access to the existing transit center. The posted speed limit is 30 mph and no on-street parking is permitted on either side of the street.

Bishop Drive

A two-lane, north-south and east-west local street with a posted speed limit of 30 mph. No on-street parking is permitted on either side of the street.

Crow Canyon Place

A four-lane, north-south local street with a two-way left-turn lane in the middle. This street provides access to the Crow Canyon Specific Plan area. The posted speed limit of 25 mph and no on-street parking is permitted on either side of the street.

Existing Traffic Conditions Analysis**Study Intersections**

Eighteen intersections were identified for analysis. The study intersections were determined on the basis of where the majority of the traffic generated by development within the Specific Plan area will be focused and where potential traffic impacts are most likely to occur. The study intersections are shown in Exhibit 3.12-1 and listed in Table 3.12-1.

Table 3.12-1: Study Intersections

No.	Study Intersection
1	Fostoria Way/Camino Ramon/Crow Canyon Place
2	Fostoria Way/Camino Ramon/Costco Driveway
3	Crow Canyon Road/San Ramon Valley Boulevard
4	Crow Canyon Road/I-680 Southbound Ramps
5	Crow Canyon Road/I-680 Northbound Ramps
6	Crow Canyon Road/Crow Canyon Place
7	Crow Canyon Road/Camino Ramon
8	Crow Canyon Road/Alcosta Boulevard
9	Norris Canyon Road/San Ramon Valley Boulevard

Table 3.12-1 (cont.): Study Intersections

No.	Study Intersection
10	Norris Canyon Road/Bishop Drive
11	Norris Canyon Road/Camino Ramon
12	Norris Canyon Road/Alcosta Boulevard
13	Executive Parkway/Camino Ramon
14	Bishop Drive/Camino Ramon
15	Bollinger Canyon Road/I-680 Southbound Ramps
16	Bollinger Canyon Road/I-680 Northbound Ramps
17	Bollinger Canyon Road/Camino Ramon
18	Bollinger Canyon Road/Alcosta Boulevard
Source: Kimley-Horn and Associates, Inc., 2012.	

All study intersections are signalized intersections with the exception of the intersection of Fostoria Way/Camino Ramon/Costco Driveway, which is a four-way stop-controlled unsignalized intersection. Lane configurations and type of intersection control at each of the above noted study intersections are shown in Exhibit 3.12-2a and Exhibit 3.12-2b.

Freeway Segments

The following freeway segments are included in the analysis:

- Northbound and southbound I-680, north of the Crow Canyon Road Interchange
- Northbound and southbound I-680, between the Crow Canyon Road and Bollinger Canyon Road Interchanges
- Northbound and southbound I-680, south of the Bollinger Canyon Road Interchange

Intersection Level of Service Methodology

Capacity constraints in urban areas usually take place at intersections. How an intersection operates from the driver’s perspective is based on the concept of Level of Service (LOS). Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, LOS A represents free-flow conditions and LOS F represents forced-flow or breakdown conditions. Consistent with the requirements of Measures C and J, the City of San Ramon specifies that LOS be based on the CCTA methodology for signalized intersections. This method identifies LOS for signalized intersections with the volume to capacity (v/c) ratio of critical movements. For the single unsignalized intersection within the study area, the 2000 Highway Capacity Manual (HCM) methodology was used. Table 3.12-2 summarizes the LOS definitions for CCTA and HCM 2000 methodologies, respectively.

Table 3.12-2: Intersection Level of Service Definitions

Level of Service	Description	Signalized Volume/Capacity Ratio (v/c) ¹	Unsignalized Control Delay (sec/veh) ²
A	Free flow with no delays; users are virtually unaffected by others in the traffic stream	< 0.60	0 – 10
B	Stable traffic; traffic flows smoothly with few delays	0.61 – 0.70	> 10 – 15
C	Stable flow but the operation of individual users becomes affected by other vehicles; modest delays	0.71 – 0.80	>15 – 25
D	Approaching unstable flow; operation of individual users becomes significantly affected by other vehicles; Delays may be longer than one cycle during peak hours	0.81 – 0.90	> 25- 35
E	Unstable flow with operating conditions at or near the capacity level; long delays and vehicle queuing	0.91 – 1.0	> 35 – 50
F	Forced or breakdown flow that causes reduced capacity; stop-and-go traffic conditions; excessive long delays and vehicle queuing	> 1.0	> 50

Notes:
¹ Contra Costa Transportation Authority (CCTA), 2007.
² 2000 Highway Capacity Manual (HCM) – All-Way Stop Controlled Intersections.
 Source: Kimley-Horn and Associates, Inc., 2012.

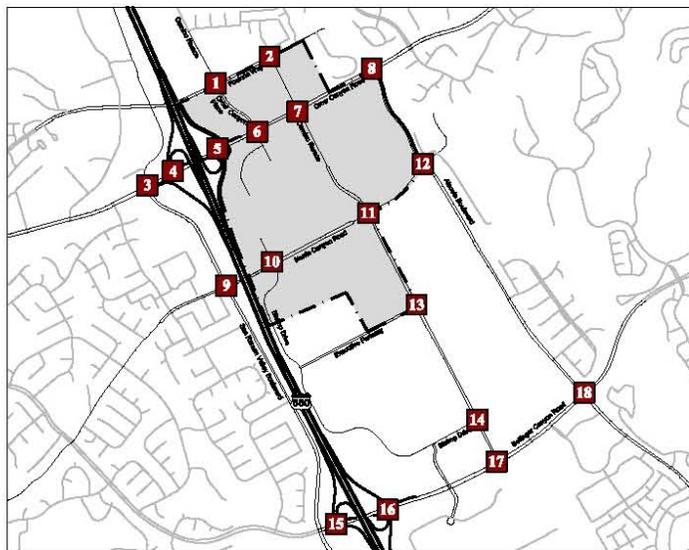
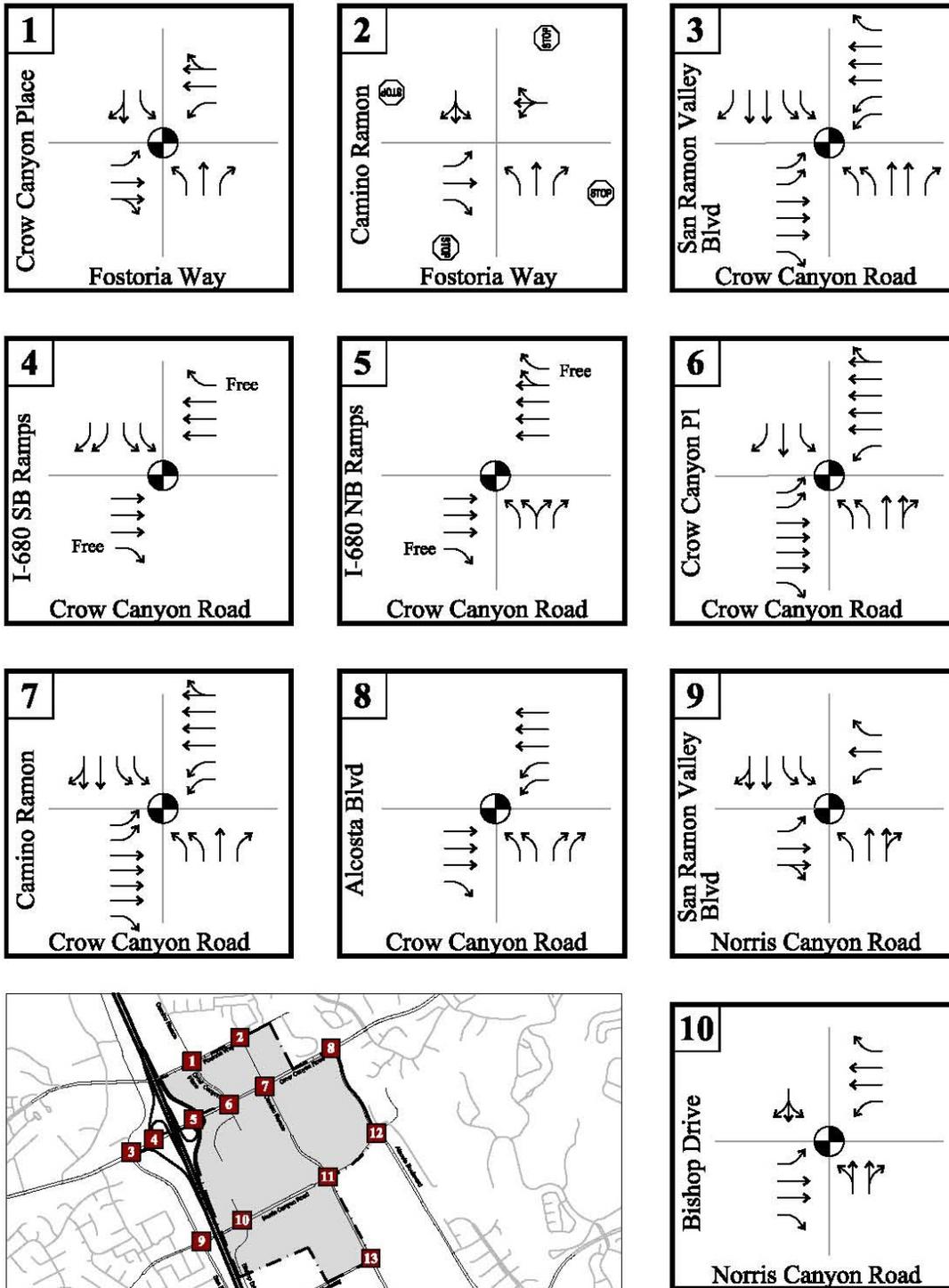
Freeway Analysis Methodology

Performance measures such as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience are used to describe freeway operation conditions. The City of San Ramon is part of the Tri-Valley Transportation Plan/Action Plan. The Tri-Valley Action Plan (TVAP) (adopted November, 2009) identifies Multimodal Transportation Service Objectives (MTSOs) for I-680, including average peak-hour speed and the delay index. TVAP sets the target minimum average peak-hour speed for I-680 as 30 miles per hour. The delay index compares the time required to travel between two points during peak hour conditions with the time required during non-congested, off-peak conditions and is defined as the observed travel time divided by the free-flow travel time. The target minimum value for delay index for I-680 is 2.0, which would indicated that a trip through the segment of I-680 takes twice as long during peak periods. The TVAP compares existing and 2030 traffic conditions for I-680 against the identified MTSOs. The MTSOs adopted for the study segments of I-680 within the vicinity of San Ramon are summarized in Table 3.12-3.

Table 3.12-3: MTSOs for I-680 within San Ramon

Tri-Valley Facility	Limits	Multimodal Transportation Service Objectives (MTSO)
Interstate I-680	TRANSPAC/Tri-Valley Boundary (between Rudgear Road 7 Livorna Road) to Alameda County	Maintain a minimum average speed of 30 mph, delay index of 2.0.

Note:
 Tri-Valley Transportation Plan and Action Plan Update, Final Report, adopted by the Tri-Valley Transportation Council November 30, 2009.
 Source: Kimley-Horn and Associates, Inc., 2012.



LEGEND

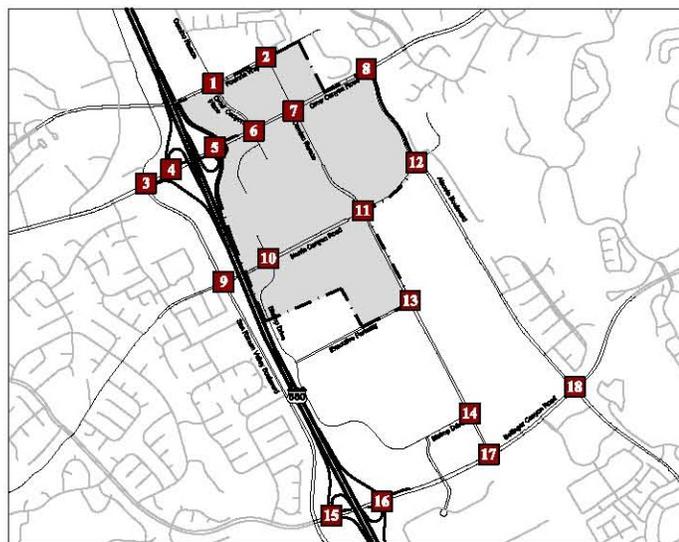
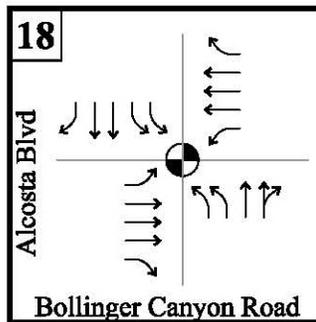
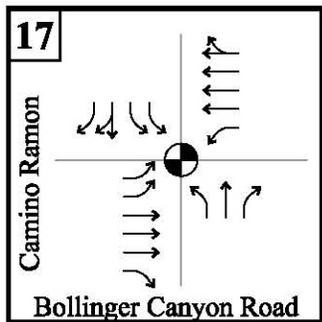
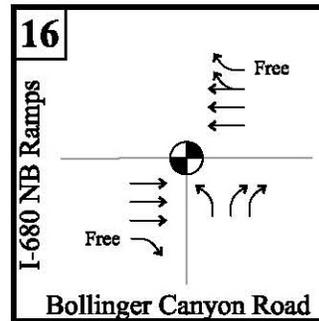
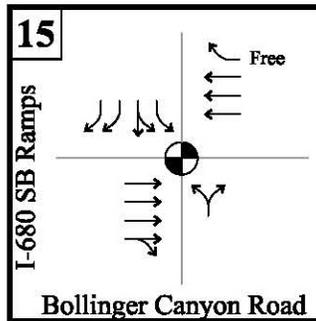
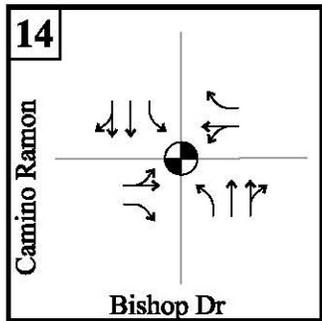
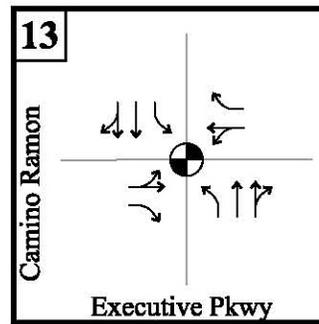
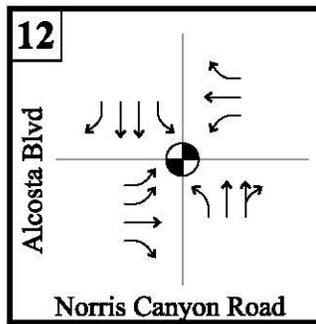
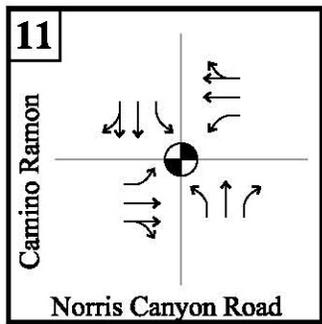
- STUDY AREA INTERSECTIONS
- NORTH CAMINO RAMON SPECIFIC PLAN AREA
- TRAFFIC SIGNAL
- STOP SIGN

Source: Kimley-Horn and Associates, Inc., 2012.



Michael Brandman Associates

Exhibit 3.12-2a Existing Conditions Lane Geometry and Traffic Control



Source: Kimley-Horn and Associates, Inc., 2012.



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Exhibit 3.12-2b Existing Conditions Lane Geometry and Traffic Control

Existing Traffic Volumes

Study Intersections

The intersection turning movement counts for study intersections were provided by the City of San Ramon’s Engineering Division from their annual count program. Traffic counts are collected during the morning peak hour (between 7:00 a.m. and 9:00 a.m.) and the afternoon peak hour (between 4:00 p.m. and 6:00 p.m.). Peak hour intersection traffic counts were collected in 2008 and 2009. Existing AM and PM peak-hour turning movement counts are shown in Exhibit 3.12-3a and Exhibit 3.12-3b.

Freeway Segments

Freeway mainline volumes for the peak hours were developed using Caltrans 2009 Annual Average Daily Traffic (AADT) volume data for the freeway study segments. The AM and PM peak-hour volumes were derived using factors developed by Caltrans to determine the amount of peak-hour traffic (k-factor) and the directional distribution of the traffic (d-factor). The HOV percentage, provided from Caltrans 2009 HOV data, estimates the number of vehicles using the HOV lane during the AM and PM peak hours. Existing AM and PM peak-hour freeway volumes are shown in Table 3.12-4.

Table 3.12-4: Existing Conditions – Peak-Hour Freeway Volumes

Interstate 680		Total Lanes	HOV Lanes	Peak Hour	Total Volume	HOV Percentage
Direction	Segment					
North of Crow Canyon Road Interchange	Northbound	4	1	AM	5,657	17
				PM	6,852	17
	Southbound	4	1	AM	6,967	14
				PM	6,412	12
North of Bollinger Canyon Road Interchange	Northbound	5	1	AM	5,374	17
				PM	6,510	17
	Southbound	5	1	AM	6,619	14
				PM	6,091	12
South of Bollinger Canyon Road Interchange	Northbound	4	1	AM	5,551	17
				PM	6,724	17
	Southbound	4	1	AM	6,837	14
				PM	6,292	12

Notes:
 Peak-hour volumes from Caltrans 2009 AADT Report
 AM and PM peak-hour volumes derived using K and D Factors from Caltrans Peak Hour Volume Report
 HOV percentage of total volume based on data from Caltrans District 4 Year 2009 HOV Lane Report
 For freeway segment between Bollinger Canyon Road and Crow Canyon Road, auxiliary lane is more than 2,500 feet. Weaving does not apply to lane segments greater than 2,500 feet in length; therefore, the auxiliary lane is considered a basic freeway segment.
 Source: Kimley-Horn and Associates, Inc., 2012.

Existing Conditions for Intersection Level of Service

Results of the existing conditions intersection LOS analysis using the CCTA LOS methodology for signalized intersections and the 2000 HCM methodology for unsignalized intersections during the AM and PM peak hours are summarized in Table 3.12-5 and shown on Exhibit 3.12-3a and Exhibit 3.12-3b. Detailed intersection LOS calculations are included in Appendix E.

According to the current General Plan, LOS C or better should be maintained at all intersections, with LOS D (volume to capacity ratio less than or equal to 0.90) for no more than 2 hours of the day (AM and PM peak hours). As shown in Table 3.12-5, all study intersections operate at acceptable levels of service.

Table 3.12-5: Existing Conditions Intersection Level of Service

No.	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			V/C Ratio or Control Delay (sec/veh)	LOS	V/C Ratio or Control Delay (sec/veh)	LOS
1	Fostoria Way/Camino Ramon/Crow Canyon Place	Signal	0.31	A	0.47	A
2	Fostoria Way/Camino Ramon/Costco Driveway	AWSC	10.10	B	18.60	C
3	Crow Canyon Road/San Ramon Valley Boulevard	Signal	0.55	A	0.71	C
4	Crow Canyon Road/I-680 Southbound Ramps	Signal	0.44	A	0.59	A
5	Crow Canyon Road/I-680 Northbound Ramps	Signal	0.60	B	0.73	C
6	Crow Canyon Road/Crow Canyon Place	Signal	0.63	B	0.78	C
7	Crow Canyon Road/Camino Ramon	Signal	0.52	A	0.59	A
8	Crow Canyon Road/Alcosta Boulevard	Signal	0.55	A	0.62	B
9	Norris Canyon Road/San Ramon Valley Boulevard	Signal	0.54	A	0.43	A
10	Norris Canyon Road/Bishop Drive	Signal	0.34	A	0.55	A
11	Norris Canyon Road/Camino Ramon	Signal	0.45	A	0.53	A
12	Norris Canyon Road/Alcosta Boulevard	Signal	0.37	A	0.40	A
13	Executive Parkway/Camino Ramon	Signal	0.37	A	0.36	A

Table 3.12-5 (cont.): Existing Conditions Intersection Level of Service

No.	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			V/C Ratio or Control Delay (sec/veh)	LOS	V/C Ratio or Control Delay (sec/veh)	LOS
14	Bishop Drive/Camino Ramon	Signal	0.26	A	0.45	A
15	Bollinger Canyon Road/I-680 Southbound Ramps	Signal	0.63	B	0.63	B
16	Bollinger Canyon Road/I-680 Northbound Ramps	Signal	0.85	D	0.77	C
17	Bollinger Canyon Road/Camino Ramon	Signal	0.54	A	0.81	D
18	Bollinger Canyon Road/Alcosta Boulevard	Signal	0.66	B	0.68	B

Notes:
AWSC - All-Way Stop Controlled intersection.
Source: Kimley-Horn and Associates, Inc., 2012.

Bicycle Circulation

The City of San Ramon has an extensive bicycle network. The bicycle transportation system is comprised of the following facilities:

- **Class I Bikeway (Bike Path):** A right-of-way that is completely separated from any street. These facilities are usually multi-use trails that accommodate pedestrian and bicyclists.
- **Class II Bikeway (Bike Lane):** A one-way striped and signed lane for bicyclists on either side of the street.
- **Class III Bike Route:** A street where bicyclists and automobiles share the traveled way marked only by signs.

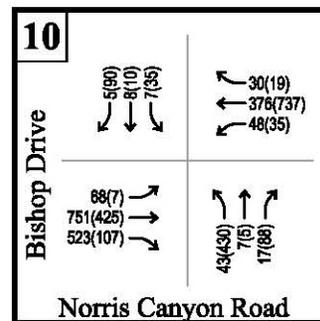
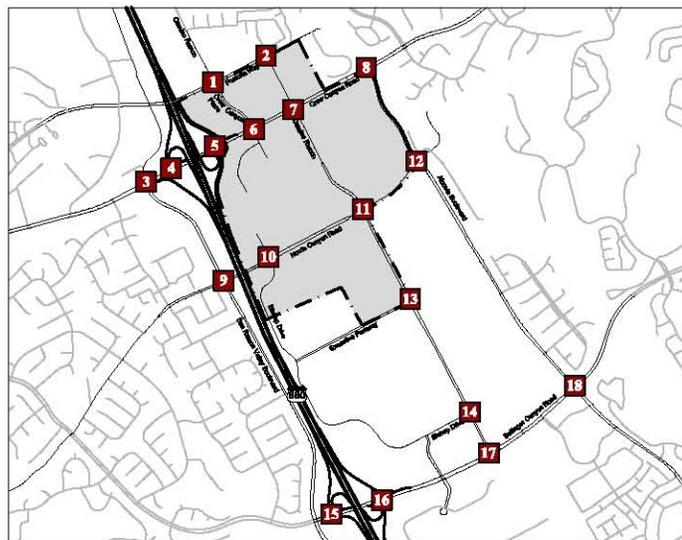
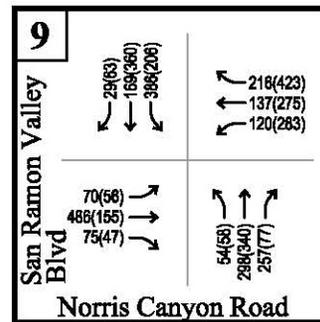
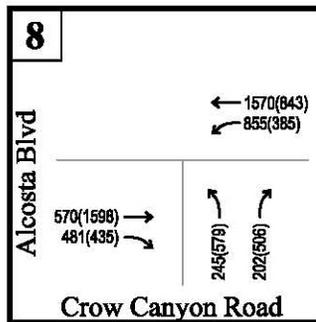
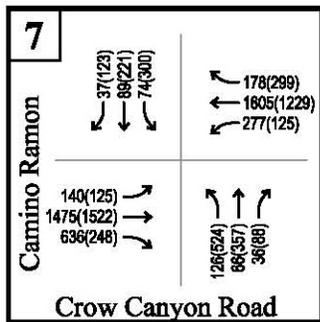
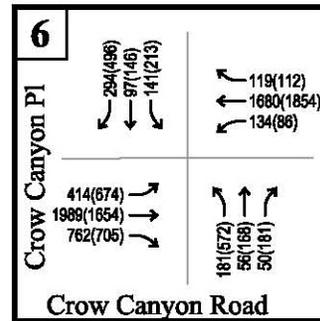
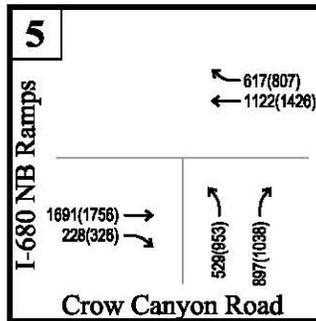
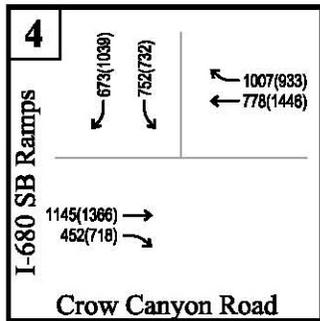
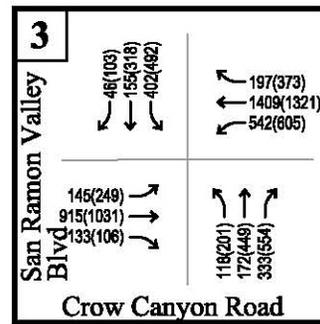
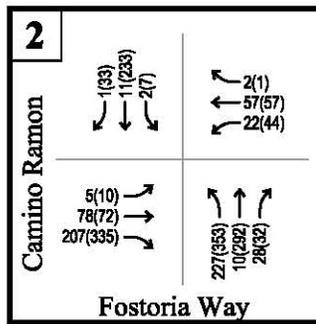
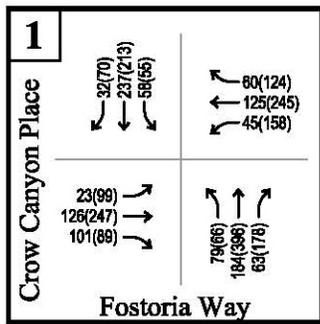
Within the vicinity of the Specific Plan area, the only Class I Bikeway is the Iron Horse Trail. This trail is approximately 30 miles long extending from Pleasanton to Concord along the former San Ramon Branch Line railroad right-of-way. North of Crow Canyon Road, the trail forms the east end of the Specific Plan area, and south of Crow Canyon Road, the trail runs through the Specific Plan area to Norris Canyon Road. The Specific Plan area is regionally accessible via bicycle, primarily by using the Iron Horse Trail.

