3.12 PARKS AND RECREATION

3.12.1 AFFECTED ENVIRONMENT

REGIONAL ENVIRONMENT

Folsom Lake State Recreation Area

Folsom Lake State Recreation Area is managed by the California State Parks (CSP) under an agreement with the U.S. Bureau of Reclamation (Reclamation), which operates the dams (Folsom and Nimbus) and administers the Federally owned land surrounding Folsom Lake and Lake Natoma (CSP/Reclamation 2007). The Folsom Lake State Recreation Area, located approximately 8 miles north of the SPA, serves the greater Sacramento area for recreation in the form of camping, hiking, biking, boating, and other outdoor recreation activities. The lake also host bass fishing tournaments that frequently draw fishermen from throughout the state. CSP manages the Folsom Lake State Recreation Area, which includes Folsom Lake and the surrounding facilities. The lake features approximately 75 miles of shoreline and 80 miles of trails that provide opportunities for hiking, horseback riding, nature studies, camping, and picnicking. There are seven major recreation areas with facilities located around the lake (CSP/Reclamation 2007). The Folsom Lake State Recreation Area, including Folsom Lake and Lake Natoma, is one of the most heavily used recreational facilities in the CSP system, with 2 to 3 million visitor days per year. Approximately 75% of the annual visitations to the Folsom Lake State Recreation Area occur during the spring and summer, and many (85%) of the Folsom Lake State Recreation Area activities are water-dependent (CSP/USBR 2007).

Nimbus Fish Hatchery

The Folsom-Nimbus project, completed in 1958, blocks spawning and rearing areas for salmon and steelhead. In response, Reclamation, in cooperation with the California Department of Fish and Game (DFG) and the U.S. Fish and Wildlife Service, designed, built, and operates the Nimbus Fish Hatchery to address the declining anadromous fish population. The hatchery provides recreational opportunities, including a visitor center, picnic area, parking for vehicles and bikes, access to the American River, the Jedediah Smith Memorial Trail, and the American River Hatchery to observe trout (DFG undated). The Nimbus Fish Hatchery is approximately 7 miles north of the SPA.

Visitation at the fish hatchery averaged approximately 69,000 people per year from 2005–2006 through 2009–2010. The most popular event at the fish hatchery has typically been the Salmon Festival, a 2-day event that drew up to 20,000 annually but was not held in 2009 or 2010. Visitation in 2009-2010 without the Salmon Festival consisted of 45,739 persons.

Folsom South Canal Recreation Trail

The 14-mile Folsom South Canal Recreation Trail travels from the Jedediah Smith Memorial Trail to Sloughhouse Road along the Folsom South Canal, which is a Federal facility administered by Reclamation. This paved trail is used for bicycling and hiking and is managed by Reclamation. Entry points to the trail are provided from any road that crosses the canal. In the vicinity of the SPA, access to the trail would be provided by Kiefer Boulevard, approximately 0.5 mile east via Sunrise Boulevard.

Prairie City State Vehicular Recreation Area

The Prairie City State Vehicular Recreation Area (SVRA) is located on White Rock Road approximately 4 miles northwest of the SPA. The Prairie City SVRA is operated by the Off-Highway Motor Vehicle Recreation Division of the CSP and offers off-highway vehicle enthusiasts 836 acres of varying terrain and trails for motorcycles, all-terrain vehicles, and four-wheel-drive vehicles (CSP 2009). The SVRA includes the Hangtown MX Track, which

hosts the annual national outdoor MX (motocross) championship; the Quarter Midget Track, which is used by the American Quarter Midget Association for both practice and competitive events; and a 4x4 vehicle area, motorcycle/all-terrain vehicle (ATV) area, several practice tracks, a go-kart track, and several staging areas that include picnic facilities. The Prairie City SVRA is operated by the Off-Highway Vehicle Division of CSP and is open year-round (CSP 2009).

Sacramento County Regional Parks

Park planning in Sacramento County is an interagency and interjurisdictional process. At the broadest level, the Sacramento County Regional Parks (SCRP) manages the regional park system. Local parks (mini, neighborhood, and community parks) are planned and operated primarily by the 18 parks and recreation districts located throughout the unincorporated and incorporated areas of the County. Parks in Rancho Cordova are planned by the Cordova Recreation & Park District (CRPD), discussed further below.

The SCRP was established in 1959 with acquisition of land now known as the American River Parkway (SCRP 2010a). Since that time, the County has expanded its total parklands to more than 15,000 acres, including the American River Parkway, Dry Creek Parkway, Mather Regional Park, Discovery Park, Elk Grove Regional Park, the Effie Yeaw Nature Center, and other historic and natural sites (SCRP 2010b). In addition to traditional regional park activities, SCRP also oversees four regional golf facilities.

American River Parkway

On January 19, 1981, approximately 23 miles of the American River, from the confluence with the Sacramento River to Nimbus Dam, was designated a National Wild and Scenic River by the National Park Service (NPS) (National Wild & Scenic Rivers [WSR] 2010). Nimbus Dam is located approximately 7 miles north of the SPA. This stretch of river, managed by SCRP, flows through the City of Sacramento and is the most heavily used Wild and Scenic River in California. The American River Parkway (Parkway) is a river corridor/open space greenbelt that extends along the American River from the confluence with the Sacramento River to Nimbus Dam. The Parkway's trail system, which has been designated a "National Recreation Trail," includes the 32-mile-long multiuse (pedestrian, equestrian, and bicycle) Jedediah Smith Memorial Trail, which parallels the American River from Folsom to downtown Sacramento.

The Parkway is one of the most valuable recreation/open space assets in the region. It is a unique natural environment managed by SCRP. There are several points of entry to this recreation area. The closest access point for the Parkway is located off of Rod Beaudry Drive through River Bend Park. Many neighborhoods also have pedestrian and bicycle access points to the Parkway.

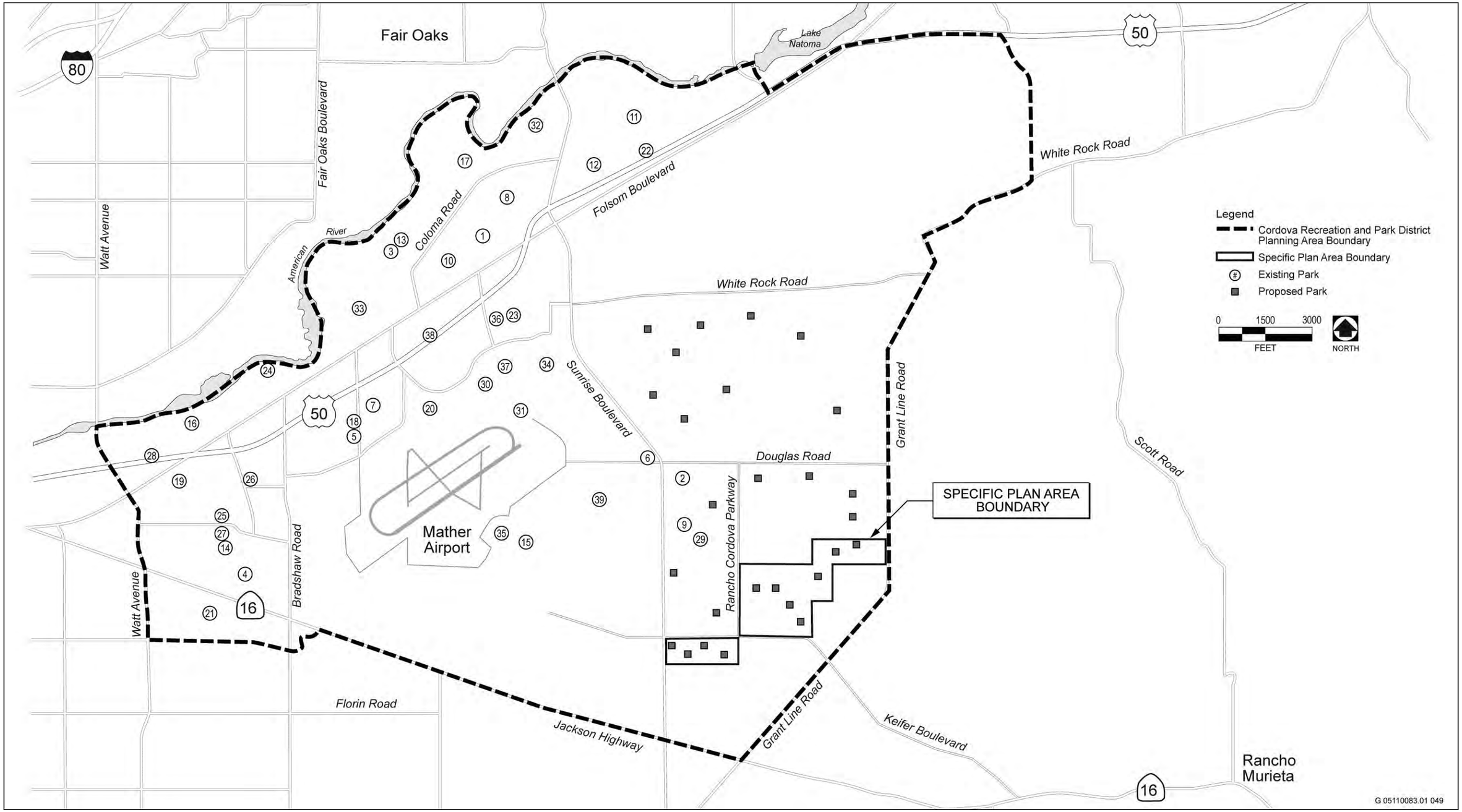
Mather Regional Park

The Mather Regional Park is located east of Sunrise Boulevard and south of Douglas Road, approximately 2 miles north of the SPA via Sunrise Boulevard. The 1,600-acre Mather Regional Park includes an 18-hole golf course, picnic sites, hiking trails, and the Mather Regional Park vernal pools. In addition, Mather Lake provides wildlife viewing, bird watching, and fishing (SCRP 2010c).

LOCAL ENVIRONMENT

Cordova Recreation & Park District

The CRPD is located in the east-central portion of Sacramento County, south of the American River, and is bisected by U.S. 50. CRPD encompasses 75 square miles (see Exhibit 3.12-1). The SPA lies in the CRPD planning area. CRPD has the primary responsibility of providing recreation facilities and services within the Cordova Planning Area, which includes Rancho Cordova and the SPA. CRPD's jurisdiction extends south beyond the boundaries of Rancho Cordova and SPA to Jackson Road and Grant Line Road. CRPD has developed six park categories—



Source: CRPD, Compiled by AECOM in 2011

Existing and Proposed Park Facilities **Exhibit 3.12-1**

mini parks; neighborhood parks; community parks; regional parks; linear parkways, greenbelts and open space; and bicycle trails—to meet the recreational needs of the community. The classification of each category is based on CRPD's determination of use, function, acreage, service area, and population served. CRPD administers a total of 438 acres, which includes 18 neighborhood parks, six community parks, four community swimming pools, the Cordova Community Center at Hagan Community Park on Chase Drive, the Cordova Senior Center on Routier Road, Mather Sports Complex, the Cordova Public Shooting Center on Douglas Road, and the Cordova Golf Course on Jackson Road (CRPD 2005). The Parkway (described above) is located in the CRPD planning area. Table 3.12-1 includes the names and locations and short descriptions of existing CRPD facilities.

In fall 2005, CRPD adopted new standards that include a requirement of 5 acres of parkland per 1,000 residents, and the addition of performance standards for specific types of open space. Using the new standard of 5 acres per 1,000 residents, and the projected 2005 CRPD population (112,765 residents) contained in the CRPD Draft Master Plan (CRPD 2005), CRPD currently has a deficit of 126 acres of parks under the existing CRPD population.

The existing park facilities nearest the SPA are located to the northwest within the Anatolia Community, and consist of Sandpiper Park, Eagle's Nest Park, and Argonaut Park (see Exhibit 3.12-1). The project would include 10 neighborhood parks, two community parks, and pocket parks and paseos at various locations throughout the SPA, as well as a network of bicycle trails. An additional 16 parks would be provided as part of planned developments within the CRPD.

3.12.1 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

National Recreation and Park Association

The National Recreation and Park Association (NRPA) recommends that communities have a park system that includes 5–10 acres of developed parklands for every 1,000 residents. Although the amount of parkland varies from community to community and is not regulated by law, many communities have used the NRPA recommendation to develop a standard of 5 acres per 1,000 residents for traditional service/passive park acreage, with an additional 5 acres allocated for special-use facilities and open space (i.e., nontraditional parklands), for a total standard of 10 acres per 1,000 residents.

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 (42 United States Code [USC] 12181) prohibits discrimination on the basis of disability in public accommodation and state and local government services. Under the ADA, the Architectural and Transportation Barriers Compliance Board issues guidelines to ensure that facilities, public sidewalks, and street crossings are accessible to individuals with disabilities. Typical ADA improvements include creating parking spaces for handicapped users, restroom modifications, door hardware requirements, and lighting upgrades. Play areas, meeting rooms, park restrooms, and other buildings and park structures must comply with ADA requirements. Park facilities under the Proposed Project or any of the action alternatives would be required to be ADA compliant.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Quimby Act

The Quimby Act (California Government Code Section 66477) was established by the California Legislature in 1965 to preserve open space and parkland in rapidly urbanizing areas of the state. The Quimby Act allows cities and counties to establish requirements for new development to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two.

Table 3.12-1
Existing Cordova Recreation & Park District Facilities and Services

	Facility Name	Location	Description of Facilities
1	Ahlstrom Park	Zinfandel Drive and Cordova Lane, Rancho Cordova	7 acres with Little League baseball field and picnic tables
2	Argonaut Park	Anatolia Drive and Herodian Drive, Rancho Cordova	5.9 acres with group picnic area, barbeques, half basketball court, softball field, soccer field, and playground
3	Cordova Community Center	2197 Chase Drive, Rancho Cordova	
4	Cordova Golf Course	9425 Jackson Road (three-quarters mile west of Bradshaw Road)	Pro shop, lighted driving range, practice putting green, electric carts, hand carts, golf club rentals, and restaurant
5	Cordova Senior Center	3480 Routier Road, Rancho Cordova	Full schedule of senior activities (e.g., watercolors, arts and crafts, yoga, and adult exercise)
6	Cordova Shooting Center	11551 Douglas Road (near Sunrise Boulevard)	Outdoor shooting range featuring covered shooting positions, rental firearms, and a variety of classes
7	Countryside Park	Glenmoor Drive, Rancho Cordova	2 acres with picnic tables and tot lot
8	Dave Roberts Community Park	Benita Drive and Mapola Way, Rancho Cordova	13 acres with a lighted softball field, tennis courts, regulation soccer field, and playground
9	Eagle's Nest Park	Anatolia Drive and Chrysanthy Boulevard, Rancho Cordova	3.7 acres with basketball court, open play fields, group picnic area, individual picnic areas, playground, and tennis courts. Adjacent to private community-owned recreation center
10	Federspiel Park	Aramon Drive and Chassella Way, Rancho Cordova	4 acres with swimming pool, bantam soccer field, picnic tables, and playground
11	Gold River Park	Gold Country Boulevard and Poker Flat Drive, Gold River	6 acres with picnic tables, horseshoe pits, tot lot, playground, and bantam soccer field
12	Gold Station Park	Gold Station Road, Gold River	2.2 acres with picnic tables, playground, and bantam soccer field
13	Hagan Community Park	2197 Chase Drive, Rancho Cordova	75 acres with Cordova Community Center, three swimming pools, eight tennis courts, group picnic areas, baseball fields, soccer fields, basketball court, playgrounds, tot lots, fitness course, and scale model stream railroad. Also provides access to the Jedediah Smith memorial Trail and foot access to the American River
14	Henley Park	Henley Drive, Rosemont	One-half acre with picnic tables and tot lot
15	Independence Park	Brittan Way and School Street, Mather	11 acres with picnic tables, restrooms, and playground
16	Larchmont Community Park	Linda Rio Drive, Sacramento	14 acres with two tennis courts, one bantam soccer field, one regulation soccer field, group picnic area, and playground
17	Larchmont-Rossmoor Park	Ambassador Drive, Sacramento	3 acres with softball field, soccer field, picnic tables, and playground
18	Lincoln Village Community Park	3480 Routier Road, Sacramento	17 acres with a lighted softball field, four tennis courts, swimming pool, basketball court, group picnic area, and the Cordova Senior Center
19	Manlove Park	Rose Parade Way and Spellbinder Court, Rosemont	3 acres with picnic tables and tot lot

Table 3.12-1
Existing Cordova Recreation & Park District Facilities and Services

	Facility Name	Location	Description of Facilities
20	Mather Sports Center	3755 Schriever Avenue, Mather	Aerobics, open gym, racquetball, weight rooms, and walking and jogging facility
21	Primrose Park	Off Hedge Road and Jackson Highway, Rosemont	2.4 acres with picnic tables and tot lot with play structure
22	Prospect Hill Park	Gold Flat Drive and Prospect Hill Drive, Rancho Cordova	7 acres with picnic tables, basketball court, bantam soccer field, and tot lot
23	Renaissance Park	3125 Mowbray Way, Rancho Cordova	Group picnic area, playground, half basketball court
24	Riviera East Park	Mira Del Rio Drive, Sacramento	9 acres with two tennis courts, bantam soccer field, basketball court, group picnic area, and tot lot
25	Rosemont Community Park	Americana Way, Rosemont	17 acres with four tennis courts, two Little League fields, softball field, playground, tot lot, and group picnic areas
26	Rosemont North Park	Huntsman Drive and Premier Way, Rosemont	3 acres with picnic tables and playground
27	Rosswood Park	Roseport Way and Rose Brook Way, Rosemont	1 acre with picnic tables and tot lot
28	Salmon Falls Park	Salmon Falls Drive, Sacramento	One-quarter acre, no permanent facilities
29	Sandpiper Park	Appolon Way near Steccato Drive, Rancho Cordova	5 acres with open play fields, group picnic area, individual picnic areas, playground, and bike trail access
30	Sonoma Park	Bear Hollow Drive, Rancho Cordova	4 acres with concrete walkways, tot lot, playground, and covered group picnic area
31	Stone Creek Community Park	Spoto Drive, Rancho Cordova	21 acres with large and small group picnic areas, restrooms, concrete walkways, playground, water feature, basketball court, soccer fields, softball/youth baseball field, amphitheatre, and modular skateboard features
32	Sunriver Park	Klamath River Drive, Rancho Cordova	4.5 acres with picnic tables, ball field, basketball court, and tot lot
33	Taylor Park	West La Loma Drive, Rancho Cordova	3 acres with a tot lot, playground, and picnic tables
34	Tuscany Park	Corvina Drive, Rancho Cordova	4.5 acres with covered group picnic area, playground, soccer field, half basketball court, horseshoe pit, softball/youth baseball field, and concrete walkways
35	Veteran's Park	Mather Boulevard, Mather	6.4 acres with a playground, tennis courts, basketball court, and a group picnic area
36	The Village Green Park	3141 Bridgeway Drive, Rancho Cordova	2 acres with spray park, restrooms, amphitheatre, and sitting areas
37	Waterbrook Park	Waterbrook Drive, Rancho Cordova	One-tenth acre with playground
38	White Rock Park	10488 White Rock Road, Rancho Cordova	12 acres with a swimming pool, two tennis courts, group picnic areas, playground, and basketball court
39	Mather Regional Park and Mather Lake	Eagles Nest Road, Mather	18-hole golf course, picnic sites, hiking trails, wildlife viewing, bird watching, and fishing.

Sources: CRPD 2005, 2010a.

The Quimby Act provides two standards for the dedication of land for use as parkland. If the existing area of parkland in a community is greater than 3 acres per 1,000 residents, then the community may require dedication based on a standard of up to 5 acres per 1,000 persons residing in the subdivision. If the existing amount of parkland in a community is less than 3 acres per 1,000 residents, then the community may require dedication based on a standard of only 3 acres per 1,000 persons residing in the subdivision. The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan if it is to adopt a parkland dedication or fee ordinance.

It should be noted that the Quimby Act applies only to the acquisition of new parkland; it does not apply to the physical development of new park facilities or associated operations and maintenance costs. Therefore, the Quimby Act effectively preserves open space needed to develop park and recreation facilities, but it does not ensure the development of the land or the provision of park and recreation services to residents. In addition, the Quimby Act applies only to residential subdivisions. Nonresidential projects could contribute to the demand for park and recreation facilities without providing land or funding for such facilities. Quimby Act fees are collected by the local agency (e.g., park district, city, or county) in which the new residential development is located.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Cordova Recreation & Park District Draft Master Plan 2005-2015

The CRDP Draft Master Plan 2005-2015 is the current guiding policy document for the CRPD (Franklin pers. comm., 2010). The CRDP is preparing a new master plan for the park system to update, improve, and identify future park and recreational needs of the community and there is currently no time frame for completion of the master plan update. CRPD calculates its Quimby Act parkland standard based on the most current census information of people per household for Sacramento County. Table 3.12-2 lists CRPD standards for the provision of parklands. CRPD's Quimby Act standard for dedication of parkland is 5 acres per 1,000 residents.

Table 3.12-2
CRPD Park Classifications and Standards

Park Classification	Desirable Size (acres)	Service Area
Mini Park	1.5–2 acres	One-eighth to one-quarter mile
Neighborhood Park	5-15 acres	One-quarter to one-half mile
Community Park	20-150 acres	1 to 2 miles
Source: CRPD 2005		

New developments are required to provide either parkland dedication or in-lieu fees to the CRPD for development of new or rehabilitating existing parks and related facilities. The City of Rancho Cordova collects Quimby Act fees on behalf of CRPD. Sacramento County collects Quimby Act fees for areas under CRPD jurisdiction that are not within Rancho Cordova boundaries and distributes these fees to CRPD. These fees contribute to a fund used to acquire properties for future parkland development. CRPD continues to collect fees from the City and County to meet the Draft Master Plan parkland requirement.

City of Rancho Cordova General Plan

Goals and policies from the *City of Rancho Cordova General Plan* (City General Plan 2006) relating to parks and recreation that are applicable to the Proposed Project and alternatives under consideration are listed in Appendix K.

3.12.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines, as amended. These thresholds also encompass the factors taken into account under NEPA to determine the significance of an action in terms of its context and the intensity of its impacts. The Proposed Project or alternatives under consideration were determined to result in a significant impact related to parks and recreation if they would do any of the following:

- include new recreational facilities, or require the construction or expansion of existing recreational facilities that might have a substantial adverse physical effect on the environment; or
- increase demand on existing neighborhood and community parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

ANALYSIS METHODOLOGY

The evaluation of recreational resources is based on a comparison between existing and planned future recreational facilities and the policies of the CRPD Draft Master Plan (see Table 3.12-3). As stated above, the CRDP Draft Master Plan 2005-2015 is the current guiding policy document for the CRPD (Franklin pers. comm., 2010). In general, demand for recreational resources was estimated based on Draft Master Plan standards for parkland acreage relative to population size. Parkland dedication requirements are based on the number of projected residents in the SPA based on per-dwelling-unit population generation factors for the project (see Section 3.13, "Population, Employment, and Housing"). Parklands (community and neighborhood parks) identified in the CRPD Draft Master Plan and those proposed for the project are the focus of this analysis.

Table 3.12-3
Parkland Acreage Calculations for the Action Alternatives

Alternative	Projected Population	Parkland Requirement (5 acres per 1,000 residents)[1]	Total Proposed Parkland (acres)	Total Surplus (+) or Deficit (-) of Parkland Acreage Compared with Requirement
No USACE Permit	11,685	58.4	32.2	-26.2
Proposed Project	12,589	62.9	87.1	+24.2
Biological Impact Minimization	11,349	56.7	78.3	+21.6
Conceptual Strategy	12,260	61.3	74.2	+12.9
Increased Development	14,469	72.3	96	+23.7

Notes:
[1] Franklin, pers. comm., 2010.
Source: Data compiled by AECOM in 2010

Open Space, Open Space Preserve, Private Recreation, and Public/Quasi-Public land uses (including multiuse stormwater detention basins), commercial and employment centers, and other nonresidential land uses are not considered part of this analysis because CRPD does not does not consider parkland dedication for these uses; therefore, these uses were not included in the project's total parkland acreage. Furthermore, the project would include more than 9 miles of Class I paved off-street bike paths, in addition to Class II bike paths, throughout the SPA. However, because these uses are also not considered by CRPD as meeting parkland dedication requirements, they were not included in the project's total parkland acreage.

This analysis does not address various public and commercial recreational facilities, such as community centers, movie theaters, or gymnasiums, which can be expected to be developed as part of the project but which have not been specifically identified at this time.

IMPACT ANALYSIS

Impacts that would occur under each alternative development scenario are identified as follows: NP (No Project), NCP (No USACE Permit), PP (Proposed Project), BIM (Biological Impact Minimization), CS (Conceptual Strategy), and ID (Increased Development). The impacts for each alternative are compared relative to the PP at the end of each impact conclusion (i.e., similar, greater, lesser).

IMPACT 3.12-1 **Sufficiency of Proposed Parkland to Meet Proposed Development.** *Residential development proposed for the SPA would require 5 acres of parkland per 1,000 residents to meet the adopted Cordova Recreation & Park District (CRPD) standards.*

NP

Under the No Project Alternative, no residential development would occur and no new residents would be generated. With no development occurring under the No Project Alternative, there would be no project-generated increase in population and no corresponding demand for parks. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP

As shown in Table 3.12-3 above, the No USACE Permit Alternative would generate 11,685 new residents in the City of Rancho Cordova at buildout. The No USACE Permit Alternative would include 32.2 acres of parks for active recreation, compared with the CRPD requirement of 58.4 acres. Thus, the No USACE Permit Alternative would result in a shortfall of 26.2 acres of parkland. Because the No USACE Permit Alternative would not provide sufficient park facilities to meet the demand generated by the projected population at buildout, this would result in a **direct, significant** impact. The indirect impacts from physical development of on-site parklands on all other topical areas are analyzed throughout the sections in Chapter 3 of this EIR/EIS. The **indirect** impact from potential deterioration of off-site parklands as a result of increased use is evaluated below in Impact 3.12-2. ***[Greater]***

Mitigation Measure 3.12-1: Comply with CRPD Parkland Requirements.

The project applicants for the No USACE Permit Alternative shall comply with CRPD's parkland requirements of 5 acres per 1,000 residents. To satisfy the parkland shortfall that would be created with implementation of the No USACE Permit Alternative, the project applicants of all project phases shall consult with the City and work with CRPD to identify options to meet the standard of 5 acres per 1,000 residents, which may include any or all of the following: dedication of additional parkland acreage either on- or off-site, payment of in-lieu fees, or expansion of existing park facilities.

Implementation: Project applicants for any particular discretionary development application for the No USACE Permit Alternative.

Timing: Prior to approval of tentative subdivision maps.

Enforcement: City of Rancho Cordova and CRPD.

PP

As shown in Table 3.12-3 above, the Proposed Project Alternative would generate 12,589 new residents in the City of Rancho Cordova at buildout. The Proposed Project Alternative would include 87.1 acres of parks for active recreation, compared with the CRPD requirement of 62.9 acres. Thus, the Proposed Project Alternative would result in a surplus of 24.2 acres of parkland. Because the Proposed Project Alternative would provide sufficient park facilities to meet the demand generated by the projected population at buildout, this **direct** impact is considered **less than significant**. The indirect impacts from physical development of on-site parklands on all other topical areas are analyzed throughout the resource sections in Chapter 3 of this EIR/EIS. The **indirect** impact from potential deterioration of off-site parklands as a result of increased use is evaluated below in Impact 3.12-2.

Mitigation Measure: No mitigation measures required.

BIM

As shown in Table 3.12-3 above, the Biological Impact Minimization Alternative would generate 11,349 new residents in the City of Rancho Cordova at buildout. This Alternative would include 78.3 acres of parks for active recreation, compared with the CRPD requirement of 56.7 acres. Thus, the Biological Impact Minimization Alternative would result in a surplus of 21.6 acres of parkland. Because this alternative would provide sufficient park facilities to meet the demand generated by the projected population at buildout, this **direct** impact is considered **less than significant**. The indirect impacts from physical development of on-site parklands on all other topical areas are analyzed throughout the resource sections in Chapter 3 of this EIR/EIS. The **indirect** impact from potential deterioration of off-site parklands as a result of increased use is evaluated below in Impact 3.12-2. ***[Similar]***

Mitigation Measure: No mitigation measures required.

CS

As shown in Table 3.12-3 above, the Conceptual Strategy Alternative would generate 12,260 new residents in the City of Rancho Cordova at buildout. This Alternative would include 74.2 acres of parks for active recreation, compared with the CRPD requirement of 61.3 acres. Thus, the Conceptual Strategy Alternative would result in a surplus of 12.9 acres of parkland. Because the Conceptual Strategy Alternative would provide sufficient park facilities to meet the demand generated by the projected population at buildout, this **direct** impact is considered **less than significant**. The indirect impacts from physical development of on-site parklands on all other topical areas are analyzed throughout the resource sections in Chapter 3 of this EIR/EIS. The **indirect** impact from potential deterioration of off-site parklands as a result of increased use is evaluated below in Impact 3.12-2. ***[Similar]***

Mitigation Measure: No mitigation measures required.

ID

As shown in Table 3.12-3 above, the Increased Development Alternative would generate 14,469 new residents in the City of Rancho Cordova at buildout. This Alternative would include 96 acres of parks for active recreation, compared with the CRPD requirement of 72.3 acres. Thus, the Increased Development Alternative would result in a surplus of 23.7 acres of parkland. Because the Increased Development Alternative would provide sufficient park facilities to meet the demand generated by the projected population at buildout, this **direct** impact is considered **less than significant**. The indirect impacts from physical development of on-site parklands on all other topical areas are analyzed throughout the resource sections in Chapter 3 of this EIR/EIS. The **indirect** impact from

potential deterioration of off-site parklands as a result of increased use is evaluated below in Impact 3.12-2. ***[Similar]***

Mitigation Measure: No mitigation measures required.

Implementation of Mitigation Measure 3.12-1 would reduce the significant impact under the No USACE Permit Alternative associated with insufficient parkland acreage to a **less-than-significant** level because additional parkland acreage would be dedicated or existing parks would be expanded.