Class II bike lanes exist on Fostoria Way between San Ramon Valley Boulevard and Crow Canyon Place, Norris Canyon, Bishop Drive, and Alcosta Boulevard within the Specific Plan area. In the vicinity of Specific Plan area, Class II bike lanes exists on San Ramon Valley Boulevard and on Crow Canyon Road, east of Alcosta Boulevard.

No Class III bike routes exist within the Specific Plan area. In the vicinity, Class III bike routes exist on Norris Canyon Road between San Ramon Valley Boulevard and Bollinger Canyon Road. Bollinger Canyon Road between San Ramon Valley Boulevard and Canyon View Lakes Drive is designated as a Class III bike route. Exhibit 3.12-4 shows the existing bicycle facilities within the vicinity of the Specific Plan area.

Pedestrian Circulation

Pedestrian facilities within the Specific Plan area consist of sidewalks, crosswalks at signalized intersections, street lighting, and the Class I multi-use Iron Horse Trail. Pedestrian crossings are located at signalized intersections and consist of striped crosswalks, pedestrian signal heads, curb ramps, and pedestrian pushbuttons. The City's current standard requires pedestrian countdown timers, but not all of the intersections within the Specific Plan area include these devices. A summary of existing sidewalks and crosswalks by streets within the vicinity of the Specific Plan area is described below and summarized in Table 3.12-6.



LEGEND

- STUDY AREA INTERSECTIONS
- NORTH CAMINO RAMON SPECIFIC PLAN AREA
- AW(PM) AM(PM) PEAK HOUR VOLUMES

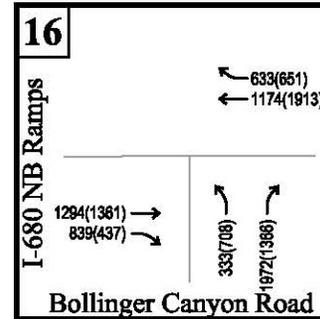
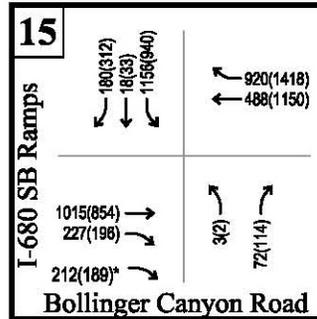
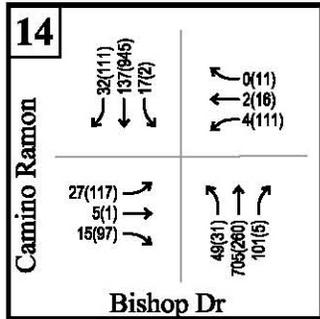
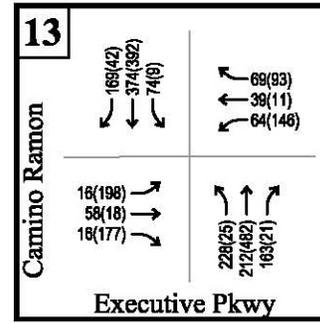
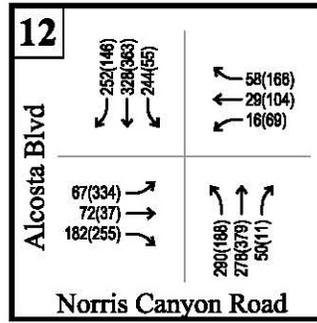
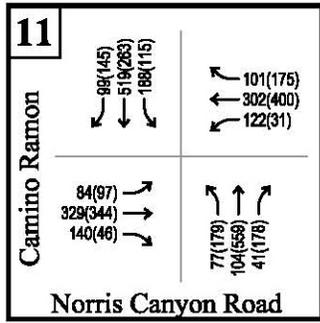
Source: Kimley-Horn and Associates, Inc., 2012.



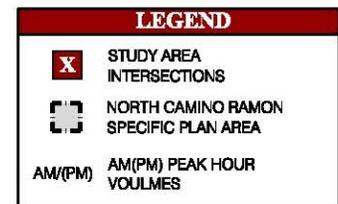
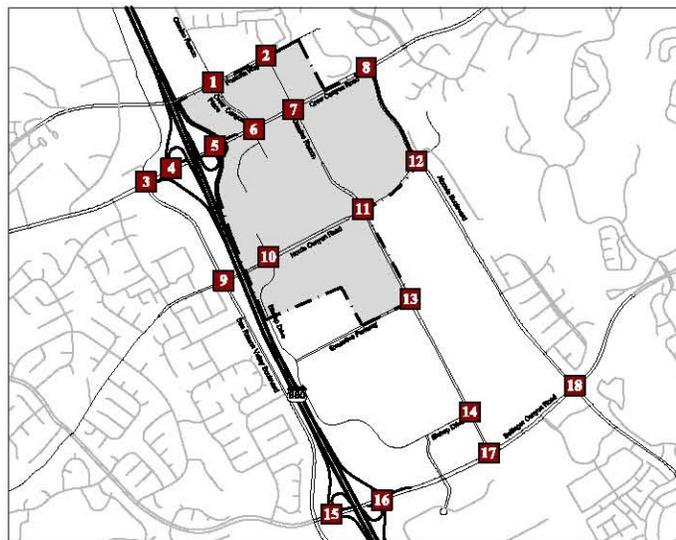
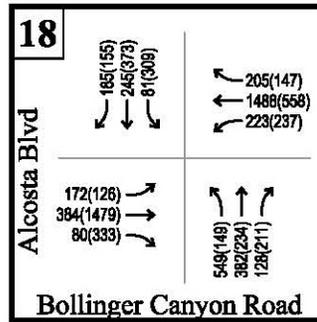
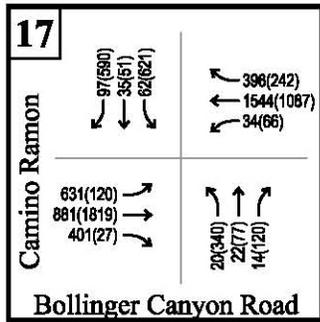
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Exhibit 3.12-3a Existing Peak-Hour Turning Movement Volumes



*I-680 SB on-ramp volume (included in right turn volume)



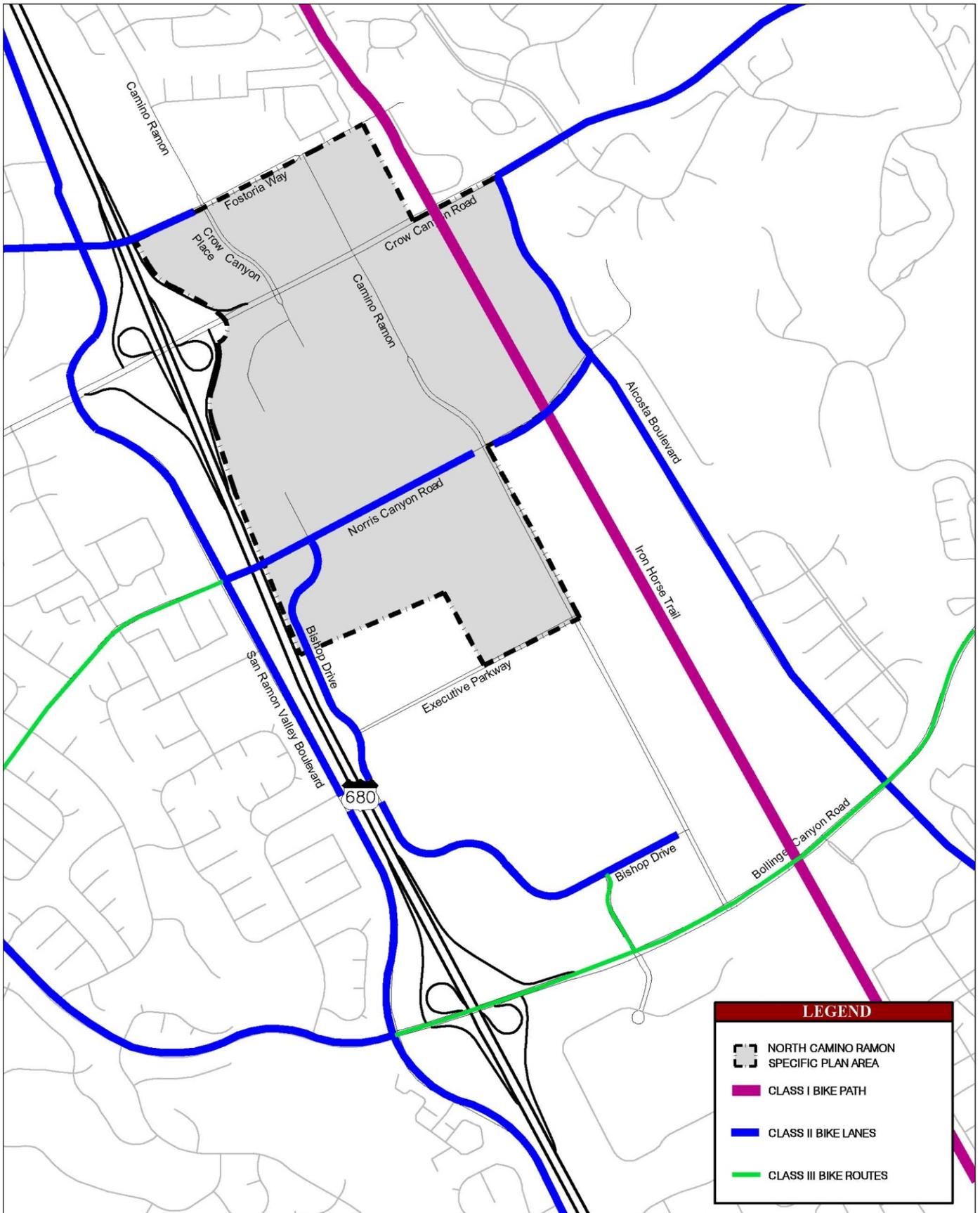
Source: Kimley-Horn and Associates, Inc., 2012.



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Exhibit 3.12-3b Existing Peak-Hour Turning Movement Volumes



Source: Kimley-Horn and Associates, Inc., 2012.



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Exhibit 3.12-4 Existing Bicycle Facilities

Table 3.12-6: Existing Conditions – Pedestrian Facilities

Street	Orientation of Street	Street Segment		Sidewalk Exists On				Crosswalks at Signalized Intersections
		From	To	North Side	South Side	East Side	West Side	
Fostoria Way	East-West	San Ramon Valley Boulevard	Camino Ramon/ Crow Canyon Place	No	Yes	N/A	N/A	Yes
		Camino Ramon/Crow Canyon Place	Camino Ramon	Yes	Yes	N/A	N/A	No
Crow Canyon Road	East-West	I-680	Crow Canyon Place.	No	Yes	N/A	N/A	Yes
		Crow Canyon Place	Alcosta Boulevard.	Yes	Yes	N/A	N/A	Yes
Norris Canyon Road	East-West	San Ramon Valley Boulevard	Bishop Drive	Yes	No	N/A	N/A	Yes
		Bishop Drive	Camino Ramon	Yes	No	N/A	N/A	Yes
		Camino Ramon	Alcosta Boulevard.	Yes	Yes	N/A	N/A	Yes
Alcosta Boulevard	North-South	Crow Canyon Road	Norris Canyon Road	N/A	N/A	No	Yes	Yes
Camino Ramon	North-South	Fostoria Way	Norris Canyon Road	N/A	N/A	Yes	Yes	Yes
		Norris Canyon Road	Executive Parkway	N/A	N/A	No	Yes	Yes
		Executive Parkway	Bishop Drive	N/A	N/A	Yes	Yes	Yes
		Bishop Drive	Bollinger Canyon Road	N/A	N/A	Yes	No	Yes
Bishop Drive	North-South	Norris Canyon Road	Executive Parkway	N/A	N/A	Yes	No	Yes
	North-South and East-West	Executive Parkway	Camino Ramon	Yes	N/A	Yes	N/A	Yes

Source: Kimley-Horn and Associates, 2012.

Fostoria Way

On Fostoria Way, a sidewalk exists on the south side of the street between San Ramon Valley Boulevard and Crow Canyon Place. Between Crow Canyon Place and Camino Ramon, a sidewalk exists on either side of the street. The signalized intersection of Fostoria Way/Crow Canyon Place has crosswalks across all approaches. However, at the intersection of Fostoria Way/Camino Ramon, crosswalks exist only across the westbound approach.

Crow Canyon Road

On Crow Canyon Road, a sidewalk exists on the south side of the street between I-680 freeway and Crow Canyon Place. Between Crow Canyon Place and Alcosta Boulevard, sidewalks exist on both sides of the street. The signalized intersection of Crow Canyon Road/Crow Canyon Place has crosswalks across all approaches, except across the eastbound approach. Crosswalks exist across all approaches at the Crow Canyon Road/Camino Ramon intersection and across Crow Canyon Road at the Iron Horse Trail. At the intersection with Alcosta Boulevard, crosswalks exist across all approaches, except at the eastbound approach.

Norris Canyon Road

On Norris Canyon Road, a sidewalk exists on the north side of the street between San Ramon Valley Boulevard and Bishop Drive. No sidewalk exists on the south side of the street in this segment. Between Bishop Drive and Camino Ramon, a sidewalk exists only on the north side of the street; between Camino Ramon and Alcosta Boulevard, a sidewalk exists on either side of the street. Crosswalks exist at all signalized intersections on Norris Canyon Road within the vicinity of the Specific Plan area.

Alcosta Boulevard

On Alcosta Boulevard, a sidewalk exists on the west side between Crow Canyon Road and Norris Canyon Road. Crosswalks exist at all signalized intersections along Alcosta Boulevard.

Camino Ramon

On Camino Ramon, sidewalks exist on both sides between Fostoria Way and Norris Canyon Road. South of Norris Canyon Road to Executive Parkway, sidewalk exists only along the west side of the street. Between Executive Parkway and Bishop Drive, sidewalks exist on both sides of the street. A sidewalk exists only on the east side of the street between Bishop Drive and Bollinger Canyon Road. At all signalized intersections on Camino Ramon, crosswalks exist across all approaches. Between Crow Canyon Road and Norris Canyon Road, two unsignalized striped crosswalks exist across Camino Ramon.

Bishop Drive

On Bishop Drive, a sidewalk exists only on the east side between Norris Canyon Road and Executive Parkway. A meandering dirt sidewalk is present on the east/north side of Bishop Drive between Executive Parkway and Camino Ramon. Segments of the sidewalk are present on the south side

between Camino Ramon and Executive Parkway. At all signalized intersections along Bishop Drive, crosswalks exist across all approaches.

Iron Horse Trail

The Iron Horse Trail is located within the eastern portion of the Specific Plan area. The Iron Horse Trail crosses Crow Canyon Road and Norris Canyon Road using the signalized pedestrian crossing. The trail crosses Executive Parkway using an unsignalized pedestrian crossing. All sidewalks and intersections are lit with City standard streetlights on roadways and safety lighting at intersections. The pedestrian system surrounding the site is continuous without gaps. The entire Specific Plan area site is accessible via sidewalks and signalized crossings on Iron Horse Trail.

Transit Systems

Bus Service

The County Connection serves Walnut Creek, Concord, Danville, Martinez, Lafayette, Orinda, Clayton, Moraga, Pleasant Hill, Alamo, and the San Ramon area. County Connection is operated by the Central Contra Costa Transit Authority (CCCTA). County Connection provides bus service to all Bishop Ranch offices and the San Ramon Transit Center. Employees of Bishop Ranch are eligible for free bus passes as part of the local Transportation Demand Management (TDM) Program. Exhibit 3.12-5 shows the transit routes operating within the Specific Plan area and its vicinity.

Currently, there are eight routes operating within the Specific Plan area and its vicinity. Detailed descriptions of these routes follow.

Route 21

This weekday service route operates between 5:30 a.m. and 11:20 p.m. with a 30-minute peak-hour frequency and a 60-minute off-peak-hour frequency. It connects Walnut Creek BART station with the San Ramon Transit Center. Within the vicinity of the Specific Plan area, the route operates via San Ramon Valley Boulevard, Fostoria Way, Camino Ramon, and Executive Parkway to terminate at the San Ramon Transit Center located east of the Executive Parkway/Camino Ramon intersection, next to the Iron Horse Trail.

Route 321

Route 321 is a weekend service that operates between 7:45 a.m. and 10:30 p.m. During the early hours (7:45 a.m. to 1:45 p.m.), the frequency of service is every 120 minutes in the morning, which increases to 60 minutes during the midday hours (1:45 p.m. to 4:45 p.m.) and then reverts to 120 minutes during the evening hours. The route connects the Walnut Creek BART station to the San Ramon Transit Center and then to Shops at Bishop Ranch. This route is the same as weekday Route 21, except for the last segment where it provides connection between San Ramon Transit Center and Shops at Bishop Ranch.

Route 35

This weekday service route operates between 6:00 a.m. and 8:17 p.m. with a 30-minute peak-hour frequency and a 60-minute off-peak-hour frequency. It connects San Ramon Transit Center with the Dublin/Pleasanton BART Station. Within the vicinity of the Specific Plan area, the route operates on Executive Parkway, Bishop Drive, and Bollinger Canyon Road.

Route 36

This weekday service route operates between 6:30 a.m. and 9:00 p.m. with a 60-minute frequency during the peak and off-peak hours. It also connects San Ramon Transit Center with the Dublin/Pleasanton BART Station. Within the vicinity of the Specific Plan area, the route operates via Executive Parkway, Bishop Drive, Norris Canyon Road, Crow Canyon Road, Bollinger Canyon Road, and San Ramon Valley Boulevard.

Route 92X (ACE Express)

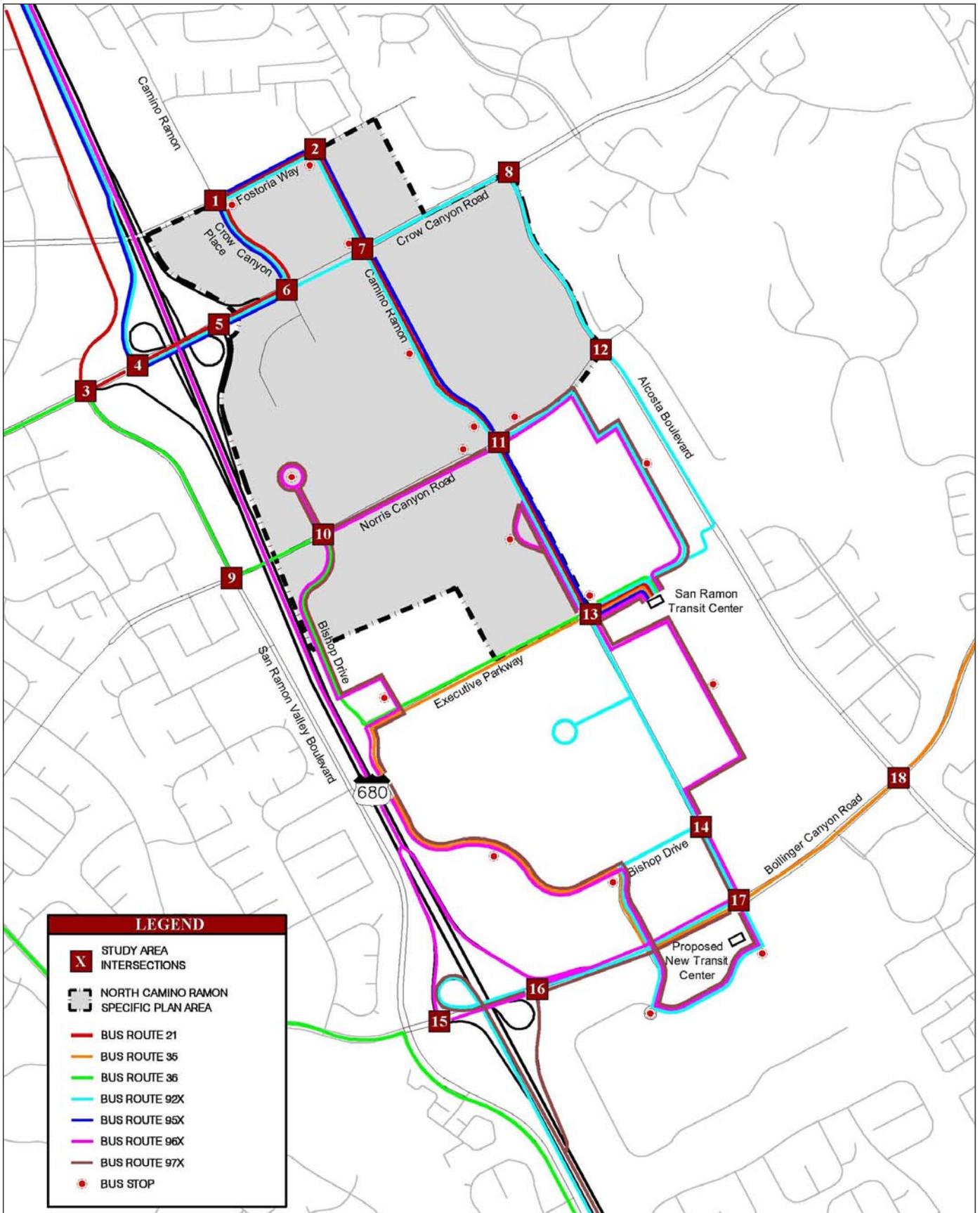
This weekday express service route operates only during the peak hours every 60 minutes. It connects the Mitchell Park & Ride lot off Ygnacio Valley Road in Walnut Creek, the Sycamore Valley Road Park & Ride lot in Danville, San Ramon Transit Center, Chevron Park, AT&T Offices, and the Altamont Commuter Express (ACE) Pleasanton Train Station. The timing for the service is designed around the ACE train timings. In the southbound direction, the service runs five times—twice during the AM peak hour and three times during the PM peak hour. In the northbound direction, the service runs five times—two times during the AM and three during the PM peak hours. Within the vicinity of the Specific Plan area, the route operates along Crow Canyon Road, Camino Ramon, Norris Canyon Road, and Alcosta Boulevard.

Route 95X (San Ramon Express)

This weekday express service route operates only during the peak hours with a 30-minute frequency. It connects the Walnut Creek BART Station, the Sycamore Valley Road Park & Ride lot in Danville, and the San Ramon Transit Center. The timing for the service is designed around the BART train timings. The route offers four southbound trips and three northbound trips during the morning and five northbound and four southbound trips during the afternoon. Within the vicinity of the Specific Plan area, the route operates on Crow Canyon Road, Fostoria Way, and Camino Ramon.

Route 96X (Bishop Ranch – Walnut Creek BART Express)

This weekday express service route operates only during peak hours with a 20-minute frequency. It connects the Walnut Creek BART Station, the San Ramon Transit Center, and the Bishop Ranch area. The timing for the service is designed around the BART train timings. Within the vicinity of the Specific Plan area, the route operates on Bishop Drive, Camino Ramon, and Norris Canyon Road.



Source: Kimley-Horn and Associates, Inc., 2012.



Michael Brandman Associates

24910011 • 01/2012 | 3.12-5_existing_transit.cd

Exhibit 3.12-5 Existing Transit System

Route 97X (Bishop Ranch – Dublin/Pleasanton BART Express)

This weekday express service route operates only during peak hours with a 30-minute frequency. It connects the Dublin/Pleasanton BART Station, the San Ramon Transit Center, and the Bishop Ranch area. The timing for the service is designed around the BART train timings. Within the vicinity of the Specific Plan area, the route operates on Bishop Drive, Camino Ramon, and Norris Canyon Road.

Existing Transit Center

The existing San Ramon Transit Center is located on Executive Parkway, adjacent to the Iron Horse Trail and Bishop Ranch 3. The transit center provides commuters with 54 parking spaces to meet a carpool, vanpool, or bus. These parking spaces are available on a first-come first-serve basis and are free of charge. Bike racks and lockers are also available at the Transit Center. Lockers are covered and secured and can be rented for three, six, or 12 months.

3.12.3 - Regulatory Framework

State

California Department of Transportation (Caltrans)

Caltrans builds, operates, and maintains the state highway system, including the interstate highway system. Caltrans's mission is to improve mobility statewide. The department operates under strategic goals to provide a safe transportation system, optimize throughput and ensure reliable travel times, improve the delivery of state highway projects, provide transportation choices, and improve and enhance the State's investments and resources. Caltrans controls the planning of the state highway system and accessibility to the system. Caltrans establishes LOS goals for highways and works with local and regional agencies to assess impacts and develop funding sources for improvements to the state highway system. Caltrans requires encroachment permits from agencies or new development before any construction work may be undertaken within the State's right-of-way. For projects that would impact traffic flow and levels of services on state highways, Caltrans would review measures to mitigate the traffic impacts.

Regional and Local

Tri-Valley Transportation Plan and Action Plan Update

One of five Contra Costa sub-regional transportation planning advisory bodies, the TVTC adopted the Tri-Valley Transportation Plan/Action Plan Update in 2008. The Contra Costa Countywide Transportation Plan was adopted by the Contra Costa Transportation Authority in July 2009. The plan includes an update of the Tri-Valley Transportation Action Plan. This Plan serves as a guide for transportation planning in the Tri-Valley area and as the action plan for Routes of Regional Significance, as mandated by Measure C and Measure J. The Plan's recommendations are incorporated into the aforementioned Countywide Comprehensive Transportation Plan and used to define gas and sales tax programs for funding transportation improvements. The Action Plan establishes and adopts Multimodal Transportation Service Objectives, which are quantifiable

measures of performance for Routes of Regional Significance in achieving objectives set forth in the plan.

The Plan identifies a number of programmed improvements for the Tri-Valley area; improvements within the City of San Ramon and the surrounding Tri-Valley are identified below.

Interstate 580 (I-580)

- I-580 Eastbound/Westbound HOV Lane: Foothill Road to east of Vasco Road (Eastbound HOV/Express lane construction complete from Hacienda Drive to Greenville Road)
- A fifth Eastbound I-580 Lane: Santa Rita Road to Vasco Road
- Westbound I-580 Auxiliary Lane: Airway Boulevard to Tassajara Road

Interstate 680 (I-680)

- Construct Auxiliary Lanes: Sycamore Valley Road to Crow Canyon Road
- HOV Lane over Sunol Grade (northbound): Fremont to SR-84
- I-680/Norris Canyon Road HOV Ramps: Interchange of I-680 and Norris Canyon in San Ramon
- Southbound I-680 HOV Lane Extension: North Main Street to Livorna Road
- I-680 HOV Lane Extension: Between Alcosta Boulevard and south to SR-237
- Transportation Operations System on I-680: I-580 to Santa Clara County Line
- I-680/Sunol Interchange improvements

Crow Canyon Road

- Crow Canyon Road Widening to six lanes: From Alcosta Boulevard to Tassajara Ranch Drive
- Safety Improvements on Crow Canyon Road: From Castro Valley Boulevard to Alameda County/San Ramon City Limit

Camino Tassajara

- Camino Tassajara Widening: From East Blackhawk Drive to Contra Costa /Alameda County Line

Dougherty Road

- Widen to eight lanes: From I-580 to Dublin Boulevard
- Widen to six lanes north of Dublin Boulevard: Contra Costa County Line to I-580

Dublin Boulevard

- Dublin Boulevard Widening: Donlon Way to Tassajara Road
- Dublin Boulevard Extension: Tassajara Road to Dolan Road

San Ramon Valley Boulevard

- I-580/Foothill/San Ramon Valley Boulevard Interchange Improvements
- Widen to four lanes: Sycamore Valley Road to Fountain Springs Drive

Santa Rita Road

- Santa Rita Road Interchange at I-580

Tassajara Road

- Widen to eight lanes: I-580 to Dublin Boulevard
- Widen to six lanes: From Dublin Boulevard to County Line

Transit

- ACE Commuter Service: Addition of four round trips per day
- Park-and-Ride Lots: Add new park-and-ride lots and serve them by bus lines.
- County Connection: Expand the service from six lines serving the Tri-Valley (30-minute headway) to eight lines. The lines would serve Danville, San Ramon, Bishop Ranch, Dougherty Valley, and the East Dublin BART Station.
- WHEELS: Expand service from the current 12 lines with 30- to 60-minute headways to 21 lines, all with 30-minute headways. Revise the route system to serve the two BART stations, park-and-ride lots, and the newly developed areas of East Dublin and North Livermore. Some routes would be extended to San Ramon and Danville.
- Express Bus Service: The plan call for the provision of new express bus routes operating the I-680, I-580 and Vasco Road corridors.

Measure J

The projects and programs contained in Contra Costa Measure J Transportation Sales Tax Expenditure Plan are for the continued maintenance, improvement, and operation of local streets, roads, and highways, and the construction, improvement, and operation of the public transit system. Measure J projects and programs specific to the San Ramon Valley include the I-680 Carpool Lane Gap Closure/Transit Corridor Improvements, which will extend the existing bus/carpool lanes on southbound I-680 from North Main Street to Livorna Road and northbound from North Main Street to north of SR-242. It includes the construction of bus/carpool/vanpool on-off ramps on I-680 at Norris Canyon Road in San Ramon, and the implementation of transit corridor improvements that address congestion and/or increase the person-throughput in the I-680 corridor (these improvements are identified in the Tri-Valley Transportation Plan and Action Plan Update improvements for I-680 described above).

Measure J also provides funding for the “Safe Transportation for Children” and includes implementation of a San Ramon Valley School Traffic Congestion Relief Program and other projects

in the San Ramon Valley that reduce school-related congestion. The Measure J Traffic Congestion Relief Agency (TRAFFIX) oversees bus service to seven school sites in the San Ramon Valley. Service began in August 2009 and targets the most congested corridors in the San Ramon Valley. The goal of the program is to provide an incentive to parents to avoid using automobiles to transport children to school by providing a viable alternative.

The County Connection - Short Range Transit Plan (SRTP)

The SRTP identified transit improvements expected over the next 10 years (2008–2017) within the County Connection service area. The transit improvements are divided into two groups: Track I and Track II. Track I improvements are expected to be implemented in the foreseeable future and Track II improvements depend upon the availability of funds and may not have a time frame. Transit improvements within the City of San Ramon and the surrounding region are identified below.

Track I

- New Service Using Out-of-Service Bus Trips: Each day County Connection buses travel between the operations facility and the starting points of routes without passengers. This project will review current out-of-service bus trips for the potential of operating these trips or portions of these trips as regular in-service trips. These trips could provide service between the cities of San Ramon and Dublin, and between Downtown Concord and North Concord Industrial Area.

Track II

- ACE Fourth Train: County Connection Route 92X service expansion to serve the fourth ACE train.
- Limited holiday service on New Year’s Day, Labor Day, Fourth of July, Memorial Day, Thanksgiving Day, or Christmas Day. Currently County Connection does not provide any service during these holidays.
- Lifeline Transportation Network: Identify lifeline services intended to meet the travel needs of low-income individuals and families.
- Provide additional express bus services (various routes). The 2001 “Contra Costa Express Bus Study,” identified the following all-day express routes:
 - Benicia/Vallejo to Walnut Creek BART, Bishop Ranch/San Ramon, and Dublin BART; Fairfield to Walnut Creek BART, Bishop Ranch/San Ramon, and Dublin BART; and Martinez to Dublin BART.
- The preferred option in the 2003 “I-680 Investment Options Analysis” study also identified express bus service improvements. Central Core to Urban Core Express Buses connecting San Ramon and Bishop Ranch Business Park employment centers to/from Castro Valley or Hayward, and San Ramon to Downtown San Jose.

- Coordination between CCCTA, which is the primary transit provider for central/south Contra Costa County, and Livermore Amador Valley Transit Authority, which primarily operates in north-central Alameda County.
- Tassajara Valley/Alamo Creek Service: In 2002, the Board of Supervisors approved additional developments northeast of the Dougherty Valley projected to add approximately 4,000 additional persons to the local population. The Contra Costa Board of Supervisors imposed conditions on the developers to form a Community Services District to help fund transit service linking the Tassajara developments to Bishop Ranch, Stoneridge Mall, Dublin BART, and Hacienda Business Park between 6:30 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:30 p.m.
- Restructuring Weekend Service: Restructure existing Saturday service to more closely resemble the Sunday routes (which have been proven to be more productive) by combining key route segments.
- Increased bus transit service along SR-24 (with the construction of the fourth bore at the Caldecott Tunnel) to complement reverse commute travel.
- Paratransit expanded to provide Americans with Disabilities parallel service during the same times and days as Track II fixed-route projects.

San Ramon Valley Iron Horse Trail - Bicycle Pedestrian Corridor Concept Plan

This study assesses the feasibility of integrating a series of proposed overcrossings along the Iron Horse Trail with adjacent transit- and pedestrian-oriented land use plans. The Corridor Concept Plan identifies overhead crossings for the Iron Horse Trail at Bollinger Canyon Road and Crow Canyon Road in San Ramon and Sycamore Valley Road in Danville.

2009 Draft Contra Costa Countywide Bicycle and Pedestrian Plan

The Contra Costa Countywide Bicycle and Pedestrian Plan assesses the needs of bicyclists and pedestrians in the County, outlines goals and strategies, and identifies a set of countywide improvements that would encourage more walking and bicycling. The plan identifies several projects that are identified in the section summarizing the Tri-Valley Transportation Plan.

BART Fiscal Year 2008 to 2017 Short-Range Transit Plan and Capital Improvement Program

This report identified a new West Dublin/Pleasanton Station in the median of I-580 between Castro Valley and the existing Dublin/Pleasanton Station. The station opened in February 2011.

Congestion Management Program Facilities and Requirements

The CCTA Congestion Management Program (CMP) identifies programs, standards, and planned improvements designed to maintain an acceptable level of service, reduce automobile traffic in order to improve air quality, and reduce traffic congestion. Measures and programs in the CMP include public transit, telecommuting, compressed workweek, carpooling, vanpooling, walking, bicycling, and incentives to increase the use of these alternatives.

San Ramon collects data related to commute mode of travel from city employees and businesses, including the Bishop Ranch Business Park, to monitor the effectiveness of congestion management and Transportation Demand Management (TDM) programs. Data from 2009 indicate that about 11 percent of San Ramon Valley commuters use carpools and vanpools, nearly 6 percent use public transportation, and about 2 percent walk or bike to work for a total of 19 percent utilization of commute alternatives. The effectiveness of the current programs in San Ramon has been recognized by the Environmental Protection Agency (EPA) and the U.S. Department of Transportation. The most congested areas in the City of San Ramon are in the Crow Canyon and Bishop Ranch subareas, where employment is most concentrated. The primary goal of the City's TDM program is to reduce traffic congestion and improve air quality through the reduction of work-related car trips. The City adopts the strategy, which includes utilization of the technical assistance provided by the City's TDM Program Manager and the implementation of the 511 Contra Costa Incentives Programs at employment sites, to achieve its TDM goal. Technical assistance, program development, and implementation services available to participating employers include the following elements:

- Coordinate, distribute, and evaluate employee transportation surveys.
- Implement citywide commuter incentive programs for carpooling, vanpooling, transit, and a citywide Guaranteed Ride Home Program for residents and businesses.
- Coordinate and implement regional commuter campaigns such as Bike to Work Day, Summer/Winter Spare the Air Campaign, and 511 Regional Rideshare.
- Provide and disseminate information on national campaigns such as Earth Day and Try Transit Week, among others.
- Provide "Transportation Options" presentations to employers and employees relocating to San Ramon and other portions of the Southwest Contra Costa County.
- Organize and facilitate employer transportation commuter fairs.
- Coordinate and facilitate Spare the Air commuter fairs at employment sites.
- Facilitate with local transit agencies to develop, increase, and promote transit service.
- Provide assistance and support to property managers with multi-tenant buildings to coordinate and implement commuter rideshare programs.
- Provide and distribute rideshare information to local Chambers Of Commerce, developers, and homeowner associations.

Commuter Incentive Programs

The City in collaboration with 511 Contra Costa promotes commuter incentive programs to residents, employees, and students, including:

- Carpool Incentive Program: provides incentives to those who carpool to work in the City of San Ramon instead of driving alone.
- Vanpool Driver Incentive Program: provides \$1,000 for starting a new vanpool and keeping it on the road for one year with a minimum of six new passengers. Drivers of new vanpools with origin and/or destination in the City of San Ramon and throughout Contra Costa County are eligible.
- Vanpool Passengers Incentive Program: provides 50 percent of vanpool fare for the first 3 months. New vanpool riders who live or work in the City are eligible.
- Transit Incentive Program: provides complimentary transit passes to commuters who live, work, or attend school in Contra Costa County.
- Guaranteed Ride Home Program: provides a free taxi ride or a rental car for emergencies, including unscheduled mandatory overtime, family emergency, and illness. Employees in Contra Costa County who use alternate modes of travel other than car are eligible. The employer is required to pre-register in the program.
- Altamont Commuter Express (ACE): provides an incentive for commuters who ride the County Connection 920 ACE shuttle from the San Ramon Transit Center and the Sycamore Road Park & Ride lot (Danville) to the Pleasanton ACE station.
- Bike Locker Program: bike racks and lockers are available at the San Ramon Transit Center. These lockers are covered and secured and can be rented for three, six, or 12 months.
- Park & Ride Lots: These lots are available for commuters that carpool, vanpool, and use public transit. The Bollinger Canyon Road/San Ramon Valley Boulevard lot provides 100 parking spaces, the Dougherty Valley Park and Ride provides 50 parking spaces and bike lockers, and the Sycamore Park & Ride lot in Danville provides over 150 spaces in addition to bike racks and lockers. The San Ramon Transit Center, located along the Iron Horse Trail at the corner of Executive Parkway and Camino Ramon, provides commuters with 54 parking spaces to meet a carpool, vanpool, or bus. Commuters can leave their cars at the Transit Center and board a County Connection bus to Dublin/Pleasanton and Walnut Creek BART Station.
- Carpool to School Ridematching Program: The City of San Ramon, 511 Contra Costa, and the regional Rideshare Agency can develop personalized carpool to school ridematching programs for individual school sites. The program is tailor made to meet the diverse needs of each individual school site and/or school district.
- Student Transit Ticket Program: free public transit tickets are provided as an alternative to driving student(s) to school. Each student is eligible to receive two 12-Ride County Connection transit tickets (limit two tickets per school year). This offer is available with a maximum of three students per household while supplies last.

City of San Ramon*Bollinger Canyon Road Plan Line Study*

As a requirement of the development agreement for the Dougherty Valley, the City of San Ramon has undertaken a Plan Line Study of Bollinger Canyon Road between San Ramon Valley Boulevard and Alcosta Boulevard to identify right-of-way requirements and lane needs on this roadway segment. The Plan Line concepts have been integrated into the traffic analysis in this EIR as planned improvements.

General Plan 2030

The City of San Ramon General Plan 2030 sets forth the following guiding and implementing policies that are relevant to transportation:

- **Implementing Policy 2.3-I-12:** Promote and encourage public transit, carpool and vanpool opportunities into San Ramon’s business areas including Bishop Ranch, Crow Canyon business area, and the San Ramon Valley Boulevard business area.
- **Implementing Policy 2.3-I-13:** Encourage and facilitate non-motorized means of transportation to business areas.
- **Implementing Policy 2.3-I-19:** Encourage businesses to promote the use of commute alternatives among their employees by implementing the City’s Transportation Demand Management (TDM) programs.
- **Guiding Policy 3.3-G-1:** Maintain acceptable traffic levels of service on City streets and roadways through implementation of Transportation Demand Management (TDM), Growth Management, the Capital Improvement Program and traffic engineering operational measures.
- **Implementing Policy 3.3-I-1:** Strive to maintain traffic LOS C or better as the standard at all intersections with a maximum LOS D during a.m. and p.m. peak periods.
- **Implementing Policy 3.3-I-2:** Accept LOS D during a.m. and p.m. peak periods with the possibility of intersections at or closely approaching the limits of LOS D (Volume/Capacity <0.90), only on arterial routes bordered by non-residential development where improvements to meet the City’s standard would be prohibitively costly or disruptive.
- **Implementing Policy 3.3-I-3:** Require traffic impact studies for all proposed new development projected to generate 50 or more net new peak hour vehicle trips or as requested by the City Traffic Engineer.
- **Implementing Policy 3.3-I-4:** Proposed development expected to generate 50 or more peak hour vehicle trips will not be approved, unless it can be shown that its impact can be mitigated and the City’s traffic and circulation standards can be maintained. The City also will not approve any proposed development expected to generate over 100 peak hour vehicle trips, unless “Findings of Consistency” can be made
- **Implementing Policy 3.3-I-5:** Identify and implement circulation improvements on the basis of detailed traffic studies.
- **Implementing Policy 3.3-I-6:** Support regional and local neighborhood transit options o reduce the use of the automobile and maintain acceptable traffic levels of service.

- **Implementing Policy 3.3-I-7:** Develop and implement, Findings of Special Circumstances for any intersection on non-Regional Routes that does not meet the City’s traffic and circulation standards.
- **Guiding Policy 3.4-G-1:** Utilize Transportation Demand Management (TDM) strategies to reduce total vehicle trips on San Ramon streets, and to contribute to regional air quality improvement and effective growth management.
- **Implementing Policy 3.4-I-1:** Continue to implement the City’s TDM Program to reduce trip generation.
- **Implementing Policy 3.4-I-2:** Work with 511 Contra Costa, other jurisdictions and agencies to coordinate the City’s TDM Program with regional TDM programs and activities.
- **Implementing Policy 3.4-I-3:** Cooperate with regional and local service providers and other jurisdictions to promote local and regional public transit service.
- **Implementing Policy 3.4-I-4:** Support local feeder transit service to and from current and future regional transit lines.
- **Implementing Policy 3.4-I-5:** Preserve options for future transit use when designing improvements for roadways.
- **Implementing Policy 3.4-I-6:** Locate future transit uses, such as light rail or BART, in the I-680 right-of-way.
- **Implementing Policy 3.4-I-7:** Improve and expand the bicycle routing system in San Ramon.
- **Guiding Policy 3.5-G-1:** Participate in regional cooperative and multi-jurisdictional transportation planning for the maintenance of regional mobility and air quality standards as required by the Measure J Growth Management Program and the Contra Costa Congestion Management Plan (CMP).
- **Implementing Policy 3.5-I-1:** Continue to develop and implement Action Plans for Routes of Regional Significance, in cooperation with the Southwest Area Transportation Committee (SWAT), the Contra Costa Transportation Authority (CCTA), and the Tri-Valley Transportation Council (TVTC).
- **Implementing Policy 3.5-I-2:** Continue to implement the Tri-Valley Transportation Action Plan through participation in the Tri-Valley Transportation Council (TVTC).
- **Implementing Policy 3.5-I-3:** Participate in programs to mitigate regional traffic congestion, including implementation of regional and sub-regional transportation demand management and trip reduction strategies as alternatives to increased roadway capacity.
- **Implementing Policy 3.5-I-4:** Emphasize regional transportation demand management and trip reduction strategies as alternatives to increased roadway capacity.
- **Implementing Policy 3.5-I-5:** Continue to address the impacts of land use decisions on regional and local transportation facilities by applying the Contra Costa Transportation Authority (CCTA) travel demand model and technical procedures during project analysis. Additionally, help maintain CCTA’s travel demand modeling system by providing information on proposed improvements to the transportation system and future developments and long-range plans within San Ramon.

- **Implementing Policy 3.5-I-6:** Participate in the Contra Costa Transportation Authority conflict resolution process as needed to resolve disputes related to the development and implementation of Action Plans and other Growth Management Programs.
- **Implementing Policy 3.6-I-4:** As part of the development review process, support the accommodation of public transit, bicycle, and pedestrian access for new development.
- **Guiding Policy 5.1-G-1:** Maintain acceptable levels of service and ensure that future development and the circulation system are in balance.
- **Implementing Policy 5.1-I-4:** Implement uniform design standards for City arterials, collectors, and local streets.
- **Implementing Policy 5.1-I-5:** Monitor key intersection levels of service on an annual basis and document the results.
- **Implementing Policy 5.1-I-6:** Implement the following transportation programs: the Transportation Demand Program (TDM), Street Smarts Traffic Safety Program, the Residential Traffic Calming Program, the Safe Routes to School Program, TRAFFIX Program and the Engineering Services Department's Traffic Engineering component.
- **Implementing Policy 5.1-I-7:** Implement a School Traffic Calming Program to address access and safety issues on streets adjacent to schools in San Ramon.
- **Guiding Policy 5.2-G-1:** Actively participate in local and regional transportation planning.
- **Implementing Policy 5.2-I-1:** Continue to develop and implement Action Plans for Routes of Regional Significance, in cooperation with the Southwest Area Transportation Committee (SWAT), the Contra Costa Transportation Authority (CCTA), and the Tri-Valley Transportation Council (TVTC).
- **Implementing Policy 5.2-I-2:** Continue to implement the Tri-Valley Transportation Action Plan through participation in the Tri-Valley Transportation Council (TVTC).
- **Implementing Policy 5.2-I-3:** Participate in roadway programs to mitigate regional traffic congestion including the following projects when necessary based on monitoring and program goals:
 - **Alcosta Boulevard/I-680 Northbound Off-Ramp:** Widen the off-ramp to provide one left turn lane, one shared left/through/right turn lane, and one right turn lane.
- **Implementing Policy 5.2-I-4:** Support goals and policies of the Contra Costa Congestion Management Plan (CMP).
- **Implementing Policy 5.2-I-5:** Emphasize regional transportation demand management and trip reduction strategies as alternatives to improvements to existing facilities and the construction of new facilities.
- **Implementing Policy 5.2-I-6:** Identify the impacts of land use decisions on regional as well as local transportation facilities.
- **Implementing Policy 5.2-I-7:** Support regional air quality objectives through effective management of the City's transportation system.
- **Guiding Policy 5.3-G-1:** Encourage transportation facilities that consider the users' safety and allows for all modes of travel based on local conditions and needs of the community.