IMPACT 3.12-2 **Increased Use and Potential Physical Deterioration of Existing Off-Site Local or Regional Facilities.** *Project implementation would result in a large number of new residents, which would increase the use and could cause the potential physical deterioration of existing off-site local and regional park facilities.*

NP

Under the No Project Alternative, no residential development would occur and no new residents would be generated. With no development occurring under the No Project Alternative, there would be no project-generated increase in population and therefore no potential for project-related deterioration of off-site park facilities. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

As presented in Table 3.12-3 above, at full project buildout, development of all the action alternatives would result in an increased population ranging from 11,349 to 14,469 new residents in the City of Rancho Cordova. In addition to the on-site facilities, the new residents would also be expected to use existing off-site recreational facilities such as those at Folsom Lake State Recreation Area, Nimbus Fish Hatchery, Folsom South Canal Recreation Trail, Prairie City SVRA, Mather Regional Park, and the American River Parkway. These recreation areas provide bicycle, hiking, and horseback riding trails; campgrounds; boat launch facilities; golf courses; picnic areas; and sports parks. Although it cannot be fully ascertained with any degree of certainty exactly how many residents and with what frequency they would choose to use off-site recreational facilities, for purpose of this analysis, it is assumed that revenues from use charges and admission fees of these off-site facilities would increase along with increased usage, thus supporting increased maintenance. Reclamation, CSP, DFG, and SCRP assess fee increases based on criteria such as available funding from Federal, state, and local sources; increased maintenance costs; and the cost of providing new and maintaining existing equipment and facilities. Therefore, this **indirect** impact is considered **less than significant**. **Direct** impacts are analyzed in Impact 3.12-1 above. ***[Similar]***

Mitigation Measure: No mitigation measures required.

3.12.3 RESIDUAL SIGNIFICANT IMPACTS

The Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would have less-than-significant impacts related to provision of sufficient on-site parkland acreage and potential physical deterioration of existing off-site park lands. With implementation of Mitigation Measure 3.12-1, the No USACE Permit Alternative would also result in a less-than-significant impacts related to provision of sufficient on-site parkland acreage. Therefore, no residually significant impacts would occur.

3.12.4 CUMULATIVE IMPACTS

Regional recreational facilities are located near the SPA, including Folsom Lake, Lake Natoma, Prairie City SVRA, and the American River Parkway. Neighborhood and community parks are located throughout Sacramento County. CRPD provides and maintains a full range of recreational activities and park facilities.

Implementation of the project and the related projects would generate demand for parks and recreational facilities. The Proposed Project Alternative would meet CRPD's parkland dedication requirement of 5 acres per 1,000 residents. Development of related projects could result in cumulative impacts related to providing an adequate amount of parks and open space because there is no guarantee that each related project would meet CRPD's standards for parkland dedication. While the related projects may result in a cumulatively considerable impact, because project would provide sufficient parkland, the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact.

Introduction of new residential units and new population from development of the project and related projects would increase the attendance and demand for privately owned and operated regional park facilities located outside the SPA. New residents from the project and the related projects would be expected to utilize off-site recreational opportunities such as bicycle trails, campgrounds, boat launch facilities, sports parks, etc. Although it cannot be ascertained with any degree of certainty exactly how many residents and with what frequency would choose to utilize off-site recreational facilities, for the purpose of this analysis, it is assumed that revenues from use charges and admission fees of these off-site facilities would increase along with increased usage, supporting increased maintenance. Therefore, the project and the related projects would not contribute to physical deterioration of regional park facilities, and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to deterioration of off-site regional park facilities.

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3.13 POPULATION, EMPLOYMENT, AND HOUSING

3.13.1 AFFECTED ENVIRONMENT

POPULATION

Because the City of Rancho Cordova (City) was not incorporated at the time of the 2000 U.S. Census, the U.S. Census Bureau determined the population of Rancho Cordova using census tracts. The City conducted an analysis to calibrate the available data to the city limits using the 2000 census block groups, blocks, and tracts in relation to the city-limit boundary during preparation of its general plan. This analysis determined that the population in the city limits was 53,065 in 2000 (City of Rancho Cordova 2006a:4-3.2). The current population as of January 1, 2010, was estimated to be 62,899, which represents an approximately 19% increase from 2000 (Department of Finance [DOF] 2010).

The *City of Rancho Cordova General Plan* (City General Plan) reflects an approach that combines specific land use designations in some areas of Rancho Cordova and more general descriptions of land uses in areas planned for future growth (Planning Areas). The Planning Area for the City General Plan consists of the existing incorporated city limits, the city's sphere of influence, and surrounding areas in unincorporated Sacramento County that are anticipated to be incorporated into the City in the future.

Population projections in the City's General Plan are based on assumptions relating to existing, proposed, and approved project boundaries and expected development trends in the city and its Planning Areas by 2030 and 2050, which is consistent with the planning horizons of Sacramento Area Council of Governments' (SACOG's) Sacramento Region Blueprint. The City's General Plan estimates the population of Rancho Cordova will grow to 267,275 by 2030 and 310,568 by 2050 (City of Rancho Cordova 2006a:3.0-15). Actual projections may potentially be higher or lower when more detailed project descriptions are developed for the Planning Areas.

The project is identified in the City General Plan as part of the SunCreek/Preserve Planning Area (City of Rancho Cordova 2006a:Figure 3.0-15). The City General Plan estimated that residential development within the SunCreek portion of the planning area would generate 13,526 new residents by 2030 (City of Rancho Cordova 2006a:4.1-25, City of Rancho Cordova 2009:78). However, depending on the project alternative selected for development, implementation of the project would include an estimated population of 11,349–14,469 new residents at full buildout (see "Analysis Methodology" below).

EMPLOYMENT

Employment growth is one of the primary determinants of housing demand. Working-age individuals will often choose a place to live based on employment prospects in the local area. Therefore, employment trends are an important indicator of housing demand. The rate of employment growth, and the types of jobs most likely to be created, would determine how much housing would be needed by type and cost. For example, an economy based on seasonal tourism will generate different housing needs for local workers than an economy based on government, education, research, and technology.

The following discussion provides the historical, current, and future employment conditions in Sacramento County and Rancho Cordova. The anticipated trend in the jobs/housing index is provided below under "Cumulative Impacts."

Between 2000 and 2009, the employed population in the labor force in the City of Rancho Cordova increased from 24,319 to 27,726 (population of persons 16 years and older) (U.S. Census Bureau 2000, 2009). Of the total employment in 2009, 38% was in financial, insurance, real estate, public administration, and other professional and management services; 20% was in construction, manufacturing, transportation, and warehousing; 17% was in education and health care; 17% was in retail and wholesale trades; 8% was in arts, entertainment, and recreational

services; and 0.4% was in agricultural industries (U.S. Census Bureau 2009). In 2007 there were approximately 56,000 jobs within a four-mile radius of Rancho Cordova's city center. This number accounts for approximately 9% of Sacramento County's total employment (City of Rancho Cordova 2009:15). The largest employers in the city include Aerojet, Delta Dental, Cedar Valley Concrete, Pacific Coast Building Products, Sprint Communications, and Vision Service Plan (City of Rancho Cordova 2009:A:18). Employment growth is anticipated to concentrate along Sunrise Boulevard and U.S. 50.

Based on the current employment totals and projections, Rancho Cordova would have approximately 146,459 jobs in the Planning Area by 2030 and 195,021 jobs by 2050 (City of Rancho Cordova 2006a:3.0-15). Of this total, the City General Plan anticipated the SunCreek portion of the SunCreek/Preserve Planning Area would contribute 1,331 jobs by 2030 (City of Rancho Cordova 2009:83). However, depending on the project alternative selected, implementation of the project would include 196–2,854 jobs (see "Analysis Methodology" below).

HOUSING

The total number of housing units in Rancho Cordova increased from 21,584 in 2000 to 24,786 in 2010 (DOF 2010). The city's housing growth rate was approximately 17%, with the supply and composition of housing changing little in this period. Approximately 63% of housing units are single-family homes and the average household size was 2.64 (considered to be a relatively large household) (DOF 2010).

The number of housing units in Rancho Cordova is anticipated to increase with the approval of large-scale development plans and the construction of new and proposed residential projects. The city estimates an average household size of 2.68 persons per dwelling unit, which is slightly higher than the DOF's average estimate of 2.64 (City of Rancho Cordova 2006a:4.3-4). Based on existing, planned, and approved projects, the number of housing units is estimated to increase to approximately 109,884 residential units by 2030 and 126,241 by 2050 (City of Rancho Cordova 2006a:3.0-15). Of this total, the City General Plan anticipated the SunCreek Planning Area would contribute 5,104 housing units by 2030 (City of Rancho Cordova 2009:83). However, depending on the project alternative selected, implementation of the project would include 4,235–5,399 new residential units at full buildout (see "Analysis Methodology" below).

The relative ability of a community to meet the demands for local housing is analyzed using a "vacancy rate," which establishes the relationship between housing supply and demand. If the demand for housing units is greater than the available supply, then the vacancy rate is low and the price of housing will most likely increase at a higher rate than an area where supply and demand are more in balance. According to the California Department of Housing and Community Development (HCD) (2000), a housing vacancy rate of 5% is considered normal. Vacancy rates below 5% indicate a housing shortage in a community. Rancho Cordova had a vacancy rate of 3.9% for owner-occupied units and 7.0% for rental units and an overall vacancy rate of 10.9% in 2009 (U.S. Census Bureau 2009).

Regional Housing Needs Allocation

The 2006–2013 Regional Housing Needs Plan (RHNP) allocates to SACOG cities and counties their "fair share" of the region's projected housing needs (SACOG 2008). Each city and county in the RHNP receives a Regional Housing Needs Allocation (RHNA) of total number of housing units that it must plan for within a 7.5-year time period through their General Plan Housing Elements. Within the total number of needed units, allocations are also made for the number of very low-, low-, moderate-, and above-moderate-income units. The RHNP allocations take into consideration several factors: market demand for housing; type and tenure of housing supply; employment opportunities; commuting patterns; availability of suitable residential sites and public facilities; loss of assisted multifamily units; avoiding further concentration of lower income households; and special housing needs.

SACOG anticipates that 10,395 housing units would be required in the City of Rancho Cordova during the current planning period of the RHNP (Table 3.13-1).

Table 3.13-1 City of Rancho Cordova Regional Housing Needs Allocation for 2006–2013		
Income Grouping	**Projected Housing Units (2013)**	**Percent of Housing Need**
Very low	2,107	20.3
Low	1,595	15.3
Moderate	1,991	19.2
Above-moderate	4,702	45.2
Total	**10,395**	**100.0**
Source: SACOG 2008:Table 2		

As of January 2006, the City has not produced any additional housing units affordable to very low- and low-income households. The City has produced 203 housing units affordable to moderate-income households and 1,832 above-moderate housing units. As shown in Table 3.13-2, the City would need an additional 2,870 above moderate-income units and an additional 5,490 very low-, low-, and moderate-income housing units by 2013 to meet their RHNA. Of the 2,107 very low-income units, it is presumed that 50% (1,054 units) would be needed for extremely low-income households (City of Rancho Cordova 2009:12).

Table 3.13-2 City of Rancho Cordova Adjusted Housing Needs for 2006–2013			
Income Grouping	**Projected Housing Units (2013)**	**Pending or Approved Housing Units (2009)**	**Remaining Housing Need (2013)**
Very low	2,107	0	2,107
Low	1,595	0	1,595
Moderate	1,991	203	1,788
Above-moderate	4,702	1,832	2,870
Total	**10,395**	**2,035**	**8,360**
Source: City of Rancho Cordova 2009:12			

3.13.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

There are no Federal plans, policies, regulations, or laws related to population, employment, and housing that apply to the Proposed Project or other alternatives under consideration.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Regional Housing Needs Plan

A RHNP is mandated by the State of California (California Government Code Section 65584) for regions to address housing issues and needs based on future growth projections for the area. The RHNP is developed by SACOG and allocates to cities and counties their "fair share" of the region's projected housing needs based on household income groupings over the planning period for the housing elements of each specific jurisdiction. On

February 21, 2008, the SACOG Board of Directors adopted the 2006–2013 RHNP. Cities and counties must develop and adopt their Housing Elements to address how they will meet their allocations.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

City of Rancho Cordova General Plan

Goals and policies from the *City of Rancho Cordova General Plan* Land Use Element (City of Rancho Cordova 2006b) and Housing Element (City of Rancho Cordova 2009) relating to population, housing, and employment that are applicable to the Proposed Project and other alternatives under consideration are listed in Appendix K.

3.13.3 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines, as amended. These thresholds also encompass the factors taken into account under NEPA to determine the significance of an action in terms of its context and the intensity of its impacts. The Proposed Project or other alternatives under consideration could result in a significant impact related to population, employment, and housing if they would do any of the following:

- induce substantial population growth in an area, either directly (by proposed new homes and businesses) or indirectly (through the extension of roads or other infrastructure);
- generate a substantial demand for new housing, the construction of which could cause significant environmental impacts; or
- displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

ANALYSIS METHODOLOGY

The examination of population, employment, and housing conditions in this section is based on information obtained from review of the proposed land use plans and review of available population, employment, and housing projections from the City General Plan Draft EIR (City of Rancho Cordova 2006a), City General Plan (City of Rancho Cordova 2006b), and City Housing Element (City of Rancho Cordova 2009); the U.S. Census Bureau (2000, 2009); the California Department of Finance (2010); and other sources.

The project includes new housing and businesses that would result in direct increases in population in Rancho Cordova over the buildout time period, estimated to be complete in 2032. This analysis assumes that project development would generate the numbers of residents and housing units that are presented in Table 3.13-3.

Population projections for the project site were calculated by multiplying the number of proposed housing units by the City of Rancho Cordova's per dwelling unit factor of 2.68 persons. Under the No Project Alternative, no residential land uses would be developed and there would be no increases in population. Therefore, the No Project Alternative is not included in Table 3.13-3. The population estimate has been rounded (either up or down) to create a whole number estimate for each land use category.

- The No USACE Permit Alternative would develop 4,360 new housing units and would generate approximately 11,685 new residents in Rancho Cordova.

- The Proposed Project Alternative would develop 4,698 new housing units and generate approximately 12,589 new residents in Rancho Cordova.
- The Biological Impact Minimization Alternative would develop 4,235 new housing units and generate approximately 11,349 new residents in Rancho Cordova.
- The Conceptual Strategy Alternative would develop 4,574 new housing units and generate approximately 12,260 new residents in Rancho Cordova.
- The Increased Development Alternative would develop 5,399 new housing units and would generate approximately 14,469 new residents in Rancho Cordova.

Table 3.13-3
SunCreek Specific Plan Residential Population Projections

Land Use Type	Acres					Units					Residents[1]				
	NCP	PP	BIM	CS	ID	NCP	PP	BIM	CS	ID	NCP	PP	BIM	CS	ID
Low Density Residential	54.3	169.4	166.7	141.5	609.8	289	900	885	751	3,239	774	2,412	2,372	2,013	8,680
Medium Density Residential	287.1	322.7	391.3	410.9	173.0	2,239	2,517	3,052	3,205	1,349	6,001	6,746	8,179	8,589	3,615
Compact Density Residential	97.7	20.1	11.6	18.5	--	1,393	287	166	264	--	3,733	769	445	708	--
High Density Residential	18.1	34.6	6.2	12.5	31.4	385	735	132	266	667	1,032	1,969	353	714	1,788
Commercial Mixed Use	6.7	31.9	--	10.9	17.7	54	259	--	88	144	145	693	--	236	386
Total	464	579	576	594	832	4,360	4,698	4,235	4,574	5,399	11,685	12,589	11,349	12,260	14,469

Notes: NCP = No USACE Permit Alternative; PP = Proposed Project Alternative; BIM = Biological Impact Minimization Alternative; CS = Conceptual Strategy Alternative; ID = Increased Development Alternative.

[1] The number of new residents was based on the City average of 2.68 persons per dwelling unit.

Sources: City of Rancho Cordova 2006a; MacKay & Somps 2010 (see Exhibits 2-4, 2-23, 2-25, 2-27, and 2-29)

In addition, the project would include development of mixed-use, office park, and commercial. The number of jobs generated by the project was calculated by Fehr & Peers Transportation Consultants by multiplying the city's standards for total employees per acre based by land use type, as listed below:

- The No USACE Permit Alternative would generate 299 new jobs.
- The Proposed Project Alternative would generate 2,854 new jobs.
- The Biological Impact Minimization Alternative would generate 196 new jobs.
- The Conceptual Strategy Alternative would generate 480 new jobs.
- The Increased Development Alternative would generate 609 new jobs.

Specific indirect impacts associated with increased population, employment, and housing, such as traffic congestion, air quality degradation, noise generation, and increased demand for public services and utilities, are

addressed in each technical section of this DEIR/DEIS, as appropriate. These technical sections provide a detailed analysis of other relevant environmental effects of the project; therefore, indirect impacts are not discussed further in this section.

IMPACT ANALYSIS

Impacts that would occur under each alternative development scenario are identified as follows: NP (No Project), NCP (No USACE Permit), PP (Proposed Project), BIM (Biological Impact Minimization), CS (Conceptual Strategy), and ID (Increased Development). The impacts for each alternative are compared relative to the PP at the end of each impact conclusion (i.e., similar, greater, lesser).

IMPACT 3.13-1 **Temporary and Short-term Increase in Population and Subsequent Housing Demand during Construction.** *Project implementation would generate temporary and short-term increases in employment and subsequent housing demand in Sacramento County and the City of Rancho Cordova from construction-related jobs.*

NP

Under the No Project Alternative, no project-related development would occur. Therefore, no construction activities would occur at the SPA and no construction workers would be needed; thus, **no direct** or **indirect** impacts would result. ***[Lesser]***

NCP, PP, BIM, CS, ID

Project construction activities would occur at intervals throughout the planning horizon of the project, and the site would ultimately be built out in approximately 20 years (2012-2032). A greater number of construction workers would be employed during peak construction periods (determined by market demand and overall economic conditions), while fewer construction workers would be employed during nonpeak periods. Each development phase would likely be constructed as several small projects that would be ongoing in each development phase. For example, roads, utilities, a housing development, a commercial center, and supporting off-site improvements could all be constructed simultaneously. It is estimated that project-related construction would generate approximately 780 construction jobs during the peak construction period of each of the three phases (URBEMIS 2007 Version 9.2.4).

Construction workers serving the project can be expected to come from Rancho Cordova, Sacramento County, and from nearby communities. According to the latest labor data available from the U.S. Census Bureau (2009), it is estimated that 2,917 residents in Rancho Cordova and 59,225 residents in Sacramento County are employed in the construction industry. Although the current number of residents employed in construction is likely lower in 2010 due to the economic downturn, the construction industry in Sacramento County is more than sufficient to meet the demand for construction workers that would be generated by the project. Because construction workers serving the project could be expected to come from Rancho Cordova itself and from nearby communities in Sacramento County, neither substantial population growth nor an increase in housing demand in the region is anticipated as a result of these jobs. Furthermore, if some construction workers from outside the region were employed for the project, the temporary and short-term nature of the work supports the conclusion that these workers would not typically change residences when assigned to a new construction site. Therefore, substantial permanent relocations of construction workers to the area are not anticipated. The project would not be expected to generate the need for substantial additional housing stock in Rancho Cordova or Sacramento County. Because of these conditions, the temporary increase in population growth and housing demand associated with project construction is considered a **direct, less-than-significant** impact. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure: No mitigation measures required.

IMPACT 3.13-2 **Permanent Increase in Population Growth.** *Project implementation would result in the development of new residential dwelling units and businesses, which would cause a direct long-term increase in population.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no increases in population. Therefore, there would be **no direct** or **indirect** impacts related to permanent increases in population growth. ***[Lesser]***

NCP

Implementation of the No USACE Permit Alternative would directly induce population growth in Rancho Cordova through construction of new homes and businesses over the 20-year buildout period (2012–2032). The No USACE Permit Alternative would develop 4,360 residential units. As shown in Table 3.13-3 above, these residential units are estimated to generate 11,685 new residents at project buildout, which is assumed to be the year 2032 based on current projections of the project applicants. Therefore, the buildout period of the SPA would occur beyond the City's General Plan planning horizon (2030). However, the City General Plan assumed buildout of the SPA by 2030 and therefore the population generated by the project was included in the City General Plan population projections and assumed in the related City General Plan EIR analyses. Thus, the population that would be generated under the No USACE Permit Alternative is compared to the 2030 population projections in the City General Plan. The City General Plan and its EIR are incorporated herein by reference.

The current City General Plan (2006b) projects the city would have a total population of approximately 267,275 persons by 2030. As of January 1, 2010, the population of Rancho Cordova was estimated to be 62,899 (DOF 2010). The 2030 projected population for the City (267,275) represents an increase of 204,376 persons from 2010 to 2030. Comparing the new residents expected to be generated by the No USACE Permit Alternative (11,685) to the City General Plan, the project-related estimated increase in population is within the increase in population that would result from the planned residential growth as projected by the City's General Plan.

In addition, the SPA is identified in the City General Plan as part of the SunCreek/Preserve Planning Area (City of Rancho Cordova 2006a:Figure 3.0-15). The City estimated that residential development within the SunCreek portion of the planning area would generate 13,526 new residents by 2030. The new residents expected to be generated by the No USACE Permit Alternative (11,685) would be 1,841 fewer residents than identified in the City General Plan and EIR for the SPA (13,526).

Because the No USACE Permit Alternative would not generate population growth that exceeds estimates for Rancho Cordova under its currently adopted General Plan, the project would not result in unplanned population growth in the area. Population growth consistent with current population projections by itself is not considered a significant environmental impact. However, development of housing, infrastructure, and facilities and services to serve this growth can have significant environmental impacts through land conversions, commitment of resources, and other mechanisms. Because the No USACE Permit Alternative would generate 904 fewer residents than the Proposed Project Alternative, it is likely that direct impacts associated with development would be less. The **indirect** impacts associated with the development needed to accommodate increased population are evaluated in each resource area within Chapter 3 of this DEIR/DEIS. Because population growth is not, itself, considered a significant environmental impact, this **direct** impact is considered **less than significant**. ***[Lesser]***

PP

Implementation of the Proposed Project Alternative would directly induce population growth in Rancho Cordova through construction of new homes and businesses over the 20-year buildout period (2012–2032). The Proposed Project Alternative would develop 4,698 residential units. As shown in Table 3.13-3 above, these residential units

are estimated to generate 12,589 new residents at project buildout, which is assumed to be the year 2032 based on current projections of the project applicants. Therefore, the buildout period of the SPA would occur beyond the City's General Plan planning horizon (2030). However, as noted above, the City General Plan assumed buildout of the SPA by 2030 and therefore the population generated by the project was included in the City General Plan population projections and assumed in the related City General Plan EIR analyses. Thus, the population that would be generated under the Proposed Project Alternative is compared to the 2030 population projections in the City General Plan. The City General Plan and its EIR are incorporated herein by reference.

The 2030 projected population for the City (267,275) represents an increase of 204,376 persons from 2010 to 2030, as noted above under the "No USACE Permit Alternative." Comparing the new residents expected to be generated by the Proposed Project Alternative (12,589) with the City General Plan, the project-related estimated increase in population is within the increase in population that would result from the planned residential growth as projected by the City's General Plan.

In addition, the SPA is identified in the City General Plan as part of the SunCreek/Preserve Planning Area. The City estimated that residential development within the SunCreek portion of the planning area would generate 13,526 new residents by 2030. The new residents expected to be generated by the Proposed Project Alternative (12,589) would be 937 fewer residents than identified in the City General Plan and EIR for the SPA (13,526).

Because the Proposed Project Alternative would not generate population growth that exceeds estimates for Rancho Cordova under its currently adopted General Plan, the project would not result in unplanned population growth in the area. Population growth consistent with current population projections by itself is not considered a significant environmental impact. However, development of housing, infrastructure, and facilities and services to serve this growth can have significant environmental impacts through land conversions, commitment of resources, and other mechanisms. The **indirect** impacts associated with the development needed to accommodate increased population under the Proposed Project Alternative are evaluated in each resource area within Chapter 3 of this DEIR/DEIS. Because population growth is not, itself, considered a significant environmental impact, this **direct** impact is considered **less than significant**.

BIM

Implementation of the Biological Impact Minimization Alternative would directly induce population growth in Rancho Cordova through construction of new homes and businesses over the 20-year buildout period (2012–2032). The Biological Impact Minimization Alternative would develop 4,235 residential units. As shown in Table 3.13-3 above, these residential units are estimated to generate 11,349 new residents at project buildout, which is assumed to be the year 2032 based on current projections of the project applicants. Therefore, the buildout period of the SPA would occur beyond the City's General Plan planning horizon (2030). However, the City General Plan assumed buildout of the SPA by 2030 and therefore the population generated by the project was included in the City General Plan population projections and assumed in the related City General Plan EIR analyses. Thus, the population that would be generated under the Biological Impact Minimization Alternative is compared to the 2030 population projections in the City General Plan. The City General Plan and its EIR are incorporated herein by reference.

The 2030 projected population for the City (267,275) represents an increase of 204,376 persons from 2010 to 2030, as noted above. Comparing the new residents expected to be generated by the Biological Impact Minimization Alternative (11,349) to the City General Plan, the project-related estimated increase in population is within the increase in population that would result from the planned residential growth as projected by the City's General Plan. In addition, the SPA is identified in the City General Plan as part of the SunCreek/Preserve Planning Area. The City estimated that residential development within the SunCreek portion of the planning area would generate 13,526 new residents by 2030. The new residents expected to be generated by the Biological Impact Minimization Alternative (11,349) would be 2,177 fewer residents than identified in the City General Plan and EIR for the SPA (13,526).

Because the Biological Impact Minimization Alternative would not generate population growth that exceeds estimates for Rancho Cordova under its currently adopted General Plan, the project would not result in unplanned population growth in the area. Population growth consistent with current population projections by itself is not considered a significant environmental impact. However, development of housing, infrastructure, and facilities and services to serve this growth can have significant environmental impacts through land conversions, commitment of resources, and other mechanisms. Because the Biological Impact Minimization Alternative would generate 1,240 fewer residents than the Proposed Project Alternative, it is likely that direct impacts associated with development would be less. The **indirect** impacts associated with the development needed to accommodate increased population are evaluated in each resource area within Chapter 3 of this DEIR/DEIS. Because population growth is not, itself, considered a significant environmental impact, this **direct** impact is considered **less than significant**. ***[Lesser]***

CS

Implementation of the Conceptual Strategy Alternative would directly induce population growth in Rancho Cordova through construction of new homes and businesses over the 20-year buildout period (2012–2032). The Conceptual Strategy Alternative would develop 4,574 residential units. As shown in Table 3.13-3 above, these residential units are estimated to generate 12,260 new residents at project buildout, which is assumed to be the year 2032 based on current projections of the project applicants. Therefore, the buildout period of the SPA would occur beyond the City's General Plan planning horizon (2030). However, the City General Plan assumed buildout of the SPA by 2030 and therefore the population generated by the project was included in the City General Plan population projections and assumed in the related City General Plan EIR analyses. Thus, the population that would be generated under the Conceptual Strategy Alternative is compared to the 2030 population projections in the City General Plan. The City General Plan and its EIR are incorporated herein by reference.

The 2030 projected population for the City (267,275) represents an increase of 204,376 persons from 2010 to 2030, as noted above. Comparing the new residents expected to be generated by the Conceptual Strategy Alternative (12,206) to the City General Plan, the project-related estimated increase in population is within the increase in population that would result from the planned residential growth as projected by the City's General Plan. In addition, the SPA is identified in the City General Plan as part of the SunCreek/Preserve Planning Area (City of Rancho Cordova 2006a:Figure 3.0-15). The City estimated that residential development within the SunCreek portion of the planning area would generate 13,526 new residents by 2030. The new residents expected to be generated by the Conceptual Strategy Alternative (12,206) would be 1,320 fewer residents than identified in the City General Plan for the SPA (13,526).

Because the Conceptual Strategy Alternative would not generate population growth that exceeds estimates for Rancho Cordova under its currently adopted General Plan, the project would not result in unplanned population growth in the area. Population growth consistent with current population projections by itself is not considered a significant environmental impact. However, development of housing, infrastructure, and facilities and services to serve this growth can have significant environmental impacts through land conversions, commitment of resources, and other mechanisms. Because the Conceptual Strategy Alternative would generate 329 fewer residents than the Proposed Project Alternative, it is likely that direct impacts associated with development would be less. The **indirect** impacts associated with the development needed to accommodate increased population are evaluated in each resource area within Chapter 3 of this DEIR/DEIS. Because population growth is not, itself, considered a significant environmental impact, this **direct** impact is considered **less than significant**. ***[Lesser]***

ID

Implementation of the Increased Development Alternative would directly induce population growth in Rancho Cordova through construction of new homes and businesses over the 20-year buildout period (2012–2032). The Increased Development Alternative would develop 5,399 residential units. As shown in Table 3.13-3 above, these residential units are estimated to generate 14,469 new residents at project buildout, which is assumed to be the

year 2032 based on current projections of the project applicants. Therefore, the buildout period of the SPA would occur beyond the City's General Plan planning horizon (2030). However, the City General Plan assumed buildout of the SPA by 2030 and therefore the population generated by the project was included in the City General Plan population projections and assumed in the related City General Plan EIR analyses. Thus, the population that would be generated under the Increased Development Alternative is compared to the 2030 population projections in the City General Plan. The City General Plan and its EIR are incorporated herein by reference.

The 2030 projected population for the City (267,275) represents an increase of 204,376 persons from 2010 to 2030, as noted above. In addition, the SPA is identified in the City General Plan as part of the SunCreek/Preserve Planning Area (City of Rancho Cordova 2006a:Figure 3.0-15). The City estimated that residential development within the SunCreek portion of the planning area would generate 13,526 new residents by 2030. The new residents expected to be generated by the Increased Development Alternative (14,469) would be 943 more residents than identified in the City General Plan for the SPA (13,526). However, the project-related estimated increase in population (14,469) is within the overall increase in population that would result from the planned residential growth as projected by the City's General Plan (204,376). Although the Increased Development Alternative would generate population growth that exceeds the number of residents identified in the City General Plan for the SunCreek/Preserve Planning Area (which was identified as a "conceptual plan" only in the City General Plan), the number of residents generated by the Increased Development Alternative would not generate population growth that exceeds estimates for Rancho Cordova as a whole under its currently adopted General Plan. Therefore, the project would not result in unplanned population growth in the area. Population growth consistent with current population projections by itself is not considered a significant environmental impact. However, development of housing, infrastructure, and facilities and services to serve this growth can have significant environmental impacts through land conversions, commitment of resources, and other mechanisms. Because the Increased Development Alternative would generate 1,880 more residents than the Proposed Project Alternative, it is likely that direct impacts associated with development would be greater. The **indirect** impacts associated with the development needed to accommodate increased population are evaluated in each resource area within Chapter 3 of this DEIR/DEIS. Because population growth is not, itself, considered a significant environmental impact, this **direct** impact is considered **less than significant**. ***[Greater]***

Mitigation Measure: No mitigation measures required.