- **Implementing Policy 5.3-I-1:** Develop Complete Streets Guidelines that establish local review and assessment criteria and encourage development of a multimodal transportation network to meet community needs.
- **Implementing Policy 5.3-I-2:** Implement Complete Streets principles, as appropriate, for new roadway design and significant roadway rehabilitation.
- **Implementing Policy 5.3-I-3:** Coordinate the implementation of Complete Streets concepts, as appropriate, with ongoing transportation and congestion relief programs such as the TDM Program, Street Smarts Traffic Safety Program, Residential Traffic Calming Program, Safe Routes to School Program and TRAFFIX Program.
- **Implementing Policy 5.3-I-4:** Encourage Complete Streets concepts as a vehicle-miles-traveled and greenhouse gas reduction strategy.
- **Guiding Policy 5.4-G-1:** Design arterial roadways to efficiently move inter-city traffic, thereby minimizing through-traffic in residential areas of the City.
- **Implementing Policy 5.4-I-1:** Ensure that adequate north-south and east-west arterial capacity is provided to accommodate future travel demand and, where appropriate, implement Complete Streets concepts pursuant to Policy 5.3-G-1.
- **Implementing Policy 5.4-I-2:** Implement the City’s five-year Capital Improvement Plan.
- **Implementing Policy 5.4-I-3:** Construct the capacity improvements necessary to serve traffic growth generated by development under the General Plan.
 - **Crow Canyon Road:** Widen to six lanes from Alcosta Boulevard to Danville Town limits. Preserve right-of-way for widening to four lanes from Bollinger Canyon Road to Alameda County line.
 - **Dougherty Road:** Support construction to six lanes from North Gale Ridge Road to Alameda County line.
 - **Bollinger Canyon Road:** Widen to eight lanes from I-680 to Alcosta Boulevard. Construct to six lanes from east of Canyon Lakes Drive to Dougherty Road (North) [Project Complete].
 - **Camino Tassajara:** Support widening to four lanes from Danville Town limits to Windemere Parkway. Support widening to six lanes from Windemere Parkway to Alameda County line.
 - **Alcosta Boulevard:** Install signals and associative lane improvements at the Old Ranch Road and Vera Cruz Drive intersections.
- **Implementing Policy 5.4-I-4:** Maximize the carrying capacity of arterial roadways by controlling the number of intersections and minimize residential and commercial driveway access, on-street parking and requiring sufficient off-street parking to meet the needs of each proposed project.
- **Implementing Policy 5.4-I-5:** Require traffic impact mitigation fees on new residential and commercial development to ensure that transportation improvements are constructed before the increased traffic causes conditions to deteriorate.

- **Implementing Policy 5.4-I-6:** Make optimal use of federal, state, and other funding sources to complete circulation system improvements.
- **Implementing Policy 5.4-I-7:** Minimize congestion on arterials by fully implementing the policies in the Transportation Demand Management and Transit section of the Circulation Element.
- **Implementing Policy 5.4-I-8:** Encourage regional freight movement on freeways and other appropriate routes; evaluate and implement vehicle weight limits as appropriate on arterial, collector and local roadways to mitigate truck traffic impacts in the community.
- **Implementing Policy 5-4-I 9:** Specify routes for transporting hazardous materials that minimize the risk to people and property.
- **Guiding Policy 5.5-G-1:** Design collector and local roadways to improve circulation and to connect residential and commercial areas of the City while incorporating Complete Streets concepts pursuant to Policy 5.3-I-2 where appropriate.
- **Implementing Policy 5.5-I-1:** Implement residential traffic calming measures, as warranted, and police enforcement to mitigate speeding and other traffic impacts in residential areas of the City.
- **Implementing Policy 5.5-I-2:** Continue to implement traffic-control measures and design features that support attainment of the City’s goal of less than 3,000 vehicles per day on collector roadways.
- **Implementing Policy 5.5-I-3:** Continue to implement traffic-control measures, residential traffic calming, and design features that support attainment of the City’s goal of less than 500 vehicles per day on local roadways.
- **Implementing Policy 5.5-I-4:** Construct improvements to collector roadways as follows:
 - **Twin Creeks Drive:** Extend and construct as a four-lane street from Crow Canyon Road to Old Crow Canyon Road.
 - **Alcosta Boulevard Extension:** Extend Alcosta Boulevard north from Crow Canyon Road to Fostoria Parkway as a four-lane street. Widen and construct Fostoria Parkway as a four-lane roadway from Camino Ramon east to Alcosta Boulevard extension. (These streets are partially within the Danville Town limits, and these projects would require the support and participation of the Town of Danville.)
 - **Camino Ramon:** Install a signal and associated lane improvements at the Fostoria Way intersection. Reconfigure the westbound and eastbound approaches at the Bishop Drive intersection and alter signal phasing.
- **Implementing Policy 5.5-I-5:** Mitigate appropriately traffic that impacts collector streets as a result of new residential and commercial development.
- **Implementing Policy 5.5-I-6:** Maintain controlled or permit-only parking restrictions in residential areas adjacent to California High School.
- **Guiding Policy 5.6-G-1:** Utilize Transportation Demand Management (TDM) strategies as an integral component of the City’s transportation program to reduce total vehicle trips on San

Ramon roadways and reduce the corresponding vehicle emissions that promote regional air quality improvements.

- **Implementing Policy 5.6-I-1:** Cooperate with public agencies and other jurisdictions to promote local and regional public transit service in San Ramon as part of a multimodal and Complete Streets strategy.
- **Implementing Policy 5.6-I-2:** Encourage and assist major employers and commercial complexes to reduce the number of single-occupant vehicles by participating in the City's TDM programs.
- **Implementing Policy 5.6-I-3:** Encourage additional local bus or other public transportation service providers to and from regional transit lines. Bus service or other public transportation services should be included under the Initial Level of Development as part of the Dougherty Valley area. The City shall consistently strive to improve the transit service to and from San Ramon including the annexed areas of Dougherty Valley.
- **Implementing Policy 5.6-I-4:** Preserve options for future public transit and alternative transportation uses when designing improvements for roadways such as Bollinger Canyon Road Corridor within Dougherty Valley.
- **Implementing Policy 5.6-I-5:** Support future transit uses within the I-680 corridor right-of-way.
- **Implementing Policy 5.6-I-6:** Work with other jurisdictions and agencies to coordinate the City's TDM programs with regional plans that are aimed at reducing traffic congestion and improving air quality.
- **Implementing Policy 5.6-I-7:** Encourage new development to include a mix of uses and Complete Streets concepts that will allow people to walk and bike between destinations and reduce the amount of automobile vehicle-miles-traveled.
- **Implementing Policy 5.6-I-8:** Support alternative public transportation programs and obtain funding for new TDM projects or programs.
- **Implementing Policy 5.6-I-9:** Encourage employers and commercial complexes to emphasize public transit services or private alternatives to the single-occupant vehicle.
- **Implementing Policy 5.6-I-10:** Work with transit providers to situate transit stops at convenient and safe locations.
- **Implementing Policy 5.6-I-11:** Promote increased transit ridership through the use of Transportation Management Associations and other employer-based transit programs, equip buses with bike racks, and making transit information readily accessible.
- **Implementing Policy 5.6-I-12:** Coordinate with Caltrans and transit providers to identify and implement park and ride lots with convenient access to public transit.
- **Implementing Policy 5.6-I-13:** Work with the San Ramon Valley Unified School District and other appropriate agencies and organizations to reduce vehicle trips through the provision of transit programs and promoting carpooling, bicycling, and walking.
- **Implementing Policy 5.6-I-14:** Consider the construction of public parking facilities in the City Center, North Camino Ramon Specific Plan, or other commercial areas to serve projected

parking demand, while carefully balancing the need for adequate parking against the desire to minimize traffic growth and create a pedestrian/bicycle friendly environment.

- **Implementing Policy 5.6-I-15:** Work with local transit providers to increase and expand weekend transit service.
- **Implementing Policy 5.6-I-16:** Explore opportunities for the location or relocation of a transit center to North Camino Ramon Specific Plan Area to better geographically balance the public transit needs for the City.
- **Guiding Policy 5.6-G-2:** Encourage trip reduction measures in an effort to reduce vehicle miles traveled improve air quality and reduce greenhouse gas emissions.
- **Implementing Policy 5.6-I-17:** Encourage “Park Once” concepts as a vehicle miles traveled reduction strategy for mixed use, commercial, and public facilities through the integration of common design features and shared parking concepts including but not limited to Parking Benefit Districts.
- **Implementing Policy 5.6-I-18:** Encourage shared parking facilities and parking reductions for compatible land uses to minimize excessive parking to reduce inefficient use of land, unnecessary pavement and stormwater runoff, and encouraged alternative transportation and reductions in Vehicle miles traveled.
- **Implementing Policy 5.6-I-19:** Encourage infill and Transit Oriented Development (TOD) concepts as a “vehicle miles traveled” reduction strategy for existing and proposed development.
- **Guiding Policy 5.7-G-1:** Encourage bicycling and walking as alternatives to driving, consistent with Complete Streets concept.
- **Implementing Policy 5.7-I-1:** Establish a network of on- and off-street bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon. The design of bike routes shall consider the safety of cyclists.
- **Implementing Policy 5.7-I-2:** Develop bicycle routes that provide access to regional employment centers, shopping centers, public facilities, transit centers, schools and parks.
- **Implementing Policy 5.7-I-3:** Continue to emphasize the Iron Horse Trail as a major north-south route for non-motorized transportation by improving connectivity and enhancing amenities.
- **Implementing Policy 5.7-I-4:** Encourage future development along the trail corridor to provide connection points and amenities as appropriate.
- **Implementing Policy 5.7-I-5:** Require bicycle parking, storage and other support facilities as part of any new office and retail developments and public facilities.
- **Implementing Policy 5.7-I-6:** Continue to promote and implement through the development review process, continuous circulation facilities within Bishop Ranch Business Park, commercial districts, and residential neighborhoods to enhance connectivity and promote pedestrian and bicycle modes of transportation consistent with Complete Streets concepts.

- **Implementing Policy 5.7-I-7:** Continue to implement accessibility standards for physically disabled persons within the public rights-of-way
- **Implementing Policy 5.7-I-8:** Adopt a local or regional Bicycle Master Plan that considers sources of statewide funding for bicycle programming.
- **Implementing Policy 5.7-I-9:** Implement the San Ramon Valley Iron Horse Trail Corridor Concept Plan by refining the design alternatives and pursue funding through grants, public/private partnerships and other funding sources as appropriate.
- **Implementing Policy 5.7-I-10:** Require roadway improvement projects to minimize both temporary and permanent reductions in bicycle and pedestrian mobility and/or accessibility.
- **Implementing Policy 5.7-I-11:** Work with neighboring jurisdictions to ensure that continuity in bicycle and pedestrian networks is provided at jurisdictional boundaries.
- **Implementing Policy 5.7-I-12:** Work with the California Department of Transportation (Caltrans) and other appropriate agencies to improve bicycle and pedestrian mobility and safety at freeway crossings.
- **Implementing Policy 5.7-I-13:** Promote educational efforts about traffic laws and safe practices to avoid conflicts between motorists, bicyclists, and pedestrians.

General Plan Roadway Improvements

The General Plan’s Traffic and Circulation Element identifies a list of planned improvements within the City. Roadway improvements identified in the General Plan with their current status are listed below.

Arterial Roadway Improvements

Crow Canyon Road

- Widen to six lanes from Alcosta Boulevard to Danville Town limits. No construction currently scheduled.
- Preserve right-of-way for widening to four lanes from Bollinger Canyon Road to Alameda County line—preserved.

Dougherty Road

- Support construction to six lanes from North Gale Road to Alameda County line—under construction [Project Complete].

Bollinger Canyon Road

- Widen to eight lanes from I-680 to Alcosta Boulevard—under construction.
- Construct to six lanes from Canyon Lakes Drive to Dougherty Road (North)—scheduled for 2009–2014 [Project Complete].

Camino Tassajara

- Support widening to four lanes from Danville Town limits to Windemere Parkway—no construction currently scheduled.

Transportation

- Support widening to six lanes from Windemere Parkway to Alameda County line—no construction currently scheduled.

Alcosta Boulevard

- Extend Alcosta Boulevard north from Crow Canyon Road to Fostoria Parkway as a four-lane street—no construction currently scheduled.
- Widen and construct Fostoria Parkway as a four-lane roadway from Camino Ramon east to Alcosta Boulevard extension. (These streets are partially within the Danville Town limits, and these projects would require the support and participation of the Town of Danville)—no construction currently scheduled.

Collector and Local Roadway Improvements

Twin Creeks Drive

- Extend and construct as a four-lane street from Crow Canyon Road to Old Crow Canyon Road—scheduled for 2009–2014.

Bicycle Network Improvements

Within the City limits, the General Plan identifies the following bicycle network improvements:

- Class II bike lane on Bollinger Canyon Road (north of Deerwood Drive)
- Class I bike path on Cross Valley Trail (between Tareyton Avenue and Alcosta Boulevard)
- Designation of Class III bike route on Deerwood Drive between San Ramon Valley Boulevard and Bollinger Canyon Road
- Class II bike lane on Dougherty Road extension
- Class III bike route on Fostoria Parkway from Crow Canyon Place to Iron Horse Trail

3.12.4 - Methodology

Analysis in this section was based on the traffic analysis prepared by Kimley-Horn and Associates, Inc. Four analysis scenarios are included in the traffic operations analysis. These scenarios are as follows:

- **Existing Conditions:** This scenario reflects traffic counts that were collected during 2008 and 2009.
- **Existing Plus Project:** This scenario adds project vehicular trips generated by the land uses proposed in the Specific Plan to existing traffic conditions.
- **Year 2030 Cumulative Conditions – No Project:** This scenario represents Year 2030 traffic conditions modeled by the Contra Costa Transportation Authority (CCTA) travel forecasting model.

- **Year 2030 Cumulative Conditions Plus Project:** This scenario adds trips generated by the land uses proposed in the Specific Plan to Year 2030 traffic conditions.

Trip Generation

The Institute of Transportation Engineer’s (ITE) Trip Generation, 8th Edition, was used to estimate daily and peak-hour trip generation that can be attributed to the proposed land uses of the Specific Plan. Trip generation rates are the number of trips generated by a particular land use per an independent variable of dwelling units, employees, or square feet. These rates are developed through many studies conducted throughout the country and, therefore, the rates represent a national average for similar land use types. Trip generation rates can vary depending on where the studies were conducted, and ITE provides a range of rates.

For purposes of determining the worst-case impacts of traffic on the surrounding street network, the trips generated by a proposed development are typically estimated between the hours of 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. While the project itself may generate more traffic during other times of the day, the peak of “adjacent street traffic” represents the time period when the uses generally contribute to the greatest amount of congestion, with the PM peak commonly being the greatest congestion period. For this reason, this analysis is focused on the weekday AM and PM peak hours. This methodology is in harmony with typical City of San Ramon and CCTA practices in the preparation of other traffic impact studies.

Because development in the Specific Plan area comprise the redevelopment and intensification of existing land uses, estimates of the “net new external” vehicle trips generated by the proposed project equal the total trip generation within the Specific Plan area with buildout of the proposed land use plan minus the trip generation of existing uses. The trip generation estimates for the proposed project include adjustments to account for internal capture, transit use, and applicable TDM programs within the Specific Plan area. For the purposes of applying these trip generation adjustments appropriately, the Specific Plan area was partitioned into block groups, or groupings of development subareas. Exhibit 3.12-6 shows the project development subareas and block groups.

Internal Capture

With multi-use development, there is the potential for interaction among uses within the site. These types of trips are considered internal to the site and are “captured” within the site. Trip estimates for the proposed project were reduced to account for mixed-use internal capture based on ITE’s “Multi-Use Internalization Methodology” published in the Trip Generation Handbook, 2nd Edition. This reduction may be used to reflect the fact that some trips are made between different land uses when a development or adjacent development contains a mix of complementary land use types. The trips are expected to remain internal to the project site or sub-district and frequently do not require the use of an automobile. Internal capture reductions for each use within the development block groups shown in Exhibit 3.12-6 were calculated separately, based on ITE methodology.

Project Transit Trip Reduction

Developments constructed within viable walking distance (generally within 0.33 to 0.50 mile) to existing transit systems typically have lower vehicular trip generation than developments with poor access to transit. Further, areas with well-connected and attractive pedestrian and bicycle networks create a greater propensity for walk and bike travel. In order to account for the potential transit mode share that can be anticipated within the Specific Plan area, the following trip reductions were taken to the existing and proposed land uses within the Specific Plan area:

- Residential: 2 percent
- Office: 2 percent
- Retail: no reduction applied

There is generally a lower propensity to utilize transit for retail trips compared with office or residential uses. For this reason, no transit reduction is applied to the trip generation for retail uses. The 2-percent transit reduction applied to office and residential trips is consistent, if not conservative, when compared with mode split data reported for San Ramon in the 2009 511 Southern Contra Costa County Transportation Survey.

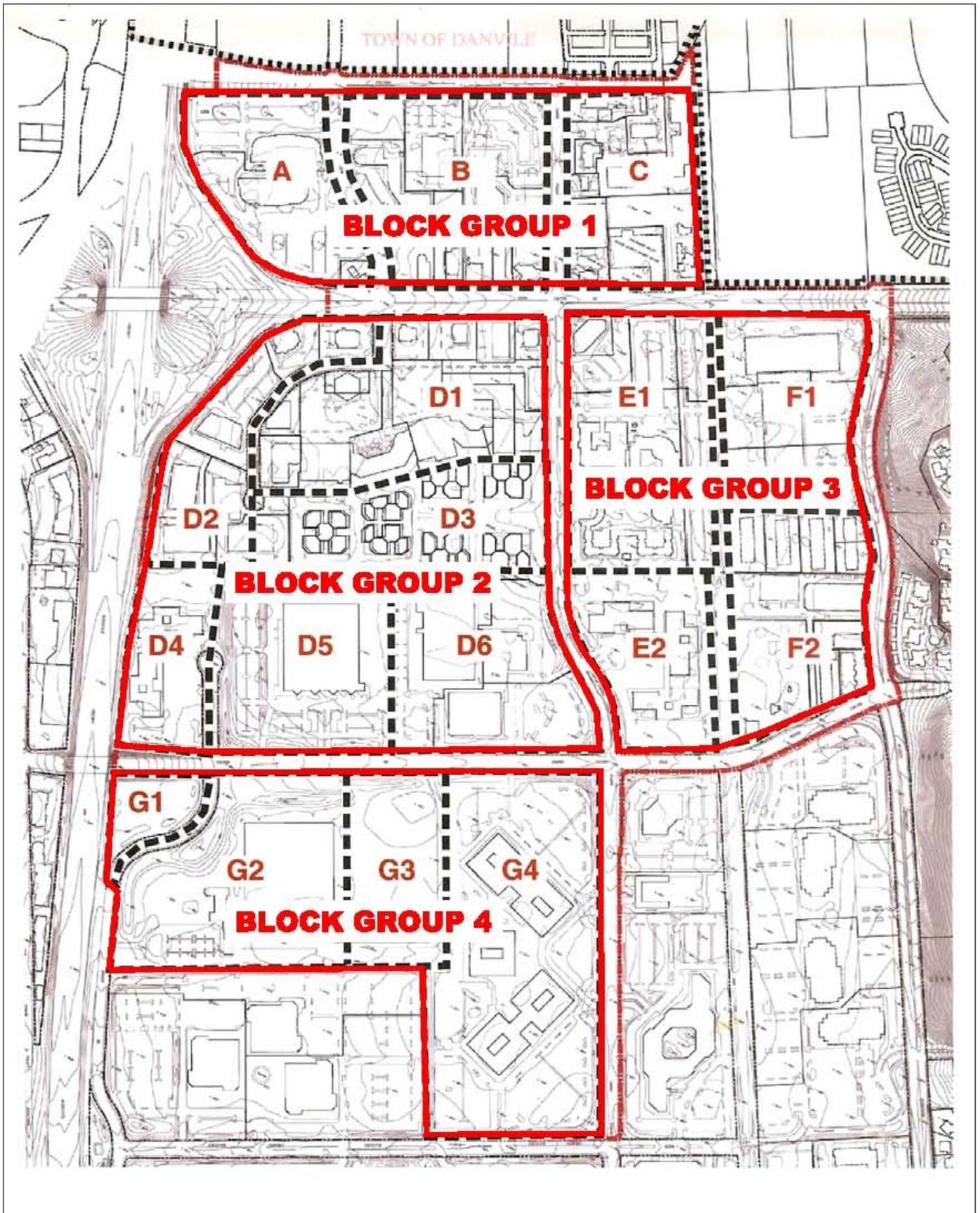
Project Trip Pass-By

Pass-by trips represent trips already on the road that stop as they pass by the site as a matter of convenience on their path to another destination. These trips enter and exit the site at the driveways but are not new trips to the study area. The most complete source of data regarding average pass-by rates for various land uses is found in ITE's Trip Generation Handbook. A reduction was applied to the trip generation for retail uses within the Specific Plan area to account for pass-by trips.

TDM Reduction

TDM refers to strategies to reduce single-occupant automobile traffic for the purposes of reducing traffic congestion, improving air quality, and delaying/reducing the need to construct costly transportation infrastructure improvements. TDM measures include carpooling, vanpooling, transit, walking, bicycles, and telecommuting, among others. The City of San Ramon provides administrative oversight and implements the 511 Southern Contra Costa County regional TDM programs. The Bishop Ranch Transportation Association has been an active member in the City's TDM program and has been recognized at the local, regional, and state level for its contribution to reduce the number of trips by single-occupant vehicles and encourage commuters to carpool, vanpool, ride transit, walk, and bicycle to work.

TDM reductions of 8 percent for general office uses and 4 percent for medical/dental office uses have been applied to the existing trip generation for block groups within Bishop Ranch, which historically reports successful results from its TDM programs and policies.



Source: Kimley-Horn and Associates, Inc., 2012.



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Exhibit 3.12-6 Project Development Subareas

Because the Specific Plan includes recommendations supporting the formation of a representative transportation management association (TMA) for the Specific Plan area, the TDM reductions for general office and medical/dental office uses were applied to the proposed project trip generation for all block groups within the Specific Plan area. The reductions applied to the project trip generation estimates are consistent with the guidance presented in the CCTA Technical Procedures Update (July 2006), and conform to the 10-percent maximum allowed reduction for transit and TDM measures.

The net new external trip generation was calculated by subtracting the adjusted trip generation (after applied reductions) for the existing land uses within the Specific Plan area from the adjusted trip generation estimate for the proposed project land use program. The trip generation estimates are calculated for each individual block group (see Exhibit 3.12-6) and then added together to estimate the total project’s trips. Table 3.12-7 summarizes the ITE trip generation for the proposed buildout of the Specific Plan land uses. A detailed trip generation summary is included in Appendix E.

Table 3.12-7: Net New Trips Over Existing Conditions with Development of Plan

Land Use	Daily	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Block Group 1 (Subarea A, B, C)	(155)	(88)	(8)	(96)	8	(62)	(54)
Block Group 2 (Subarea D1, D2, D3)	29,030	519	343	862	1,192	1,320	2,512
Block Group 3 (Subarea E1, E2, F1, F2)	3,719	17	269	286	264	26	290
Block Group 4 (Subarea G1, G2, G3, G4)	16,656	496	307	803	634	775	1,409
Total	49,250	944	911	1,855	2,098	2,058	4,156

Notes:
 Trip generation estimates calculated using rates from ITE Trip Generation, 8th Edition
 The following ITE land use categories were assumed for all development scenarios:
 Residential – ITE 230, Residential Condominium/Townhouse
 Retail – ITE 820, Shopping Center
 General Office – ITE 710, General Office Building
 Professional/Medical Office – ITE 720, Medical-Dental Office Building
 Reductions for mixed-use internalization and pass-by reductions for retail calculated using methodology presented in ITE Trip Generation Handbook, 2nd Edition. ITE does not provide daily pass-by rates; therefore, a daily pass-by rate of 15 percent was assumed, in accordance with Caltrans TIA Standards, 2002.
 Bus Transit reduction applied - 2% for Residential and Office uses to reflect proximity to the existing transit center and bus service in the Specific Plan area. This reduction is consistent with the methodology used in the San Ramon City Center EIR. A TDM reduction of 8% for General Office traffic and 4% for Medical-Dental Office traffic has been applied. For this analysis, a lower reduction, 4%, has been used for Medical-Dental Office traffic, as there is likely to be a higher proportion of non-employee trips, where TDM measures such as carpool, rideshare, etc. are typically less utilized
 Source: Kimley-Horn and Associates, 2012.

Project Trip Distribution

The Specific Plan trip distribution was based on distributions prepared in previous traffic reports, existing traffic count information, discussions with City staff and the general orientation of population sources to the site. Table 3.12-8 shows the traffic distribution assumed for the traffic analysis.

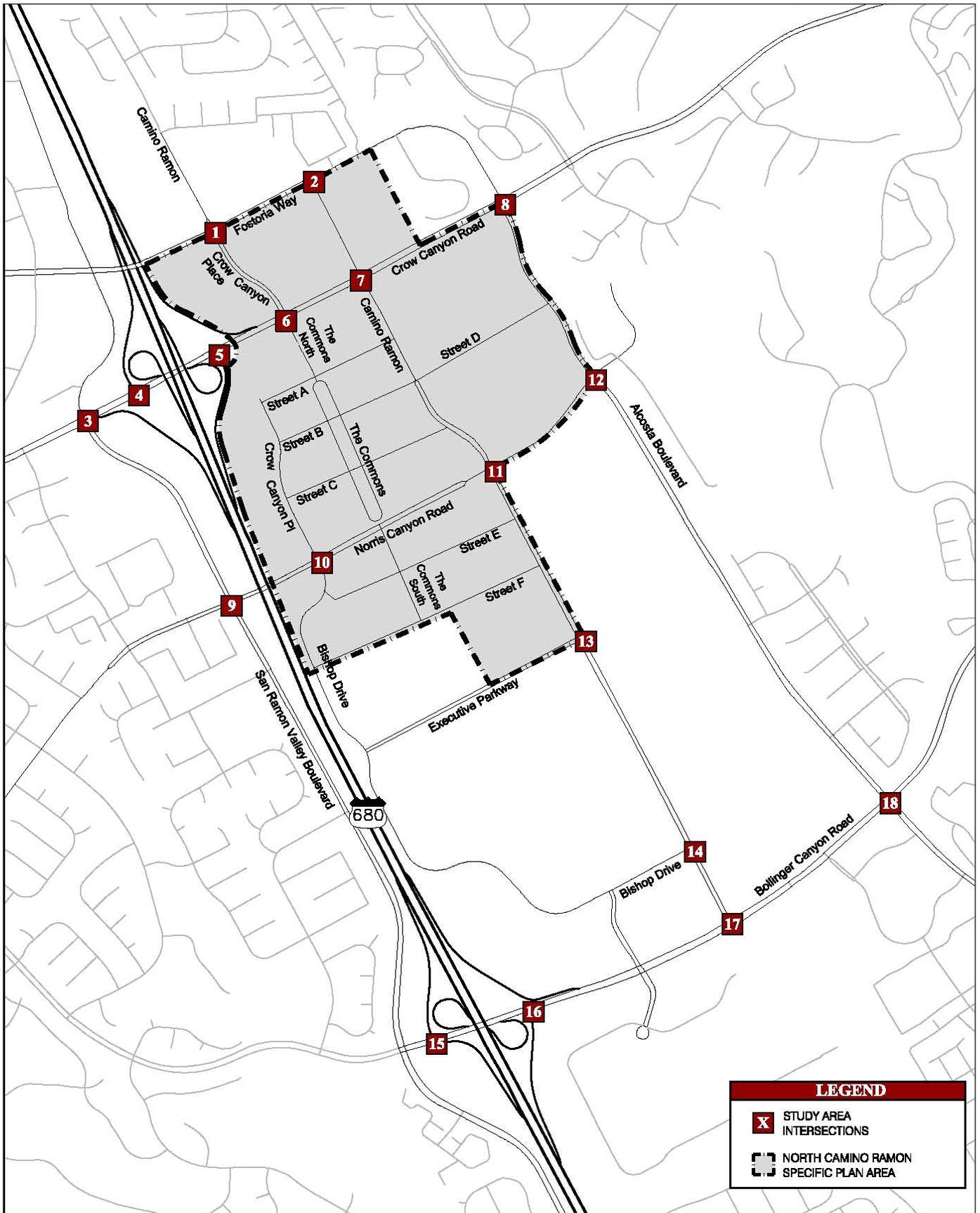
Table 3.12-8: Trip Distribution

Description	Percent Distribution
I-680 North	25%
I-680 South	35%
Crow Canyon Road East	8%
Crow Canyon Road West	8%
Fostoria Way	2%
San Ramon Valley Boulevard North	3%
San Ramon Valley Boulevard South	3%
Bollinger Canyon Road East	6%
Bollinger Canyon Road West	3%
Alcosta Road South	5%
Norris Canyon Road West	2%
Total	100%
Source: Kimley-Horn and Associates, 2012.	

Project Roadway Improvements*Specific Plan Roadway Improvements*

The North Camino Ramon Specific Plan identifies a list of planned roadway improvements within the Specific Plan area as shown on Exhibit 3.12-7. Roadway improvements included in the Specific Plan are listed below:

- A new Alcosta Boulevard roadway extension north of Crow Canyon Road connecting to Fostoria Way (this is a planned improvement and not exclusive to the proposed project).
- A new north-south street forming the new spine of the internal circulation network, with a wide center landscaped median. The northernmost segment of the new street is called “The Commons North,” the central core segment is called “The Commons” and the southernmost segment of this street is called “The Commons South.”
- The extension of Crow Canyon Place, which connects to “A” Street, to Norris Canyon Road, forming the top of the new grid.
- Three new east-west streets that connect Crow Canyon Place and Camino Ramon north of Norris Canyon Road (Streets A, B, C).
- Two new east-west streets that connect Crow Canyon Place and Camino Ramon south of Norris Canyon Road (Streets E, F).
- A new east-west street connecting Camino Ramon and Alcosta Boulevard (Street D).



Source: Kimley-Horn and Associates, Inc., 2012.



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Exhibit 3.12-7 Proposed Roadway Network

Access and Traffic Control for New Roadway Connections

There are several new streets in the proposed roadway network that will intersect with each other and with key existing streets. The following new intersections are created with buildout of the proposed roadway network:

New Intersections with Existing Streets

- Camino Ramon/Street A
- Camino Ramon/Street B/Street D
- Camino Ramon/Street C
- Camino Ramon/Street E
- Camino Ramon/Street F
- Alcosta Boulevard/Street D
- Norris Canyon Road/The Commons

New Intersections with Proposed Streets

- The Commons North/Street A
- The Commons/Street B/Street D
- The Commons/Street C
- The Commons South/Street E
- The Commons South/Street F
- Crow Canyon Place/Street A
- Crow Canyon Place/Street B
- Crow Canyon Place/Street C

It is anticipated that the intersection of The Commons and Norris Canyon Road would be signalized because of the expected traffic volume levels, significant bus activity accessing the relocated transit center, and anticipated pedestrian activity crossing Norris Canyon Road. The anticipated lane configuration at this intersection includes a left-turn lane, two through lanes and a right-turn lane for the eastbound and westbound Norris Canyon Road approaches. The northbound and southbound intersection approaches for The Commons will feature an exclusive left-turn lane, through lane, and a right-turn lane. The design elements of this intersection—including curb returns, lane widths, pedestrian crossing timings, bicycle detection, and signal timings—will need to be designed in order to accommodate the significant pedestrian, bicycle, and transit activity anticipated at this location, particularly since buses would use this intersection to access the relocated transit center.

It is anticipated that the intersection of Camino Ramon and Street B/Street D would be signalized because of the expected traffic volumes at this location. The anticipated lane configuration at this intersection is consistent with the street cross-section shown in Appendix E. The northbound and southbound travel lanes on Camino Ramon are divided by a raised center median.

The northbound and southbound intersection approaches will include an exclusive left-turn lane, a through lane, and a shared through/right-turn lane. The eastbound and westbound side street approaches will include an exclusive left-turn lane and a shared through/right-turn lane.

It is anticipated that the new minor street intersections along Camino Ramon, Alcosta Boulevard, Crow Canyon Place, and The Commons will be side-street stop-controlled. In order to avoid conflicts with existing driveways, where possible, the proposed street connections should attempt to align with existing driveway curb cuts and median breaks and existing access control shall be retained.

However, as individual development projects are submitted to the City for review and as traffic conditions are regularly assessed through the City's annual monitoring program, intersection access and traffic control can be reevaluated to assess the need for signalization and to evaluate the potential to limit access to right-in/right-out or to expand to full access if needed. Where full access is allowed, exclusive left-turn lanes should be provided. As buildout of the Specific Plan area occurs and traffic is redistributed throughout the proposed roadway system, the specific intersection access and traffic control needs for each existing and newly formed intersection will be considered. It should be noted that the proposed street design of The Commons and the new east-west connecting streets (Streets A, B, C, D, E, and F) feature elements such as on-street parking, 11-foot travel lanes, and enhanced pedestrian crossings that will provide traffic calming influences that will reduce the attractiveness of these streets for cut-through traffic currently using other local roadways traveling through the area.

3.12.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, transportation impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) 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?
- b) 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.
- c) 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? (Refer to Section 7.0, Effects Found Not To Be Significant.)
- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

- e) Result in inadequate emergency access?
- f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance of safety of such facilities?

In the context of checklist item a), the following quantitative threshold will be used, which reflects the policies of General Plan 2030:

Would the project:

- Cause a study intersection to exceed the current General Plan's standard of LOS C, with LOS D (volume to capacity ratio less than or equal to 0.90) for no more than two hours of the day (AM and PM peak hours). This criteria is consistent with, and slightly more stringent than, the CCTA MTSO for intersections on Routes of Regional Significance?

In the context of checklist item f), the following criteria will be used:

- Fail to provide for reasonably efficient pedestrian and bicycle circulation, through implementation of City standards and the current General Plan's proposed bicycle and trail network or General Plan policies related to pedestrian and bicycle circulation.
- Create a condition, either by design or by the generation of traffic, that provides a barrier to, or unsafe condition for, pedestrian and bicycle circulation.
- Create a transit demand that would exceed currently planned transit service.

For the freeway mainline segments, the Tri-Valley Transportation Plan/Action Plan has identified I-680 as a Route of Regional Significance, and has developed specific Traffic Service Objectives, including:

- Maintain a minimum average speed of 30 mph
- Maintain a delay index of 2.0

Therefore, the standard of significance for the I-680 freeway mainline is LOS E.

3.12.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the Specific Plan and provides mitigation measures where appropriate.

Existing Plus Project Conditions

Impact TRANS-1: Development and land use activities contemplated by the Specific Plan would increase traffic volumes and cause transportation facilities to degrade below acceptable standard levels under existing plus project conditions.

Impact Analysis

This impact identifies potential ramifications to intersection operations and freeway segments under the Existing Plus Project Conditions. The Existing Plus Project Conditions are an artificial scenario that identifies specific impacts of the proposed plan for comparative purposes. The peak-hour traffic volumes for this scenario were developed by adding the net new trips generated by the land use plan to the existing traffic volumes using the project trip distribution.

Intersection Operations

Each study area intersection was analyzed using the existing intersection geometry and traffic control illustrated in Exhibit 3.12-2a and Exhibit 3.12-2b with the exception of the Bishop Drive/Norris Canyon Road intersection, where the northbound and southbound approach lane configuration is assumed to be modified with implementation of the proposed extension of Crow Canyon Place (Annabel Drive) to Norris Canyon Road. For project conditions, it is assumed that the southbound approach will be modified to include one left-turn, one through, and one right-turn lane. It is assumed that the northbound approach will be restriped to include one left-turn lane and one shared through/right lane with protected left-turn phasing for the northbound/southbound approaches.

Using the trip generation from Table 3.12-7 and the trip distribution percentages from Table 3.12-8 the project trips were calculated and added to the existing traffic volumes to develop the existing plus project traffic volumes. The assigned project trips (project only volumes) are shown in Exhibit 3.12-8a and Exhibit 3.12-8b. Exhibit 3.12-9a and Exhibit 3.12-9b illustrate the existing plus project peak-hour volumes. Results of the capacity analysis are compared with the existing conditions as shown in Table 3.12-9.

Table 3.12-9: Existing Plus Project Conditions – Intersection Levels of Service

No.	Intersection	Traffic Control	Existing Condition				Existing Plus Project Condition			
			AM Peak		PM Peak		AM Peak		PM Peak	
			V/C Ratio or Control Delay	LOS	V/C Ratio or Control Delay	LOS	V/C Ratio or Control Delay	LOS	V/C Ratio or Control Delay	LOS
1	Fostoria Way/Camino Ramon/Crow Canyon Place	Signal	0.31	A	0.47	A	0.32	A	0.49	A
2	Fostoria Way/Camino Ramon/Costco Driveway	AWSC	10.1	B	18.6	C	10.3	B	21.0	C
3	Crow Canyon Road/San Ramon Valley Boulevard	Signal	0.55	A	0.71	C	0.59	A	0.88	D
4	Crow Canyon Road/I-680 Southbound Ramps	Signal	0.44	A	0.59	A	0.52	A	0.67	B
5	Crow Canyon Road/I-680 Northbound Ramps	Signal	0.60	B	0.73	C	0.69	B	0.94	E
6	Crow Canyon Road/Crow Canyon Place	Signal	0.63	B	0.78	C	0.72	C	0.92	E
7	Crow Canyon Road/Camino Ramon	Signal	0.52	A	0.59	A	0.73	C	0.79	C
8	Crow Canyon Road/Alcosta Boulevard	Signal	0.55	A	0.62	B	0.57	A	0.66	B
9	Norris Canyon Road/San Ramon Valley Boulevard	Signal	0.54	A	0.43	A	0.60	A	0.61	B
10	Norris Canyon Road/Bishop Drive	Signal	0.34	A	0.55	A	0.41	A	0.74	C
11	Norris Canyon Road/Camino Ramon	Signal	0.45	A	0.53	A	0.58	A	0.79	C
12	Norris Canyon Road/Alcosta Boulevard	Signal	0.37	A	0.40	A	0.40	A	0.48	A
13	Executive Parkway/Camino Ramon	Signal	0.37	A	0.36	A	0.41	A	0.43	A
14	Bishop Drive/Camino Ramon	Signal	0.26	A	0.45	A	0.32	A	0.54	A
15	Bollinger Canyon Road/I-680 Southbound Ramps	Signal	0.63	B	0.63	B	0.63	B	0.64	B
16	Bollinger Canyon Road/I-680 Northbound Ramps	Signal	0.85	D	0.77	C	0.91	E	0.90	E

Table 3.12-9 (cont.): Existing Plus Project Conditions – Intersection Levels of Service

No.	Intersection	Traffic Control	Existing Condition				Existing Plus Project Condition			
			AM Peak		PM Peak		AM Peak		PM Peak	
			V/C Ratio or Control Delay	LOS	V/C Ratio or Control Delay	LOS	V/C Ratio or Control Delay	LOS	V/C Ratio or Control Delay	LOS
17	Bollinger Canyon Road/Camino Ramon	Signal	0.54	A	0.81	D	0.58	A	0.84	D
18	Bollinger Canyon Road/Alcosta Boulevard	Signal	0.66	B	0.68	B	0.68	B	0.74	C

Notes:
 AWSC – All-Way Stop Controlled
 LOS analysis performed using TRAFFIX software.
 Source: Kimley-Horn and Associates, 2012.

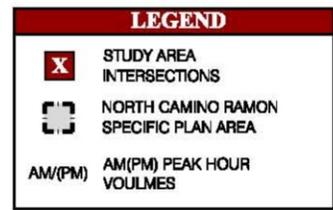
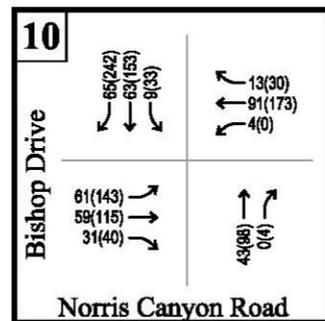
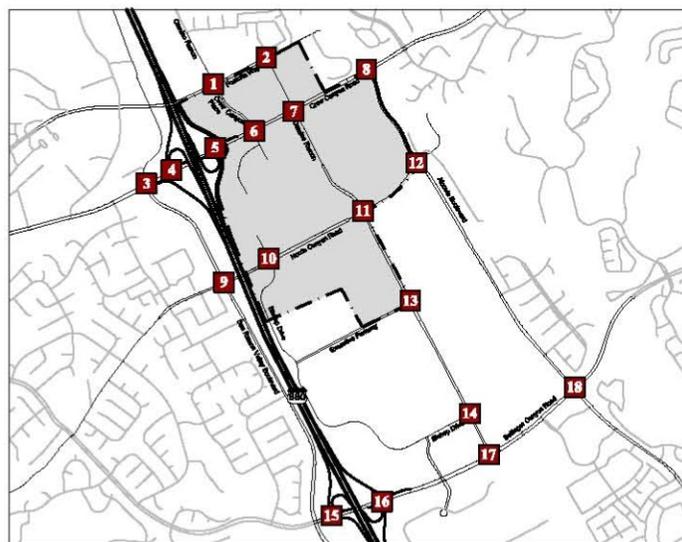
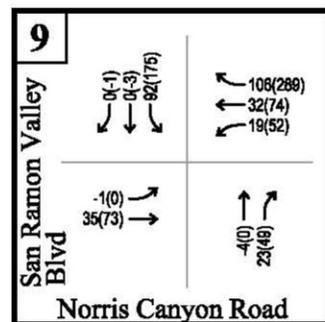
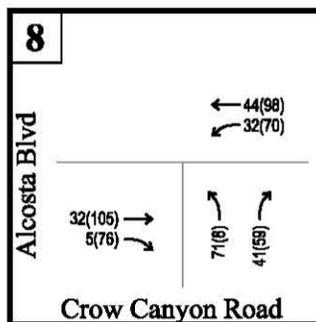
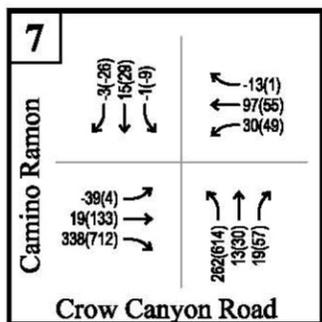
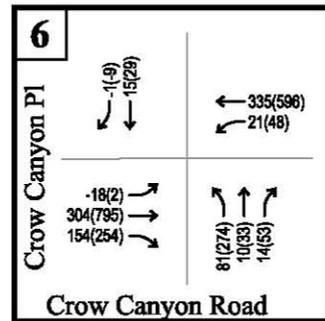
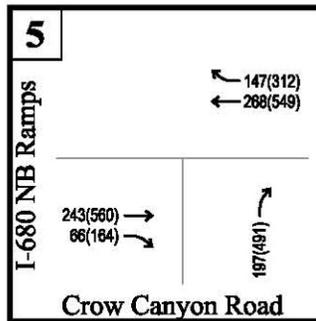
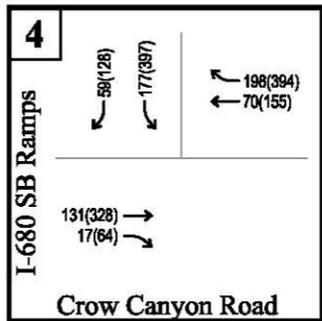
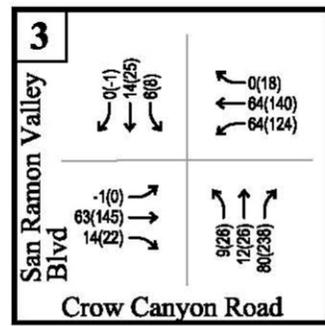
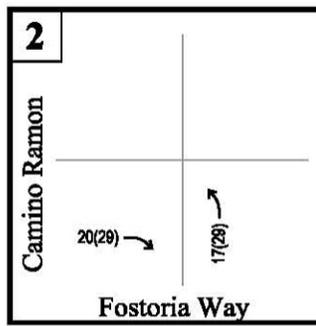
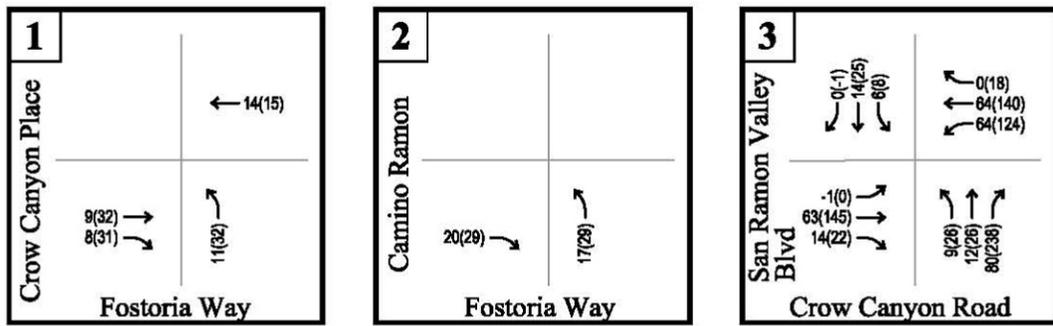
As shown in Table 3.12-9, the study intersections in the Existing Plus Project scenario would continue to operate at acceptable levels of service, except for the following intersections:

- Crow Canyon Road and I-680 Northbound Ramps (PM peak)
- Crow Canyon Road and Crow Canyon Place (PM Peak)
- Bollinger Canyon Road and I-680 Northbound Ramps (AM Peak and PM Peak)

These three intersections currently operate at acceptable LOS under existing conditions. By adding the trips generated by the Specific Plan to these intersections, they would operate at unacceptable levels.

Crow Canyon Road and I-680 Northbound Ramps (PM peak)

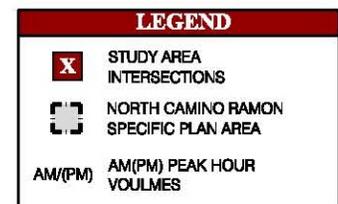
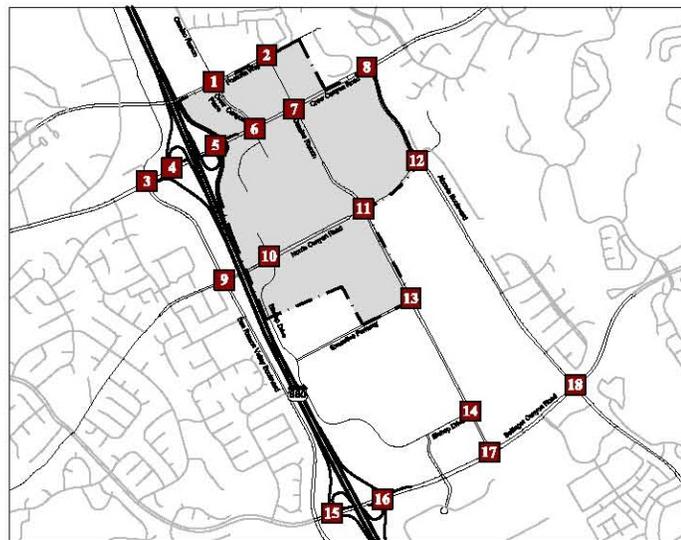
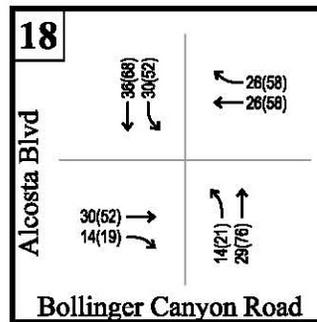
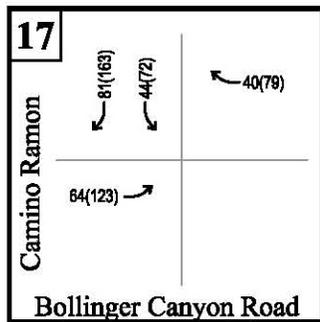
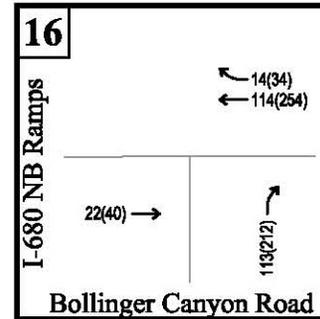
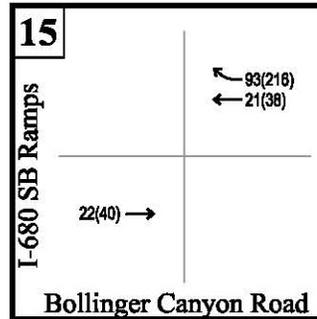
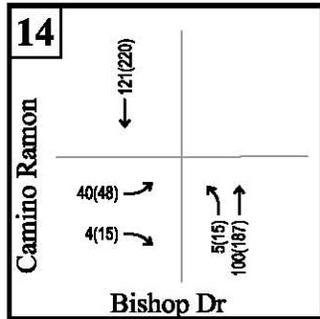
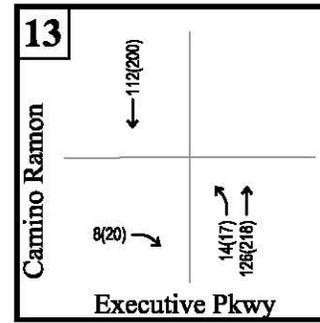
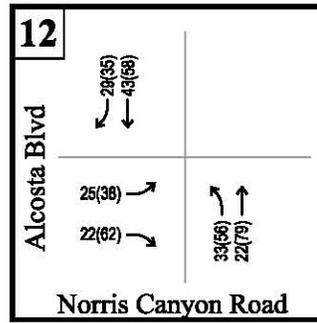
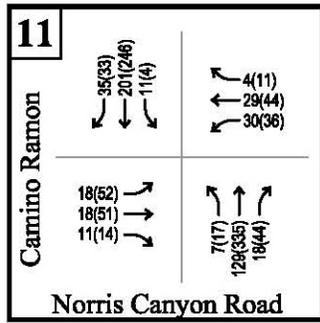
The Crow Canyon Road and I-680 Northbound Ramp intersection currently operates at LOS C during the PM peak hour, and is projected to operate at LOS E with the addition of the project-generated trips under the Existing Plus Project scenario. The City of San Ramon’s General Plan 2030 includes policies to implement capital improvement projects, including widening the northbound ramp to provide two left-turn and two right-turn lanes. This improvement would result in a v/c ratio of 0.89/LOS D for the PM peak hour, which would meet the City’s LOS standard. Implementation of the planned CIP project at this intersection would mitigate the Existing Plus Project impact, making this impact less than significant with mitigation. The planned CIP improvement consists of adding a northbound traffic lane and restriping the northbound approach for two left-turn and two right-turn lanes. This improvement is reflected in Mitigation Measure TRANS-1a.