IMPACT 3.13-3 **Displacement of Existing Housing or People Resulting from Project Development.** *Project implementation would displace five existing residences located on the SPA.*

NP

Under the No Project Alternative, no project-related development would occur and the five existing residences within the SPA would not be removed. Therefore, there would be **no direct or indirect** project-related impacts related to the displacement of existing housing or people. ***[Lesser]***

NCP, PP, BIM, CS, ID

A total of four existing residences, only one of which is occupied, are located within the SPA; they would all be removed as part of project development. Project implementation would result in the construction of low-, medium-, and high-density residential dwelling units on the SPA. Construction of these residential dwelling units on the SPA would fully replace the five existing residences removed during project construction. Because the project would not displace substantial numbers of existing housing or people, this impact is considered **direct** and **less than significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure: No mitigation measures required.

3.13.4 RESIDUAL SIGNIFICANT IMPACTS

Impacts associated with population, employment, and housing demand would be less than significant. Therefore, no residual significant impacts would occur.

3.13.5 CUMULATIVE IMPACTS

Because the project would provide employment opportunities in Sacramento County, including the City of Rancho Cordova, as well as the greater Sacramento region as a whole, the geographic area is defined as Sacramento region (El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba Counties). Depending on the project alternative chosen for development, implementation of the project would include an estimated population of 11,349–14,469 new residents at full buildout. As discussed above, the project would not generate population growth that exceeds estimates for the City under the currently adopted General Plan, and the project would not result in unplanned population growth in the area. Population growth, by itself, is not considered a significant cumulative impact because it is not an environmental impact. However, the direct and indirect effects discussed above, such as housing and infrastructure needs that are related to population growth, can lead to conversion of land to other uses, the impacts of which are considered throughout Chapter 3 of this DEIR/DEIS.

Jobs/Housing Balance

The concept of jobs/housing balance presumes that the environment and quality of life in a given area benefit when the area has a balance between its housing supply and its employment base. In the broadest sense, the balance of jobs and housing in a metropolitan region is defined as provision of an adequate supply of housing to house workers employed in a defined geographic area, such as a community, a city, or other subregion. Alternatively, a jobs/housing balance can be defined as adequate provision of employment in a defined area that generates enough local workers to fill the housing supply. The opportunity to live close to the workplace afforded by providing housing close to jobs should translate to lower congestion and commute times by eliminating the necessity for long-distance commutes. It also provides increased opportunities to use transit, bike, or walk to work in lieu of driving. An area that has too many jobs relative to its housing supply is likely (in the absence of offsetting factors) to experience substantial in-commuting, relatively rapid increases in housing prices, and intensified pressure for additional residential development. Conversely, if an area has relatively few jobs in comparison to the number of employed residents, many of the workers are required to commute to jobs outside their area of residence. Commuting results in more traffic congestion, air quality degradation, and noise generation.

The simplest measure of jobs/housing balance is an index based on the ratio of housing units to jobs in the area. An index of 1.5 indicates a jobs/housing balance. An index above 1.5 indicates employment growth outpacing housing growth and, therefore, there are more jobs than employed residents, and may suggest that many employees are commuting in from outside the community. An index below 1.5 indicates housing growth outpacing employment growth and, therefore, there are more employed residents than jobs and may suggest that many residents are commuting to jobs outside the community. The average number of workers per household can vary from community to community, and the standard should be based on an analysis of local data on workers per household. A range of 1.3 to 1.6 is often recommended to signify balance (Weitz 2003:21).

Jobs/housing indices are more useful for examining the potential for "self-containment" at the regional level than for determining whether this self-sufficiency actually exists in a given community. Balance involves more than matching numbers of housing units and numbers of jobs. Even if communities have a statistical balance between jobs and housing, they are still very likely to experience in-commuting and out-commuting, given the variety and dispersed nature of employment and residential opportunities elsewhere in the region and the high level of mobility offered by automobiles. Trip-making decisions, including the choice of mode, are based on many factors. In the most rational scenario, mode choice is based on the relative time, cost, and availability of alternative transportation modes. However, mode choice is not simply the result of a rational decision between equally

weighed travel tradeoffs. Based on theory and empirical research, perceived cost, household characteristics, and land use also affect mode choice. Additional factors shape the context in which people make trip decisions, including the fact that two-income households usually work in different locations; frequent job turnover reduces the ability to locate with reference to one's workplace; and factors other than jobs access, such as quality of schools, housing prices, and access to other amenities influence residential location choices as much as or more than proximity to employment (Atlanta Regional Commission 2002). The jobs/housing balance is a ratio that is used for planning purposes; it is not a physical impact on the environment and therefore is not an impact evaluated under CEQA. The jobs/housing balance analysis below is presented for informational purposes only.

To allow for consistency in comparisons, the jobs/housing balance indices in this analysis were calculated using SACOG's Metropolitan Transportation Plan's (MTP's) estimated housing and employment projections for these counties. These projections were based on employment, population and housing growth in specific geographic locations using recent growth trends; planned projects (both adopted and in-process) in each jurisdiction; planning-related issues such as flood control, habitat and infrastructure; and the long-range planning projects in each location. The jobs/housing indices were determined by dividing the projected number of jobs by the projected number of housing units (SACOG 2007:15-1).

The ratio of jobs to housing varies considerably in Sacramento County. Rancho Cordova had the highest jobs ratio in 2005 with a jobs/housing index of 2.70, followed by the Cities of Sacramento and Folsom with jobs/housing indices of 1.99 and 1.29, respectively. Citrus Heights had the lowest jobs to housing ratio in 2005 with a jobs/housing index of 0.53. As a whole, the jobs/housing index for Sacramento County was 1.34 in 2005. Over the next 25 years, job growth is expected to improve the number of jobs compared to the number of employed residents living in the county and the jobs/housing index is projected to decrease in Sacramento County to 1.21 in 2035 (SACOG 2007:15-3).

The estimated number of jobs generated by the project and the number of employable residents on the SPA would depend on the project alternative chosen for development. Depending on the project alternative chosen, implementation of the project would include 196–2,854 jobs and include 4,235–5,399 new residential units at full buildout. Regardless of the alternative implemented, the project would result in a condition where housing exceeds the projected number of jobs.

The jobs/housing index for Rancho Cordova is projected to decrease from 2.70 to 1.29 in 2035 with the development of housing projects identified in the City's General Plan (SACOG 2007:15-3). Although the jobs/housing balance is expected to improve over the long term, Rancho Cordova will continue to have an imbalance between housing and jobs, with employment growth outpacing housing growth, and more jobs than employed residents.

Overall, the jobs/housing index for the Sacramento region (El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba Counties) as a whole would decrease from 1.24 in 2005 to 1.15 by 2035. The jobs/housing indices for these counties indicate that planned housing projects, including the project, are expected to provide housing opportunities and improve the current jobs/housing balance to approximately 1.15 jobs to one housing unit by 2035; however, the Sacramento region would remain slightly job rich (SACOG 2007:15-2).

3.14 PUBLIC SERVICES

3.14.1 AFFECTED ENVIRONMENT

FIRE PROTECTION SERVICES

The Sacramento Metropolitan Fire District (SMFD) currently provides fire protection services to unincorporated areas of Sacramento County and to the Cities of Rancho Cordova and Citrus Heights. SMFD offers fire protection, fire suppression, inspection, plan checking, emergency transportation and medical services, public education, advanced life support, and rescue services to the unincorporated portions of Sacramento County. SMFD was formed in 2000 by consolidation of the American River Fire District and the Sacramento County Fire Protection District. As the largest fire district in Sacramento County, SMFD currently operates 42 stations and provides service through 750 uniformed and support personnel to nearly 600,000 people in a 417-square-mile area. SMFD operates ten transporting Advanced Life Support medics, seven reserve transporting medics, 38 engine companies, five truck companies, 24 grass engines, two crash rescue rigs, six water tenders, four swift water rescue bikes, five swift water rescue inflatable rubber boats, five air units, three reserve firefighter engine companies, and two reserve firefighter grass engines (SMFD 2011a). Many of SMFD's engines are paramedic staffed and all responding units provide coverage by emergency medical technicians. SMFD's personnel are trained and equipped to deal not only with emergency medical alarms and structural or wildland fires, but also with swift water emergencies, confined space incidents, technical rescues, hazardous materials incidents, and crash fire rescue.

To improve response times for fire districts within Sacramento County, the County Department of Emergency Medical Services developed a Joint Powers Authority (JPA) for a unified-dispatch system to respond to fire and emergency-related incidents. Under the JPA, the closest unit available is dispatched to an incident, and fire district boundaries are not considered when an incident occurs. The JPA, known as the Regional Fire and Rescue Training Authority, is made up of the California Office of Emergency Services–Fire and Rescue Branch, SMFD, and the Sacramento Fire Department (City of Rancho Cordova 2006a:4.12-2).

Rancho Cordova represents only a portion of the overall SMFD service area, which includes Orangevale, Citrus Heights, Fair Oaks, Arden Arcade, Rio Linda, and South Sacramento. SMFD's Fire Administration Office is located at 2101 Hurley Way in Sacramento. SMFD operates a total of six fire stations that serve Rancho Cordova:

- Station 61—10595 Folsom Boulevard, Rancho Cordova
- Station 62—3646 Bradshaw Road, Sacramento
- Station 63—12397 Folsom Boulevard, Rancho Cordova
- Station 65—11201 Coloma Road, Rancho Cordova
- Station 66—3180 Kilgore Road, Rancho Cordova
- Station 68—4381 Anatolia Drive, Rancho Cordova

First-response service to the SPA would be provided by Station 68, approximately 1.9 miles north of the project via Sunrise Boulevard. Station 68 operates one engine company (SMFD 2010).

The Insurance Services Office (ISO) rating is the recognized classification for a fire department or district's ability to defend against major fires. According to the ISO, newly developing urban areas should have a fire station opened within 1.5 miles of all commercial development and 2.5 miles from all residential development when "build-out" exceeds 20% of the planning area. A rating of 10 generally indicates no protection, whereas an ISO rating of 1 indicates high firefighting capability. The SMFD's ISO rating is currently a class 3 for hydrant areas and class 8 for non-hydrant areas and a response time of five minutes for emergency calls, where staffing levels are adequate (Sacramento County 2009:4-27).

In February 2011, the Federal Emergency Management Agency awarded SMFD $5.5 million dollars to hire 24 new firefighters. Through the Staffing for Adequate Fire and Emergency Response Grant Program, SMFD will use these new firefighters to replace firefighters that have been lost through attrition over the last several years. These firefighters will be used to staff two additional truck companies, which will increase public safety (SMFD 2011b).

Funding for fire services and facilities resulting from new construction is facilitated through SMFD's Capital Fire Facilities Fee Schedule. The Capital Fire Facilities Fee was established through State Assembly Bill 1600, which provides the authority for SMFD to fund the full cost of providing new fire services and facilities to new development within its service area. The fee is used exclusively to defray costs and mitigate the impact associated with property acquisition, site preparations, design, construction, and equipping new fire stations that are required to serve new development. The Capital Fire Facilities Fee became effective in June 2003 and remains in effect until December 2020. Additional funds are generated by ambulance transport fees, and service fees (mostly from fire prevention plan checking charges) (Sacramento Local Agency Formation Commission 2004:11).

In July 2003, the City began collecting the new Capital Fire Facilities Fee for SMFD. The Capital Fire Facilities Fee is assessed by the City's Public Works Department when improvement plans are submitted.

LAW ENFORCEMENT SERVICES

The Rancho Cordova Police Department is contracted through the Sacramento County Sheriff's Department (SCSD) Patrol Services. SCSD has a paid staff of 2,332 persons, consisting of 1,789 officers and 543 nonsworn members. SCSD also has a reserve force of 168 officers and approximately 621 community volunteers. SCSD is funded through Sacramento County tax revenues and special Federal and local grants and SCSD and the City have agreed that funding for the Rancho Cordova Police Department will occur using revenues from the City's General Fund, which is the primary source of revenue for law enforcement services (City of Rancho Cordova 2006a:4.12-14).

The City has adopted an agreement with SCSD stating that all law enforcement for Rancho Cordova will be provided by the SCSD and law enforcement services for Rancho Cordova are provided by the SCSD's East Division. The contracted services include patrol, traffic enforcement, investigations, and administrative services. The police department is located at 10361 Rockingham Drive (at Mather Field Road), approximately 6.8 miles northeast of the SPA via Sunrise Boulevard.

The police department is organized into four main components: the Administrative Services Bureau, which include the budget coordinator, equipment manager, and volunteer coordinator; the Investigations and Community Services Bureau, which includes the detective unit, problem-oriented police unit, traffic enforcement, and crime prevention center; and Patrol Operations Bureau. As part of the City's contract with SCSD, the City pays the salaries of 55 sworn and seven non-sworn staff, which work solely for the City (Rancho Cordova Police Department 2010). The City's goal is to provide one police officer for every 1,000 citizens and one support staff member for every three officers, similar to the standard that was adopted for SCSD (City of Rancho Cordova 2006a:4.12-14).

One important measurement of service delivery is response time to emergency calls-for-service. The Police Department Service Delivery Plan calls for emergency call response within 5 minutes or less for Priority One calls. A Priority One call is a violent crime against a person or an emergency requiring an immediate response to save a life. The police department maintains an average response time for Priority One calls for service of 5 minutes or less. Daily assessments are conducted on a call-by-call basis, with the goal of improving the department's response times.

The California Highway Patrol (CHP) provides traffic regulation enforcement, emergency management, and vice assistance on state highways, all Federal interstate highways, and other major roadways in unincorporated portions of the eastern Sacramento County area. The SPA is located within the Valley Division, which oversees Interstate 80, Interstate 5, U.S. 50, and State Route 99. The Valley Division includes 16 area offices, three

resident posts, one commercial inspection facility, one transportation management center, three communications/dispatch centers and is staffed with 785 uniformed officers and 250 non-uniformed personnel (CHP 2012).

PUBLIC SCHOOLS

The SPA is located within the Elk Grove Unified School District (EGUSD) boundary. EGUSD is the fifth largest school district in California and the largest in northern California. Located in southern and eastern Sacramento County, EGUSD covers 320 square miles and has been in existence for over 41 years. The EGUSD boundaries encompass the entire city of Elk Grove, portions of the city of Sacramento and portions of the city of Rancho Cordova, and most of southern Sacramento County. EGUSD had a 2010–2011 school year enrollment of 63,130 students (EGUSD 2011). The EGUSD has 64 schools: 39 elementary schools, nine middle schools, nine high schools, four alternative education schools, an adult school, a special education school, and one charter school (EGUSD 2012). In addition to the schools listed above, EGUSD has approximately several elementary school sites and combined middle school/high school sites planned in the Sunrise-Douglas area, with opening dates to be determined, based on market conditions and associated student generation. As the district opens up new schools, school boundaries will also change, which will mean that some students may have to change schools (City of Rancho Cordova 2006a:4.12-71). In cases where school capacity is exceeded, students would be redirected to other schools in the EGUSD (Grambusch pers. comm., 2010).

As shown on the EGUSD 2010-2011 school attendance boundaries map, students living in the SPA in early stages of project development, before the proposed on-site schools are constructed, would attend Sunrise Elementary School, Katherine Albiani Middle School, and Pleasant Grove High School (EGUSD 2010a). Table 3.14-1 identifies the 2010–2011 school-year enrollments for these schools.

Table 3.14-1
Elk Grove Unified School District Enrollment, 2010–2011

School Name	Grade	Current Enrollment	State Standard Capacity	Estimated Remaining Capacity
Sunrise Elementary School	K–5	738	850	112
Katherine Albiani Middle School	6–8	1,380	1,450	70
Pleasant Grove High School	9–12	2,453	2,650	197

Note: Student enrollment in the district changes daily as more students enroll and others leave; therefore, this table does not necessarily reflect exact current enrollment.
Sources: EGUSD 2010a, 2010b, 2010c, 2010d, 2011; Williams, pers. comm., 2010

Sunrise Elementary is located at 11821 Cobble Brook Drive, approximately 2.6 miles north of the SPA, and serves elementary school students in grades K–5. The buildings were completed and occupied in August 2007, and include 39 classrooms, a multipurpose room, a library, a computer lab, a Learning Center, and an administration building (EGUSD 2010b).

Katherine Albiani Middle School is located at 9140 Bradshaw Road, approximately 9.6 miles southwest of the SPA, and serves students in grades 6–8. Katherine L. Albiani Middle School opened in August 2005 and includes 48 classrooms, a multipurpose room, a library, a dance room, a music room, and an administration building (EGUSD 2010c).

Pleasant Grove High School is located at 9531 Bond Road, approximately 9.8 miles southwest of the SPA. The high school serves students in grades 9–12. Pleasant Grove High School was opened in August 2005 with 13 pods containing 87 classrooms, five computer labs, administrative and student services offices, two gyms, and a

multipurpose room. The library serves both the Pleasant Grove High School and Katherine Albiani Middle School. In 2007, five portables were added to the northwest corner of campus to accommodate student growth. Architectural plans are currently being drafted for a barn to support the Agriculture Education program at Pleasant Grove High School (EGUSD 2010d).

The EGUSD is funded by 50% state and 50% local sources. The district can receive local funding through developer impact fees, tax revenue from Mello-Roos districts, and General Obligation bonds. Developer impact fees are the major source of funding for the district. Based on its facility needs assessment, EGUSD demonstrated the need to levy Level II developer fees (described below in Section 3.14.2, "Regulatory Framework") that are higher than the statutory fee. As of August 2010, Level II fees for residential development are $4.20 per square foot and $0.47 per square foot for commercial/industrial construction (Grambusch, pers. comm., 2010). Developer fees may be used to finance new schools and equipment, and to reconstruct existing facilities to maintain adequate housing for all the district's students. Mello-Roos districts are defined tax areas usually associated with new residential subdivisions, which are often used for additional school taxes.

3.14.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

There are no Federal plans, policies, regulations, or laws related to public services that are applicable to the Proposed Project or other alternatives under consideration.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment," the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials; fire hose sizing requirements; restrictions on the use of compressed air; access roads; and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Fire Codes and Guidelines

The California Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The California Fire Code contains specialized technical regulations related to fire and life safety.

All development projects in Rancho Cordova are required to meet various other fire protection requirements identified in the SMFD Fire Prevention Standards. The fire code and prevention standards outline the number and distribution of fire hydrants, the minimum requirements for fire access roads and emergency gates and barriers, and the installation of traffic control devices (Opticom). In addition, SMFD requires installation of automatic fire sprinklers in all new commercial construction that exceeds 3,599 square feet and some residential properties exceeding 2,999 square feet (City of Rancho Cordova 2006a:4.12-4).

An important requirement for fire suppression is adequate fire flow, which is the amount of water, expressed in gallons per minute (gpm), available to control a given fire and the length of time that this flow is available. The availability of sufficient water flows and pressure is a basic requirement of the California Building Standards

Code. The total fire flow needed to extinguish a structural fire is based on a variety of factors, including building design, internal square footage, construction materials, dominant use, height, number of floors, and distance to adjacent buildings. Minimum requirements for available fire flow at a given building are dependent on standards set in the California Fire Code. These fire flow requirements are 1,500 gpm for low- and medium-density residential (2-hour duration), 2,500 gpm for high-density residential (3-hour duration), and 3,000 gpm for commercial/office and light industrial (3-hour duration). In addition, SMFD requires 1,000 gpm at minimum water pressure of 20 pounds per square inch (3-hour duration) for structures exceeding 3,600 square feet (City of Rancho Cordova 2006a:4.12-4).

State School Funding

California Education Code Section 17620 authorizes school districts to levy a fee, charge, dedication, or other requirement against any development project for the construction or reconstruction of school facilities, provided that the district can show justification for levying the fees. California Government Code Section 65995 limits the fee to be collected to the statutory fee unless a school district conducts a Facility Needs Assessment (California Government Code Section 65995.6) and meets certain conditions.

Senate Bill 50 (Chapter 407, Statutes of 1998) instituted a new school facility program by which school districts can apply for state construction and modernization funds. This legislation limits the power of cities and counties to require developers to mitigate impacts on school facilities as a condition of approving new development. This legislation also provides the authority for school districts to levy fees at three different levels:

- *Level I* fees are the current statutory fees allowed under Education Code Section 17620. As mentioned above, this code section authorizes school districts to levy a fee against residential and commercial developers to fund school construction or reconstruction. These fees are adjusted in January every 2 years in accordance with the statewide cost index for Class B construction as determined by the State Allocation Board.

- *Level II* developer fees are outlined in California Government Code Section 65995.5. This code section allows a school district to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multitrack year-round scheduling, having an assumed debt equal to 15–30% of the district's bonding capacity (the percentage is based on revenue sources for repayment), having at least 20% of the district's teaching stations housed in relocatable classrooms, and having placed (within the last 4 years) a local bond measure on the ballot that received at least 50% plus one of the votes cast. A Facility Needs Assessment must demonstrate that the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years. As of August 2010, Level II fees are $4.20 per square foot for residential development and $0.47 per square foot for commercial/industrial construction (Grambusch, pers. comm., 2010).

- *Level III* developer fees are outlined in California Government Code Section 655995.7. This code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction if state funding becomes unavailable. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives state funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

California Department of Education

The CDE School Facilities Planning Division (SFPD) has prepared a guide entitled *School Site Analysis and Development*, which was changed by CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The guide provides specific recommendations for school size and school site selection criteria for locating appropriate school sites in the State of California. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, SFPD may approve an amount of acreage less than the recommended gross site size and building-to-grounds ratio. The expanded use of school

buildings and grounds for community and agency joint use also influenced the modification of the CDE recommendations, as did concern for the safety of students and staff members.

Certain health and safety requirements for school site selection are governed by state regulations and SFPD policies. These requirements are outlined in the *School Site Selection and Approval Guide* and relate to:

- proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- presence of toxic and hazardous substances;
- hazardous facilities and hazardous air emissions within one-quarter mile;
- proximity to high-pressure natural-gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- noise;
- results of geological studies or soil analyses;
- traffic and school bus safety; and
- safety issues related to joint-use facilities.

An analysis of conformity of the proposed school sites with the CDE School Siting Criteria is not part of this EIR/EIS and would be the subject of further, separate environmental review that would be conducted by the EGUSD.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

City of Rancho Cordova General Plan

Goals and policies from the *City of Rancho Cordova General Plan* Infrastructure, Services, and Finance Element and Safety Element (City General Plan 2006b) relating to public services that are applicable to the Proposed Project and other alternatives under consideration are listed in Appendix K.

3.14.3 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

ANALYSIS METHODOLOGY

Impacts on fire services, police services, and public schools that would result from project implementation were identified by comparing existing service capacity and facilities against future demand associated with project implementation. Evaluation of potential public services impacts was based on a review of documents pertaining to the SPA and vicinity, including the City General Plan DEIR (2006a) and City General Plan (2006b). Additional background information on current services, staffing, and equipment was obtained through consultation with appropriate agencies such as SMFD, the City of Rancho Cordova Police Department, and the EGUSD.

New elementary schools in EGUSD have an average capacity of 850 students. The average capacity of new middle schools range from 1,200 to 1,450 students and the average capacity of new high schools range from 2,200 to 2,650 students (Grambusch, pers. comm., 2010). The current student-yield generation rates for the EGUSD, which is used in this analysis to calculate the estimated number of students generated by the Proposed Project and other alternatives under consideration, are provided in Table 3.14-2, below.

Table 3.14-2 Student-Yield Generation Rates for the Elk Grove Unified School District		
Grade level	**Single-Family (Students per Dwelling Unit)**	**Multifamily (Students per Dwelling Unit)**
Elementary (K–5)	0.3763	0.2684
Middle (6–8)	0.1127	0.0736
High (9–12)	0.2101	0.1333
Total	**0.6991**	**0.4753**
Source: Grambusch, pers. comm., 2010		

The number of new students generated under the Proposed Project and the other four action alternatives is summarized below in Table 3.14-3 Under the No Project Alternative, there would be no residential land uses that would generate additional students in the SPA. Therefore, the No Project Alternative is not included in Table 3.14-3.

Table 3.14-3 SunCreek Specific Plan Elementary, Middle, and High School Student Projections				
Action Alternative	**Number of Elementary School Students**	**Number of Middle School Students**	**Number of High School Students**	**Total Number of Students (K-12)**
No USACE Permit	510	474	883	1,867
Proposed Project	1,661	490	911	3,062
Biological Impact Minimization	1,579	472	880	2,931
Conceptual Strategy	1,683	502	934	3,119
Increased Development	1,944	577	1,072	3,593
Source: Data compiled by AECOM in 2010				

It is anticipated that the provision of all new or physically altered public service facilities intended to meet the increased demand for public services would occur on site. Because public facilities would be constructed as part of the project and would be confined to the SPA, this DEIR/DEIS addresses the indirect physical environmental impacts associated with construction and operation of these facilities (along with development of the project in general) throughout each of the sections in Chapter 3. Therefore, these indirect, physical impacts are not addressed in this section.

THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines. These thresholds also encompass the factors taken into account under NEPA to determine the significance of an action in terms of its context and the intensity of its impacts. The Proposed Project or other alternatives under consideration were determined to result in a significant impact related to public services if they would do any of the following:

- create a need for the development of new service facilities (e.g., fire, police, schools, and other public facilities), the construction of which could result in significant environmental impacts;
- create circumstances where existing services and facilities could not meet established performance standards (i.e., response times, provider-per-resident ratios); or

- substantially impede existing services.

IMPACT ANALYSIS

Impacts that would occur under each alternative development scenario are identified as follows: NP (No Project), NCP (No USACE Permit), PP (Proposed Project), BIM (Biological Impact Minimization), CS (Conceptual Strategy), and ID (Increased Development). The impacts for each alternative are compared relative to the PP at the end of each impact conclusion (i.e., similar, greater, lesser).

IMPACT 3.14-1 **Possible Temporary Reduction in Emergency Response Services during Construction.** *Project implementation could obstruct roadways in the project vicinity during construction, potentially obstructing or slowing emergency vehicles attempting to access the area.*

NP

Because no development would occur under the No Project Alternative, there would be no construction activities that could obstruct the passage of emergency vehicles on local roadways; thus, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

Implementation of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would include construction activities of varying levels over a 20-year period (approximately 2012 through 2032). Nearby roadways in the vicinity of the SPA, such as Sunrise Boulevard, Rancho Cordova Parkway, Kiefer Boulevard, and Grant Line Road, would likely be affected intermittently during construction activities (see Section 3.15, "Traffic and Transportation"). Ongoing construction activities could result in temporary lane closures, increased truck traffic, and other roadway effects that could slow or stop emergency vehicles, temporarily increasing response times and impeding existing services. Potential reduction of emergency response services during construction are considered a **direct, significant** impact. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.14-1: Prepare and Implement a Construction Traffic Control Plan.

The project applicant for any particular discretionary development application shall prepare and implement traffic control plans for construction activities that may affect road rights-of-way. The traffic control plans must follow any applicable standards of the agency responsible for the affected roadway and must be approved and signed by a professional engineer. Measures typically used in traffic control plans include advertising of planned lane closures, warning signage, a flagperson to direct traffic flows when needed, and shall also address methods to ensure continued access by emergency vehicles. During project construction, access to existing land uses shall be maintained at all times, with detours used as necessary during road closures. Traffic control plans shall be submitted to the City of Rancho Cordova Public Works Department for review and approval before the approval of all project plans or permits, for all project phases where implementation may cause impacts on traffic.

Implementation: Project applicants for any particular discretionary development application.

Timing: Before the approval of all relevant plans and/or permits and during construction of all project phases.

Enforcement: City of Rancho Cordova Public Works Department.

Implementation of Mitigation Measure 3.14-1 would reduce significant impacts associated with decreased emergency response times during construction under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a **less-than-significant** level by requiring preparation and implementation of a construction traffic control plan that would provide for adequate emergency access during construction activities.

IMPACT 3.14-2 **Increased Demand for Fire Protection Facilities, Systems, Equipment, and Services.** *Project development would result in increased demand for fire protection facilities and services, potentially resulting in the need for additional staff and equipment to maintain an adequate level of service.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase demand for fire protection facilities and services. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS

SMFD would provide fire protection services to the SPA. First-response service to the SPA during the early stages of project development would be provided by Station 68, approximately 1.9 miles north of the project via Sunrise Boulevard. Station 68 operates one engine company (SMFD 2010). The No USACE Permit, Biological Impact Minimization, and Conceptual Strategy Alternatives would generate fewer residents than under the Proposed Project Alternative; therefore, these action alternatives would potentially result in fewer new firefighters and services.

The No USACE Permit, Proposed Project, Biological Impact Minimization, and Conceptual Strategy Alternatives would include construction of a fire station to serve the SPA. The fire station would be located approximately 1,000 feet south of Kiefer Boulevard and west of Rancho Cordova Parkway on a 2.96-acre site designated as public/quasi-public. The final size, timing of construction, and the number of personnel and equipment required would be determined through coordination with SMFD.

Funding for fire services and facilities resulting from new construction is facilitated through SMFD's Capital Fire Facilities Fee Schedule. The fee is used exclusively to defray costs and mitigate the impact associated with property acquisition, site preparation, design, construction, and equipping new fire stations that are required to serve new development. Additional funds are generated by ambulance transport fees, and service fees (mostly from fire prevention plan checking charges) (Sacramento Local Agency Formation Commission 2004:11).

SMFD outlines fire prevention standards to be incorporated into new residential and commercial development. These standards include access arrangements, fire hydrant placement, fire flow availability and requirements, and plan submittal requirements. SMFD also requires installation of automatic fire sprinklers in all new commercial construction that exceeds 3,599 square feet and some residential properties exceeding 2,999 square feet. In addition, as required by the City General Plan, new commercial and industrial development, as well as multifamily residential development with five or more units must incorporate on-site fire suppression systems into project designs (City of Rancho Cordova 2006b:21). On-site equipment and facilities would be approved by SMFD.

Because the SMFD outlines fire prevention standards to be incorporated into new residential and commercial development and because improvement plans have not yet been prepared that depict these requirements, impacts on fire protection facilities and services would be **direct** and **potentially significant**. The **indirect** physical impacts of constructing these facilities, including the new fire station, are addressed throughout this EIR/EIS in connection with discussions of the impacts of overall site development. ***[Similar]***

Mitigation Measure 3.14-2: Incorporate California Fire Code and Sacramento Metropolitan Fire District (SMFD) Fire Prevention Standards into Project Design and Submit Project Design to the SMFD for Review and Approval.

To reduce impacts related to the provision of new fire services, the project applicant for any particular discretionary development application shall incorporate all applicable California Fire Code and SMFD Fire Prevention Standards into their project designs and shall prepare improvement plans for review and approval by the SMFD before issuance of building permits by the City of Rancho Cordova Building and Safety Department.

Improvement plans shall show fire hydrant locations and details. SMFD notes shall be shown on the plans or improvement drawings. Approved fire hydrants capable of providing the required fire flow for the protection of any and all structures shall be located along the route of fire apparatus access roadways as detailed in Fire Prevention Standard 441.1051. The required fire hydrants shall be installed and operational prior to any construction. A letter from the Sacramento County Water Agency shall be obtained verifying that adequate water is available for fire flow.

Improvement plans shall show access design as described by Fire Prevention Standard 444.302 ("Fire Apparatus Access Roads"). These plans shall describe access-road length, dimensions, and finished surfaces for firefighting equipment. If security gates are installed at the SPA, the project applicant shall obtain a copy of the Sacramento County Fire Code, Amendment VII, "Emergency Access Gates and Barriers." The design of the entry shall conform to this standard.

As required by the City General Plan, new commercial and industrial development, as well as multifamily residential development with five or more units shall incorporate on-site fire suppression systems into project designs. On-site equipment and facilities would be consistent with industry standards and approved by SMFD.

The City shall not authorize the occupancy of any structures until the project applicant have obtained a Certificate of Release (Standard 441.105, "Certificate of Release—Residential") from SMFD verifying that all fire prevention items have been addressed on-site to the satisfaction of SMFD.

Information regarding the possible inclusion or utilization of Mello-Roos or other special assessment mechanism shall be provided to the fire district for the possible inclusion of a "Special Fire Tax" within the Mello-Roos area/assessment area.

Implementation: Project applicants for any particular discretionary development application.

Timing: Before issuance of building permits and issuance of occupancy permits or final inspections for all project phases.

Enforcement: SMFD and City of Rancho Cordova Building and Safety Department.

ID

SMFD would provide fire protection services to the SPA. The Increased Development Alternative would generate more residents than under the Proposed Project Alternative; therefore, this action alternative would potentially result in more new firefighters. In addition, impacts under the Increased Development Alternative would occur to a greater degree than under the Proposed Project Alternative because the on-site fire station would not be constructed; therefore, the Increased Development Alternative would potentially result in a need for additional off-site fire protection facilities and services to meet the demands of the project.

Funding for fire services and facilities resulting from new construction is facilitated through SMFD's Capital Fire Facilities Fee Schedule. The fee is used exclusively to defray costs and mitigate the impact associated with property acquisition, site preparation, design, construction, and equipping new fire stations that are required to serve new development. Additional funds are generated by ambulance transport fees, and service fees (mostly from fire prevention plan checking charges).

Because the SMFD outlines fire prevention standards to be incorporated into new residential and commercial development and because improvement plans have not yet been prepared that depict these requirements, impacts on fire protection facilities and services would be **direct** and **potentially significant**. Because the fire station would not be constructed under this action alternative, **no indirect** impacts would occur. ***[Greater]***

Mitigation Measure: Implement Mitigation Measure 3.14-2.

Implementation of Mitigation Measure 3.14-2 would reduce significant impacts under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives associated with the increased demand for fire protection facilities, systems, equipment, and services to a **less-than-significant** level by requiring that applicable California Fire Code and SMFD Fire Prevention Standards are incorporated into the project design, along with review and approval of project plans by the SMFD and City of Rancho Cordova Building and Safety Department prior to issuance of building permits, occupancy permits, or final inspections.

IMPACT 3.14-3 **Increased Demand for Fire Flow.** *Project implementation would include the development of residential, commercial, school, and other uses that would require adequate available water flow for fire suppression. Lack of adequate fire flow would impede effective fire suppression in the SPA.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would require adequate available water flow for fire suppression. Therefore, **no direct** or **indirect** impacts on increased demand for fire flow would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

The SMFD maintains oversight authority to ensure that adequate water volume and pressure are available in its service area. The total fire flow needed to extinguish a structural fire is based on a variety of factors, including building design, internal square footage, construction materials, dominant use, height, number of floors, and distance to adjacent buildings. Minimum requirements for available fire flow at a given building are dependent on standards set in the California Fire Code. Generally, fire flow requirements for the type of development associated with the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives are identified by the California Fire Code. These fire flow requirements are 1,500 gpm for low- and medium-density residential (2-hour duration), 2,500 gpm for high-density residential (3-hour duration), and 3,000 gpm for commercial/office and light industrial (3-hour duration).

In addition to meeting minimum water flow requirements, all development projects in Rancho Cordova are required to meet various other fire protection requirements identified in the SMFD Fire Prevention Standards. The SMFD requirements are determined for specific development projects at the design stage.

Lack of adequate fire flow would impede the ability of the SMFD to provide effective fire suppression service in the SPA. Increased demands for fire flow would be considered a **significant**, **direct** impact. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure: Implement Mitigation Measure 3.14-2.

Implementation of Mitigation Measure 3.14-2 would reduce impacts associated with increased demand for fire flow to a **less-than-significant** level under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives because verification from the SMFD that adequate water supply is available would be obtained prior to approval of improvement plans, and project fire flow design would be based on specification requirements included in the California Fire Code and SMFD Fire Prevention Standards, and reviewed and approved by the City.

IMPACT 3.14-4 **Increased Demand for Police Protection Facilities, Services, and Equipment.** *Project development would increase the demand for police protection facilities and services, resulting in the need for additional staff and equipment to maintain an adequate level of service.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase demand for police protection facilities and services. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

The Rancho Cordova Police Department, which is located approximately 6.8 miles northwest of the SPA, would provide first-response service for the SPA. To maintain adequate levels of service, additional officers, facilities, and equipment would be required to serve project development at buildout. The number of new police officers and police support staff were calculated based the population projections for the Proposed Project and the other four action alternatives and the City's ratio one police officer for every 1,000 citizens and one support staff member for every three officers. Table 3.14-4 shows the number of new police officers and support staff that would be required to serve the project under each action alternative.

Table 3.14-4
SunCreek Specific Plan Firefighter and Police Officer Projections

Action Alternative	Number of Required Police Officers[1]	Number of Required Police Support Staff[2]
No USACE Permit	12	4
Proposed Project	13	4
Biological Impact Minimization	11	3
Conceptual Strategy	12	4
Increased Development	15	5

Notes:
[1] The number of required police officers is based on the population projected for each action alternative and the City of Rancho Cordova's Department's ratio of one police officer per 1,000 residents.
[2] The number of required police support staff is based on one support staff member for every three officers.
Source: Data compiled by AECOM in 2010

As shown in Table 3.14-4, the number of new officers would range from 12-15, and the number of new police staff would range from 3-5 people, under all five action alternatives.

New development in the City is responsible for the full cost of additional facilities and equipment necessary as a result of that development. The project applicant would be required to comply with City Ordinance No. 13-2003,

which levies a special tax on all taxable parcels in the project area. This tax would be included in new homeowners' property taxes and would be used to pay for new facilities and equipment and the startup costs incurred to hire and train each of the new police officers necessary to serve project development.

The Rancho Cordova Police Department has established guidelines to enhance law enforcement and emergency response. These guidelines include the use of design measures to increase the opportunity for residents and occupants of buildings to see into areas deemed as potential sites for crime. In addition, the City encourages the use of "Crime Prevention Through Environmental Design" principles, such as maximizing visibility of parking areas and building entrances; defining property lines and distinguishing private spaces from public spaces using landscape plantings, and gateway treatments, and fences; and prohibiting entry or access using window locks, dead bolts, and interior door hinges, in the design of residences and commercial buildings (City of Rancho Cordova 2006a:4.12-22).

Because the project applicant would provide funding for additional police facilities, services, and equipment necessary to serve the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives and would incorporate the Rancho Cordova Police Department guidelines into project designs, impacts related to increased demands for police protection facilities, services, and equipment would be **direct** and **less than significant**. **No indirect** impacts would occur. ***[Lesser]***

Mitigation Measure: No mitigation measures required.

IMPACT 3.14-5 **Increased Demand for Public Elementary School Facilities and Services.** *Project implementation would increase demand for elementary schools (grades K–5) to serve the project.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no residential land uses that would generate elementary school students (grades K–5). Therefore, **no direct** or **indirect** impacts on elementary school facilities and services would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

The SPA would be within the boundaries of EGUSD. The project proposes to construct three elementary schools at different locations within the SPA (see Exhibits 2-4, 2-20, 2-22, 2-24, and 2-26 in Chapter 2, "Alternatives"). Each elementary school would have an average capacity of 850 students; therefore, the three proposed elementary schools would have a total capacity of 2,550 students (Grambusch, pers. comm., 2010). The number of new elementary school students (grades K–5) that would be generated under the Proposed Project and the other four action alternatives were calculated based on the EGUSD's student-yield generation rate shown in Table 3.14-2 and are summarized in Table 3.14-3. Once constructed, the proposed elementary schools would have sufficient capacity to meet the demands of project-generated elementary school students under all five action alternatives and would not result in a shortfall of elementary school services or facilities. Furthermore, under all five action alternatives the proposed elementary schools would generate less than 2,550 elementary school students and therefore would have capacity to accommodate additional students in the EGUSD.

As required by state law, the project applicant would pay the state-mandated school impact fees to EGUSD. As of August 2010, Level II fees for residential development are $4.20 per square foot and $0.47 per square foot for commercial/industrial construction in the EGUSD boundaries (Grambusch, pers. comm., 2010). The City would determine the assessable square footage that would be subject to the fee at the time of development. This fee is typically an insufficient amount to fund 100% of new school facility construction. Thus, other funding sources (see discussion in 3.14.1, "Affected Environment") would likely be needed to construct schools. However, the

California Legislature has declared that the school impact fee is deemed to be full and adequate mitigation under CEQA (California Government Code Section 65996).

Because the project applicant would pay state-mandated school impact fees and would construct on-site elementary schools sufficient to serve the SPA, implementation of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would have a **less-than-significant, direct** impact on elementary school services. The **indirect** impacts of constructing these facilities are addressed throughout this DEIR/DEIS in connection with discussions of the impacts of overall site development. ***[Similar]***

Mitigation Measure: No mitigation measures required.

IMPACT 3.14-6 **Increased Demand for Public Middle and High School Facilities and Services.** *Project implementation would increase demand for middle schools (grades 6–8) and high schools (grades 9–12) to serve the project.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no residential land uses that would generate middle school (grades 6–8) or high school students (grades 9–12). Therefore, **no direct** or **indirect** impacts on elementary school facilities and services would occur. ***[Lesser]***

NCP

Based on student-yield generation rates shown in Table 3.14-3, implementation of the No USACE Permit Alternative would generate approximately 474 new middle school students (grades 6–8) and approximately 883 new high school students (grades 9–12) at buildout.

The No USACE Permit Alternative would not include construction of the combined middle school and high school. This alternative would not accommodate students living in the SPA and would result in a shortfall of school services and facilities. In addition, impacts under the No USACE Permit Alternative would occur to a greater degree than under the Proposed Project Alternative because the combined middle school and high school would not be constructed. Students generated by the No USACE Permit Alternative would be redirected to other schools in the EGUSD that have available capacity (Grambusch, pers. comm., 2010).

As required by state law, the project applicant would pay the state-mandated school impact fees to EGUSD. As of August 2010, Level II fees for residential development are $4.20 per square foot and $0.47 per square foot for commercial/industrial construction in the EGUSD boundaries (Grambusch, pers. comm., 2010). The City would determine the assessable square footage that would be subject to the fee at the time of development. This fee is typically an insufficient amount to fund 100% of new school facility construction. Thus, other funding sources (see discussion in 3.14.1, "Affected Environment") would likely be needed to construct schools. However, the California Legislature has declared that the school impact fee is deemed to be full and adequate mitigation under CEQA (California Government Code Section 65996). Therefore, implementation of the No USACE Permit Alternative would have a **less-than-significant, direct** impact on school services. Because the combined middle school and high school would not be constructed under this alternative, **no indirect** impacts would occur. ***[Greater]***

PP, BIM, CS, ID

The SPA would be within the boundaries of EGUSD. The proposed combined middle school and high school site would accommodate a combined campus in the north-central portion of the SPA (see Exhibits 2-4, 2-22, 2-24, and 2-26 in Chapter 2, "Alternatives"). The middle school and high school would have an average capacity of

1,200 and 2,200 students, respectively. The number of new middle school students (grades 6–8) and the number of new high school students (grades 9–12) that would be generated under each action alternative were calculated based on the EGUSD's student-yield generation rate shown in Table 3.14-2 and are summarized in Table 3.14-4.

Once constructed, the proposed combined middle school and high school would have sufficient capacity to meet the demands of project-generated middle school and high school students under the Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives and would not result in a shortfall of school services or facilities. Furthermore, these alternatives would generate less than 1,200 middle school students and 2,200 high school students and therefore would have capacity to accommodate additional students in the EGUSD.

As required by state law, the project applicant would pay the state-mandated school impact fees to EGUSD. As of August 2010, Level II fees for residential development are $4.20 per square foot and $0.47 per square foot for commercial/industrial construction in the EGUSD boundaries (Grambusch, pers. comm., 2010). The City would determine the assessable square footage that would be subject to the fee at the time of development. This fee is typically an insufficient amount to fund 100% of new school facility construction. Thus, other funding sources (see discussion in 3.14.1, "Affected Environment") would likely be needed to construct schools. However, the California Legislature has declared that the school impact fee is deemed to be full and adequate mitigation under CEQA (California Government Code Section 65996).

Because the project applicant would pay state-mandated school impact fees and would construct a middle school/high school sufficient to meet project needs, implementation of the Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would have a **less-than-significant, direct** impact on school services. The **indirect** impacts of constructing these facilities are addressed throughout this DEIR/DEIS in connection with discussions of the impacts of overall site development. ***[Similar]***

Mitigation Measure: No mitigation measures required.

3.14.4 RESIDUAL SIGNIFICANT IMPACTS

Impacts associated with increased demands for police protection facilities, service, and equipment and increased demands for public elementary school, middle school, and high school facilities and services are considered less than significant. Impacts related to temporary reductions in emergency services during construction would be reduced to a less-than-significant level through preparation and implementation of a construction traffic control plan (Mitigation Measure 3.14-1), and increased demands for fire protection facilities and services, including adequate water pressure for fire flow, would be less-than-significant level through incorporation of California Fire Code and SMFD Fire Prevention Standards into project designs (Mitigation Measure 3.14-2). Therefore, there would be no residually significant impacts related to public services.

3.14.5 CUMULATIVE IMPACTS

In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public services within their jurisdictional boundaries. Public services would be provided to the SPA by the SMFD, the Rancho Cordova Police Department, and the EGUSD. The related projects within the City of Rancho Cordova would also use the SMFD, the Rancho Cordova Police Department, the EGUSD, and the Folsom Cordova Unified School District, which covers several of the related projects. Related projects outside the City of Rancho Cordova would rely on different service providers.

Impacts associated with increased demands for police protection facilities, service, and equipment and increased demands for school facilities and services are considered less than significant. Significant project-specific impacts associated with the potential to impede the provision of emergency services during construction and potentially significant impacts related to the increased demand for fire protection services and facilities and adequate water

pressure for fire flow would be reduced to less-than-significant levels through implementation of the mitigation measures identified above.

Future development in the City of Rancho Cordova would incrementally increase the demand for public services. In terms of cumulative impacts, appropriate service providers are responsible for ensuring adequate provision of public services within their jurisdictional boundaries. At this time, it is unknown whether sufficient police, fire, school facilities, and other public services are planned to serve the related projects. While some of the related projects include proposals for the construction of service facilities, including schools, others do not. However, it is clear that sufficient police facilities, fire stations, and schools would need to be constructed to serve the related projects.

Although a cumulative shortage of public services and facilities would not represent in and of itself a significant environmental impact under CEQA because these are not physical impacts on the environment, such a shortage would lead to the need to develop additional public services facilities, which could in turn lead to significant construction- and operation-related physical impacts on the environment. It is assumed that the development of the related projects, and development of the additional public-services facilities required to serve them, would be preceded by the required CEQA review. However, conducting the required CEQA review of the related projects would not necessarily guarantee that significant environmental impacts associated with construction of new fire, police, school facilities, and other public services would not occur. Hence, the related projects could result in significant cumulative environmental indirect impacts associated with the development of new fire and school facilities.

A new fire station would be constructed under the No USACE Permit, Proposed Project, Biological Impact Minimization, and Conceptual Strategy Alternatives to meet the increased demand for fire protection services. However, under the Increased Development Alternative, the fire station would not be constructed and this alternative would potentially result in a need for additional off-site fire protection facilities and services to meet the demands of the project. Therefore, the Increased Development Alternative could potentially result in a cumulatively considerable incremental contribution to a significant cumulative impact associated with the increased demand for fire protection services and facilities.

The three proposed on-site elementary schools would have sufficient capacity to accommodate students living in the SPA. In addition, these elementary school facilities would potentially have capacity for some additional students generated by related projects. The proposed on-site combined middle school and high school would have sufficient capacity to accommodate students generated under the Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives and would potentially have capacity for some additional students generated by related projects. However, under the No USACE Permit Alternative, the combined middle school and high school would not be constructed. This alternative would not accommodate students living in the SPA, resulting in a shortfall of school services and facilities. Therefore, the No USACE Permit Alternative could potentially result in a cumulatively considerable incremental contribution to a significant cumulative impact associated with the development of new middle school/high school facilities. California Government Code Section 65996 provides that payment of school impact fees constitutes adequate CEQA mitigation for all project-specific and cumulative effects relating to adequacy of school facilities as a result of residential development.

This section was prepared by Fehr & Peers Transportation Consultants, Inc.

3.15 TRAFFIC AND TRANSPORTATION

This chapter presents the results of the transportation impact analysis (TIA) prepared by Fehr & Peers for development of the SunCreek Specific Plan. The analysis discloses impacts on roadways, intersections, pedestrian and bicycle facilities, and transit service due to the project. Because of the large volume of raw data generated during the analyses in support of the TIA, it is not feasible to provide these data as an appendix to this draft environmental impact report/environmental impact statement (DEIR/DEIS). However, the data are available for review at the City of Rancho Cordova, 2729 Prospect Park Drive, Rancho Cordova, CA 95670.

The SPA, other areas of Rancho Cordova, and cities and communities throughout Sacramento County are expected to experience substantial growth in the future. Major projects have been entitled for development throughout the region, and more are expected. As projects develop, traffic will increase on local and regional roadways and freeways. As regional development proceeds, transportation system improvements will be provided through local and regional funding programs, individual project mitigation, and improvements funded by the California Department of Transportation (Caltrans).

In an effort to be mindful of regional growth and impacts along the U.S. Highway 50 (U.S. 50) corridor, select members of the Sacramento region formed the 50 Corridor Mobility Partnership. The partnership was a cooperative effort by Sacramento County, City of Rancho Cordova (City), City of Folsom, El Dorado County, and several private landowners (GenCorp; Elliot Homes; MJM Properties, LLC; and Carpenter Ranch). Also involved, as an advisory committee, were Caltrans, the Sacramento Area Council of Governments (SACOG), and Sacramento Regional Transit (RT). The resulting report included information and recommendations regarding future transportation infrastructure in the study area (see Appendix T for the report prepared by Parsons Brinkerhoff and DKS Associates). However, the report identified many projects as partially funded. In an effort to identify foreseeable projects for EIR/EIS analyses in the eastern Sacramento County region, Fehr & Peers produced a technical memorandum in January 2007 that received approval from Sacramento County and City of Rancho Cordova (see Appendix U for the technical memorandum prepared by Fehr & Peers). This DEIR/DEIS analysis is consistent with these findings. When the analysis for this TIA was prepared, the City was in the process of updating its capital improvement plan (CIP) to address the partial funding issues published by the 50 Corridor Mobility Partnership.

As part of the traffic analysis, the following preliminary analyses were conducted to provide a basis for comparison of project-related traffic impacts:

- **Existing conditions analysis.** Existing roadway operations were analyzed using existing roadway geometrics and existing volumes obtained from traffic count data.

- **Baseline conditions analysis.** The existing roadway conditions described above ("existing conditions") were analyzed with the addition of traffic expected from projects that City staff members have identified as having already received tentative map approval (such as the Villages of Zinfandel), as well as traffic generated by development of up to 6,500 units in the Sunridge Specific Plan area. This "baseline conditions" analysis incorporates roadway improvements that are currently under construction or are consistent with approved projects. The use of these baseline conditions for the assessment of project-related impacts is appropriate and conservative under CEQA because it does not include hypothetical, speculative, or unapproved projects. It does include approved projects that have obtained necessary discretionary approvals, but have not yet begun to generate the traffic that is the foreseeable consequence of existing discretionary approvals.

- **Cumulative conditions analysis.** Roadway conditions that are projected to occur in the year 2032, when full buildout of the SunCreek Specific Plan area is expected, were analyzed. This planning horizon incorporates roadway improvement projects associated with assumed development projects in the area, as identified by the

City, the efforts of the 50 Corridor Mobility Partnership, and Fehr & Peers described above; Tier I projects identified in the SACOG *Metropolitan Transportation Plan for 2025* (MTP 2025) that are outside the city limits; and additional improvements identified by the City that would be required pursuant to the City's CIP. Land use development assumed in the cumulative analysis are foreseeable projects with applications submitted to the City, Sacramento County, City of Folsom, and City of Elk Grove.

3.15.1 AFFECTED ENVIRONMENT

The site location, study intersections, and surrounding roadway network are shown in Exhibit 3.15-1. The SPA is in the city of Rancho Cordova, and generally lies between Sunrise Boulevard to the west and Grant Line road to the east, extending south from Chrysanthy Boulevard to approximately 0.4 mile past Kiefer Boulevard. Major planned roadways traveling through the project consist of Kiefer Boulevard, Rancho Cordova Parkway, and Americanos Boulevard.

Several corridors provide access to U.S. 50 under existing conditions. Mather Boulevard, Zinfandel Boulevard, and Sunrise Boulevard currently act as the major connections from the project to the freeway. Under cumulative conditions, project traffic will redistribute when Rancho Cordova Parkway and Americanos Boulevard extend north through the Rio del Oro Specific Plan, and ultimately, the Rancho Cordova Parkway/U.S. 50 interchange. Regional east/west travel, in addition to U.S. 50, is provided by State Route (SR) 16 (Jackson Highway), a Caltrans facility, and White Rock Road. Additional connectivity, including the Easton Valley Parkway, Kiefer Boulevard, and International Drive extension/widening, is expected to be constructed under cumulative conditions.

Detailed traffic analyses were performed for the intersections, roadway segments, freeway facilities, and interchanges shown in Table 3.15-1.

EXISTING ROADWAY NETWORK

Exhibit 3.15-2 shows the surface roadways in the vicinity of the SPA and the number of lanes on each roadway. A brief description of each of the key roadways in the project study area is provided below.

U.S. Highway 50

U.S. 50 extends eastward from downtown Sacramento into El Dorado County. U.S. 50 has four lanes in each direction from west of Bradshaw Road to Sunrise Boulevard. From Sunrise Boulevard to Hazel Avenue, it has three lanes in each direction plus a high-occupancy vehicle (HOV) lane. East of Hazel Avenue, U.S. 50 has three lanes, including HOV lanes, in each direction. Currently, as part of Caltrans' Go California project, a westbound auxiliary lane traveling from the Folsom Boulevard interchange is being extended through the Hazel interchange to create a continuous third lane. This improvement is accounted for under baseline and cumulative conditions.

Sunrise Boulevard

Sunrise Boulevard is a major north-south secondary road that connects Grant Line Road to the city of Roseville. It has two lanes between Grant Line Road and Douglas Road, four lanes between Douglas Road and White Rock Road, and six lanes north of White Rock Road. The U.S. 50/Sunrise Boulevard interchange is an L-9 configuration with loop on-ramps in the northeast and southwest quadrants and diagonal ramps in all four quadrants. In the vicinity of the SPA, the Circulation Element/Plan of the *City of Rancho Cordova General Plan* (City General Plan) designates this roadway as a six-lane major road. It is currently being widened to four lanes between Douglas Road and SR 16. This improvement is accounted for under baseline conditions.

Table 3.15-1
Locations of Detailed Traffic Analyses

Intersections

1. SR 16/Excelsior Road
2. SR 16/Eagles Nest Road
3. SR 16/Sunrise Boulevard
4. SR 16/Grant Line Road
5. Florin Road/Sunrise Boulevard
6. Grant Line Road/Sunrise Boulevard
7. Grant Line Road/Kiefer Boulevard
8. Douglas Road/Grant Line Road
9. Douglas Road/Sunrise Boulevard
10. Mather Field Road/Folsom Boulevard
11. Mather Field Road/U.S. 50 westbound ramps
12. Mather Field Road/U.S. 50 eastbound ramps
13. Mather Field Road/International Drive
14. Zinfandel Drive/International Drive
15. Zinfandel Drive/White Rock Road
16. Zinfandel Drive/U.S. 50 eastbound ramps
17. Zinfandel Drive/U.S. 50 westbound ramps
18. Sunrise Boulevard/White Rock Road
19. Sunrise Boulevard/Folsom Boulevard
20. Sunrise Boulevard/U.S. 50 eastbound ramps
21. Sunrise Boulevard/U.S. 50 westbound ramps
22. Sunrise Boulevard/Zinfandel Drive
23. Hazel Avenue/Folsom Boulevard
24. Hazel Avenue/U.S. 50 eastbound ramps
25. Hazel Avenue/U.S. 50 westbound ramps
26. Hazel Avenue/Gold Country Boulevard
27. White Rock Road/Grant Line Road
28. Kilgore Road/White Rock Road
29. Sunrise Boulevard/Kiefer Boulevard—baseline and cumulative scenarios only
30. Eagles Nest Road/Douglas Road—baseline and cumulative scenarios only
31. Sunrise Boulevard/International Drive—cumulative scenario only
32. Rancho Cordova Parkway/White Rock Road—cumulative scenario only
33. Rancho Cordova Parkway/Easton Valley Parkway—cumulative scenario only
34. Rancho Cordova Parkway/U.S. 50 eastbound ramps—cumulative scenario only
35. Rancho Cordova Parkway/U.S. 50 westbound ramps—cumulative scenario only
36. Americanos Boulevard/White Rock Road—cumulative scenario only
37. Douglas Road/Rancho Cordova Parkway—cumulative scenario only
38. Douglas Road/Americanos Boulevard—cumulative scenario only
39. Chrysanthy Boulevard/Sunrise Boulevard—cumulative scenario only
40. Chrysanthy Boulevard/Rancho Cordova Parkway—cumulative scenario only
41. Chrysanthy Boulevard/Americanos Boulevard—cumulative scenario only
42. Kiefer Boulevard/Rancho Cordova Parkway—cumulative scenario only

Roadways

1. SR 16—Excelsior Road to Eagles Nest Road
2. SR 16—Sunrise Boulevard to Grant Line Road
3. Kiefer Boulevard—Grant Line Road to SR 16
4. Mather Boulevard—Femoyer Street to Douglas Road
5. Douglas Road—Mather Boulevard to Sunrise Boulevard
6. Douglas Road—Sunrise Boulevard to Grant Line Road
7. International Drive—South White Rock Road to Zinfandel Drive
8. International Drive—Zinfandel Drive to Kilgore Road
9. White Rock Road—Zinfandel Drive to Sunrise Boulevard
10. White Rock Road—Sunrise Boulevard to Grant Line Road
11. Folsom Boulevard—Zinfandel Drive to Sunrise Boulevard
12. Folsom Boulevard—Sunrise Boulevard to Hazel Avenue
13. Mather Field Road—Folsom Boulevard to U.S. 50 westbound ramps
14. Mather Field Road—U.S. 50 eastbound ramps to International Drive
15. Zinfandel Drive—Folsom Boulevard to U.S. 50 westbound ramps
16. Zinfandel Drive—U.S. 50 eastbound ramps to White Rock Road
17. Zinfandel Drive—White Rock Road to International Drive
18. Sunrise Boulevard—Gold Country Boulevard to Coloma Road
19. Sunrise Boulevard—Coloma Road to U.S. 50 westbound ramps
20. Sunrise Boulevard—U.S. 50 eastbound ramps to Folsom Boulevard
21. Sunrise Boulevard—Folsom Boulevard to White Rock Road
22. Sunrise Boulevard—White Rock Road to Douglas Road
23. Sunrise Boulevard—Douglas Road to SR 16
24. Sunrise Boulevard—SR 16 to Grant Line Road
25. Hazel Avenue—U.S. 50 westbound ramps to Winding Way
26. Grant Line Road—White Rock Road to Douglas Road
27. Grant Line Road—Douglas Road to SR 16
28. Grant Line Road—SR 16 to Sunrise Boulevard
29. Douglas Road—Sunrise Boulevard to Rancho Cordova Parkway—baseline and cumulative scenarios only

Table 3.15-1
Locations of Detailed Traffic Analyses

Roadways (Continued)

30. Douglas Road—Americanos Boulevard to Grant Line Road—baseline and cumulative scenarios only
31. Sunrise Boulevard—Douglas Road to Kiefer Boulevard—baseline and cumulative scenarios only
32. Sunrise Boulevard—Kiefer Boulevard to SR 16—baseline and cumulative scenarios only
33. Douglas Road—Rancho Cordova Parkway to Americanos Boulevard—cumulative scenario only
34. Chrysanthy Boulevard—Sunrise Boulevard to Rancho Cordova Parkway—cumulative scenario only
35. Chrysanthy Boulevard—Rancho Cordova Parkway to Americanos Boulevard—cumulative scenario only
36. Kiefer Boulevard—Eagles Nest Road to Sunrise Boulevard—cumulative scenario only
37. Kiefer Boulevard—Sunrise Boulevard to Rancho Cordova Parkway—cumulative scenario only
38. Eagles Nest Road—Mather Boulevard to Douglas Road—cumulative scenario only
39. Eagles Nest Road—Douglas Road to Kiefer Boulevard—cumulative scenario only
40. Eagles Nest Road—Kiefer Boulevard to SR 16—cumulative scenario only
41. Sunrise Boulevard—Douglas Road to Chrysanthy Boulevard—cumulative scenario only
42. Sunrise Boulevard—Chrysanthy Boulevard to Kiefer Boulevard—cumulative scenario only
43. Sunrise Boulevard—Kiefer Boulevard to SR 16—cumulative scenario only
44. Rancho Cordova Parkway—U.S. 50 to Americanos Boulevard—cumulative scenario only
45. Rancho Cordova Parkway—Americanos Boulevard to white Rock Road—cumulative scenario only
46. Rancho Cordova Parkway—White Rock Road to Douglas Road—cumulative scenario only
47. Rancho Cordova Parkway—Douglas Road to Chrysanthy Boulevard—cumulative scenario only
48. Rancho Cordova Parkway—Chrysanthy Boulevard to Kiefer Boulevard—cumulative scenario only
49. Americanos Boulevard—Rancho Cordova Parkway to White Rock Road—cumulative scenario only
50. Americanos Boulevard—White Rock Road to Douglas Road
51. Americanos Boulevard—Douglas Road to Chrysanthy Boulevard

Freeway Segments

1. U.S. 50—Mather Field Road to Zinfandel Drive
2. U.S. 50—Zinfandel Drive to Sunrise Boulevard
3. U.S. 50—Sunrise Boulevard to Hazel Avenue
4. U.S. 50—Hazel Avenue to Folsom Boulevard
5. U.S. 50—Sunrise Boulevard to Rancho Cordova Parkway—cumulative scenario only
6. U.S. 50—Rancho Cordova Parkway to Hazel Avenue—cumulative scenario only

Interchanges

1. Mather Field Road interchange at U.S. 50
2. Zinfandel Drive interchange at U.S. 50
3. Sunrise Boulevard interchange at U.S. 50
4. Hazel Avenue interchange at U.S. 50
5. Rancho Cordova Parkway interchange at U.S. 50—cumulative scenario only

Notes: SR = State Route; U.S. 50 = U.S. Highway 50
Source: Data Compiled by Fehr & Peers in 2007

White Rock Road

White Rock Road extends from International Drive to El Dorado County. It is a two-lane local road between International Drive and Zinfandel Drive, a six-lane secondary road between Zinfandel Drive and Sunrise Boulevard, and a two-lane roadway east of Sunrise Boulevard. In the vicinity of the SPA, the Circulation Element/Plan of the City General Plan designates this roadway as a six-lane expressway. White Rock Road is a fully funded project from Sunrise Boulevard to the future Silva Valley interchange in El Dorado Hills and is analyzed as such under cumulative conditions.