Source: Kimley-Horn and Associates, Inc., 2012.



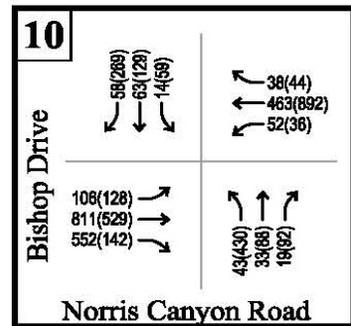
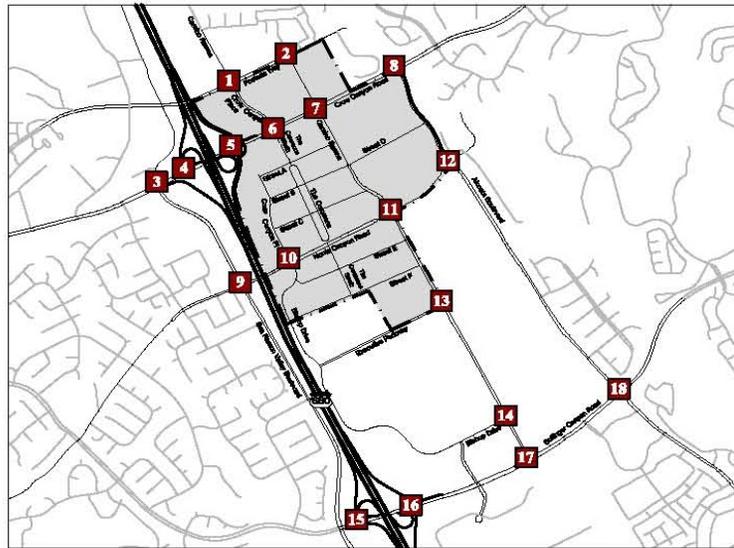
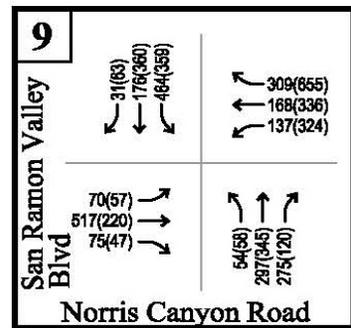
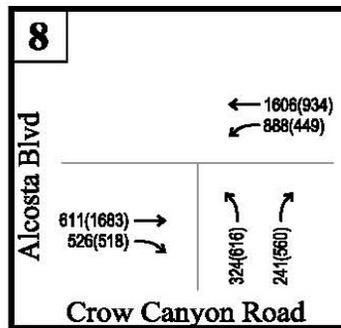
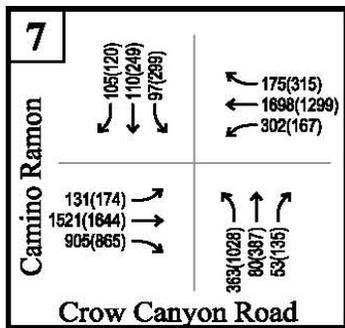
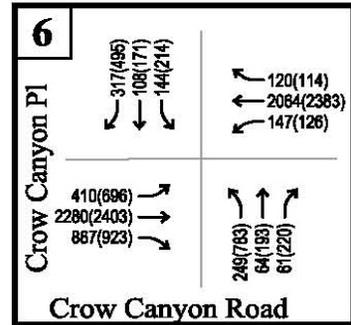
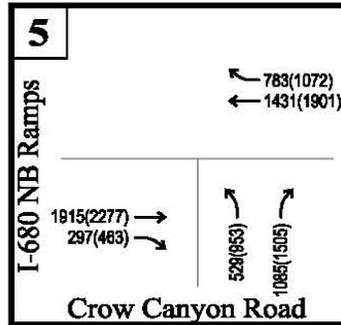
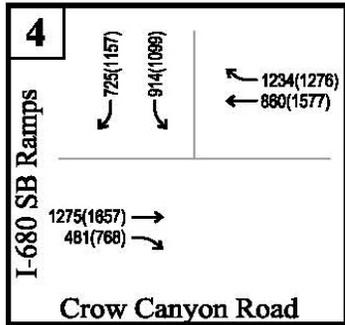
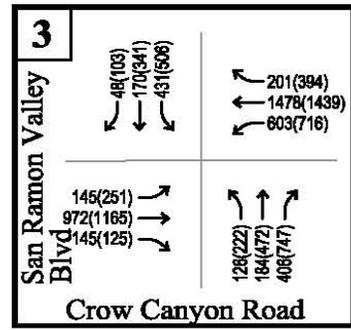
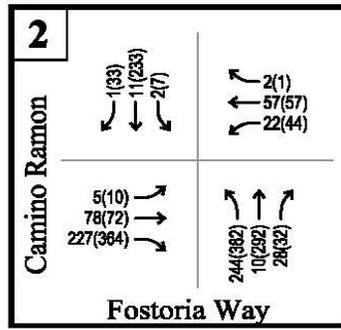
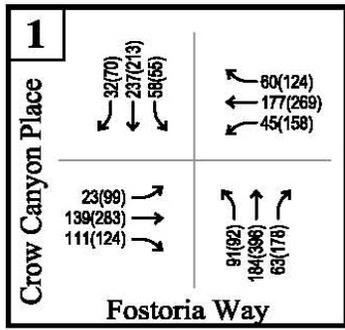
Exhibit 3.12-8a Project Only Peak-Hour Turning Movement Volumes



Source: Kimley-Horn and Associates, Inc., 2012.



Exhibit 3.12-8b Project Only Peak-Hour Turning Movement Volumes



LEGEND

- STUDY AREA INTERSECTIONS
- NORTH CAMINO RAMON SPECIFIC PLAN AREA
- AM(PM) AM(PM) PEAK HOUR VOLUMES

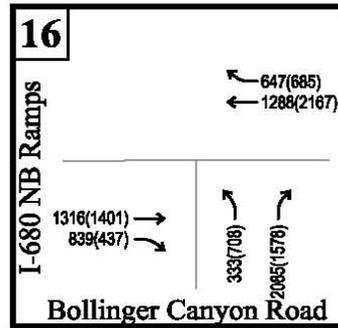
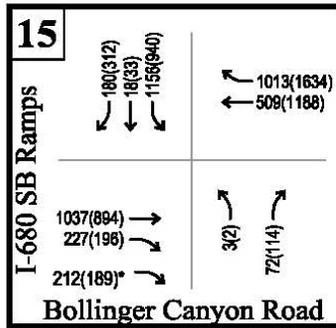
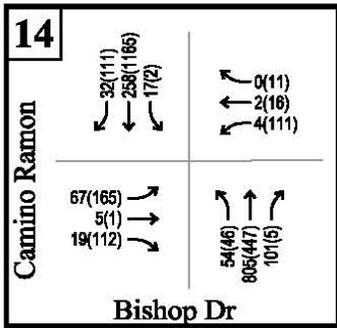
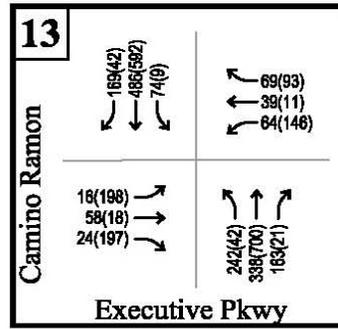
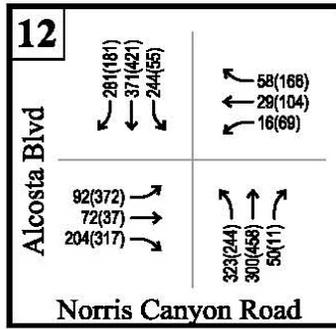
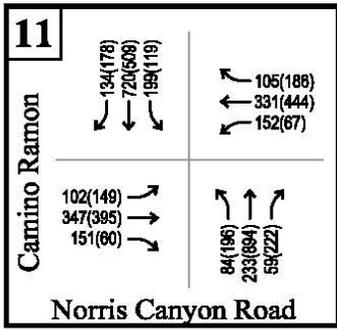
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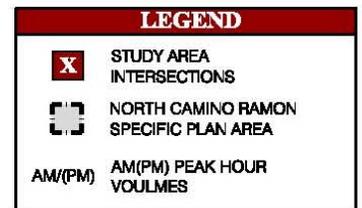
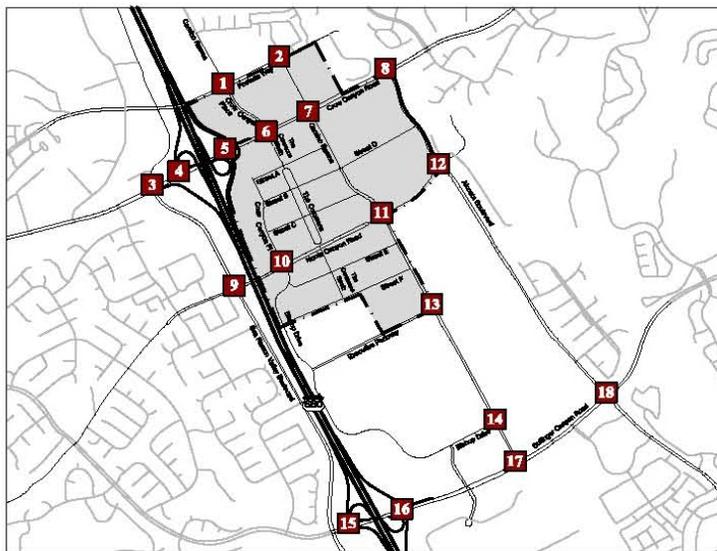
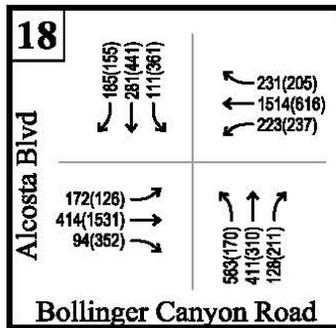
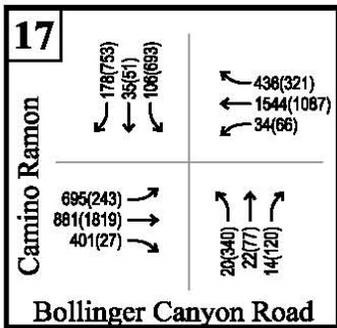
Michael Brandman Associates

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Exhibit 3.12-9a Existing Plus Project Conditions Peak-Hour Turning Movement Volumes



*I-680 SB on-ramp volume (included in right turn volume)



Source: Kimley-Horn and Associates, Inc., 2012.



Michael Brandman Associates

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Exhibit 3.12-9b Existing Plus Project Conditions Peak-Hour Turning Movement Volumes

Because traffic generated through gradual buildout of the Specific Plan area and from other cumulative development will progressively impact the intersection, the City should continue to monitor this intersection through its annual monitoring program to identify when traffic from new development causes the intersection to near the LOS E threshold. When the annual monitoring results indicate that this intersection is nearing the threshold of unacceptable operations, the City can work to prioritize the planned improvement project at this location. As individual development projects occur within the Specific Plan area, these projects would be required to pay into the local and regional traffic impact fee programs that are used to fund CIP improvements.

Crow Canyon Road and Crow Canyon Place (PM Peak)

The Crow Canyon Road and Crow Canyon Place intersection currently operates at LOS C during the PM peak hour, and is projected to operate at LOS E with the addition of the project-generated trips under the Existing Plus Project scenario. The intersection currently operates with split phasing for the northbound and southbound approaches, due to the proximity of the shopping center signal to the south. With redevelopment of the Specific Plan area and implementation of the Annabel Drive/Crow Canyon Place roadway connection between Crow Canyon Road and Norris Canyon Road, it is logical to assume that there will be opportunity to modify or remove the shopping center signal. As part of this improvement, the City can modify the signal operations at the Crow Canyon Place/Crow Canyon Road intersection to provide protected phasing for the northbound and southbound approaches, which would improve operating conditions to an acceptable v/c ratio of 0.89/LOS D in the PM peak hour for Existing Plus Project conditions. This improvement is reflected in Mitigation Measure TRANS-1b.

Bollinger Canyon Road and I-680 Northbound (AM Peak)

This intersection currently operates at LOS D during the AM peak hour and LOS C during the PM peak hour, and is projected to operate at LOS E during the AM and PM peak hours with the addition of the project-generated trips under the Existing Plus Project scenario. The addition of a third northbound left-turn lane is a funded and programmed improvement project to be constructed subject to Caltrans approval. Implementation of this improvement would result in a v/c ratio of 0.72/LOS C during the AM peak hour and 0.80/LOS D during the PM peak hour. The planned improvement would improve the intersection to acceptable levels and, therefore, would reduce the project impact to less than significant. This improvement is reflected in Mitigation Measure TRANS-1c.

Freeway Segments

The Existing Plus Project freeway volumes were determined by assigning the net new trips generated by the project to the mainline freeway segments based on the project distribution. Existing Plus Project mainline freeway volumes are shown in Table 3.12-10. Detailed freeway volume calculation sheets are included in Appendix E.

Table 3.12-10: Existing Plus Project Conditions – Peak-Hour Freeway Volumes

Interstate 680		Total Lanes	HOV Lanes	Peak Hour	Existing		Existing Plus Project	
Direction	Segment				Total Volume	HOV Percentage	Total Volume	HOV Percentage
North of Crow Canyon Road Interchange	Northbound	4	1	AM	5,657	17	5,884	17
				PM	6,852	17	7,362	17
	Southbound	4	1	AM	6,967	14	7,203	14
				PM	6,412	12	6,937	12
North of Bollinger Canyon Road Interchange	Northbound	5	1	AM	5,374	17	5,585	17
				PM	6,510	17	7,035	17
	Southbound	5	1	AM	6,619	14	6,834	14
				PM	6,019	12	6,549	12
South of Bollinger Canyon Road Interchange	Northbound	4	1	AM	5,551	17	5,861	17
				PM	6,724	17	7,427	17
	Southbound	4	1	AM	6,837	14	7,145	14
				PM	6,292	12	6,966	12

Notes:
 Peak-hour volumes from Caltrans 2009 AADT Report
 AM and PM peak-hour volumes derived using K and D Factors from Caltrans Peak Hour Volume Report
 HOV percentage of total volume based on data from Caltrans District 4 Year 2009 HOV Lane Report
 For freeway segment between Bollinger Canyon Road and Crow Canyon Road, auxiliary lane is more than 2,500 feet. Weaving does not apply to lane segments greater than 2,500 feet in length; therefore, the auxiliary lane is considered a basic freeway segment.
 Source: Kimley-Horn and Associates, Inc., 2012.

Summary

Overall, traffic patterns are not anticipated to change significantly compared to the existing scenario as the only roadway modifications include the new roadways proposed as part of the Specific Plan while the primary roadway network remains the same. Implementation of Mitigation Measures TRANS-1a through TRANS-1c would ensure that traffic resulting from Specific Plan buildout would not cause intersection or freeway LOS to degrade beyond acceptable levels. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-1a Following adoption of the Specific Plan, the City of San Ramon shall monitor the intersection of Crow Canyon Road/I-680 Northbound Ramps. When traffic monitoring determines that intersection operations are approaching unacceptable levels, the City shall install the improvements contemplated by the City’s Capital Improvement Program. Those improvements consist of adding a northbound traffic

lane and restriping the northbound approach for two left-turn lanes and two right-turn lanes.

MM TRANS-1b Following adoption of the Specific Plan, the City of San Ramon shall monitor the intersection of Crow Canyon Road/Crow Canyon Place. When traffic monitoring determines that intersection operations is approaching unacceptable levels, the City shall modify the signal operation to convert the north and south approaches from split to protected phasing.

MM TRANS-1c Following adoption of the Specific Plan, the City of San Ramon shall monitor the intersection of Bollinger Canyon Road/I-680 Northbound Ramps. When traffic monitoring determines that intersection operations are approaching unacceptable levels, the City shall install the improvements contemplated by the City’s Capital Improvement Program. Those improvements consist of adding a third northbound right-turn lane.

Level of Significance After Mitigation

Less than significant impact.

Year 2030 Cumulative Plus Project Conditions

Impact TRANS-2: Development and land use activities contemplated by the Specific Plan would not increase traffic volumes and cause transportation facilities to degrade below acceptable standard levels under cumulative plus project conditions.

Impact Analysis

Cumulative Without Project Scenario

This scenario evaluates the impacts on traffic and circulation that would occur in 2030 with and without the development of the project. The Cumulative No Project scenario will develop baseline traffic projections to establish background conditions for the evaluation of the project in the future and form the basis for determining and comparing cumulative impacts. Additional development projects are expected to be completed by 2030 and will contribute to a long-term increase in background traffic, regardless of the proposed land uses in the North Camino Ramon Specific Plan. These projects include growth in land uses located within the City’s urban growth limit such as residential, industrial, business park, and commercial, as well as growth outside of the City. This step in the analysis makes it possible to identify long-term traffic impacts, regardless of the proposed project.

Cumulative traffic volumes were established in the 2030 General Plan EIR and are based on the future land projections, which include:

- Land Use Amendments: to include parcel designation changes to the North Camino Ramon Specific Plan area and El Nido property; land use changes for the City Center project; and the

elimination of manufacturing, warehouse, and commercial service land use designations from the North Camino Specific Plan area.

The process for developing the 2030 General Plan forecasts included updating the land use database used in the CCTA regional travel demand forecasting model to reflect current and proposed housing, population and employment forecasts, and sphere of influence boundary changes. The CCTA regional model is based on the Association of Bay Area Government's (ABAG) "Projections 2005" land use projections to the year 2030. City of San Ramon Traffic Analysis Zones (TAZs) were reviewed and modified to match the City's forecasts and current approved development projects (e.g., City Center). The 2030 General Plan model forecasts were developed on the basis that some level of future development would occur within the Specific Plan area; however, detailed land use plans had not been developed at that time. Land use forecasts in TAZs outside of the City of San Ramon remain based on ABAG's Projections 2005. The CCTA regional model's transportation network was revised to reflect existing recent transportation improvements and proposed transportation improvements identified in the General Plan Update to the extent the improvements can be represented in the model. The current General Plan transportation improvements are listed below; the CCTA model's 2030 transportation network was reviewed, and modified when necessary, to ensure that these improvements were properly reflected. Further, the network was reviewed to ensure it included regional transportation improvements that affect travel characteristics in San Ramon such as the Norris Canyon High Occupancy Vehicle Ramps.

The traffic forecasting process develops year 2030 intersection turning movement volume and freeway mainline volume projections using the forecasted growth in traffic between the year 2000 (base year model) and 2030 year model. The absolute growth from the model forecasts (2000 to 2030) is converted to annual growth. This annual growth is then added to existing intersection traffic counts and existing freeway mainline volumes for the appropriate number of years between counts and the year 2030.

General Plan Roadway Improvements

The General Plan's Traffic and Circulation Element identifies a list of planned improvements within the City. Roadway improvements identified in the current General Plan with their current status are listed below:

Arterial Roadway Improvements

Crow Canyon Road

- Widen to six lanes from Alcosta Boulevard to Danville Town limits—construction schedule to be determined.
- Preserve right-of-way for widening to four lanes from Bollinger Canyon Road to Alameda County line—preserved.

Dougherty Road

- Support construction to six lanes from North Gale Road to Alameda County line—under construction [Project Complete].

Bollinger Canyon Road

- Widen to eight lanes from I-680 to Alcosta Boulevard—under construction; some portions completed.

Camino Tassajara

- Support widening to four lanes from Danville Town limits to Windemere Parkway—construction schedule to be determined.
- Support widening to six lanes from Windemere Parkway to Alameda County line—construction schedule to be determined.

Alcosta Boulevard

- Extend Alcosta Boulevard north from Crow Canyon Road to Fostoria Parkway as a four-lane street—construction schedule to be determined.
- Widen and construct Fostoria Parkway as a four-lane roadway from Camino Ramon east to Alcosta Boulevard extension. (These streets are partially within the Danville Town limits, and these projects would require the support and participation of the Town of Danville.—construction schedule to be determined.

Collector and Local Roadway Improvements

Twin Creeks Drive

- Extend and construct as a four-lane street from Crow Canyon Road to Old Crow Canyon Road—scheduled for 2009–2014.

Cumulative Plus Project Scenario

The Cumulative Plus Project scenario was developed by modifying the 2030 CCTA regional travel demand model to reflect the land use and roadway modifications proposed as part of the North Camino Ramon Specific Plan. The 2030 General Plan traffic forecasts, which were used for the Cumulative No Project scenario in this analysis, included employment and residential growth assumptions for projected development within the Specific Plan area; however, the future land use assumptions used in the 2030 General Plan traffic analysis were preliminary estimates of the development potential for the area. To more accurately project traffic volumes for the purposes of this analysis, the CCTA model was modified as follows:

- The model traffic analysis zones (TAZs) in the Specific Plan area were modified to more accurately match the proposed project land use plan.

- The project land use plan includes projections for office and retail land uses in terms of square footage; however, the CCTA model TAZs include employment information to account for these types of land uses. For this reason, the project office and retail uses were converted to employment information by applying rates that convert square feet of various land uses to types of employment.
- The transportation network was modified to reflect the project proposed roadway improvements within the plan area.

The traffic forecasting process compared the plus project model results with the no project model results and calculated the net difference in peak-hour roadway segment and freeway segment volumes. The net incremental difference was then added or subtracted to the Cumulative No Project volumes at each intersection approach, and distributed to the intersection turning movements based on the Cumulative No Project movements. The resulting turning movement volumes reflect the Cumulative Plus Project peak-hour traffic volumes. A similar process was used to add the net incremental difference between the no project and plus project model results for the study freeway segments to develop the Cumulative Plus Project freeway mainline volumes. Because of the changes to development levels by block throughout the Specific Plan area and mix of land uses with implementation of the project, traffic distribution within the Specific Plan area results in an increase in traffic volumes at some locations, while other locations show a slight decrease in traffic levels when compared with Cumulative No Project volumes.