State Route 16 (Jackson Highway)

SR 16, also known as Jackson Highway, is a two-lane highway that extends from Folsom Boulevard east of Howe Avenue into Amador County. In the vicinity of the SPA, the Circulation Element/Plan of the City General Plan designates this roadway as a six-lane expressway, however, SR 16 is a Caltrans controlled facility and is assumed to remain a two-lane highway through the cumulative conditions analysis.

Mather Field Road

Mather Field Road extends from the Mather Reuse Area to Folsom Boulevard. It has six lanes between International Drive and U.S. 50, and four lanes between U.S. 50 and Folsom Boulevard. The U.S. 50/Mather Field Road interchange is an L-9 configuration with loop on-ramps in the northeast and southwest quadrants and diagonal ramps in all four quadrants.

Douglas Road

Douglas Road is a two-lane roadway that extends from Mather Boulevard in the Mather Reuse Area to Grant Line Road. In the vicinity of the SPA, the Circulation Element/Plan of the City General Plan designates this roadway as a six-lane major road. As agreed upon by the City and Sacramento County, cumulative conditions analysis assumes full funding for the widening of Douglas Road to four lanes.

Grant Line Road

Grant Line Road is a two-lane roadway that extends from SR 99 to White Rock Road through the southeastern portion of Sacramento County. In the vicinity of the SPA, the Circulation Element/Plan of the City General Plan designates this roadway as a six-lane expressway. As agreed upon by the City and Sacramento County, cumulative conditions analysis assumes full funding for the widening of Grant Line Road to a four lane major road. Additionally, Grant Line Road has been identified as the preferred alignment for the U.S. 50-SR 99 connector between El Dorado County and the City of Elk Grove.

Zinfandel Drive

Zinfandel Drive is a four-lane secondary road from International Drive to Sunrise Boulevard. The U.S. 50/Zinfandel Drive interchange is an L-9 configuration with loop on-ramps in the northeast and southwest quadrants and diagonal ramps in all four quadrants. Zinfandel Drive will extend south and connect as the north leg of the Douglas Road/Eagles Nest Road intersection by 2032.

Hazel Avenue

Hazel Avenue is four-lane north-south secondary road through Sacramento County and into Placer County, where it becomes Sierra College Boulevard. The U.S. 50/Hazel Avenue interchange is an L-9 configuration with loop on-ramps in the northeast and southwest quadrants and diagonal ramps in all four quadrants. Hazel Avenue is expected to be widened to six lanes by 2032 and is analyzed as such for cumulative conditions.

Intersection lane configurations and traffic control devices for the existing roadway network were obtained during a field visit to the project study area in summer 2006. These lane configurations are shown in Exhibits 3.15-3A and 3.15-3B.

EXISTING TRAFFIC VOLUMES

Fehr & Peers conducted traffic counts for all intersection turning movements and roadway segments in the project study area. The existing intersection turning movement volumes are shown in Exhibits 3.15-3A and 3.15-3B. ADT volumes for existing roadways are presented in Exhibit 3.15-4.

EXISTING TRANSIT SERVICE

Sacramento RT operates bus and light-rail transit (LRT) service in Sacramento County. The existing transit services in the vicinity of the SPA are described below and are shown in Exhibit 3.15-5.

Fixed-Route Bus Service

Fixed-route bus service is provided northwest of the SPA. Routes 73 and 74 provide service along White Rock Road. Route 109 is operated along U.S. 50 during weekday peak periods only. The following describes these individual routes in greater detail.

- **Route 73** provides service between the Mather Field/Mills light-rail station and the Sunrise Boulevard light-rail station. Weekday service is provided between 6:05 a.m. and 7:45 p.m. on 60-minute headways. (A "headway" is the amount of time between buses. For example, if a bus on the same route arrives at a given stop every 60 minutes, it is operating on 60-minute headways.) Saturday service is provided between 7:30 a.m. and 6:20 p.m. on 60-minute headways. No Sunday or holiday service is provided.

- **Route 74** provides fixed-route service between the Mather Field/Mills light-rail Station and the Sunrise Boulevard light-rail station on weekdays. The route operates between 5:50 a.m. and 8:20 p.m. on 60-minute headways. Saturday service is provided between 7:10 a.m. and 7:10 p.m. on 60-minute headways. No Sunday or holiday service is provided.

- **Route 75** provides fixed-route service along a loop route stopping at Mather Field/Mills light-rail station; Mather Armstrong and Whitehead; Mather Boulevard and Von Karman; and back to Mather Field/Mill station. The route operates from 6:40 a.m. to 7:50 p.m. with 60-minute headways on the weekdays. Saturday service is provided between 7:40 a.m. and 7:45 p.m. on 60-minute headways. Sunday and Holiday service is provided from 7:45 a.m. to 6:00 p.m. on 60-minute headways

- **Route 109 (Hazel Express)** is an express bus route between Orangevale and downtown Sacramento. During the morning commute period, the route operates from 6:25 a.m. to 8 a.m. on approximately 30-minute headways in the westbound direction only. During the evening commute period, the route operates from 4:35 p.m. to 6:20 p.m. on 45- to 50-minute headways in the eastbound direction only.

- **Routes 21, 28, 72, and 91** also service the City, but are designed to provide an external link to surrounding cities/towns, such as Fair Oaks, Folsom, and Citrus Heights. These lines run seven days a week with headways ranging from 30 to 60-minutes.

Light-Rail Transit Service

LRT service is provided from downtown Sacramento along the U.S. 50 corridor to the Sunrise Boulevard light-rail station, which has a 489-space park-and-ride lot. The LRT then extends eastward to the City of Folsom. Two light-rail stations are being proposed as part of development projects between the Sunrise Boulevard station and the Iron Point Station in Folsom; the first of which would be part of the Westborough development along Folsom Boulevard and the future Rancho Cordova Parkway, the second station would be part of the Easton Place development at the Folsom Boulevard and Hazel Avenue intersection.

EXISTING BICYCLE AND PEDESTRIAN SYSTEM

Bicycle and pedestrian facilities are limited near the SPA. A Class I off-street bike path parallels Sunrise Boulevard from White Rock Road south to Grant Line Road along the Folsom South Canal. Sidewalks have been built along Sunrise Boulevard north and south of White Rock Road; sidewalks south and east of the Sunrise Boulevard/Douglas Road intersection are currently being constructed as part of the improvement project.

EXISTING TRAFFIC CONDITIONS

Existing operation of roadways, intersections, freeway facilities, and bicycle/pedestrian facilities in the project study area is discussed below.

Study Intersections

The existing peak-hour traffic volumes, traffic control, and intersection lane configurations shown in Exhibits 3.15-3A and 3.15-3B. were used to calculate levels of service (LOS) at the study intersections. Table 3.15-2 summarizes intersection LOS under existing conditions.

The following intersections operate at an unacceptable LOS E or LOS F (see Table 3.15-6 for LOS definitions) during both the A.M. and P.M. peak traffic hours:

- SR 16/Sunrise Boulevard
- SR 16/Grant Line Road
- Hazel Avenue/U.S. 50 westbound off-ramp/Tributary Point Drive

The following intersections operate at an unacceptable LOS E or LOS F during only the P.M. peak traffic hour:

- Zinfandel Drive/White Rock Road
- Zinfandel Drive/U.S. 50 eastbound ramps
- Sunrise Boulevard/White Rock Road
- Sunrise Boulevard/Folsom Boulevard
- Sunrise Boulevard/Zinfandel Drive
- Hazel Avenue/Folsom Boulevard
- Grant Line Road/White Rock Road

The following intersections are not reported as an unacceptable LOS, but should be noted that collected volumes are constrained due to queuing of adjacent intersections:

- Sunrise Boulevard/U.S. 50 eastbound ramps
- Sunrise Boulevard/U.S. 50 westbound ramps
- Hazel Avenue/Gold Country Boulevard

Roadway Segments

Table 3.15-3 presents the existing conditions analysis for roadway segments in the project study area.

The following roadway segments operate at an unacceptable LOS E or LOS F based on the record average daily traffic (ADT):

- Sunrise Boulevard between Gold Country Boulevard and Coloma Road
- Sunrise Boulevard between Coloma Road and the U.S. 50 westbound ramps
- Sunrise Boulevard between the U.S. 50 eastbound ramps and Folsom Boulevard
- Sunrise Boulevard between Douglas Road and SR 16
- Hazel Avenue between Winding Way and the U.S. 50 westbound ramps

Analyses of Freeway-Ramp Merge, Diverge, and Weave Maneuvers

The existing peak-hour traffic volumes shown in Exhibit 3.15-6 were used to calculate LOS) for the study freeway facilities. The results of the analyses of freeway-ramp merge, diverge, and weave maneuvers are summarized in Table 3.15-4.

Table 3.15-2
Intersection Levels of Service—Existing Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay[1]	LOS	Delay	LOS
1. SR 16/Excelsior Road	Signalized	37	D	31	C
2. SR 16/Eagles Nest Road	Side-street stop	29	D	41	E
3. SR 16/Sunrise Boulevard	Signalized	>80	F	67	E
4. SR 16/Grant Line Road	Signalized	60	E	>80	F
5. Florin Road/Sunrise Boulevard	Signalized	8	A	14	B
6. Grant Line Road/Sunrise Boulevard	Signalized	17	B	14	B
7. Grant Line Road/Kiefer Boulevard	All-way stop	11	B	11	B
8. Douglas Road/Grant Line Road	Side-street stop	14	B	15	C
9. Douglas Road/Sunrise Boulevard	Signalized	32	C	29	C
10. Mather Field Road/Folsom Boulevard	Signalized	45	D	52	D
11. Mather Field Road/U.S. 50 westbound ramps	Signalized	9	A	10	B
12. Mather Field Road/U.S. 50 eastbound ramps	Signalized	27	C	9	A
13. Mather Field Road/International Drive	Signalized	14	B	18	B
14. Zinfandel Drive/International Drive	Signalized	19	B	21	C
15. Zinfandel Drive/White Rock Road	Signalized	46	D	76	E
16. Zinfandel Drive/U.S. 50 eastbound ramps	Signalized	33	C	>80	F
17. Zinfandel Drive/U.S. 50 westbound ramps	Signalized	26	C	21	C
18. Sunrise Boulevard/White Rock Road	Signalized	48	D	57	E
19. Sunrise Boulevard/Folsom Boulevard	Signalized	36	D	57	E
20. Sunrise Boulevard/U.S. 50 eastbound ramps[2]	Signalized	25	C	26	C
21. Sunrise Boulevard/U.S. 50 westbound ramps[2]	Signalized	23	C	33	C
22. Sunrise Boulevard/Zinfandel Drive	Signalized	45	D	>80	F
23. Hazel Avenue/Folsom Boulevard	Signalized	32	C	>80	F
24. Hazel Avenue/U.S. 50 eastbound ramps[2]	Signalized	24	C	22	C
25. Hazel Avenue/U.S. 50 westbound ramps	Signalized	>80	F	>80	F
26. Hazel Avenue/Gold Country Boulevard	Signalized	20	C	31	C
26. White Rock Road/Grant Line Road	Side-street stop	20	C	>80	F
27. White Rock Road/Kilgore Road	Signalized	51	D	51	D

Notes: LOS = level of service; SR = State Route; U.S. 50 = U.S. Highway 50; V/C = volume-to-capacity

[1] Worst-case delay reported for unsignalized, side-street-stop intersections; average intersection delay reported for all-way-stop and signalized intersections. Delay is reported in seconds per vehicle.

[2] Operations are worse at these ramp terminal intersections than reflected in the LOS analysis. LOS is based on vehicles that get through the intersections. Because of upstream and downstream congestion, fewer cars get through the intersection, which yields a better LOS.

Shaded areas indicate deficiency.

Source: Data Compiled by Fehr & Peers in 2007

Table 3.15-3
Roadway Levels of Service—Existing Conditions

Roadway Segment	Existing Conditions			
	Lanes	Volume	V/C	LOS
1. SR 16—Excelsior Road to Eagles Nest Road	2	11,400	0.57	A
2. SR 16—Sunrise Boulevard to Grant Line Road	2	15,400	0.77	C
3. Kiefer Boulevard—Grant Line Road to north of SR 161	2	1,800	0.10	A
4. Mather Boulevard—Femoyer Street to Douglas Road	2	6,000	0.33	A
5. Douglas Road—Mather Boulevard to Sunrise Boulevard	2	5,000	0.28	A
6. Douglas Road—Sunrise Boulevard to Grant Line Road	2	2,300	0.12	A
7. International Drive—South White Rock Road to Zinfandel Drive	4	12,000	0.33	A
8. International Drive—Zinfandel Drive to Kilgore Road	4	6,800	0.19	A
9. White Rock Road—Zinfandel Drive to Sunrise Boulevard	6	20,800	0.39	A
10. White Rock Road—Sunrise Boulevard to Grant Line Road	2	4,400	0.22	A
11. Folsom Boulevard—Zinfandel Drive to Sunrise Boulevard	4	20,300	0.56	A
12. Folsom Boulevard—Sunrise Boulevard to Hazel Avenue	4	13,300	0.37	A
13. Mather Field Road—Folsom Boulevard to U.S. 50 westbound ramps	4	26,400	0.73	C
14. Mather Field Road—U.S. 50 eastbound ramps to International Drive	6	33,700	0.62	B
15. Zinfandel Drive—Folsom Boulevard to U.S. 50 westbound ramps	4	22,700	0.63	B
16. Zinfandel Drive—U.S. 50 eastbound ramps to White Rock Road	6	41,900	0.78	C
17. Zinfandel Drive—White Rock Road to International Drive	4	19,700	0.55	A
18. Sunrise Boulevard—Gold Country Boulevard to Coloma Road	6	74,400	1.38	F
19. Sunrise Boulevard—Coloma Road to U.S. 50 westbound ramps	6	70,700	1.31	F
20. Sunrise Boulevard—U.S. 50 eastbound ramps to Folsom Boulevard	6	52,100	0.96	E
21. Sunrise Boulevard—Folsom Boulevard to White Rock Road	6	38,700	0.72	C
22. Sunrise Boulevard—White Rock Road to Douglas Road	4	24,600	0.68	B
23. Sunrise Boulevard—Douglas Road to SR 16	2	20,000	1.00	E
24. Sunrise Boulevard—SR 16 to Grant Line Road	2	10,700	0.54	A
25. Hazel Avenue—Winding Way to U.S. 50 westbound ramps[2]	4	53,000	1.47	F
26. Grant Line Road—White Rock Road to Douglas Road	2	6,000	0.30	A
27. Grant Line Road—Douglas Road to SR 16	2	6,700	0.34	A
28. Grant Line Road—SR 16 to Sunrise Boulevard	2	5,600	0.28	A

Notes: V/C = volume-to-capacity ratio; LOS = level of service; SR = State Route; U.S. 50 = U.S. Highway 50

[1] Roadway segment is currently not a through roadway.

[2] Roadway segment assumed to have high access control.

[3] Roadway segment operates at capacity.

Shaded areas indicate deficiency.

Source: Data Compiled by Fehr & Peers in 2007

Table 3.15-4
Levels of Service for Freeway-Ramp Merge, Diverge, and Weave Maneuvers—Existing Conditions

Ramp	Merge, Diverge, or Weave Maneuvers	A.M. Peak		P.M. Peak	
		Density[1]	LOS[2]	Density[1]	LOS[3]
Eastbound U.S. 50					
Mather Field Road direct off-ramp	Diverge	55	F	43	F
Mather Field Road loop on-ramp	Merge	24	F	22	C
Mather Field Road direct on-ramp	Merge	26	F	24	C
Zinfandel Drive direct off-ramp	Diverge	26	F	16	B
Zinfandel Drive loop on-ramp	Merge	23	C	25	C
Zinfandel Drive direct on-ramp	Merge	22	C	24	C
Sunrise Boulevard direct off-ramp	Diverge	17	B	20	C
Sunrise Boulevard loop/direct on-ramp	Merge	30	D	38	F
Hazel Avenue direct off-ramp	Diverge	21	C	30	F
Hazel Avenue loop/direct on-ramp Aerojet direct off-ramp	Weave	36	C	39	D
Westbound U.S. 50					
Folsom Boulevard direct on-ramp Hazel Avenue direct off-ramp	Weave	40	E	37	D
Hazel Avenue loop on-ramp	Merge	36	E	31	D
Sunrise Boulevard direct off-ramp	Diverge	18	B	12	B
Zinfandel Drive direct off-ramp	Diverge	40	E	32	D
Zinfandel Drive loop on-ramp	Merge	49	F	42	F
Zinfandel Drive direct on-ramp	Merge	18	B	19	B
Mather Field Road direct off-ramp	Diverge	39	E	40	E
Mather Field Road loop on-ramp	Merge	46	F	56	F
Mather Field Road direct on-ramp	Merge	18	B	20	C

Notes: LOS = level of service; NA = not applicable; U.S. 50 = U.S. Highway 50

[1] Density in passenger cars per mile per lane for merge/diverge analysis only.

[2] LOS computed using Highway Capacity Software (HCS) 2000 software for the merge/diverge analysis consistent with HCM 2000 methodologies. Weave analysis evaluated using the Leisch Method for Weaving Analysis.

Shaded areas indicate deficiency where calculation indicates that demand exceeds capacity.

Source: Data Compiled by Fehr & Peers in 2007

The merge, diverge, and weave maneuvers for the following on- and off-ramps are operating at LOS F, where demand exceeds capacity based on *Highway Capacity Manual* (HCM) (Transportation Research Board 2000) methodology:

- Eastbound U.S. 50
  - Mather Field Road direct off-ramp—A.M. and P.M. peak hours

- Mather Field Road loop on-ramp—A.M. peak hour only
- Mather Field Road direct on-ramp—A.M. peak hour only
- Sunrise Boulevard loop/direct on-ramp—P.M. peak hour only
- Hazel Avenue direct off-ramp—P.M. peak hour only

- Westbound U.S. 50
  - Zinfandel Drive loop on-ramp—A.M. and P.M. peak hours
  - Mather Field loop on-ramp—A.M. and P.M. peak hours

3.15.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

There are no Federal plans, policies, regulations, or laws related to traffic and transportation that apply to the project or alternatives under consideration.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Caltrans policies are applicable to the project and alternatives under consideration and are summarized in Caltrans's *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002). These guidelines identify circumstances under which Caltrans believes that a traffic impact study would be required, information that Caltrans believes should be included in the study, analysis scenarios, and guidance on acceptable analysis methodologies.

In addition to these policies, Caltrans prepares a Transportation Concept Report (TCR) for each of its facilities in the area. A TCR is a long-term planning document that each Caltrans district prepares for every state highway or portion thereof in its jurisdiction. This document usually represents the first step in Caltrans's long-range corridor planning process. The purpose of a TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period. These are indicated in the "route concept." In addition to the 20-year route concept level, the TCR includes an "ultimate concept," which is the ultimate goal for the route beyond the 20-year planning horizon. Ultimate concepts must be used cautiously, however, because unforeseen changes in land use and other variables make forecasting beyond 20 years difficult.

SR 16 in the project study area has a route concept level of LOS E. The ultimate concept for SR 16 is a four-lane facility with continuous left-turn lane (Caltrans 2004). U.S. 50 in the project study area has a route concept level of LOS F. The ultimate concept for U.S. 50 is a 10- to 12-lane freeway between Sunrise Boulevard and SR 99 and an eight-lane freeway with HOV lanes east of Sunrise Boulevard (Caltrans 1998). Caltrans is currently conducting a study to add HOV lanes west of Sunrise Boulevard.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

2006 Metropolitan Transportation Plan

The 2006 MTP (SACOG 2006) is a long-range planning document for identifying and programming roadway improvements throughout the Sacramento region. The MTP 2006, the latest update to the Metropolitan Transportation Plan, covers the Federal fiscal years from 2006 through 2027. The objective of this update was to restore air-quality non-exempt projects excluded since 2004 because of SACOG's inability to make air-quality conformity findings. Although the region has made significant progress in reducing ozone, a problem arose with regard to a requirement set forth in the Federal Clean Air Act. The SIP is tied to a "motor vehicle emissions budget"; transportation planners must ensure that emissions anticipated from plans and improvement programs remain within budget. A conformity lapse began on October 4, 2004, resulting in an expedited process to prepare

the plan. The *Sacramento Regional Nonattainment Area 8-Hour Ozone Rate-of-Progress Plan Final Report* was released in February 2006. Because of the region's lapse in air-quality conformity (associated with attainment efforts for the Federal Clean Air Act standards for ozone), the new MTP 2027 no longer contains regional transportation projects.

The MTP has a history of being able to fund and deliver identified Tier I projects through state and local funding. In 2002, SACOG adopted the MTP 2025 that involved funding programs, connector projects, and expansion of public transit. SACOG has developed a 2050 Blueprint Preferred Land-Use Alternative to develop a 2030 land use base for the next-generation MTP.

City of Rancho Cordova General Plan

Goals and policies from the City General Plan relating to traffic and transportation that are applicable to the Proposed Project and alternatives under consideration are provided in Appendix K.

Because the City formally adopted the County's traffic-impact study guidelines upon incorporation, plans and policies from the County Guidelines (County of Sacramento 2004) were used in this analysis, except where the Circulation Element/Plan of the City General Plan (City of Rancho Cordova 2005a, 2005b) supersedes County thresholds and requirements. Additionally, HCM 2000 intersection analyses were used as it is the state-of-the-practice methodology for traffic operations analysis.

Measure A

Measure A is a half-cent sales tax that was approved by voters to implement transportation improvements in the Sacramento region. Some Measure A funding has been identified to fund specific roadway improvements in the project study area.

2010 Sacramento City/County Bikeway Master Plan

The *2010 Sacramento City/County Bikeway Master Plan* (County of Sacramento 1992) identifies existing and planned bicycle routes through and near the planning area. The only existing facility is an off-street path along the Folsom South Canal west of Sunrise Boulevard, connecting Hazel Avenue north of U.S. 50 with Grant Line Road. On-street bike lanes are planned on Sunrise Boulevard, Grant Line Road, Jackson Highway (SR 16) (just past Grant Line Road), Kiefer Boulevard west of Sunrise Boulevard, Douglas Road west of Sunrise Boulevard, and White Rock Road.

The master plan also contains design, safety, and traffic control standards for use in constructing and/or upgrading facilities.

The Circulation Element/Plan of the City General Plan also identifies bicycle facilities within and around the SPA. The City is currently developing their bicycle and pedestrian master plan; this will supersede the 2010 Sacramento City/County Bikeway Master Plan and the City General Plan.

Transit Master Plan

The City's Transit Master Plan (August 2006) is a 20-year plan that identifies routes and transit corridors planned within the city boundaries. The planning phases are broken out into stages (Stages 1-7) starting with routes building around the Folsom Boulevard corridor and light-rail system. The final stage, Stage 7, extends down Rancho Cordova Parkway along the SunCreek Specific Plan. Along with the existing transit routes, bus lines and bus rapid transit (BRT) lines are planned to run along Sunrise Boulevard, Rancho Cordova Parkway, Grant Line Road, White Rock Road, and other major corridors in the City. These bus lines are intended to support light-rail service along the Folsom Boulevard/U.S. 50 corridor, which currently extends as far east as the American River Bridge in Folsom.

The City, as part of the Circulation Element/Plan of the City General Plan, has developed a transit system map that identifies corridors for potential transit routes, BRT, enhanced transit corridors, and future light-rail stations.

Development Financing Plans

The County has implemented several financing plans for implementing roadway improvements with specific plan developments in the area. The following financing plans are in place and have identified funding for improvements in the project study area:

- **Villages of Zinfandel Public Facilities Financing Plan**—financing plan for development within the Villages of Zinfandel Specific Plan area, originally within County boundaries, now within City boundaries
- **Sunridge Public Facilities Financing Plan**—financing plan for development within the Sunridge Specific Plan area, originally within County boundaries, now within City boundaries
- **Mather Field Public Facilities Financing Plan**—financing plan for development within the Mather Field Specific Plan area in Sacramento County
- **North Vineyard Station Public Facilities Financing Plan**—financing plan for development within the North Vineyard Station Specific Plan area in Sacramento County
- **Vineyard Springs Comprehensive Plan Public Facilities Financing Plan**—financing plan for development within the Vineyard Springs Comprehensive Plan area in Sacramento County

City of Rancho Cordova Capital Improvement Program

The CIP consists of updated development fees and roadway improvements identified in the Circulation Element/Plan of the City General Plan. The City's CIP consists of identification of planned roadway improvements within Rancho Cordova, cost estimates of identified roadway improvements, and a nexus study to identify fair-share contributions of new development to identified roadway improvements. The City's CIP incorporates the Villages of Zinfandel and Sunridge CIP financing documents.

The City is currently in the process of updating its CIP.

Sunrise/Douglas Community Plan and Sunridge Specific Plan

The Sunrise/Douglas Community Plan establishes the general policy framework for development between Sunrise Boulevard and Grant Line Road, north of SR 16 and south of White Rock Road, excluding the Rio del Oro Specific Plan. The SunCreek Specific Plan (formerly referred to as Sunrise Douglas 2) makes up about 20% of the Community Plan area. It is the focus of the Community Plan to provide housing to meet demand generated by job development in the U.S. 50 corridor. However, the Sunrise/Douglas Community Plan was superseded when the City General Plan was adopted in 2003.

The Sunridge Specific Plan was developed for the area near the SPA (south of Douglas Road) and is generally bounded by Sunrise Boulevard, Douglas Road, Grant Line Road, and Kiefer Boulevard. Conditions of approval were applied to the Sunridge Specific Plan identifying development thresholds that could not occur unless specific roadway improvements in the area were under construction or completed. Of note, a condition requiring construction of the Rancho Cordova Parkway interchange (or other roadway improvements) was applied to a development threshold of 6,500 units to ease congestion levels on Sunrise Boulevard.

The City has completed an improvement phasing study that identified the timing for potential roadway improvements (consistent with the City's CIP) to prioritize improvements to accommodate development south of U.S. 50 and east of Sunrise Boulevard. The phasing study correlated development thresholds for all development

south of U.S. 50 and east of Sunrise Boulevard to roadway improvement packages consistent with the City's CIP roadway system.

Mobility Strategies for County Corridors (Sacramento County Mobility Study)

The County Mobility Study (County of Sacramento and Fehr & Peers 2004) was an exercise to develop candidate strategies for 11 of the county's most congested corridors. The purposes of the study were to enhance mobility, as defined by reduced travel times and improved travel-time reliability; increase the people-moving capacity; and improve safety for all users of the transportation system. Within Rancho Cordova, the mobility study identified optional strategies to improve mobility on Sunrise Boulevard, including pedestrian and bicycle enhancements, BRT, transitway development compatibility, lane additions, and intelligent transportation systems.

The mobility study is a planning-level opportunities study. The City General Plan incorporates strategies identified in the mobility study, including certain components of the study, such as BRT. Because the mobility study is a planning-level study, this DEIR/DEIS qualitatively identifies potential incompatibilities with the study options.

50 Corridor Mobility Partnership

The 50 Corridor Mobility Partnership prepared a report identifying recommendations regarding future transportation infrastructure along and near U.S. Highway 50 in eastern Sacramento County and western El Dorado County. The findings were supported by Sacramento County, City of Rancho Cordova, City of Folsom, and El Dorado County.

Due to infrastructure being identified as partially funded, a technical memorandum (Fehr & Peers 2007) approved by Sacramento County DERA and DOT was released to identify improvements that could be assumed under cumulative conditions as being fully funded for EIR/EIS analyses in eastern Sacramento County.

The priority improvements agreed upon for EIR/EIS analyses in eastern Sacramento County are presented in Table 3.15-5.

3.15.3 Environmental Consequences and Mitigation Measures

Thresholds of Significance

Roadway Facilities

The operations of roadway facilities are described in terms of LOS. LOS is a qualitative description of traffic flow based on factors such as speed, travel time, delay, freedom to maneuver, volume, and capacity. Six levels are defined, from LOS A, as the best operating conditions, to LOS F, or the worst operating conditions, as shown in Table 3.15-6. LOS E represents "at-capacity" operations. When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F.

Because the project and development alternatives under consideration would cause traffic impacts on roadways that are under state, County, and City jurisdictions, this analysis was conducted using a combination of policies and guidelines and applying each agency's respective minimum LOS as the threshold of significance for roadways within their jurisdiction. The City identifies LOS D as its minimum standard for intersection operations. The County identifies LOS E as the minimum acceptable standard for intersection operations in the project vicinity. For state-controlled facilities, thresholds presented in the State's Route Concept Report were applied. (The concept service level for SR 16 is LOS E. The concept service level for U.S. 50 is LOS F. For this study, LOS E is applied to segments of U.S. 50 as a conservative approach for identifying impacts.)

Table 3.15-5
Cumulative Priority Improvements for EIR/EIS Analyses in Eastern Sacramento County

Project ID #	Project	Improvement
1	Rancho Cordova Parkway	6 lanes from U.S. 50 to Douglas Road
2	Rancho Cordova Parkway/U.S. 50 interchange	Construct interchange and includes auxiliary lanes from Sunrise Boulevard interchange to Hazel Avenue interchange on U.S. 50
3	Easton Valley Parkway	6 lanes from Rancho Cordova Parkway to Empire Ranch Road
4	International Drive extension	Construct as 6 lanes from Kilgore Road to Rancho Cordova Parkway
5	White Rock Road widening	6 lanes from Sunrise Boulevard to the County line
6	Zinfandel Drive extension and widening	6 lanes from White Rock Road to Douglas Road
7	Empire Ranch Road/U.S. 50 interchange	Construct interchange and includes auxiliary lanes from Empire Ranch Road interchange to El Dorado Hills Boulevard interchange on U.S. 50
8	Silva Valley Road/U.S. 50 interchange	Construct interchange
9	Kiefer Boulevard extension	4 lanes from Bradshaw Road to Grant Line Road
10	Douglas Road widening	Widen to 4 lanes from Mather Boulevard to Sunrise Boulevard
11	Sunrise Boulevard widening	6 lanes from SR 16 to Grant Line Road
12	Excelsior Road widening and extension	4 lanes from Kiefer Boulevard to SR 16 and 4 lanes from Kiefer Boulevard to Mather Boulevard
13	Oak Avenue extension	4 lanes from Iron Point Road to White Rock Road
14	Scott Road widening	6 lanes from U.S. 50 to Easton Valley Parkway and 4 lanes from Easton Valley Parkway to White Rock Road
15	Empire Ranch Road extension	4 lanes from U.S. 50 to Latrobe Road
16	Latrobe Road widening	4 lanes from U.S. 50 to Empire Ranch Extension
17	Prairie City Road widening	6 lanes from U.S. 50 to Easton Valley Parkway and 4 lanes from Easton Valley Parkway to White Rock Road

Notes:
The recommended roadway improvements above would be applied to the SunCreek and Westborough developments in Rancho Cordova, the Teichert Quarry and Easton developments in Sacramento County, and the forthcoming development of the Folsom Sphere of Influence. Funding estimates were based on the *50 Corridor Mobility Partnership Draft Final Report* (Parsons Brinckerhoff and DKS Associates, June 29, 2006).
Source: Data Compiled by Fehr & Peers in 2007

Roadway Segments

Based on the County Guidelines and the LOS policy in the Circulation Element/Plan of the City General Plan, a roadway-segment impact is considered significant if the addition of project-generated traffic under the Proposed Project or the other five alternatives under consideration would cause:

- a roadway segment in Rancho Cordova or within the City's Planning Area operating at an acceptable LOS D or better to degrade to an unacceptable LOS E or LOS F;
- a roadway segment in Sacramento County (outside the City's Planning Area) operating at an acceptable LOS E or better to degrade to an unacceptable LOS F;

Table 3.15-6
Level-of-Service Definitions for Intersections

Level of Service	Type of Flow	Delay	Maneuverability
A	Free flow	Very slight or no delay. If signalized, conditions are such that no approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.	Turning movements are easily made, and nearly all drivers find freedom of operation.
B	Stable flow	Slight delay. If signalized, an occasional approach phase is fully utilized.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted in groups of vehicles.
C	Stable flow	Acceptable delay. If signalized, a few drivers arriving at the end of a phase must wait through one signal cycle.	Backups may develop behind turning vehicles. Most drivers feel somewhat restricted.
D	Approaching unstable flow	Tolerable delay. Delays may be substantial during short periods, but excessive backups do not occur.	Maneuverability is severely limited during short periods because of temporary backups.
E	Unstable flow	Intolerable delay. Delay may be great, up to several signal cycles.	There are typically long queues of vehicles waiting upstream of the intersection.
F	Forced flow	Excessive delay.	Jammed conditions. Backups from other locations restrict or prevent movement. Volumes may vary widely, depending primarily on downstream conditions.

Source: Transportation Research Board 2000

- an increase in the volume-to-capacity (V/C) ratio of 0.05 or more on a roadway segment in Rancho Cordova or Sacramento County operating an unacceptable level (LOS E or LOS F in the Rancho Cordova and the City's Planning Area, or LOS F in Sacramento County [outside the City's Planning Area]); or

- a significant increase in reliance on single-occupant vehicles to facilitate mobility within Rancho Cordova.

Note that the V/C ratio threshold is consistent with thresholds used in various jurisdictions within California, including but not limited to Sacramento County.

Signalized Intersections

Based on the County Guidelines and the Circulation Element/Plan of the City General Plan, a signalized-intersection impact at a study intersection is considered significant if the addition of project-generated traffic under the Proposed Project or the other five alternatives under consideration would cause:

- a signalized intersection operating at an acceptable LOS D or better in Rancho Cordova or the City's Planning Area to degrade to an unacceptable LOS E or LOS F

- a signalized intersection operating at an acceptable LOS E or better in Sacramento County (outside the City's Planning Area) to degrade to an unacceptable LOS F

- a signalized intersection operating at an unacceptable LOS E or worse in Rancho Cordova or the City's Planning Area to degrade average intersection delay by 5 seconds or more

- a signalized intersection operating at an unacceptable LOS F or worse in Sacramento County (outside the City's Planning Area) to degrade average intersection delay by 5 seconds or more.

Standard analysis criteria for the City of Rancho Cordova and Sacramento County defines an impact as an increase in the V/C ratio of 0.05 or more at a signalized intersection operating at an unacceptable level (LOS E or LOS F in Rancho Cordova and the City's Planning Area, or LOS F in Sacramento County [outside the City's Planning Area]). However, the state-of-the-practice for intersection operations analyses is the Highway Capacity Manual (HCM2000; Transportation Research Board 2000). In place of V/C ratio, the HCM reports delay in seconds per vehicle. An exacerbation of an intersection operating at an unacceptable level by 5 seconds or more is considered an impact. HCM2000 is a more accurate tool for congested conditions or closely spaced intersections.

Unsignalized Intersections

Based on the County Guidelines and the Circulation Element/Plan of the City General Plan, an unsignalized-intersection impact at a study intersection is considered significant if the addition of project-generated traffic under the Proposed Project or the other five alternatives under consideration would cause:

- an unsignalized intersection in Rancho Cordova or the City's Planning Area operating at an acceptable LOS D or better to degrade to an unacceptable LOS E or LOS F;

- an unsignalized intersection in Sacramento County (outside the City's Planning Area) operating at an acceptable LOS E or better to degrade to an unacceptable LOS F; or

- an increase of 5 seconds or more of control delay at an unsignalized intersection operating at an unacceptable level (LOS E or LOS F in Rancho Cordova and the City's Planning Area, or LOS F in Sacramento County [outside the City's Planning Area]).

Note that the control-delay threshold is consistent with thresholds used in various jurisdictions within California, including but not limited to Sacramento County.

Freeway Ramp Merge, Diverge, and Weave

Based on the County Guidelines, the Circulation Element/Plan of the City General Plan, and the Caltrans TCRs, a freeway-ramp merge/diverge/weave impact is considered significant if the addition of project-generated traffic under the Proposed Project or alternatives under consideration would:

- cause a facility operating at an acceptable level (based on the Route Concept Report) to deteriorate to an unacceptable level, or

- add 10 trips or more to a freeway ramp that is operating at an unacceptable level. (Volume projections for future conditions are rounded to the nearest 10. Therefore, using this threshold is consistent with the rounding of future forecasts. This threshold is consistent with other studies conducted in the Sacramento region.)

Bicycle, Pedestrian, and Transit Facilities

Based on the County Guidelines and the Circulation Element/Plan of the City General Plan, a bicycle, pedestrian, or transit-facility impact is considered significant if the Proposed Project or alternatives under consideration would do any of the following:

- eliminate or adversely affect an existing bikeway, pedestrian facility, or transit facility in a way that would discourage its use;

- interfere with the implementation of a planned bikeway as shown in the County's Bicycle Master Plan or the Bikeway and Trails Map in the City's Circulation/Element Plan, be in conflict with the Pedestrian Master Plan, or be in conflict with any future transit facility;

- result in unsafe conditions for bicyclists or pedestrians, including unsafe bicycle/pedestrian, bicycle/motor vehicle, pedestrian/motor vehicle, transit/bicycle, transit/pedestrian, or transit/motor vehicle conflict

- result in demands to transit facilities greater than there is adequate capacity to accommodate.

Because the proposed specific plan is consistent with the City General Plan, the project is expected to have less-than-significant impacts on pedestrian, bicycle, and transit facilities.

ANALYSIS METHODOLOGY

The study roadway segments, intersections, and freeway facilities identified for inclusion in this analysis were developed in consultation with County staff members (to be consistent with methodologies used in the ongoing Easton Specific Plan EIR), City staff members, and comments received on the Notice of Preparation.

Roadway Facilities

Roadway Segments

Roadway segments were analyzed by comparing the ADT volume to daily volume thresholds. Table 3.15-7 displays the daily volume thresholds for various facility types. These thresholds were used as guidelines to project the need for new or upgraded facilities. In general, analysis of intersection operations provides a more realistic assessment of traffic conditions on a road than analysis of roadway segments.

The Circulation Element/Plan of the City General Plan does recognize that significant improvements to Sunrise Boulevard (and the other river crossings in the area) and Folsom Boulevard—improvements that are not consistent with the City's Circulation Element/Plan—would be required to provide LOS D operations. The City's Circulation Element/Plan has policies relating to bicycle and pedestrian connectivity and the desire to minimize intersection and roadway cross sections. For example, the circulation plan calls for a six-lane maximum roadway cross section within Rancho Cordova and a four-lane cross section on Folsom Boulevard, where the City's mixed-use and transit-oriented design areas are located and where the City desires enhanced LRT, bicycle, and pedestrian facilities. The Circulation Element/Plan reflects that it is not the City's desire to implement roadway widening on these roadways (to more than six lanes on most roadways and to more than four lanes on Folsom Boulevard), and that a lower LOS should apply to these facilities. However, an impact threshold of LOS D was used for these facilities for the purposes of this analysis (a conservative assumption for CEQA/NEPA impact assessments).

Signalized Intersections

Signalized intersections were analyzed using the methodology contained in the *Highway Capacity Manual* (HCM2000; Transportation Research Board 2000). (This methodology is the state-of-the-practice for traffic analysis and is consistent with the methodology being used in the Easton Specific Plan EIR.) This methodology determines the intersection LOS by comparing delay in seconds per vehicle at the intersection to the thresholds shown in Table 3.15-8.

LOS E is considered the minimum acceptable operating level for signalized study intersections located within Sacramento County. Caltrans's Route Concept Report for SR 16 (Caltrans 2004a) also states that LOS E should be maintained on SR 16 in this area. The City's Circulation Element/Plan (City of Rancho Cordova 2005) states that LOS D should be maintained within the city limits.

Table 3.15-7
Daily Volume Thresholds for Roadway Segments[1]

Facility Type	Number of Lanes	Daily Volume Threshold (Level of Service)				
		LOS A	LOS B	LOS C	LOS D	LOS E
Residential	2	600	1,200	2,000	3,000	4,500
Residential local road with frontage	2	1,600	3,200	4,800	6,400	8,000
Residential local road without frontage	2	6,000	7,000	8,000	9,000	10,000
Secondary road, low access control	2	9,000	10,000	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Secondary road, moderate access control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Secondary road, high access control	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	42,000	48,000	54,000	60,000
Rural, two-lane highway	2	2,400	4,800	7,900	13,500	22,900
Rural, two-lane road, paved shoulders	2	2,200	4,300	7,100	12,200	20,000
Rural, two-lane road, no shoulders	2	1,800	3,600	5,900	10,100	17,000
Expressway[2]	6	24,300	39,720	56,700	72,900	81,000

Note: LOS = level of service
[1] County of Sacramento 2004
[2] Based on capacities in the City of Rancho Cordova's General Plan EIR.
Source: Data Compiled by Fehr & Peers in 2007

Table 3.15-8
Definitions of Intersection Levels of Service

Level of Service	Description	Unsignalized Intersection—Average Control Delay (sec/veh)	Signalized Intersection—Average Control Delay (sec/veh)
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.	≤ 10.0	≤ 10.0
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.	10.1—15.0	>10.0—20.0
C	Stable flow, but the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.	15.1—25.0	>20.0—35.0
D	Represents high-density, but stable flow.	25.1—35.0	>35.0—55.0
E	Represents operating conditions at or near the capacity level.	35.1—50.0	>55.0—80.0
F	Represents forced or breakdown flow.	> 50.0	> 80.0

Note: sec/veh = seconds per vehicle
Sources: Transportation Research Board 1980, 2000

As described previously, the City's Circulation Element/Plan does recognize that significant improvements would be required at intersections along Sunrise Boulevard (and the other river crossings in the area) and Folsom Boulevard to provide LOS D operations, and that such improvements would be inconsistent with other policies within the Circulation Element/Plan. Therefore, the Circulation Element/Plan states that it is not the City's desire to implement these significant improvements, and that a lower LOS should apply to these facilities. However, an impact threshold of LOS D was used for these intersections for the purposes of this analysis (a conservative assumption for CEQA/NEPA impact assessments).

Unsignalized (Stop-Controlled) Intersections

For unsignalized (four-way stop-controlled and side-street stop-controlled) intersections, the LOS analysis was conducted using the methodology contained in Chapter 17 of the *HCM2000.* The LOS rating is based on the average control delay expressed in seconds per vehicle. At two-way or side-street stop-controlled intersections, LOS is calculated for the worst-case movement, not for the intersection as a whole. For approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. At all-way stop-controlled intersections, LOS is based on the average delay experienced on all approaches. Table 3.15-8 also summarizes the relationship between delay and LOS for unsignalized intersections.

The minimum acceptable operating levels for unsignalized intersections are LOS E for intersections within unincorporated Sacramento County and LOS D for intersections within the city limits of Rancho Cordova.

To determine whether signals should be installed at any one location, signal warrants are typically reviewed. This consists of reviewing traffic levels, proximity of the intersection to other signals and to schools, accident frequency, and other factors against a set of warrants identified in the *Traffic Manual* (Caltrans 1995) and the *Manual on Uniform Traffic Control Devices* (FHWA 2003) to identify whether installing a traffic signal would be appropriate.

Warrants for traffic signal installation at unsignalized intersections were evaluated based on the peak-hour volume warrant contained in the *Traffic Manual.* The peak-hour warrant is a subset of the standard traffic-signal warrants recommended in the *Manual on Uniform Traffic Control Devices* and associated Caltrans guidelines. The peak-hour signal warrant analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecasted, traffic data, and on a thorough study of traffic and roadway conditions conducted by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, because the installation of signals can lead to certain types of collisions (such as rear-end collisions). Although signals provide increased capacity at intersections and may be needed (from a capacity perspective) to serve predicted volume demands at the intersection, the potential safety implications associated with signal installation should be reviewed by the responsible state or local agency (depending on whether the intersection is controlled by the state, the County, or the City). The responsible agency should undertake regular monitoring of actual traffic conditions and accident data, and a timely reevaluation of the full set of warrants to prioritize and program intersections that may be identified for signalization in this study.

Freeway-Ramp Merge, Diverge, and Weave

A merge/diverge analysis was conducted at area interchanges using the 2000 Highway Capacity Software package. The software is consistent with the methodologies contained in Chapters 24 and 25 of the *Highway Capacity Manual* (Transportation Research Board 2000). This methodology was chosen because it is the analysis methodology typically used by Caltrans for analysis of freeway-ramp merge, diverge, and weave maneuvers and because it correlates the LOS to the expected density of vehicles in passenger cars per mile per lane. Table 3.15-9 summarizes the relationship between density and LOS for freeway ramps. The software also simultaneously calculates the mainline operations at the study locations. In the event the mainline is over capacity, and therefore failing, the ramp subsequently fails.

Table 3.15-9 Definitions of Freeway-Ramp Merge/Diverge Levels of Service	
Level of Service	**Density (pc/mi/ln)**
A	< 10.0
B	> 10.0 and < 20.0
C	> 20.0 and < 28.0
D	> 28.0 and < 35.0
E	> 35.0
F	Demand exceeds capacity
Note: pc/mi/ln = passenger cars per mile per lane Source: Transportation Research Board 2000	

The weaving analysis for the freeway segment between Hazel Avenue and Aerojet Road was conducted using the nomograph presented in Figure 507.7A in the *Highway Design Manual* (Caltrans 2004). This methodology is referred to as the Leisch Method for Weaving Analysis and was chosen because it is the methodology typically used by Caltrans to evaluate the effectiveness of weaving segments.

Consistent with the impact guidelines, acceptable freeway-ramp operating levels are those defined by Caltrans in the Route Concept Report. Caltrans has identified LOS E as the minimum acceptable threshold for U.S. 50 freeway ramps from east of SR 99 to the El Dorado County line.

Bicycle, Pedestrian, and Transit Facilities

Bicycle facilities include Class I (off-street facilities), Class II (on-street bicycle lanes identified with signage and markings), and Class III (on-street bicycle routes identified by signage). Pedestrian facilities are composed of paths, sidewalks, and pedestrian crossings. Transit facilities include shuttle services, bus service, BRT, and light-rail facilities.

Analysis Scenarios

The following scenarios were analyzed to determine the impacts of the Proposed Project and the other five alternatives under consideration:

- **Baseline conditions plus project buildout (Baseline Plus Project Conditions).** This scenario places traffic generated by full buildout of the entire SunCreek Specific Plan in the existing roadway network, along with traffic expected from projects that City staff members have identified as having already received tentative map approval, as well as traffic from development of up to 6,500 units in the Sunridge Specific Plan area.

- **Cumulative (2032) conditions plus project buildout (Cumulative Plus Project Conditions).** This scenario incorporates roadways and traffic generation associated with full buildout of the entire SunCreek Specific Plan into the traffic volumes anticipated from regional development present in 2032.

Travel Demand Forecasts

Impacts on the roadway system for baseline and cumulative 2032 conditions were determined by forecasting the increase in daily and peak-hour traffic volumes that would occur with implementation of the project. The 2001 modified version of the SACMET regional travel demand forecasting (TDF) model was used to develop daily and A.M. and P.M. peak-hour traffic volume forecasts for the study roadways and intersections and is consistent with

the SACOG MTP 2025, except where superseded by the 50 Corridor Mobility Partnership Final Report (Parsons Brinckerhoff, 2006) and amending technical memorandum (Fehr & Peers 2007). A TDF model is a tool that assigns trips generated by the various land uses to the surrounding roadway network based on the locations of attractions and productions. To accomplish this task, the TDF incorporates several types of data: land use information (consistent with area general plan documents, reasonably foreseeable development, and economic land use forecasts); trip generation characteristics; mode choice; roadway networks; and census information. Using the TDF model for the SunCreek project allowed reasonably foreseeable planned development projects and fully funded roadway improvement projects to be incorporated into traffic forecasting efforts. This approach uses the best available technical tools in the region to develop future forecasts for the project study area.

For this study, the model was used to generate daily and peak-hour traffic volume forecasts for the following scenarios:

- Baseline No Project Conditions
- Baseline Plus Project Conditions
- Baseline Plus Conceptual Strategy Alternative
- Baseline Plus Biological Impact Minimization Alternative
- Baseline Plus No USACE Permit Alternative
- Baseline Plus Increased Development Alternative
- Cumulative 2032 No Project Conditions
- Cumulative 2032 Plus Project Conditions
- Cumulative 2032 Plus Conceptual Strategy Alternative
- Cumulative 2032 Plus Biological Impact Minimization Alternative
- Cumulative 2032 Plus No USACE Permit Alternative
- Cumulative 2032 Plus Increased Development Alternative

Before the TDF model could be used for this study, the land use and roadway network components of the model were modified to accurately reflect each scenario.

Land Use Modifications

When land use information is input into TDF models, areas are split into traffic analysis zones (TAZs). To more accurately reflect loading of land use onto the roadway system for the project study area, additional TAZs were added to the model and the project's land uses were disaggregated into these zones. Additionally, TAZs for other developments in Rancho Cordova, including but not limited to the Sunridge Specific Plan, Rio del Oro Specific Plan, Villages of Zinfandel, Easton Development, and Westborough Development areas, were disaggregated to accurately reflect the loading of vehicles from these zones to the surrounding roadway network.

Baseline Conditions were developed using information for approved projects in the area provided by City staff members and information described in the City's 2004 Methodology for 2030 Cumulative Traffic Assumptions. (Note: The City has refined its land use assumptions through its General Plan process since October 2004, when this methodology was published.) The Year 2030 land use projections for Rancho Cordova are based on the most current information provided by City Staff in August 2006 and were provided at the TAZ level for land uses in Rancho Cordova. These projections are consistent with land uses adopted for the City General Plan. Year 2032 land use projections outside the City's planning area (as defined in the City General Plan) were obtained from interpolation of the SACMET land use forecasts.

In addition, truck traffic from three planned quarries in eastern Sacramento County was included in the cumulative modeling. Two of the rock quarries, Teichert Quarry and Granite's Stoneridge Quarry, would utilize a shared access from a proposed southern leg of the Scott Road (east)/White Rock road intersection. The third quarry, the DeSilva Gates (formerly Millgate) Quarry, would be located approximately 5 miles south of White Rock Road along Scott Road and would use a new access road connecting to Grant Line Road.

To estimate the effect of quarry truck volumes on cumulative traffic conditions, truck volumes developed for the East Sacramento Region Aggregate Mining Truck Management Plan (DKS Associates, 2010) were added to the intersection, roadway, and freeway volumes for all cumulative year scenarios. Truck generation was based on truck ticket data provided by the mining companies participating in the Truck Management Plan (i.e. Teichert, Granite, and DeSilva Gates) for all days in 2006 (a high year for aggregate production). To provide for a conservative analysis, truck volume estimates for the 30th highest truck volume day were used (as opposed to average day volumes, which were substantially lower). This data was compiled to develop daily and hourly truck generation. The 30th highest truck volume day estimates for the Teichert and Stoneridge Quarries included 4,490 daily truck trips. From the DeSilva Gates Quarry, the 30th highest day estimate was 2,240 daily truck trips. The data shows most truck trips occur between 6:00 AM and 4:00 PM with few truck trips generated during the evening commute peak period (i.e., 4:00 PM to 6:00 PM), which includes the PM peak hour of analysis in the DEIR. For the 30th highest truck volume day, no truck loads occurred during the PM peak commute period. Consequently, because quarry truck trip generation is negligible during the PM peak hour, quarry trucks were only included in the AM peak hour analysis.

Prior to adding these truck trips into the intersection, roadway and freeway analysis truck volumes were converted into passenger car equivalents (PCEs). This accounts for the greater affect on roadway operations that trucks have compared to a typical passenger vehicle, due to their increased size and space requirements and reduced travel speeds and acceleration rates. On average, the analysis assumed that each truck was three PCEs (loaded trucks were considered to be 4 PCEs, with unloaded trucks treated as 2 PCEs).

For the cumulative year analysis, 30th highest truck volume day PCEs were added to daily roadway volumes and considered in the level of service analysis. The 30th highest truck volume day PCEs were also added to the AM peak hour intersection and freeway volumes and included the technical analysis for each facility type.

Roadway Network Modifications

Changes to the roadway network consisted of adding new roads in the project study area and creating new connections to the existing and planned roadway systems under Baseline (existing plus approved projects) and Cumulative (Year 2032) conditions. Baseline roadway improvements are based on improvements that are already under construction or are a direct result of the approved projects (these improvements were identified by City staff). Regional roadways assumed for Cumulative Conditions are consistent with improvements identified in the 50 Corridor Mobility Partnership Final Report and identified as fully funded by the amending technical memorandum (Fehr & Peers, 2007).

Exhibits 3.15-7 and 3.15-26 show the assumed roadway networks for Baseline and Cumulative (2032) Conditions respectively.

Regional and local roadways assumed for Cumulative Conditions are consistent with improvements identified in the MTP 2025 that were identified as fundable (summary presented in Table 3.15-5). However, it is noted that in July 2005, after the environmental review of this project had begun (in 2004), SACOG adopted a new MTP 2025. Although the region has made significant progress in reducing ozone, a problem has arisen with regard to another requirement set forth in the Federal Clean Air Act. The region's transportation plan must conform and thus show that it does not harm the region's chances of attaining the ozone standard. The SIP is tied to a "motor vehicle emissions budget"; transportation planners must ensure that emissions anticipated from plans and improvement programs remain within this budget. A conformity lapse began on October 4, 2004, resulting in an expedited process to prepare a plan. The *Sacramento Regional Nonattainment Area 8-Hour Ozone Rate-of-Progress Plan Final Report* was released in February 2006. Because of the region's lapse in air quality conformity (associated with attainment efforts for Federal Clean Air Act standards for ozone), the new regional transportation projects were removed from the MTP 2025. This issue was resolved with adoption of a new MTP 2025, which contained the regional transportation projects previously identified in the MTP 2025. Given these conditions, the regional

and local improvements identified in the 2004 edition of the MTP 2025 were considered appropriate at the time the analysis began.

Vehicle-Trip Generation Estimates

After the changes described above were completed, the TDF model was run for each analysis scenario. Table 3.15-10 summarizes the final A.M. peak-hour, P.M. peak-hour, and daily vehicle-trip estimates for buildout of development and the entire proposed SunCreek Specific Plan development.

Table 3.15-10
SunCreek Vehicle-Trip Generation Summary

Development		Total Vehicle Trips[1]		
		A.M. Peak Hour	P.M. Peak Hour	Daily
No USACE Permit Alternative	Total trips	4,386	4,226	49,915
	External trips	3,843	3,721	43,350
Proposed Project	Total trips[2]	7,545	8,199	94,187
	External trips[3]	6,604	6,921	77,204
Biological Impact Minimization Alternative	Total trips	4,008	3,724	44,624
	External trips	3,576	3,390	40,033
Conceptual Strategy Alternative	Total trips	4,570	4,453	52,494
	External trips	4,025	3,888	45,568
Increased Development Alternative	Total trips	5,475	5,438	64,666
	External trips	4,676	4,574	53,442

Notes:
[1] Trip summary based on 2001 modified version of the SACMET travel demand forecasting (TDF) model.
[2] Represents total vehicle trips assigned to the traffic model roadway network and not trips internal to a traffic analysis zone (TAZ). Includes trips from one TAZ to another TAZ within the SunCreek Specific Plan area.
[3] Represents vehicle trips external to the specific plan area (trips outside of the SunCreek SPA). Does not include trips from one TAZ to another TAZ within the SunCreek Specific Plan area.
Source: Data Compiled by Fehr & Peers in 2010

After calculating the final vehicle-trip estimates, the SACMET TDF model produced traffic-volume forecasts for roadway segments and intersection turning movements for daily and A.M. and P.M. peak-hour conditions. The raw TDF model volumes for No Project conditions were adjusted by adding incremental growth projected by the TDF model to existing count data (NCHRP-255). A select zone analysis of the TDF model was used to aid in the development of project trip assignments. A select zone analysis is a model run where trip assignments for the selected zones that constitute the project are presented in the surrounding roadway system.

Exhibits showing intersection and roadway-segment volumes for all analysis scenarios are presented at the end of this section.

IMPACT ANALYSIS

Impacts that would occur under each alternative development scenario are identified as follows: NP (No Project), NCP (No USACE Permit), PP (Proposed Project), BIM (Biological Impact Minimization), CS (Conceptual Strategy), and ID (Increased Development). Note that all impacts of the No USACE Permit, Biological Impact

Minimization, Conceptual Strategy, and Increased Development Alternatives would be similar to those of the Proposed Project Alternative, while those of the No Project Alternative would be substantially less than those of the Proposed Project Alternative because substantially less traffic-generating development would occur.

IMPACT 3.15-1 **Increases to Peak-Hour and Daily Traffic Volumes, Resulting in Unacceptable Levels of Service.** *Implementation of the specific plan (i.e., the Baseline Plus Project Conditions) would cause an increase in A.M. peak-hour, P.M. peak-hour, and/or daily traffic volumes on area roadways, resulting in unacceptable LOS and warranting the need for improvements such as traffic signals and additional lanes.*

NP

Because no project-related development would occur under the No Project Alternative, there would be no project-generated traffic that would affect the regional transportation system; thus, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

Under all traffic analysis scenarios that assume implementation of development of the Proposed Project, No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives (i.e., the Baseline Plus Project conditions), project implementation would affect LOS at study-area intersections. Exhibits 3.15-8A, 3.15-8B, 3.15-11A, 3.15-11B, 3.15-14A, 3.15-14B, 3.15-17A, 3.15-17B, 3.15-20A, 3.15-20B, and 3.15-23A, and 3.15-23B present peak-hour traffic volumes, lane configurations, and traffic control at study intersections under Baseline No Project, Baseline Plus No USACE Permit, Baseline Plus Project, Baseline Plus Biological Impact Minimization, Baseline Plus Conceptual Strategy, and Baseline Plus Increased Development conditions, respectively. Exhibits 3.15-9, 3.15-12, 3.15-15, 3.15-18, 3.15-21, and 3.15-24 present ADT volumes on study roadway segments under Baseline No Project, Baseline Plus No USACE Permit, Baseline Plus Project, Baseline Plus Biological Impact Minimization, Baseline Plus Conceptual Strategy, and Baseline Plus Increased Development conditions, respectively. Exhibits 3.15-10, 3.15-13, 3.15-16, 3.15-19, 3.15-22, and 3.15-25 present peak-hour traffic volumes on the U.S. 50 mainline and ramps under Baseline No Project, Baseline Plus No USACE Permit, Baseline Plus Project, Baseline Plus Biological Impact Minimization, Baseline Plus Conceptual Strategy, and Baseline Plus Increased Development conditions, respectively. As shown in these exhibits, project implementation would cause an increase in A.M. peak-hour, P.M. peak-hour, and/or daily traffic volumes at study-area intersections, roadway segments, and freeway ramps. Impacts associated with this increased traffic were compared against the thresholds of significance identified previously. For the sake of brevity, only intersections, roadways, and freeway ramps where **significant, direct** impacts would occur are discussed below, followed by required mitigation measures. There would be **no indirect** impacts in this context. Tables 3.15-11, 3.15-12, and 3.15-13 show intersections, roadway segments, and freeway ramps that would be affected by project implementation. ***[Similar]***

Mitigation Measure Common to All Impacts under Impact 3.15-1: Participate in Identified Roadway Improvements.