Intersection Operations

The CCTA’s regional travel demand model was modified to reflect the land use and roadway modifications proposed as part of the North Camino Ramon Specific Plan and then was compared with the baseline traffic projections. Results of the traffic operations comparison are summarized in Table 3.12-11. Intersection turning movements and geometry are shown in Exhibit 3.12-10a and Exhibit 3.12-10b. Exhibit 3.12-11a and Exhibit 3.12-11b depict Cumulative peak hour turning movement volumes. Exhibit 3.12-12a and Exhibit 3.12-12b depict Cumulative Plus Project peak hour turning movement volumes.

Table 3.12-11: Cumulative Plus Project Conditions – Intersection Levels of Service

No.	Intersection	Traffic Control	Cumulative				Cumulative Plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS
1	Fostoria Way/Camino Ramon/Crow Canyon Place	Signal	0.67	B	0.83	D	0.69	B	0.71	C
2	Fostoria Way/Camino Ramon/Costco Driveway	Signal	0.46	A	0.79	C	0.37	A	0.74	C

Table 3.12-11 (cont.): Cumulative Plus Project Conditions – Intersection Levels of Service

No.	Intersection	Traffic Control	Cumulative				Cumulative Plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS
3	Crow Canyon Road/San Ramon Valley Boulevard	Signal	0.69	B	0.90	D	0.63	B	0.87	D
4	Crow Canyon Road/I-680 Southbound Ramps	Signal	0.55	A	0.69	B	0.52	A	0.63	B
5	Crow Canyon Road/I-680 Northbound Ramps	Signal	0.71	C	0.73	C	0.71	C	0.66	B
6	Crow Canyon Road/Crow Canyon Place	Signal	0.63	B	0.86	D	0.72	C	0.84	D
7	Crow Canyon Road/Camino Ramon	Signal	0.59	A	0.69	B	0.59	A	0.64	B
8	Crow Canyon Road/Alcosta Boulevard	Signal	0.80	D	0.87	D	0.83	D	0.83	D
9	Norris Canyon Road/San Ramon Valley Boulevard	Signal	0.57	A	0.58	A	0.53	A	0.52	A
10	Norris Canyon Road/Bishop Drive	Signal	0.39	A	0.66	B	0.47	A	0.59	A
11	Norris Canyon Road/Camino Ramon	Signal	0.65	B	0.80	D	0.45	A	0.52	A
12	Norris Canyon Road/Alcosta Boulevard	Signal	0.49	A	0.57	A	0.43	A	0.47	A
13	Executive Parkway/Camino Ramon	Signal	0.45	A	0.51	A	0.49	A	0.53	A
14	Bishop Drive/Camino Ramon	Signal	0.56	A	0.71	C	0.58	A	0.68	B
15	Bollinger Canyon Road/I-680 Southbound Ramps	Signal	0.78	C	0.78	C	0.76	C	0.79	C
16	Bollinger Canyon Road/I-680 Northbound Ramps	Signal	0.83	D	0.68	B	0.84	D	0.67	B
17	Bollinger Canyon Road/Camino Ramon	Signal	0.72	C	0.75	C	0.72	C	0.67	B
18	Bollinger Canyon Road/Alcosta Boulevard	Signal	0.78	C	0.90	D	0.78	C	0.86	D
Notes: LOS analysis performed using TRAFFIX software. Source: Kimley-Horn and Associates, 2012.										

As shown in Table 3.12-11, all study area intersections continue to operate within the City’s level of service standard during the AM and PM peak hours. Further, conditions at some intersections are projected to improve slightly with implementation of the project land use and transportation plan. This is primarily due to variations in traffic distribution with changes to the land use plan and new local and regional roadway connections within the Specific Plan area.

Transportation

Freeway Segments

The mainline freeway volumes for the AM and PM peak hours were calculated for Cumulative and Cumulative Plus Project conditions. The average HOV proportion of the total freeway segment volume was determined from the CCTA travel demand model forecasts. The total freeway volumes and HOV percentage for each study freeway segment are summarized in Table 3.12-12. Detailed freeway volume calculation sheets are included in Appendix E.

Table 3.12-12: Cumulative Plus Project Conditions – Peak-Hour Freeway Volumes

Interstate 680		Total Lanes	HOV Lanes	Peak Hour	Cumulative		Cumulative Plus Project	
Direction	Segment				Total Volume	HOV Percentage	Total Volume	HOV Percentage
North of Crow Canyon Road Interchange	Northbound	4	1	AM	7,488	20	7,498	20
				PM	9,088	21	9,212	21
	Southbound	4	1	AM	9,599	21	9,984	21
				PM	8,334	21	8,458	21
North of Bollinger Canyon Road Interchange	Northbound	5	1	AM	6,799	20	6,861	20
				PM	8,476	21	8,407	21
	Southbound	5	1	AM	9,390	21	9,402	21
				PM	7,848	21	7,684	21
South of Bollinger Canyon Road Interchange	Northbound	4	1	AM	6,496	20	6,608	20
				PM	8,101	21	7,995	21
	Southbound	4	1	AM	8,876	21	8,743	21
				PM	7,300	21	7,000	21

Notes:
 Peak-hour volumes derived based on growth from CCTA Travel Demand Forecasting Model.
 HOV percentage of total volume based on data from CCTA 2030 Model.
 For freeway segment between Bollinger Canyon Road and Crow Canyon Road, auxiliary lane is more than 2,500 feet. Weaving does not apply to lane segments greater than 2,500 feet in length; therefore, the auxiliary lane is considered to be a basic freeway segment.
 Source: Kimley-Horn and Associates, Inc., 2012.

Results of the Cumulative and Cumulative Plus Project freeway performance compared to the existing MTSOs are provided in Table 3.12-13. The Cumulative conditions analysis includes the freeway geometry changes identified in the planned improvements section and the Tri-Valley Action Plan (2009). As shown in Table 3.12-13, the growth in traffic for I-680 between existing and cumulative conditions will result in a deterioration in MTSO performance. The I-680 freeway segments are anticipated to operate below MTSOs during the AM and the PM peak hours for Cumulative No Project and Cumulative Plus Project conditions.

Table 3.12-13: Status of MTSOs for I-680 within San Ramon (Year 2030 Cumulative and Cumulative Plus Project Conditions)

MTSO	Standard	Cumulative (2030)	Cumulative (2030) Plus Project
Peak Hour Travel Speeds	Minimum average speed of 30 miles per hour.	Not met for AM northbound or southbound and not met for PM northbound or southbound	Not met for AM northbound or southbound and not met for PM northbound or southbound
Delay Index	Delay index of 2.0 or less.	Not met for AM northbound or southbound and not met for PM northbound or southbound	Not met for AM northbound or southbound and not met for PM northbound or southbound
Notes: Tri-Valley Transportation and Action Plan Update Source: Kimley-Horn and Associates, Inc., 2012.			

Development contemplated by the Specific Plan would contribute trips to the I-680 corridor, which is forecast to operate below the MTSOs for Cumulative No Project conditions in 2030. Note that the development contemplated by the Specific Plan itself does not cause facilities to operate below acceptable levels; rather, it contributes to unacceptable operation.

Implementing General Plan 2030 Policies 3.2-I-1 through 3.2-I-6 and 3.3-I-1 through 3.3-I-8 set forth minimum performance standards for transportation facilities and require new development projects to study impacts to these facilities. New development projects are required to mitigate for impacts on transportation facilities.

Implementing General Plan 2030 Policies 5.2-I-1 through 5.2-I-6 set forth various objectives concerning regional cooperation in implementing transportation improvements. Furthermore, Implementing Policy 5.3-I-5 requires that traffic mitigation fees be assessed on new residential and commercial development. Given the regional nature of freeway operations, these are considered the most appropriate methods of addressing the proposed project’s impacts on regional facilities. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Emergency Response

Impact TRANS-3: Development and land use activities contemplated by the Specific plan would not adversely affect response time for emergency service providers.

Impact Analysis

The San Ramon Valley Fire Protection District has two existing fire stations (Station Nos. 34 and 38) that are located within 1 mile of the Specific Plan area. The San Ramon Police headquarters is also located within 1 mile of the Specific Plan area. As such, the Specific Plan area is located within close proximity of staffed fire protection and police protection facilities and, therefore, would be expected to be served with acceptable emergency response times.

The existing roadway network within the Specific Plan area consists of high-capacity arterial and collector roadways in a conventional, widely spaced suburban grid. The Specific Plan proposes a grid of smaller, pedestrian-scaled blocks consisting of walkable local streets integrated with active commercial frontages, landscaping, streetscape features, public spaces, and other amenities. The smaller, pedestrian-scaled block system is intended to encourage walking, bicycling, and exploration of the Mixed Use Core and encourages a park-once, walk and shop environment. The street grid forms a framework for development of compact commercial and residential mixed-use buildings as well as flexibility for larger retailers, office complexes, and multi-family residential blocks. The vehicular circulation system also serves to provide emergency access to all parts of the Specific Plan area. All of the streets (and service corridors) are dimensioned to accommodate the San Ramon Valley Fire Protection District's travel way clearances.

The growth in land uses allowed under the Specific Plan would increase traffic and associated delays at intersections that may impact the response time for emergency service providers. Maintenance of the City's level of service standards on roadways would ensure that emergency service response time remains at an adequate level. Based on the analysis of land use development resulting from the implementation of the Specific Plan and with the implementation of mitigation, intersections and freeway segments are projected to operate at acceptable levels of services. Therefore, future development and land use activities contemplated by the Specific Plan would not result in inadequate emergency access. Impacts would be less than significant.

Level of Significance Before Mitigation

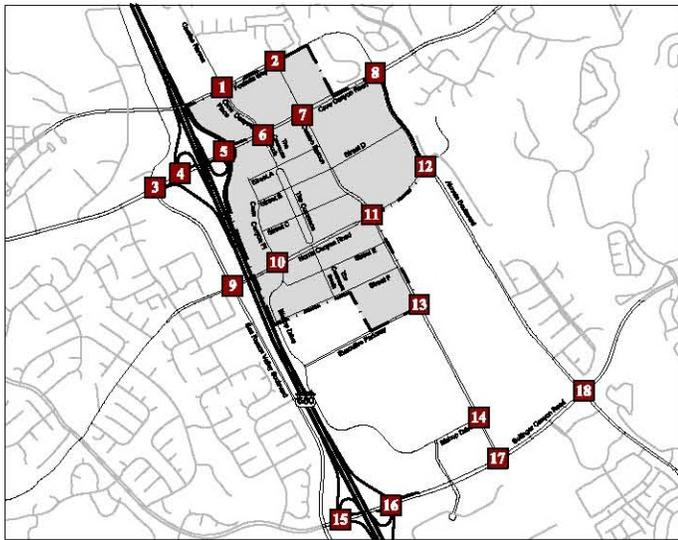
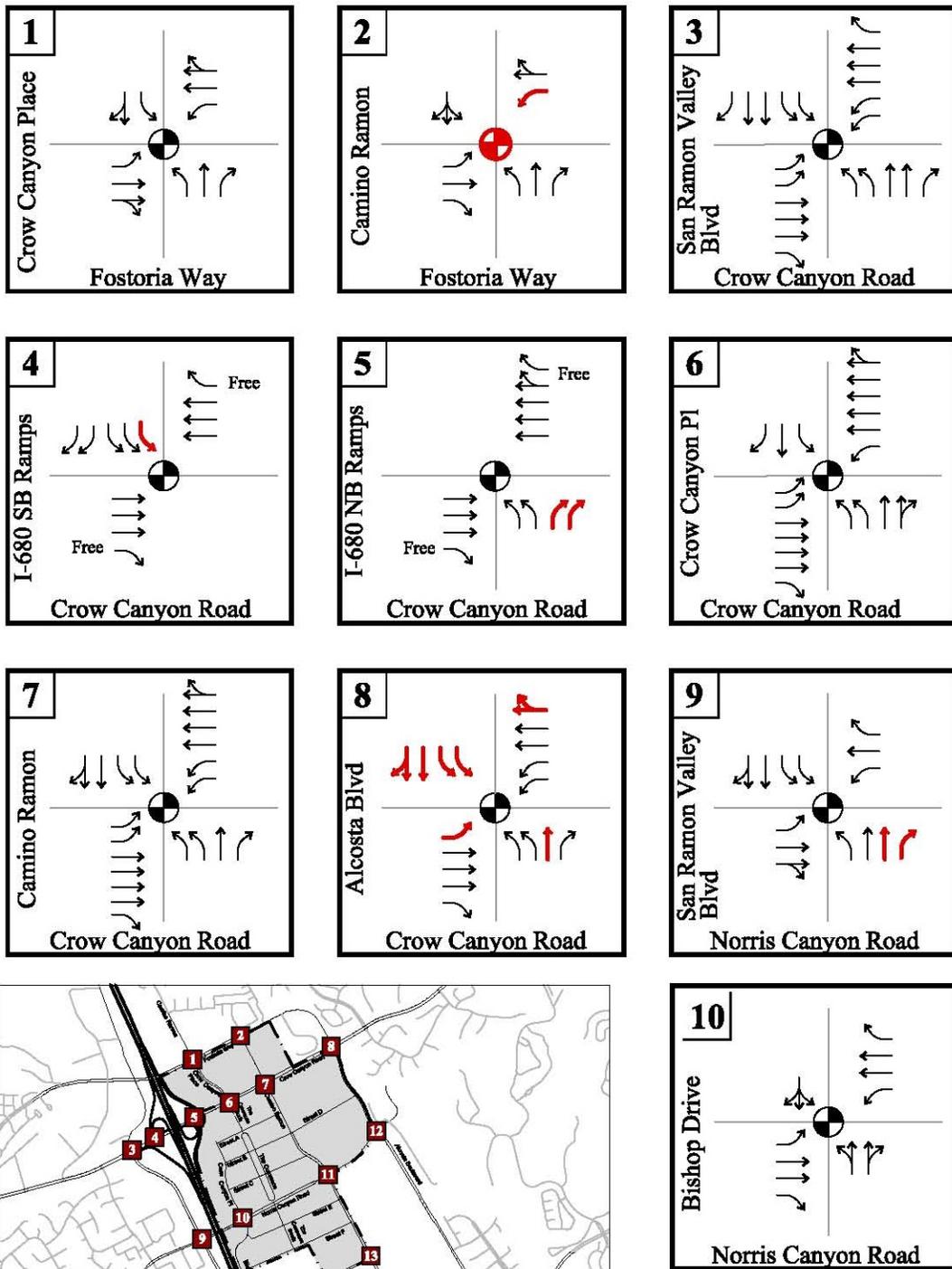
Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.



LEGEND

- STUDY AREA INTERSECTIONS
- NORTH CAMINO RAMON SPECIFIC PLAN AREA
- TRAFFIC SIGNAL
- STOP SIGN

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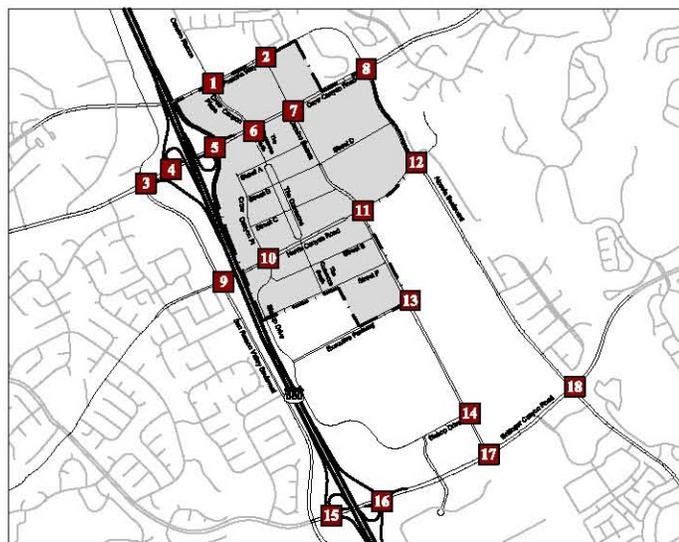
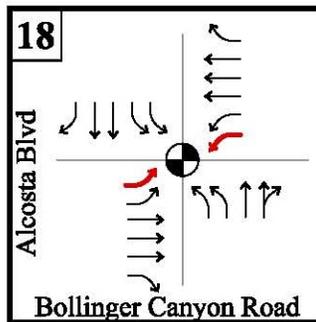
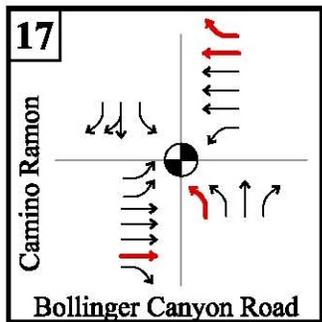
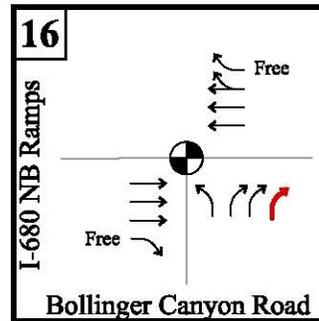
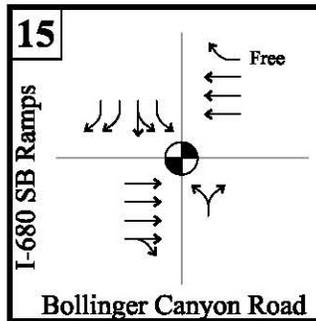
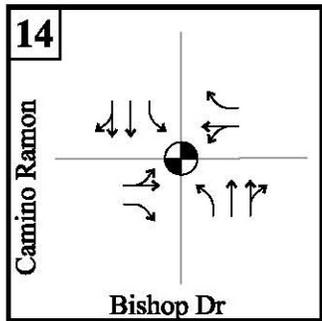
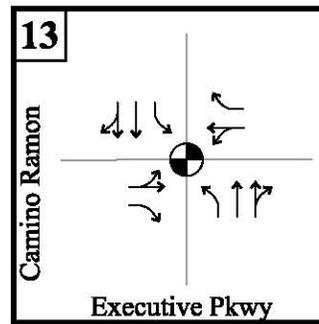
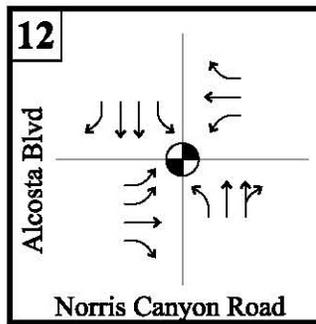
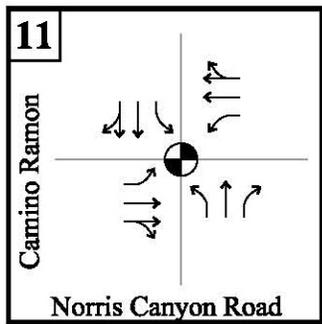
Source: Kimley-Horn and Associates, Inc., 2012.



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Exhibit 3.12-10a Cumulative (2030) Conditions Lane Geometry and Traffic Control



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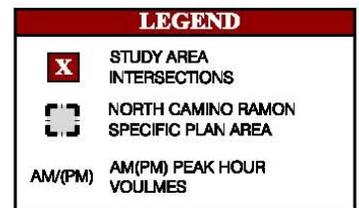
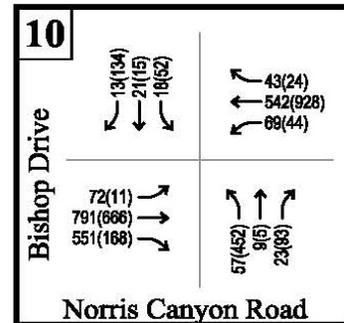
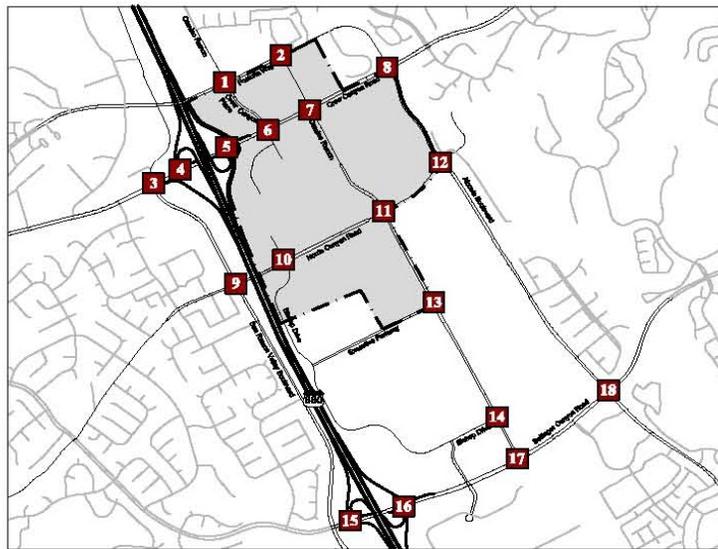
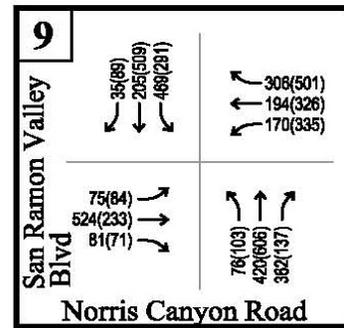
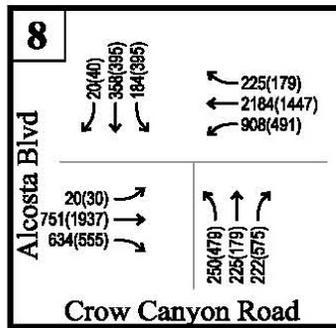
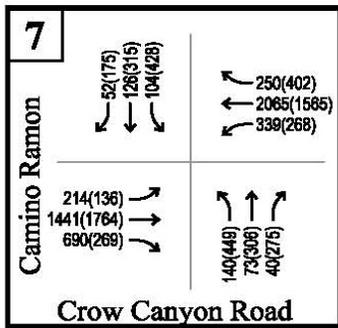
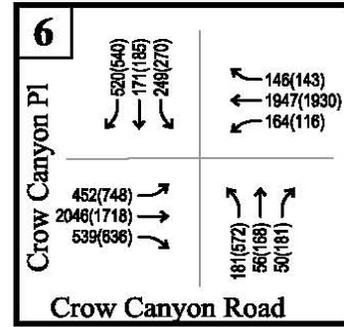
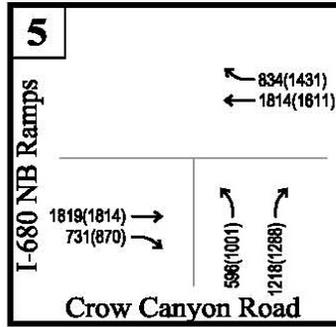
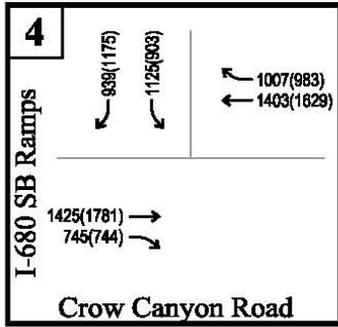
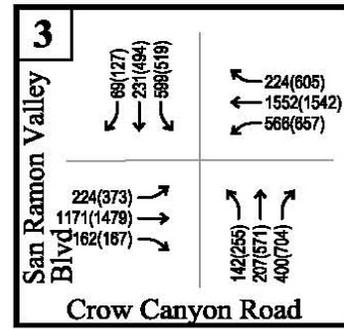
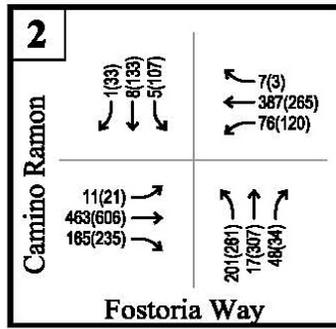
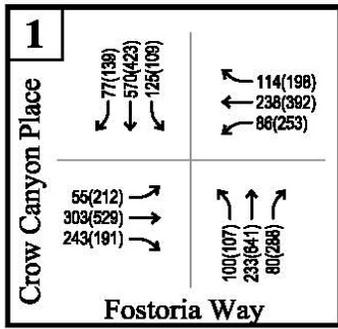
Source: Kimley-Horn and Associates, Inc., 2012.