To avoid repetition, the information contained in the following mitigation measure applies to all other mitigation measures required under Impact 3.15-1.

Note that no mitigation measures are required for the No Project Alternative because, as described above, no direct or indirect impacts would occur.

The project applicant(s) of any project phases shall participate in the necessary improvements identified in all of the following mitigation measures. The project's fair-share participation and the associated timing of the improvements shall be identified in the project conditions of approval and in the mitigation

monitoring and reporting program for the project, or in conjunction with and as an appendix to the specific plan (see mitigation measures following each identified impact).

The timing and enforcement (described below) would be the same for all identified mitigation measures associated with Impact 3.15-1.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department.

Please note that the improvements described in each of the following mitigation measures have not been designed, and therefore, project-specific impacts resulting from these improvements cannot be precisely identified or quantified.

If need be, the site-specific impacts of the identified improvements will be assessed pursuant to CEQA requirements when specific intersection and roadway improvement plans are developed, separate from the SunCreek DEIR/DEIS. Any additional necessary environmental review will be completed before final approval of the improvements identified in the mitigation measures. No such additional review may be necessary, however, if the effects of such improvements are consistent with what can generally be expected from implementing such improvements, as set forth immediately below.

Based on review of existing available environmental documentation, field review at a reconnaissance level, and review of aerial photography, it is anticipated that, at worst, the construction of these intersection and roadway improvements could directly adversely affect wetland resources and associated grassland habitat area and could result in construction-related environmental effects, including but not limited to:

- impacts related to construction traffic, noise, air quality, water quality, and drainage
- impacts on cultural resources
- impacts on special-status plants and animals and their habitats

In addition to construction-related impacts, implementation of these improvements could result in long-term effects on water quality and drainage. The impacts that could arise from the planned improvements would be measured using the significance thresholds identified in each section of Chapter 3 of this DEIR/DEIS.

Once a planned roadway is designed, the City would retain a qualified biologist to conduct a reconnaissance survey to determine the type(s) of habitat to be removed, and whether wetlands or special-status species are present. The City would also conduct a cultural resources records search to determine whether any known cultural resources are present.

The mitigation measures recommended in Chapter 3 of this DEIR/DEIS would be applied (where applicable) to mitigate any such effects, if significant, to less-than-significant levels. For example, measures would be implemented to ensure no net loss of wetlands. Best management practices and Sacramento Metropolitan Air Quality Management District measures would be implemented for water and air quality effects, and preconstruction surveys would be performed where sensitive habitat is present (and if special-status species or habitat is present, the biological resources protection measures would be implemented). The relocation of any utility pole or other utilities would be coordinated with the appropriate service provider to ensure that there would be no impact on the service provider. Additionally, if permits or other authorizations are required, they would be secured and the conditions would be followed.

Table 3.15-11
Intersection Levels of Service—Baseline Conditions

Intersection	Control	No Project				No USACE Permit Alternative				Proposed Project				Biological Impact Minimization Alternative				Conceptual Strategy Alternative				Increased Development Alternative			
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. SR 16/Excelsior Road	Signal	50	D	92	F	**90**	**F**	**196**	**F**	**99**	**F**	**>200**	**F**	**81**	**F**	**197**	**F**	**82**	**F**	**194**	**F**	**88**	**F**	**>200**	**F**
2. SR 16/Eagles Nest Road	SSS	54	F	>200	F	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**
3. SR 16/Sunrise Boulevard	Signal	139	F	97	F	**179**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**175**	**F**	**185**	**F**	**172**	**F**	**184**	**F**	**190**	**F**	**>200**	**F**
4. SR 16/Grant Line Road	Signal	67	E	143	F	**92**	**F**	**192**	**F**	**97**	**F**	**>200**	**F**	**91**	**F**	**>200**	**F**	**90**	**F**	**>200**	**F**	**94**	**F**	**>200**	**F**
5. Florin Road/Sunrise Boulevard	Signal	14	B	37	D	22	C	**96**	**F**	31	C	**158**	**F**	20	C	**85**	**F**	20	C	**86**	**F**	25	C	**115**	**F**
6. Grant Line Road/Sunrise Boulevard	Signal	25	C	16	B	33	C	20	C	47	D	23	C	31	C	20	C	33	C	20	C	38	D	20	C
7. Grant Line Road/Kiefer Boulevard	AWS	12	B	12	B	21	C	33	D	**39**	**E**	**81**	**F**	27	D	**41**	**E**	26	D	**40**	**E**	26	D	**38**	**E**
8. Douglas Road/Grant Line Road	SSS	40	E	21	C	**141**	**F**	**48**	**E**	**177**	**F**	**56**	**F**	**164**	**F**	**42**	**E**	**>200**	**F**	**49**	**E**	**>200**	**F**	**56**	**F**
9. Douglas Road/Sunrise Boulevard	Signal	151	F	64	E	**>200**	**F**	**161**	**F**	**>200**	**F**	**166**	**F**	**>200**	**F**	**157**	**F**	**>200**	**F**	**161**	**F**	**>200**	**F**	**183**	**F**
10. Mather Field Road/Folsom Boulevard	Signal	47	D	57	E	48	D	60	E	48	D	60	E	48	D	59	E	48	D	59	E	48	D	60	E
11. Mather Field Road/U.S. 50 westbound ramps	Signal	13	B	14	B	13	B	14	B	13	B	14	B	13	B	14	B	13	B	14	B	13	B	14	B
12. Mather Field Road/U.S. 50 eastbound ramps	Signal	55	E	15	B	59	E	18	B	**63**	**E**	18	B	58	E	18	B	**62**	**E**	18	B	**61**	**E**	18	B
13. Mather Field Road/International Drive	Signal	17	B	19	B	21	C	21	C	23	C	26	C	22	C	25	C	21	C	27	C	23	C	22	C
14. Zinfandel Drive/International Drive	Signal	20	B	21	C	20	B	21	C	20	B	21	C	20	B	21	C	20	B	21	C	20	B	21	C
15. Zinfandel Drive/White Rock Road	Signal	45	D	79	E	45	D	82	F	45	D	82	F	45	D	81	F	45	D	81	F	45	D	83	F
16. Zinfandel Drive/U.S. 50 eastbound ramps	Signal	34	C	116	F	34	C	115	F	34	C	116	F	34	C	115	F	34	C	115	F	34	C	115	F
17. Zinfandel Drive/U.S. 50 westbound ramps	Signal	25	C	24	C	25	C	24	C	25	C	24	C	25	C	24	C	25	C	24	C	25	C	24	C
18. Sunrise Boulevard/White Rock Road	Signal	60	E	90	F	**97**	**F**	**193**	**F**	**99**	**F**	**190**	**F**	**92**	**F**	**182**	**F**	**98**	**F**	**184**	**F**	**102**	**F**	**>200**	**F**
19. Sunrise Boulevard/Folsom Boulevard	Signal	41	D	57	E	48	D	59	E	54	D	59	E	47	D	58	E	48	D	58	E	50	D	59	E
20. Sunrise Boulevard/U.S. 50 eastbound ramps	Signal	24	C	26	C	24	C	25	C	24	C	25	C	24	C	25	C	24	C	25	C	24	C	25	C
21. Sunrise Boulevard/U.S. 50 westbound ramps	Signal	25	C	34	C	27	C	35	C	28	C	35	C	26	C	34	C	27	C	34	C	27	C	35	C
22. Sunrise Boulevard/Zinfandel Drive	Signal	46	D	82	F	51	D	**88**	**F**	53	D	**93**	**F**	50	D	**88**	**F**	51	D	**88**	**F**	52	D	**91**	**F**
23. Hazel Avenue/Folsom Boulevard	Signal	43	D	175	F	44	D	175	F	45	D	176	F	44	D	175	F	44	D	176	F	45	D	178	F
24. Hazel Avenue/U.S. 50 eastbound ramps	Signal	24	C	25	C	23	C	26	C	24	C	26	C	24	C	26	C	23	C	25	C	23	C	25	C
25. Hazel Avenue/U.S. 50 westbound ramps	Signal	158	F	175	F	160	F	**181**	**F**	**166**	**F**	**182**	**F**	159	F	177	F	160	F	180	F	161	F	**182**	**F**
26. Hazel Avenue/Gold Country Boulevard	Signal	22	C	45	D	22	C	46	D	22	C	48	D	22	C	46	D	22	C	46	D	22	C	46	D
27. White Rock Road/Grant Line Road	SSS	29	D	303	F	43	E	**>200**	**F**	**59**	**F**	**>200**	**F**	41	E	**>200**	**F**	46	E	**>200**	**F**	48	E	**>200**	**F**
28. White Rock Road/Kilgore Road	Signal	41	D	60	E	45	D	**76**	**E**	46	D	**80**	**E**	43	D	**74**	**E**	44	D	**76**	**E**	46	D	**82**	**F**
29. Eagles Nest Rd/Douglas Rd	SSS	21	C	34	D	30	D	**55**	**F**	34	D	**65**	**F**	30	D	**56**	**F**	31	D	**59**	**F**	35	D	**59**	**F**
30. Sunrise Blvd/Kiefer Blvd	Signal	17	B	17	B	33	C	25	C	**105**	**F**	**63**	**E**	34	C	31	C	33	C	27	C	38	D	39	D

Notes: LOS = level of service; U.S. 50 = U.S. Highway 50; SSS = Side-Street Stop-Controlled; AWS = All-Way Stop-Controlled

Worst-case delay reported for unsignalized, side-street-stop intersections; average intersection delay reported for all-way-stop and signalized intersections. Both delays are reported in seconds per vehicle.

Shaded areas indicate deficiency. **Bold** indicates impact.

Source: Data Compiled by Fehr & Peers in 2010

Table 3.15-12
Roadway Segment Levels of Service—Baseline Conditions

Roadway Segment	Lanes	No Project			No USACE Permit Alternative			Proposed Project			Biological Impact Minimization Alternative			Conceptual Strategy Alternative			Increased Development Alternative		
		ADT	LOS	V/C	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
1. SR 16—Excelsior Road to Eagles Nest Road	2	12,900	0.65	B	17,600	0.88	D	18,800	0.94	E	17,100	0.86	D	17,100	0.86	D	18,200	0.91	E
2. SR 16—Sunrise Boulevard to Grant Line Road	2	15,400	0.77	C	16,600	0.83	D	17,000	0.85	D	17,200	0.86	D	17,000	0.85	D	17,000	0.85	D
3. Kiefer Boulevard—Grant Line Road to north of SR 16	2	1,800	0.10	A	2,000	0.11	A	2,200	0.12	A	2,000	0.11	A	2,000	0.11	A	2,000	0.11	A
4. Mather Boulevard—Femoyer Street to Douglas Road	2	12,900	0.72	C	**16,400**	**0.91**	**E**	**17,200**	**0.96**	**E**	**16,500**	**0.92**	**E**	**16,600**	**0.92**	**E**	**17,500**	**0.97**	**E**
5. Douglas Road—Mather Boulevard to Sunrise Boulevard	2	11,700	0.65	B	15,600	0.87	D	**16,600**	**0.92**	**E**	15,700	0.87	D	15,800	0.88	D	**16,700**	**0.93**	**E**
6. International Drive—South White Rock Road to Zinfandel Drive	4	12,000	0.33	A	12,200	0.34	A	12,300	0.34	A	12,100	0.34	A	12,200	0.34	A	12,200	0.34	A
7. International Drive—Zinfandel Drive to Kilgore Road	4	6,800	0.19	A	7,100	0.20	A	7,300	0.20	A	7,100	0.20	A	7,100	0.20	A	7,200	0.20	A
8. White Rock Road—Zinfandel Drive to Sunrise Boulevard	6	24,000	0.44	A	26,300	0.49	A	26,500	0.49	A	26,000	0.48	A	26,200	0.49	A	26,500	0.49	A
9. White Rock Road—Sunrise Boulevard to Grant Line Road	2	7,600	0.38	A	7,700	0.39	A	7,700	0.39	A	7,700	0.39	A	7,700	0.39	A	7,700	0.39	A
10. Folsom Boulevard—Zinfandel Drive to Sunrise Boulevard	4	20,300	0.56	A	20,500	0.57	A	20,500	0.57	A	20,500	0.57	A	20,500	0.57	A	20,600	0.57	A
11. Folsom Boulevard—Sunrise Boulevard to Hazel Avenue	4	13,300	0.37	A	13,500	0.38	A	13,400	0.37	A	13,400	0.37	A	13,400	0.37	A	13,500	0.38	A
12. Mather Field Road—Folsom Boulevard to U.S. 50 westbound ramps	4	26,900	0.75	C	27,500	0.76	C	27,600	0.77	C	27,500	0.76	C	27,500	0.76	C	27,600	0.77	C
13. Mather Field Road—U.S. 50 eastbound ramps to International Drive	6	38,200	0.71	C	41,000	0.76	C	41,700	0.77	C	41,200	0.76	C	41,200	0.76	C	42,000	0.78	C
14. Zinfandel Drive—Folsom Boulevard to U.S. 50 westbound ramps	4	23,100	0.64	B	23,600	0.66	B	23,500	0.65	B	23,500	0.65	B	23,500	0.65	B	23,700	0.66	B
15. Zinfandel Drive—U.S. 50 eastbound ramps to White Rock Road	6	42,100	0.78	C	43,200	0.80	C	43,200	0.80	C	43,000	0.80	C	43,200	0.80	C	43,200	0.80	C
16. Zinfandel Drive—White Rock Road to International Drive	4	19,700	0.55	A	19,700	0.55	A	19,700	0.55	A	19,700	0.55	A	19,700	0.55	A	19,700	0.55	A
17. Sunrise Boulevard—Gold Country Boulevard to Coloma Road	6	74,700	1.38	F	**77,600**	**1.44**	**F**	**78,600**	**1.46**	**F**	**77,500**	**1.44**	**F**	**77,700**	**1.44**	**F**	**78,100**	**1.45**	**F**
18. Sunrise Boulevard—Coloma Road to U.S. 50 westbound ramps	6	72,400	1.34	F	**75,900**	**1.41**	**F**	**76,900**	**1.42**	**F**	**75,700**	**1.40**	**F**	**75,900**	**1.41**	**F**	**76,500**	**1.42**	**F**
19. Sunrise Boulevard—U.S. 50 eastbound ramps to Folsom Boulevard	6	55,200	1.02	F	**59,700**	**1.11**	**F**	**60,900**	**1.13**	**F**	**59,300**	**1.10**	**F**	**59,600**	**1.10**	**F**	**60,400**	**1.12**	**F**
20. Sunrise Boulevard—Folsom Boulevard to White Rock Road	6	43,200	0.80	C	**49,100**	**0.91**	**E**	**50,100**	**0.93**	**E**	**48,700**	**0.90**	**E**	**49,000**	**0.91**	**E**	**50,000**	**0.93**	**E**
21. Sunrise Boulevard—White Rock Road to Douglas Road	6	30,200	0.56	A	40,800	0.76	C	41,800	0.77	C	40,000	0.74	C	40,600	0.75	C	42,300	0.78	C
22. Sunrise Boulevard—SR 16 to Grant Line Road	2	11,400	0.57	A	13,800	0.69	B	15,800	0.79	C	13,300	0.67	B	13,500	0.68	B	14,100	0.71	C
23. Hazel Avenue—Winding Way to U.S. 50 westbound ramps[1]	4	54,200	1.51	F	54,700	1.52	F	54,800	1.52	F	54,600	1.52	F	54,600	1.52	F	54,700	1.52	F
24. Grant Line Road—White Rock Road to Douglas Road	2	8,000	0.40	A	10,300	0.52	A	11,600	0.58	A	10,500	0.53	A	10,900	0.55	A	11,000	0.55	A
25. Grant Line Road—Douglas Road to SR 16	2	6,700	0.34	A	8,700	0.44	A	10,100	0.51	A	9,600	0.48	A	9,600	0.48	A	9,700	0.49	A
26. Grant Line Road—SR 16 to Sunrise Boulevard	2	5,600	0.28	A	6,500	0.33	A	7,000	0.35	A	6,700	0.34	A	6,700	0.34	A	6,800	0.34	A
27. Douglas Road—Sunrise Boulevard to Rancho Cordova Parkway	4	13,500	0.38	A	22,800	0.63	B	20,700	0.58	A	21,800	0.61	B	23,100	0.64	B	24,100	0.67	B
28. Douglas Road—Americanos Boulevard to Grant Line Road	4	4,500	0.13	A	5,200	0.14	A	4,500	0.13	A	5,400	0.15	A	6,800	0.19	A	5,600	0.16	A
29. Sunrise Boulevard—Douglas Road to Kiefer Boulevard	4	27,700	0.77	C	**33,600**	**0.93**	**E**	**36,600**	**1.02**	**F**	**33,900**	**0.94**	**E**	**33,200**	**0.92**	**E**	**34,700**	**0.96**	**E**
30. Sunrise Boulevard—Kiefer Boulevard to SR 16	4	23,000	0.64	B	29,800	0.83	D	**33,200**	**0.92**	**E**	27,000	0.75	C	27,300	0.76	C	29,400	0.82	D

Notes: ADT= Average Daily Traffic (Two-way); LOS = level of service; SR = State Route; U.S. 50 = U.S. Highway 50; V/C = volume-to-capacity

[1] Assumed to have high access control.

Shaded areas indicate deficiency. **Bold** indicates impact.

Source: Data Compiled by Fehr & Peers in 2010

Table 3.15-13
Merge/Diverge/Weave Levels of Service—Baseline Conditions

Freeway Ramp	Maneuver	No Project				Plus No USACE Permit				Proposed Project				Plus Biological Impact Minimization				Plus Conceptual Strategy				Plus Increased Development			
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
EASTBOUND U.S. 50																									
Mather Field Road direct off-ramp	Diverge	56	F	46	F	57	F	48	F	57	F	48	F	57	F	48	F	57	F	48	F	57	F	48	F
Mather Field Road loop on-ramp	Merge	24	F	22	C	36	F	30	D	35	F	33	D	36	F	30	D	36	F	30	D	36	F	31	D
Mather Field Road direct on-ramp	Merge	26	F	24	F	37	F	35	F	35	F	36	F	37	F	35	F	37	F	35	F	37	F	36	F
Zinfandel Drive direct off-ramp	Diverge	14	F	12	F	15	F	13	F	14	F	13	F	14	F	13	F	14	F	12	F	14	F	13	F
Zinfandel Drive loop on-ramp	Merge	23	C	25	C	27	C	26	C	27	C	30	D	27	C	26	C	27	C	26	C	27	C	26	C
Zinfandel Drive direct on-ramp	Merge	22	C	24	C	23	C	33	D	30	D	36	E	23	C	33	D	23	C	33	D	23	C	33	D
Sunrise Boulevard direct off-ramp	Diverge	26	C	29	D	26	C	29	D	26	C	29	D	26	C	29	D	26	C	29	D	26	C	29	D
Sunrise Boulevard loop/direct on-ramp	Merge	30	D	38	F	31	D	38	F	31	D	38	F	31	D	38	F	31	D	38	F	31	D	38	F
Hazel Avenue direct off-ramp	Diverge	9	A	19	F	9	A	19	F	9	A	19	F	9	A	19	F	9	A	19	F	9	A	19	F
Hazel Avenue loop/direct on-ramp Aerojet direct off-ramp	Weave	38	C	41	D	39	C	41	D	39	C	41	D	39	C	45	D	38	C	41	D	39	C	41	D
WESTBOUND U.S. 50																									
Hazel Avenue direct off-ramp	Diverge	31	D	29	D	31	D	29	D	31	D	29	D	30	D	29	D	29	D	31	D	31	D	29	D
Hazel Avenue loop on-ramp	Merge	24	C	21	C	25	C	21	C	25	C	21	C	24	C	22	C	21	C	24	C	24	C	21	C
Hazel Avenue direct on-ramp	Merge	33	D	26	C	33	D	26	C	33	D	26	C	33	D	26	C	26	C	33	D	33	D	26	C
Zinfandel Drive direct off-ramp	Diverge	40	E	32	D	40	E	32	D	40	D	32	D	40	E	32	D	32	D	40	E	40	E	32	D
Zinfandel Drive loop on-ramp	Merge	30	D	37	E	31	D	37	E	31	D	37	E	31	D	37	E	37	E	31	D	31	D	37	E
Zinfandel Drive direct on-ramp	Merge	19	B	19	B	26	C	28	D	26	C	28	D	26	C	28	D	28	D	26	C	26	C	28	D
Mather Field Road direct off-ramp	Diverge	40	E	40	E	41	E	40	E	41	E	40	E	41	E	40	E	40	E	41	E	41	E	40	E
Mather Field Road loop on-ramp	Merge	31	D	33	F	32	D	33	F	32	D	37	F	32	D	33	F	33	F	32	D	32	D	33	F
Mather Field Road direct on-ramp	Merge	19	B	21	C	27	C	28	D	27	C	29	D	27	C	29	D	28	D	27	C	26	C	29	D

Notes: LOS = level of service; U.S. 50 = U.S. Highway 50.

[1] Density in passenger cars per mile per lane for merge/diverge analysis only.

[2] LOS computed using Highway Capacity Software (HCS) 2000 software for the merge/diverge analysis consistent with *Highway Capacity Manual* (HCM) 2000 methodologies. Weave analysis evaluated using the Leisch Method for Weaving Analysis.

Shaded areas indicate deficiency where calculation indicates that demand exceeds capacity.

Source: Data Compiled by Fehr & Peers in 2010

For improvements to the following intersections and roadway improvements, the following impacts (in addition to the above) could result from implementation of required improvements:

- Direct impacts on the Folsom South Canal from implementation of the Zinfandel Drive and International Drive Extensions—Sunrise Boulevard/Douglas Road, Sunrise Boulevard/White Rock Road, and Sunrise Boulevard/Folsom Boulevard intersections (Intersections 9, 18, and 19, respectively)
- Direct impacts from the required grade separation structure—Sunrise Boulevard/Zinfandel Drive intersection (Intersection 22)
- Direct impacts from potential widening of the structure across U.S. 50—Hazel Avenue/U.S. 50 eastbound ramps and Hazel Avenue/U.S. 50 westbound ramps intersections (Intersections 24 and 25, respectively)
- Direct impacts on the Folsom South Canal from implementation of the International Drive Extension—Kilgore Road/White Rock Road intersection (Intersection 28)
- Direct impacts from required widening of the existing crossing of the Folsom South Canal—Douglas Road between Mather Boulevard and Sunrise Boulevard (Roadway Segment 5)
- Direct impacts from potential removal of approximately 40 large trees (primarily oak trees) and associated (primarily grassland) vegetation, and approximately 100 power poles, resulting from improvements to White Rock Road between Sunrise Boulevard and Grant Line Road (Roadway Segment 9)
- Direct impacts from required new river crossings of the American River—Sunrise Boulevard between Gold Country Boulevard and Coloma Road and Sunrise Boulevard between Coloma Road and the U.S. 50 westbound ramps (Roadway Segments 17 and 18, respectively)
- Direct impacts from potential removal of approximately 80 utility poles, 60 street lights, approximately 50 large trees, and commercial/industrial property, resulting from improvements to Sunrise Boulevard between Folsom Boulevard and White Rock Road (Roadway Segment 20)
- Direct impacts from potential removal of approximately 60 utility poles, 100 street lights, approximately 40 large trees (primarily oak trees and landscaped trees), and commercial/industrial property, resulting from improvements to Sunrise Boulevard between White Rock Road and Douglas Road (Roadway Segment 21)
- Direct impacts from potential removal of approximately 35 utility poles and two trees, as well as other vegetation, resulting from improvements to Douglas Road between Rancho Cordova Parkway and Sunrise Boulevard (Roadway Segments 7)
- Direct impacts from potential removal of approximately 50 power poles, resulting from improvements to Sunrise Boulevard between Douglas Road and Kiefer Boulevard (Roadway Segment 38 and 39)
- Direct impacts on an already congested Sunrise Boulevard corridor

Regarding the Sunrise Boulevard corridor, phasing of circulation improvements, consistent with the City's Infrastructure Phasing Plan, would aid in minimizing impacts on intersections and roadway segments on Sunrise Boulevard and should be considered when prioritizing improvements for implementation.

The following impacts and mitigation measures apply only to those intersections, roadways, and freeway ramps where significant, direct impacts would occur. Summary impacts are followed by required mitigation measures. Note that no mitigation measures are required for Impacts 3.15-1a through 3.15-1y under the No Project Alternative. As stated above in the summary discussion of Impact 3.15-1, under this alternative there would be no

project-related traffic that would affect the regional transportation system; therefore, there would be no direct or indirect impacts under the No Project Alternative.

IMPACT 3.15-1a **Unacceptable LOS at the SR 16/Excelsior Road Intersection (Intersection 1).**

NCP, PP, BIM, CS, ID

Signalized intersection operations at SR 16/Excelsior Road would degrade from an acceptable LOS D to an unacceptable LOS F during the A.M. peak traffic hour with project-related traffic from development of the proposed project. The intersection would operate at an unacceptable LOS F both with and without project traffic during the P.M. peak hour; however, the average intersection delay would increase by more than 5 seconds with project traffic. ***[Similar]***

Mitigation Measure 3.15-1a: Participate in Improvements to the SR 16/Excelsior Road Intersection (Intersection 1).

To ensure that the SR 16/Excelsior Road intersection operates at an acceptable LOS, the following improvements are required:

- The northbound and southbound approaches must be reconfigured to consist of one left-turn lane, one through lane, and one right-turn lane.

Improvements to the SR 16/Excelsior Road intersection are contained within the *Sunridge Specific Plan Public Facilities Financing Plan* and zoning conditions. The CEQA Findings of Fact and Statement of Overriding Considerations for the Sunrise Douglas Community Plan/Sunridge Specific Plan Project state that physical improvement of this intersection is feasible. Implementation of the improvements described above would assist in reducing traffic impacts on this intersection by providing acceptable operations. If these improvements are completed concurrent with development of the Sunridge Specific Plan and implemented before development of the SunCreek project, then the project impact at this intersection would be reduced to a less-than-significant level.

Improvements to this intersection must be coordinated with Caltrans, the County, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1a would reduce the significant impact on Intersection 1 under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a less-than-significant level, by allowing the intersection to operate at an acceptable LOS E or better. However, the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1b **Unacceptable LOS at the SR 16/Eagles Nest Road Intersection (Intersection 2).**

NCP, PP, BIM, CS, ID

The unsignalized intersection of SR 16/Eagles Nest Road would operate at LOS F during the A.M. and P.M. peak traffic hours with and without project-related traffic. However, project-related traffic would increase the delay for the worst-case approach at this intersection by more than 5 seconds during the peak traffic hours. ***[Similar]***

Mitigation Measure 3.15-1b: Participate in Improvements at the SR 16/Eagles Nest Road Intersection (Intersection 2).

To ensure that the SR 16/Eagles Nest Road intersection operates at an acceptable LOS, a traffic signal must be installed at this intersection with protected left-turn signal phasing on the eastbound and westbound approaches.

Improvements to the SR 16/Eagles Nest Road intersection are contained within the *Sunridge Specific Plan Public Facilities Financing Plan* and zoning conditions. The CEQA Findings of Fact and Statement of Overriding Considerations for the Sunrise Douglas Community Plan/Sunridge Specific Plan Project state that physical improvement of this intersection is feasible. Implementation of the improvement described above would assist in reducing traffic impacts on this intersection. If these improvements are completed concurrent with development of the Sunridge Specific Plan and implemented before development of the SunCreek project, then the project impact at this intersection would be reduced to a less-than-significant level.

Improvements to this intersection must be coordinated with Caltrans, the County, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1b would reduce the significant impact on Intersection 2 under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a less-than-significant level, by allowing the intersection to operate at an acceptable LOS E or better. However, the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1c **Unacceptable LOS at the SR 16/Sunrise Boulevard Intersection (Intersection 3).**

The signalized intersection of SR 16/Sunrise Boulevard would operate at LOS F during the A.M. and P.M. peak traffic hours with and without project-related traffic. However, project-related traffic would increase the average intersection delay by more than 5 seconds. ***[Similar]***

Mitigation Measure 3.15-1c: Participate in Improvements to the SR 16/Sunrise Boulevard Intersection (Intersection 3).

To ensure that the SR 16/Sunrise Boulevard intersection operates at an acceptable LOS, the northbound approach must be reconfigured to consist of one left-turn lane, one through lane, and one shared through/right-turn lane; and the southbound approach must be reconfigured to consist of one left-turn lane, two through lanes, and one right-turn lane.

An additional through lane would be needed in the eastbound and westbound directions, which would require widening of SR 16 on both sides of the intersection for a minimum of 1,000 feet in both directions. With these improvements, this intersection would operate at an acceptable LOS.

Improvements to the SR 16/Sunrise Boulevard intersection are contained within the County Development Fee Program, are scheduled for Measure A funding, and are within the *Mather Field Specific Plan Financing Plan*. Implementation of the improvements described above, including the necessary widening of SR 16, would assist in reducing traffic impacts on this intersection. If these improvements are completed concurrent with development of the Mather Field Specific Plan and implemented before development of the SunCreek project, then the project impact at this intersection would be reduced to a less-than-significant level.

Improvements to this intersection must be coordinated with Caltrans, the County, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1c would reduce the significant impact on Intersection 3 under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a less-than-significant level, by allowing the intersection to operate at an acceptable LOS. However, the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1d **Unacceptable LOS at the SR 16/Grant Line Road Intersection (Intersection 4).**

Signalized intersection operations at SR16/Grant Line Road would degrade from an unacceptable LOS E to an unacceptable LOS F during the A.M. peak traffic hour with project-related traffic and would operate at an unacceptable LOS F both with and without project traffic during the P.M. peak hour. The average intersection delay would increase by more than 5 seconds with project-related traffic in both peak hours. ***[Similar]***

Mitigation Measure 3.15-1d: Participate in Improvements to the SR 16/Grant Line Road Intersection (Intersection 4).

To ensure that the SR 16/Grant Line Road intersection operates at an acceptable LOS, all of the following improvements are required:

- The northbound and southbound approaches must be reconfigured to consist of one left-turn lane and one shared through/right-turn lane.
- Protected left-turn signal phasing must be provided on the northbound and southbound approaches.
- The eastbound approach must be reconfigured to consist of one left-turn lane, one through lane, and a shared through/right-turn lane.
- Additional southbound right-turn lane (Increased Development Alternative only)
- These improvements would require widening of SR 16 1,000 feet on both sides of the intersection.