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Exhibit 3.12-10b Cumulative (2030) Conditions Lane Geometry and Traffic Control



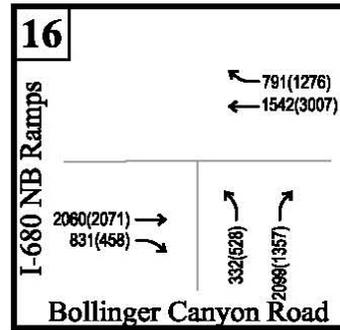
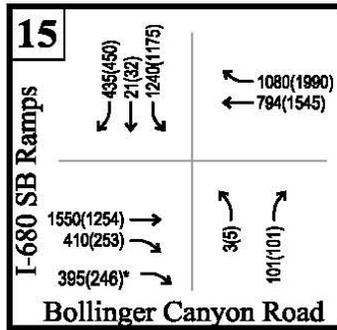
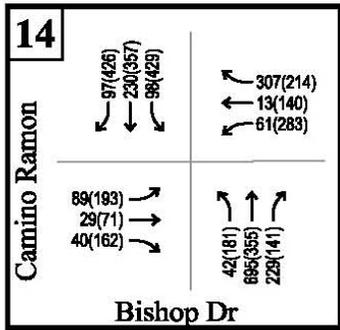
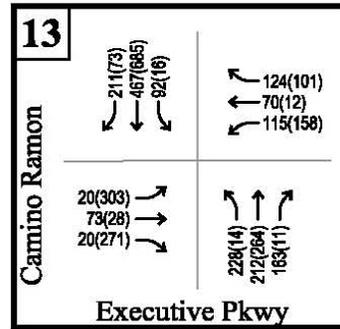
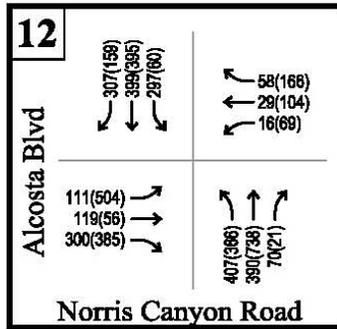
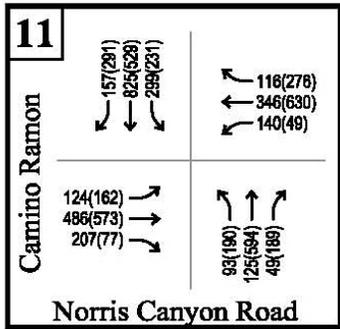
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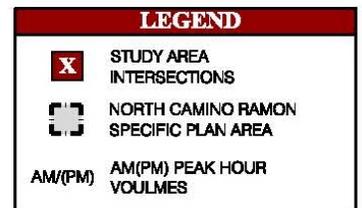
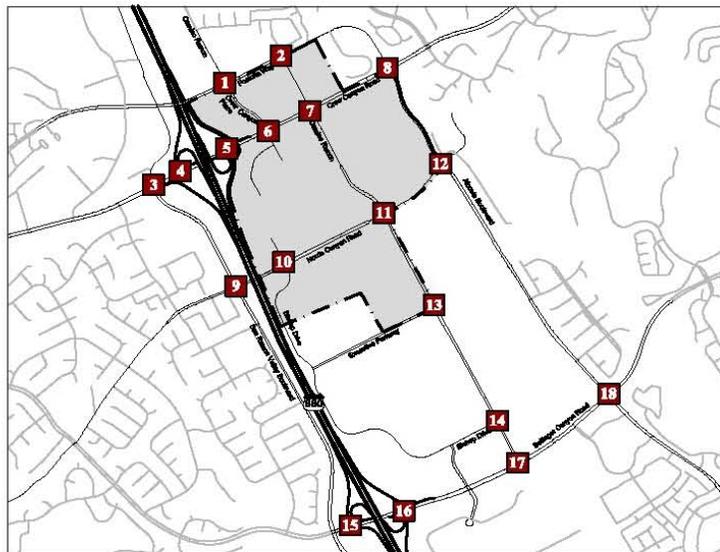
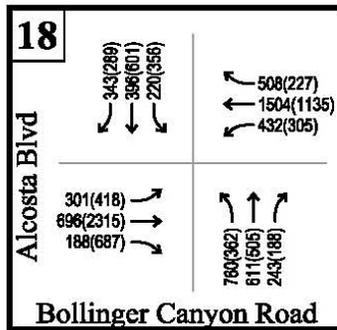
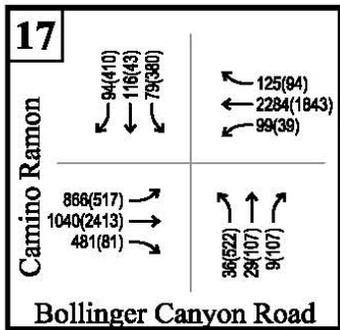
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Exhibit 3.12-11a Cumulative (2030) Conditions Peak-Hour Turning Movement Volumes



*I-680 SB on-ramp volume (included in right turn volume)



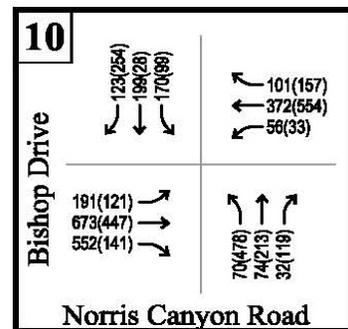
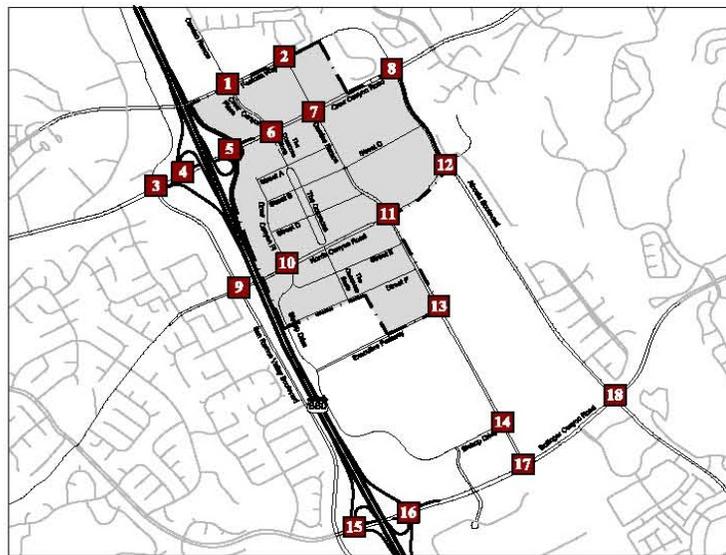
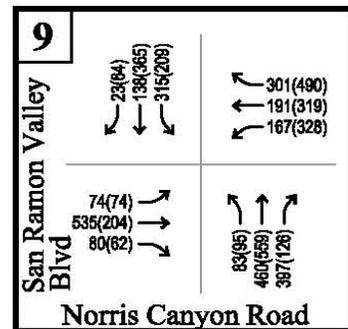
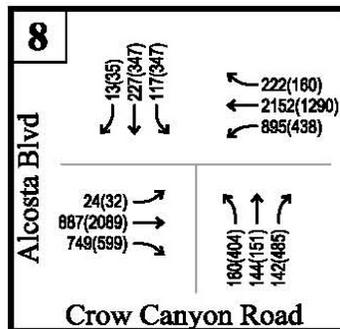
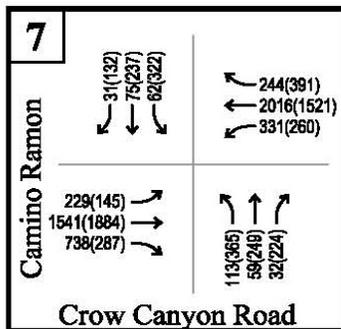
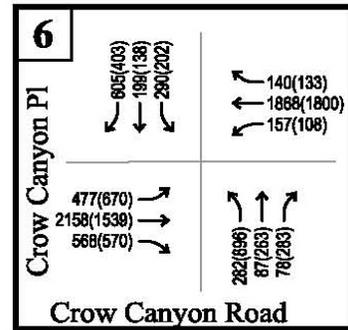
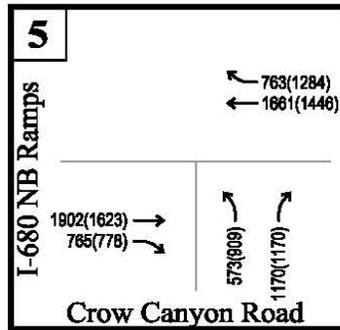
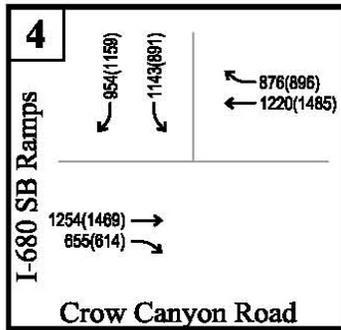
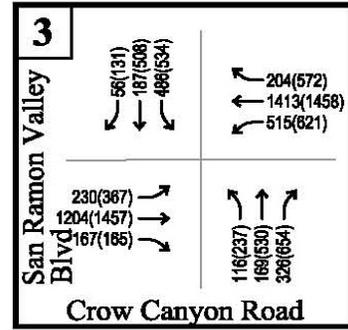
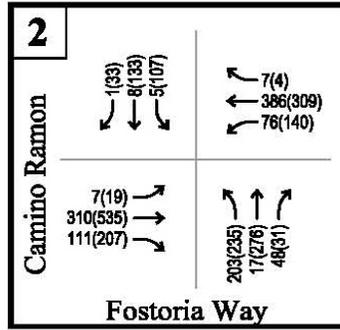
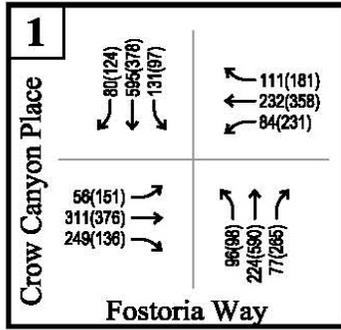
Source: Kimley-Horn and Associates, Inc., 2012.



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Exhibit 3.12-11b Cumulative (2030) Conditions Peak-Hour Turning Movement Volumes



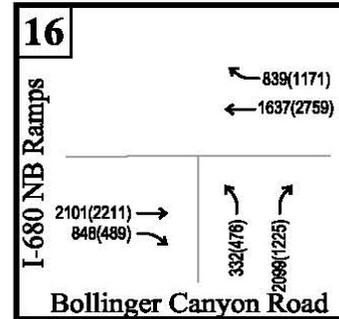
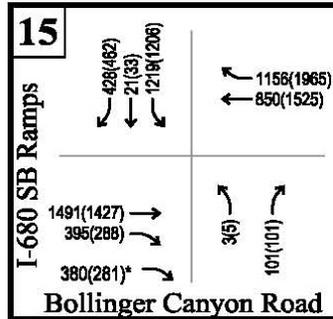
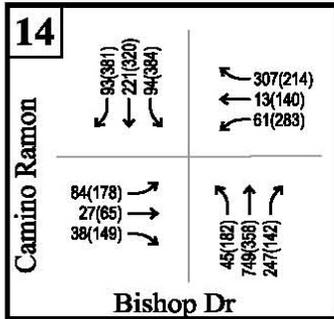
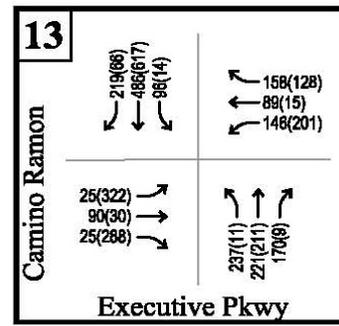
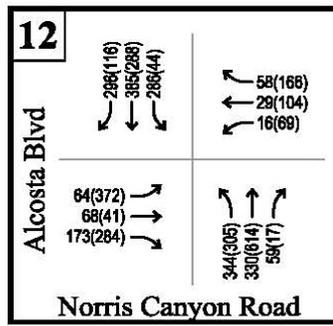
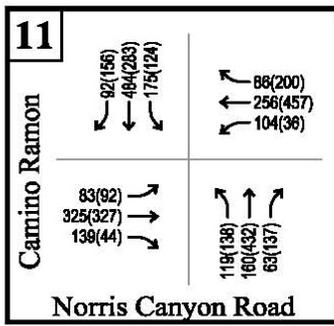
LEGEND	
X	STUDY AREA INTERSECTIONS
	NORTH CAMINO RAMON SPECIFIC PLAN AREA
AM/(PM)	AM/(PM) PEAK HOUR VOLUMES

Source: Kimley-Horn and Associates, Inc., 2012.

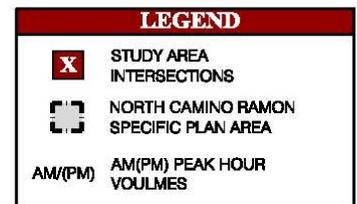
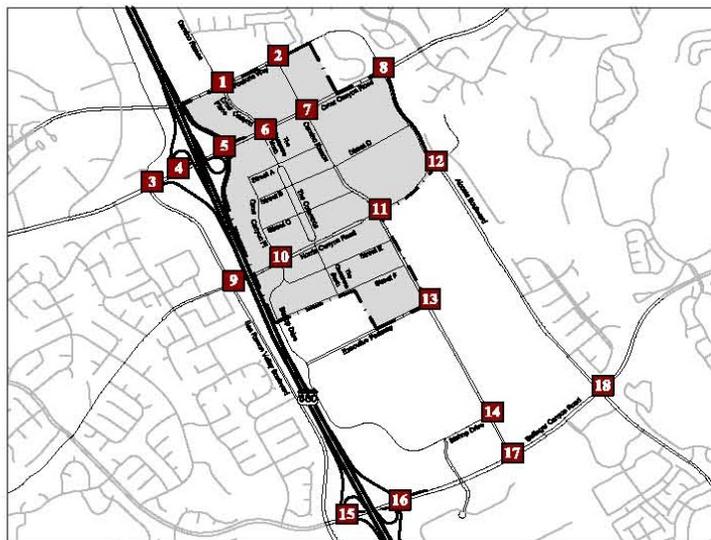
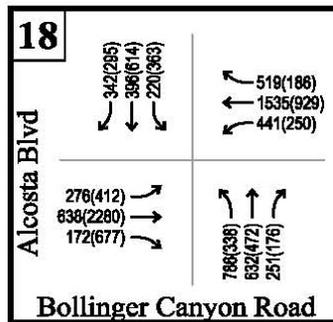
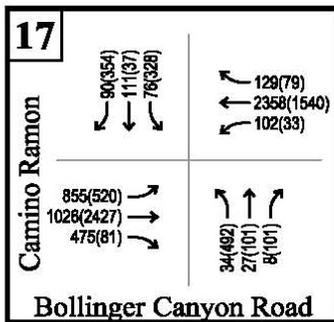


Michael Brandman Associates

Exhibit 3.12-12a Cumulative (2030) Plus Project Conditions Peak-Hour Turning Movement Volumes



*I-680 SB on-ramp volume (included in right turn volume)



Source: Kimley-Horn and Associates, Inc., 2012.



Exhibit 3.12-12b Cumulative (2030) Plus Project Conditions Peak-Hour Turning Movement Volumes

Roadway Safety

Impact TRANS-4: Development and land use activities contemplated by the Specific Plan would not result in hazardous roadway designs features or incompatible uses.

Impact Analysis

As previously explained, the existing roadway network within the Specific Plan area consists of high-capacity arterial and collector roadways in a conventional, widely spaced suburban grid. The Specific Plan proposes a grid of smaller, pedestrian-scaled blocks consisting of walkable local streets integrated with active commercial frontages, landscaping, streetscape features, public spaces, and other amenities; refer to Exhibit 2-9. The smaller, pedestrian-scaled block system is intended to encourage walking, bicycling, and exploration of the Mixed Use Core and encourages a park-once, walk and shop environment. The street grid forms a framework for development of compact commercial and residential mixed-use buildings as well as flexibility for larger retailers, office complexes, and multi-family residential blocks. The vehicular circulation system also serves to provide emergency access to all parts of the Specific Plan area. All of the streets (and service corridors) are dimensioned to accommodate the San Ramon Valley Fire Protection District's travel way clearances.

The Specific Plan area's roadway network reflects the street classification system established in the City of San Ramon General Plan 2030. New roadways contemplated by the Specific Plan would adhere to roadway sections set forth in General Plan 2030, which establish requirements for lane geometry, width, bicycle facilities, and pedestrian facilities. As such, new roadways would be consistent with City standards and industry standards for mixed-use development.

As shown in Exhibit 2-9, all new intersections are proposed at 90-degree angles or near-90-degree angles, maximizing visibility for all approaches. All new public streets would have through connections to other streets; no cul-de-sacs or dead-ends are proposed. In higher density areas such as The Commons, the Specific Plan contemplates the use of service corridors to allow for delivery access to the rear of buildings, which would serve to minimize potential safety issues associated with truck circulation and parking.

For these reasons, development and land use activities contemplated by the Specific Plan would not result in hazardous roadway design features or incompatible uses. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Bicycles, Pedestrians and Public Transit

Impact TRANS-5: Development and land use activities contemplated by the Specific Plan would not conflict with plans for or access to public transit, bicycles, or pedestrians.

Impact Analysis

The Specific Plan would be considered to have a significant impact if it conflicted with adopted policies, plans, or programs supporting alternative transportation or generate pedestrian, bicycle, or transit travel demand that would not be accommodated by current pedestrian facilities, bicycle development plans, or long-range transit plans.

Currently, sidewalks and pedestrian paths exist along the vast majority of roadways within the plan boundaries. There are also several planned and proposed bicycle facilities within the Specific Plan area, as identified in current bike plans; refer to Exhibit 3.12-13. The project's traffic generation or site access would not create any changes to the existing or planned bicycle facilities. In addition, there are several additional bicycle facilities proposed as part of the Specific Plan. The proposed project would not interfere with any of the existing or proposed bicycle facilities, or conflict with currently adopted pedestrian goals or policies. Therefore, the project would not result in any adverse impacts to bicyclists.

The development of the proposed land use plan is expected to generate transit ridership. As noted in the project trip generation section, a conservative transit mode share of 2 percent for office and residential trips was assumed for the purposes of estimating the project trip generation for use in the traffic capacity analysis. However, recent travel survey data collected by 511 Southwest Contra Costa indicate that the transit mode share (including BART, ACE rail service, and bus) for weekday commute travel represented may represent as much as 6 percent of commute trips in the San Ramon Valley.

If 6-percent transit mode share is assumed during peak AM and PM commute periods for office and residential uses within the plan area, the proposed project could be anticipated to generate a conservative estimate of roughly 60 net new transit trips during the AM peak hour, and 50 net new transit trips during the PM peak hour. Bus ridership and seating capacity data is not readily available for transit routes currently serving the Specific Plan area. However, considering that the net new transit trips are distributed among multiple service routes throughout the peak-hour periods, the existing transit system is anticipated to sufficiently accommodate the additional transit demand generated by the proposed project.

As transit ridership increases over time, it is the responsibility of transit providers, particularly CCCTA (County Connection), to ensure that sufficient transit services are provided within the Specific Plan area. The potential formation of a TMA within the Specific Plan area would provide

additional opportunity to coordinate with CCCTA to guide transit improvements and to encourage transit use through effective areawide TDM strategies.

As discussed previously, when needed, it is proposed that the existing transit center, currently located on Executive Parkway near Camino Ramon, be moved to a new location within the vicinity of The Commons at Norris Canyon Road. The specific location and design are undetermined at this time; however, relocating the transit center to this general area provides the benefit of positioning all parcels in the Specific Plan area within a 10-minute walk, making transit access to jobs, stores, and restaurants more convenient for residents within the area. Further, the new transit center location will benefit from the construction of HOV ramps at Norris Canyon Road and I-680, which will improve the regional transit network and enhance access for express bus, carpools, and vanpools to the area. This would also locate the transit center farther from the planned City Center transit facility, which improves the distribution of transit services within the City. With the proposed transit center relocation, CCCTA will have the responsibility to determine how existing County Connection bus routes will need to be re-routed, and current bus stop locations and amenity conditions will need to be reassessed.

The proposed project would not interfere with existing or planned pedestrian or bicycle facilities. The potential relocation of the existing transit center provides improved access to transit services, and dispersion of the project-generated riders to the various planned bus routes is expected to result in a minimal effect on transit capacity. Thus, the project's impact on pedestrian, bicycle, and transit facilities is determined to be less than significant.

Level of Significance Before Mitigation

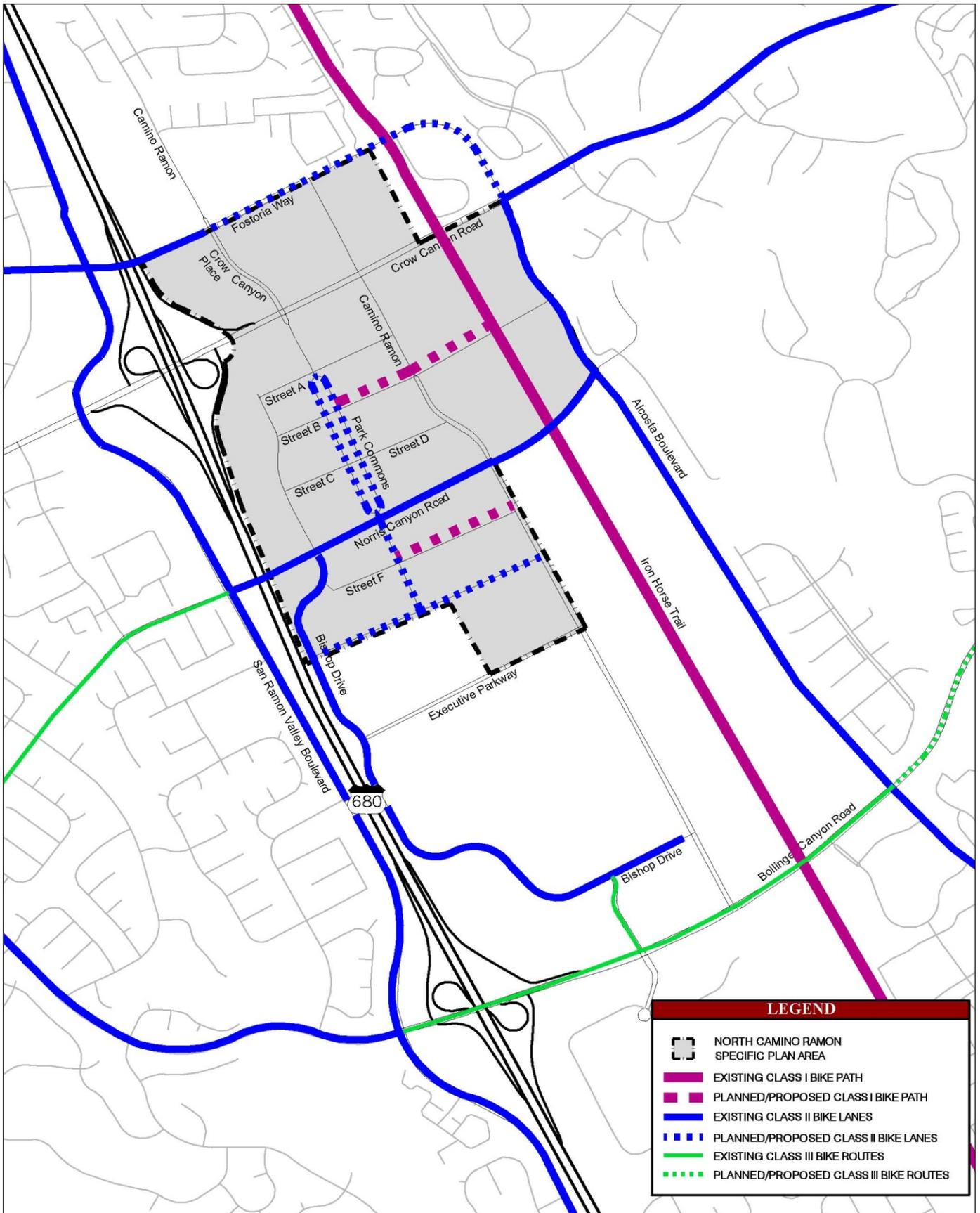
Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.



Source: Kimley-Horn and Associates, Inc., 2012.



Michael Brandman Associates

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Exhibit 3.12-13 Proposed Bicycle Network