Improvements to the SR 16/Grant Line Road intersection are contained within the County Development Fee Program, are scheduled for Measure A funding, and are within the *Mather Field Specific Plan Financing Plan.* Implementation of the improvements described above, including the necessary widening of SR 16, would assist in reducing traffic impacts on this intersection; with them, this intersection would operate at an acceptable LOS. If these improvements are completed concurrent with development of the Mather Field Specific Plan and implemented before development of the SunCreek project, then the project impact at this intersection would be reduced to a less-than-significant level.

Improvements to this intersection must be coordinated with Caltrans, the County, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1d would reduce the significant impact on Intersection 4 under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a less-than-significant level, by allowing the intersection to operate at an acceptable LOS. However, the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1e **Unacceptable LOS at the Florin Road/Sunrise Boulevard Intersection (Intersection 5).**

NCP, PP, BIM, CS, ID

Signalized intersection operations at Florin Road/Sunrise Boulevard would degrade from an acceptable LOS D to an unacceptable LOS F during the P.M. peak traffic hour with project-related traffic. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1e: Participate in Improvements to the Florin Road/Sunrise Boulevard Intersection (Intersection 5).

To ensure that the Florin Road/Sunrise Boulevard intersection operates at an acceptable LOS, the southbound approach must be reconfigured to consist of one through lane and one dedicated right-turn lane. Improvements to this intersection must be coordinated with the County and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1e would reduce the significant impact on Intersection 5 under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a less-than-significant level, by allowing the intersection to operate at an acceptable LOS. However, the identified improvements fall under the jurisdiction of the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1f **Unacceptable LOS at the Grant Line Road/Kiefer Boulevard Intersection (Intersection 7).**

NCP

A **direct, less-than-significant** impact would occur from project-generated traffic under No USACE Permit Alternative because the intersection operations do not degrade to an unacceptable level with the addition of project traffic. **No indirect** impacts would occur. ***[Lesser]***

PP, BIM, CS, ID

Unsignalized intersection operations at Grant Line Road/Kiefer Boulevard would degrade from an acceptable LOS B to an unacceptable LOS E during the either the A.M. or P.M. peak traffic hour with project-related traffic. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1f: Participate in Improvements to the Grant Line Road/Kiefer Boulevard Intersection (Intersection 7).

To ensure that the Grant Line Road/Kiefer Boulevard intersection operates at an acceptable LOS, the following improvements must be implemented:

- Configure the northbound approach with one left-turn lane, one through lane, and one right-turn lane
- Configure the southbound approach with one right-turn lane and one through lane

Improvements to this intersection must be coordinated with the County and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-1f would reduce the significant impact on Intersection 7 under development of the Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a **less-than-significant** level, by allowing the intersection to operate at an acceptable LOS.

IMPACT 3.15-1g **Unacceptable LOS at the Grant Line Road/Douglas Road Intersection (Intersection 8).**

NCP, PP, BIM, CS, ID

Unsignalized intersection operations at Grant Line Road/Douglas Road would degrade from an unacceptable LOS E to an unacceptable LOS F during the A.M. peak traffic hour with the addition of project-related traffic. However, project-related traffic would increase the average intersection delay by more than 5 seconds. Operations would degrade from LOS C to LOS E during the P.M. peak traffic hour, except under the Increased Development and Proposed Project alternatives where operations degrade to an unacceptable LOS F, with the addition of project-related traffic. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1g: Participate in Improvements to the Grant Line Road/Douglas Road Intersection (Intersection 8).

To ensure that the Grant Line Road/Douglas Road intersection operates at an acceptable LOS, a traffic signal must be installed at this intersection.

Improvements to the Grant Line Road/Douglas Road intersection are contained within the *Sunridge Specific Plan Public Facilities Financing Plan.* Implementation of the improvement described above would assist in reducing traffic impacts on this intersection. If this improvement is completed concurrent with development of the Sunridge Specific Plan and implemented before development of the SunCreek project, then the project impact at this intersection would be reduced to a less-than-significant level.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-1g would reduce the significant impact on Intersection 8 under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a **less-than-significant** level by allowing the intersection to operate at an acceptable LOS.

IMPACT 3.15-1h **Unacceptable LOS at the Sunrise Boulevard/Douglas Road Intersection (Intersection 9).**

NCP, PP, BIM, CS, ID

Signalized intersection operations at Sunrise Boulevard/Douglas Road would degrade from LOS F during the A.M. peak traffic hour and LOS E during the P.M. peak traffic hour, to LOS F during both the A.M. and P.M. peak traffic hours with project-related traffic. In addition, project-related traffic would increase the average intersection delay by more than 5 seconds. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1h: Participate in Improvements to the Sunrise Boulevard/Douglas Road Intersection (Intersection 9).

Improvements must be made to ensure that the Sunrise Boulevard/Douglas Road intersection operates at an acceptable LOS. Specifically, all approaches must be reconfigured to consist of two left-turn lanes, three through lanes, and one right-turn lane. However, with implementation of this improvement, the intersection would continue to operate at an unacceptable LOS F.

To further improve operations at the intersection, additional roadway connectivity is required. To achieve this connectivity, Rancho Cordova Parkway (and its connection to U.S. 50) must be implemented, the Zinfandel Drive Extension must be implemented, and International Drive must be extended to Sunrise Boulevard and through the Rio del Oro SPA.

Improvements to this intersection are contained within the *Sunridge Specific Plan Public Facilities Financing Plan*. The extension of Zinfandel Drive is identified as part of the *Mather Field Specific Plan Public Facilities Financing Plan*. Funding has been identified for Rancho Cordova Parkway and the interchange and for the extension of International Drive to Sunrise Boulevard within the City's CIP program. Implementation of the improvements identified above would assist in reducing traffic impacts on this intersection.

Improvements to this intersection must be coordinated with Caltrans, the County, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1h would reduce the significant impact on Intersection 9 to a less-than-significant level by improving intersection LOS under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives.

However, the identified improvements are not under the City's jurisdiction. The Zinfandel Drive Extension falls under the jurisdiction of the County, and Rancho Cordova Parkway and its associated interchange fall under the jurisdiction of Caltrans and the County. Therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable.** If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1i **Unacceptable LOS at the Mather Field Road/U.S. 50 Eastbound Ramps (Intersection 12).**

NCP, BIM

A **direct, less-than-significant** impact would occur from project-generated traffic under No USACE Permit and Biological Impact Minimization Alternatives because the intersection operations do not degrade to an unacceptable level with the addition of project traffic. **No indirect** impacts would occur. ***[Lesser]***

PP, CS, ID

Signalized intersection operations at Mather Field Road/U.S. 50 eastbound ramps would operate at an unacceptable LOS E during the A.M. peak traffic hour both with and without project-related traffic. However, project-related traffic would increase the average intersection delay by more than 5 seconds. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1i: Participate in Improvements to the Mather Field Road/U.S. 50 Eastbound Ramps Intersection (Intersection 12).

Improvements must be made to ensure that the Mather Field Road/U.S. 50 eastbound ramps intersection operates at an acceptable LOS. Specifically, the eastbound ramp needs modification to make the eastbound right turn a "free" movement. This would require a receiving lane on Mather Field Road, south of the intersection.

To further improve operations at the intersection, additional roadway connectivity is required. To achieve this connectivity, the Zinfandel Drive Extension must be implemented (to accommodate traffic generated within the Sunridge and SunCreek Specific Plan areas), International Drive must be extended to Sunrise Boulevard and into and through the Rio del Oro SPA, and Rancho Cordova Parkway (and its connection to U.S. 50) must be implemented.

The extension of Zinfandel Drive is identified as part of the *Mather Field Specific Plan Public Facilities Financing Plan*. Funding has been identified for Rancho Cordova Parkway and the interchange and for the extension of International Drive to Sunrise Boulevard within the City's CIP program. Implementation of the improvements identified above would assist in reducing traffic impacts on this intersection.

Improvements to this intersection must be coordinated with Caltrans, the County, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1i would reduce the significant impact on Intersection 12 to a less-than-significant level by improving intersection LOS under development of the Proposed Project, Conceptual Strategy, and Increased Development Alternatives. However, the identified improvements are not under the City's jurisdiction. The intersection is ultimately controlled by Caltrans. The Zinfandel Drive Extension falls under the jurisdiction of the County, and Rancho Cordova Parkway and its associated interchange fall under the jurisdiction of Caltrans and the County. Therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of these improvements. Thus, this impact is potentially **significant and unavoidable.** If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1j **Unacceptable LOS at the Sunrise Boulevard/White Rock Road Intersection (Intersection 18).**

NCP, PP, BIM, CS, ID

The signalized intersection operations of Sunrise Boulevard/White Rock Road would degrade from an unacceptable LOS E during the A.M. peak traffic hour and an unacceptable LOS F during the P.M. peak traffic hour to an unacceptable LOS F in both the A.M. and P.M. peak traffic hours with project-related traffic; however, the addition of project traffic would also increase the average intersection delay by more than 5 seconds during the A.M. and P.M. peak traffic hours. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1j: Participate in Improvements to the Sunrise Boulevard/White Rock Road Intersection (Intersection 18).

With two left-turn lanes, three through lanes, and one right-turn lane currently on all approaches, the Sunrise Boulevard/White Rock Road intersection would continue to operate at an unacceptable LOS as a result of sufficiently high volumes from traffic generated by the SunCreek Specific Plan and other developments in the area. Therefore, to ensure that this intersection operates at an acceptable LOS, additional improvements must be made, such as grade separation of the intersection (consistent with the City's Circulation Element/Plan) and/or additional roadway facilities such as the Zinfandel Drive Extension, International Drive Extension into and through the Rio del Oro SPA, and implementation of Rancho Cordova Parkway (and its connection to U.S. 50).

Improvements to this intersection and identified additional roadway connectivity are identified in the *Mather Field Specific Plan Public Facilities Financing Plan* (Zinfandel Drive Extension) or the City's CIP. Implementation of the improvements identified above would assist in reducing traffic impacts on this intersection. If these improvements are completed concurrent with development of the Mather Field Specific Plan or City's Public Facilities Financing Plan and implemented before development of the SunCreek project, then the project impact at this intersection would be reduced to a less-than-significant level.

Improvements to this intersection must be coordinated with the County and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1j would reduce the significant impact on Intersection 18 to a less-than-significant level by improving intersection LOS under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. However, a grade-separated intersection in the region has yet to be designed and implemented. Thus, this impact is potentially **significant and unavoidable**. If the City was able to provide funding to move forward with design and construction of the improvement, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1k **Unacceptable LOS at the Sunrise Boulevard/Zinfandel Drive Intersection (Intersection 22).**

NCP, PP, BIM, CS, ID

The signalized intersection of Sunrise Boulevard/Zinfandel Drive would operate at an unacceptable LOS F during the P.M. peak traffic hour with and without project-related traffic. However, the addition of project-related traffic would also increase the average intersection delay by more than 5 seconds. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1k: Participate in Improvements to the Sunrise Boulevard/Zinfandel Drive Intersection (Intersection 22).

Improvements must be made to ensure that the Sunrise Boulevard/Zinfandel Drive intersection operates at an acceptable LOS. Specifically, all of the following improvements should be made:

- Configure westbound and eastbound approaches with one left-turn lane and one shared through/right-turn lane
- Implement protected phasing for the westbound and eastbound left-turns
- Optimize signal timing and offset

These at-grade improvements may be made without allocating additional right-of-way, and then the project impact at this intersection would be reduced to a less-than-significant level.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-1k would reduce the significant impact on Intersection 22 under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a **less-than-significant** level by allowing the intersection to operate at an acceptable level of service.

IMPACT 3.15-1l **Unacceptable LOS at the Hazel Avenue/U.S. 50 Westbound Ramps Intersection (Intersection 25).**

BIM, CS

A **direct, less-than-significant** impact would occur from project-generated traffic under the Biological Impact Minimization and Conceptual Strategy Alternatives because the intersection operations do not degrade to an unacceptable level with the addition of project traffic. **No indirect** impacts would occur. ***[Lesser]***

NCP, PP, ID

The signalized intersection of Hazel Avenue/U.S. 50 Westbound Ramps would operate at LOS F during the A.M. and P.M. peak traffic hours with and without project-related traffic. However, project-related traffic would increase the average intersection delay by more than 5 seconds during both the A.M. and P.M. peak traffic hours under the Proposed Project and only the P.M. peak traffic hour under the No USACE Permit and Increased Development Alternatives. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1l: Participate in Improvements to the Hazel Avenue/U.S. 50 Westbound Ramps Intersection (Intersection 25).

To ensure that the Hazel Avenue/U.S. 50 westbound ramps intersection operates at an acceptable LOS, the following improvements should be made:

- Add an additional westbound right-turn on the off-ramp
- Add an additional eastbound right-turn lane
- Add an additional southbound through lane on Hazel Avenue

Improvements to this intersection must be coordinated with Caltrans, the County, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1l would reduce the significant impact on Intersection 25 to a less-than-significant level by improving intersection LOS under development of the No USACE Permit, Proposed Project, and Increased Development Alternatives. However, the identified improvement falls under the jurisdiction of Caltrans and the County. Therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1m **Unacceptable LOS at the Grant Line Road/White Rock Road Intersection (Intersection 27).**

NCP, PP, BIM, CS, ID

The unsignalized intersection operations of Grant Line Road/White Rock Road would degrade from an acceptable LOS D during the A.M. peak traffic hour to an unacceptable LOS F in both the A.M. peak traffic hour with project-related traffic under the Proposed Project; Operations at Grant Line Road/White Rock Road would continue to operate at an unacceptable LOS F during the P.M. peak traffic hour with the addition of project-related traffic under

all five action alternatives. However, the addition of project-related traffic during the P.M. peak traffic hour would increase control delay by more than 5 seconds. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1m: Participate in Improvements to the Grant Line Road/White Rock Road Intersection (Intersection 27).

To ensure that the Grant Line Road/White Rock Road intersection operates at an acceptable LOS, all of the following improvements are required:

- A traffic signal must be installed at this intersection.
- Configure the southbound approach with one through lane and one dedicated right-turn lane
- Maintain shared left/through/right-turn lane on the eastbound approach.
- Configure the northbound approach with one left-turn lane and one through lane

These improvements may require realignment of White Rock Road to provide adequate sight distance. Improvements to this intersection must be coordinated with the County and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1m would reduce the significant impact on Intersection 27 to a less-than-significant level by improving intersection LOS under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. However, the identified improvements fall under the jurisdiction of the County. Therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. This improvement has been approved to receive funding from the $20 billion bond measure passed in November 2006 through Proposition 1B, and if the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1n **Unacceptable LOS at the Kilgore Road/White Rock Road Intersection (Intersection 28).**

NCP, PP, BIM, CS, ID

Signalized intersection operations at Kilgore Road/White Rock Road would continue to operate at an unacceptable LOS E during the P.M. peak traffic hour with the addition of project-related traffic under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy Alternatives, and operations would degrade to an unacceptable LOS F during the P.M. peak traffic hour under the Increased Development Alternative. The addition of project-related traffic during the P.M. peak traffic hour would increase control delay by more than 5 seconds under all five action alternatives. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1n: Participate in Improvements to the Kilgore Road/White Rock Road Intersection (Intersection 28).

To ensure that the Kilgore Road/White Rock Road intersection operates at an acceptable LOS, a free right-turn lane must be added on the northbound approach with an associated receiving lane.

The crossing of the Folsom South Canal already consists of a six-lane crossing, thus the receiving lane for the northbound free right-turn can be accommodated. This reduces the project impact at this intersection to a less-than-significant level.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-1n would reduce the significant impact on Intersection 28 under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a **less-than-significant level** by allowing the intersection to operate at an acceptable level of service**.**

IMPACT 3.15-1o Unacceptable LOS at the Eagles Nest Road/Douglas Road Intersection (Intersection 29).

NCP, PP, BIM, CS, ID

Unsignalized intersection operations at Eagles Nest Road/Douglas Road would degrade an acceptable LOS D to an unacceptable LOS F during the P.M. peak traffic hour with project-related traffic under all five action alternatives. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1o: Participate in Improvements to the Eagles Nest Road/Douglas Road Intersection (Intersection 29).

To ensure that the Eagles Nest Road/Douglas Road intersection operates at an acceptable LOS, the following improvement is required:

- A traffic signal must be installed at this intersection.

Improvements to this intersection must be coordinated with the County and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1o would reduce the significant impact on Intersection 29 to a less-than-significant level by improving intersection LOS under development of the No USACE Permit, Proposed

Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. However, the identified improvements fall under the jurisdiction of the County. Therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1p **Unacceptable LOS at the Sunrise Boulevard/Kiefer Boulevard Intersection (Intersection 30).**

NCP, BIM, CS, ID

A **direct, less-than-significant** impact would occur under the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, or Increased Development Alternatives because the intersection operations do not degrade to an unacceptable level with the addition of project traffic. **No indirect** impacts would occur. ***[Lesser]***

PP

Signalized intersection operations at Sunrise Boulevard/Kiefer Boulevard would degrade from an acceptable LOS B in both the A.M. and P.M. peak traffic hours to an unacceptable LOS F during the A.M. peak traffic hour and an unacceptable LOS E during the P.M. peak traffic hour with project-related traffic. This **direct** impact would be **significant. No indirect** impacts would occur.

Mitigation Measure 3.15-1p: Participate in Improvements to the Sunrise Boulevard/Kiefer Boulevard Intersection (Intersection 30).

To ensure that the Sunrise Boulevard/Kiefer Boulevard intersection operates at an acceptable LOS, the following improvement is required:

- Optimize signal timing and phasing.

Improvements to this intersection must be coordinated with the County and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-1p would reduce the significant impact on Intersection 30 to a **less-than-significant** level by improving intersection LOS under development of the Proposed Project Alternative.

IMPACT 3.15-1q **Unacceptable LOS on Mather Boulevard between Femoyer Street and Douglas Road (Roadway Segment 4).**

NCP, PP, BIM, CS, ID

This roadway segment would degrade from an acceptable LOS C to an unacceptable LOS E with project-related traffic under all five action alternatives. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1q: Participate in Improvements to Mather Boulevard between Femoyer Street and Douglas Road (Roadway Segment 4).

To ensure that Mather Boulevard operates at an acceptable LOS between Femoyer Street and Douglas Road, Femoyer Street must be widened to four lanes between Mather Boulevard and the proposed Zinfandel Drive extension, and the future Zinfandel Drive extension must be constructed as a four-lane facility from Mather Boulevard to Douglas Road. Improvements to this roadway segment must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1q would reduce the significant impact on Roadway Segment 4 to a less-than-significant level by improving LOS under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. However, the identified improvements fall under the jurisdiction of the County. Therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term. Note that Sacramento County DERA is currently conditioning the environmental review for the widening/extension.

IMPACT 3.15-1r Unacceptable LOS on Douglas Road between Mather Boulevard and Sunrise Boulevard (Roadway Segment 5).

NCP, BIM, CS

A **direct, less-than-significant** impact would occur under the No USACE Permit, Biological Impact Minimization, and Conceptual Strategy Alternatives because the roadway segment does not degrade to an unacceptable level with the addition of project traffic. **No indirect** impacts would occur. ***[Lesser]***

PP, ID

This roadway segment would degrade from an acceptable LOS B to an unacceptable LOS E with project-related traffic under the Proposed Project and Increased Development Alternatives. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1r: Participate in Improvements to Douglas Road between Mather Boulevard and Sunrise Boulevard (Roadway Segment 5).

To ensure that Douglas Road operates at an acceptable LOS between Mather Boulevard and Sunrise Boulevard, Douglas Road must be widened to four lanes. Improvements to this roadway segment must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1r would reduce the significant impact on Roadway Segment 5 to a less-than-significant level by improving LOS under development of the Proposed Project and Increased Development Alternatives. However, the identified improvements fall under the jurisdiction of the County and other regulatory agencies because of the Folsom South Canal crossing. Therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If the County cooperates in allowing the improvement to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term. Note that Sacramento County DERA is currently conditioning the environmental review for the widening/extension.

IMPACT 3.15-1s Unacceptable LOS on Sunrise Boulevard between Gold Country Boulevard and Coloma Road (Roadway Segment 17).

NCP, PP, BIM, CS, ID

This roadway segment would operate at an unacceptable LOS F both with and without project-related traffic. However, the addition of project traffic would also cause the V/C ratio to increase by more than 0.05 under all five action alternatives. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1s: Participate in Improvements to Sunrise Boulevard between Gold Country Boulevard and Coloma Road (Roadway Segment 17).

Improvements must be made to improve operations on Sunrise Boulevard between Gold Country Boulevard and Coloma Road; specifically, this roadway segment should be widened to eight lanes. This improvement would offset the impacts of the project, but the segment would continue to operate at an unacceptable LOS. Additionally, although this improvement is consistent with the County Mobility Study, it is inconsistent with the City's Circulation Element/Plan because City Circulation Element identifies a maximum roadway cross section of six lanes. Furthermore, without additional river crossings, there are no parallel capacity improvements to relieve Sunrise Boulevard on this segment.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1s would partially reduce the significant impact on Roadway Segment 17 by offsetting impacts of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. However, implementation of this measure would not reduce the impact to a less-than-significant level, for the following reasons:

- This improvement is inconsistent with the City's Circulation Element/Plan.
- The potential for additional river crossings is limited. Any additional river crossings would require environmental review and would result in significant impacts on riparian vegetation. Additionally, implementing additional river crossings would require acquisition of a significant number of existing homes, would have the potential to increase traffic volumes through residential neighborhoods, would require substantial funding, and would require cooperation of multiple agencies and jurisdictions. Additionally, neither the City nor the project applicant(s) would have control over mitigation implementation involving other jurisdictions (i.e., the County, Caltrans, City of Sacramento).
- The segment would continue to operate at an unacceptable LOS with the identified improvement.

For these reasons, the impact is considered **significant and unavoidable**.

IMPACT 3.15-1t **Unacceptable LOS on Sunrise Boulevard between Coloma Road and the U.S. 50 Westbound Ramps (Roadway Segment 18).**

NCP, PP, BIM, CS, ID

This roadway segment would operate at an unacceptable LOS F both with and without project-related traffic. However, the addition of project traffic would also cause the V/C ratio to increase by more than 0.05 under all five action alternatives. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1t: Participate in Improvements to Sunrise Boulevard between Coloma Road and the U.S. 50 Westbound Ramps (Roadway Segment 18).

Improvements must be made to improve operations on Sunrise Boulevard between Coloma Road and the U.S. 50 westbound ramps; specifically, this roadway segment should be widened to eight lanes. This improvement would offset the impacts of the project, but the segment would continue to operate at an unacceptable LOS. Additionally, although this improvement is consistent with the County Mobility Study, it is inconsistent with the City's Circulation Element/Plan because it restricts the City's desire for a maximum roadway cross section of six lanes. Furthermore, without additional river crossings, there are no parallel capacity improvements to relieve Sunrise Boulevard on this segment.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1t would partially reduce the significant impact on Roadway Segment 18 by offsetting impacts from development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. However, implementation of this measure would not reduce the impact to a less-than-significant level for the same reasons as identified for Impact 3.15-1s above. Therefore, this impact is considered **significant and unavoidable**.

IMPACT 3.15-1u **Unacceptable LOS on Sunrise Boulevard between the U.S. 50 Eastbound Ramps and Folsom Boulevard (Roadway Segment 19).**

NCP, PP, BIM, CS, ID

This roadway segment would operate at an unacceptable LOS F both with and without project-related traffic. However, the addition of project traffic would also cause the V/C ratio to increase by more than 0.05 under all five action alternatives. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1u: Participate in Improvements to Sunrise Boulevard between the U.S. 50 Eastbound Ramps and Folsom Boulevard (Roadway Segment 19).

Improvements must be made to improve operations on Sunrise Boulevard between the U.S. 50 eastbound ramps and Folsom Boulevard; specifically, this roadway segment should be widened to eight lanes. This improvement would ensure that the roadway segment would operate at an acceptable level of service. However, although this improvement is consistent with the County Mobility Study, it is inconsistent with the City's Circulation Element/Plan because the plan reflects the City's desire for a maximum roadway cross section of six lanes.

An alternative to this identified improvement is implementation of parallel capacity improvements, such as implementation of Rancho Cordova Parkway (and its connection to U.S. 50) and the Zinfandel Drive Extension to Douglas Road, which could improve operations on this segment and reduce the project's impact.

Improvements to this roadway segment must be coordinated with Caltrans, Sacramento RT, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1u would reduce the significant impact on Roadway Segment 19 to a less-than-significant level by improving LOS under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. The alternative improvement, implementation of Rancho Cordova Parkway (and its connection to U.S. 50) and the Zinfandel Drive Extension to Douglas Road, could further reduce volumes on this segment and would reduce volumes on this segment. However, the identified improvement is inconsistent with the City's Circulation Element/Plan, and implementation of Rancho Cordova Parkway (and its connection to U.S. 50) and the Zinfandel Drive Extension to Douglas Road falls under the jurisdiction of the County and Caltrans; therefore, neither the City nor the project applicant(s) can guarantee implementation of either the identified improvement or its alternative. Thus, this impact is potentially **significant and unavoidable**. If Caltrans, Sacramento RT, the County, and other potentially affected agencies cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1v **Unacceptable LOS on Sunrise Boulevard between Folsom Boulevard and White Rock Road (Roadway Segment 20).**

NCP, PP, BIM, CS, ID

This roadway segment would degrade from an acceptable LOS C to an unacceptable LOS E with project-related traffic under all five action alternatives. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1v: Participate in Improvements to Sunrise Boulevard between Folsom Boulevard and White Rock Road (Roadway Segment 20).

Improvements must be made to improve operations on Sunrise Boulevard between Folsom Boulevard and White Rock Road; specifically, this roadway segment should be widened to eight lanes. This improvement would ensure that the roadway segment would operate at an acceptable level of service. However, this improvement is inconsistent with the City's Circulation Element/Plan because City policy requires a maximum roadway cross section of six lanes.

An alternative to this identified improvement is implementation of parallel capacity improvements, such as implementation of Rancho Cordova Parkway (and its connection to U.S. 50) and the Zinfandel Drive Extension to Douglas Road, which could improve operations on this segment and reduce the project's impact.

Improvements to this roadway segment must be coordinated with Caltrans and the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-1v would reduce the significant impact on Roadway Segment 20 to a less-than-significant level by improving LOS under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. The alternative improvement, implementation of Rancho Cordova Parkway (and its connection to U.S. 50) and the Zinfandel Drive Extension to Douglas Road, could further reduce volumes on this segment. However, the identified improvement is inconsistent with the City's Circulation Element/Plan, and implementation of Rancho Cordova Parkway and the Zinfandel Drive Extension falls under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) can guarantee implementation of either the identified improvement or its alternative. Thus, this impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-1w Unacceptable LOS at Sunrise Boulevard between Douglas Road and Kiefer Boulevard (Roadway Segment 29).

NCP, PP, BIM, CS, ID

This roadway segment would degrade from an acceptable LOS C to an unacceptable LOS E under the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives, and would degrade to an unacceptable LOS F under the Proposed Project Alternative with project-related traffic. This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1w: Participate in Improvements to Sunrise Boulevard between Douglas Road and Kiefer Boulevard (Roadway Segment 29).

To ensure that Sunrise Boulevard operates at an acceptable LOS between Douglas Road and Kiefer Boulevard, this roadway segment must be widened to six lanes consistent with the City's Circulation Element/Plan and CIP.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-1w would reduce the significant impact on Roadway Segment 29 to a **less-than-significant** level by providing acceptable operating levels with traffic from development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives.

IMPACT 3.15-1x Unacceptable LOS at Sunrise Boulevard between Kiefer Boulevard and State Route 16 (Roadway Segment 30).

NCP, BIM, CS, ID

A **direct, less-than-significant** impact would occur under the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives because the roadway segment does not degrade to an unacceptable level with the addition of project traffic. **No indirect** impact would occur. ***[Lesser]***

PP

This roadway segment would degrade from an acceptable LOS B to an unacceptable LOS E with project-related traffic under the Proposed Project Alternative. This **direct** impact would be **significant. No indirect** impacts would occur.

Mitigation Measure 3.15-1x: Participate in Improvements to Sunrise Boulevard between Kiefer Boulevard and State Route 16 (Roadway Segment 30).

To ensure that Sunrise Boulevard operates at an acceptable LOS between Kiefer Boulevard and SR 16, this roadway segment must be widened to six lanes consistent with the City's Circulation Element/Plan and CIP.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-1x would reduce the significant impact on Roadway Segment 30 to a **less-than-significant** level by providing acceptable operating levels with traffic from development of the Proposed Project Alternative.

IMPACT 3.15-1y **Unacceptable LOS at Various Merge and Diverge Segments of U.S. 50.**

NCP, PP, BIM, CS, ID

The following merge and diverge segments of U.S. 50 would operate at an unacceptable LOS F with and without project-related traffic under all five action alternatives:

- Eastbound U.S. 50
  - Mather Field Road direct off-ramp, diverge (both A.M. and P.M. peak traffic hours)
  - Mather Field Road loop on-ramp, merge (P.M. peak traffic hour only)
  - Mather Field Road direct on-ramp, merge (both A.M. and P.M. peak traffic hours)
  - Sunrise Boulevard loop/direct on-ramp, merge (P.M. peak traffic hour only)
  - Hazel Avenue direct off-ramp, diverge (P.M. peak traffic hour only)
- Westbound U.S. 50
- Mather Field Road loop on-ramp, merge (P.M. peak traffic hour only)

This **direct** impact would be **significant. No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-1y: Participate in Improvements to Various Merge and Diverge Segments of U.S. 50.

To ensure that the U.S. 50 merge and diverge areas operate at an acceptable LOS, the following improvements to the U.S. 50 corridor are required:

- Ramp metering must be added on the Mather Field Road eastbound on-ramps.
- An auxiliary lane must be constructed from Mather Field Road eastbound to Zinfandel Drive.
- An auxiliary lane must be constructed from Sunrise Boulevard eastbound to Hazel Avenue
- Traffic-signal timing at freeway interchanges must be coordinated with adjacent City intersections to minimize impacts of vehicle queue spillback onto U.S. 50.
- Parallel facilities to U.S. 50 must be constructed, including improvements to SR 16, extension of International Drive into and through the Rio del Oro SPA, extension of Kiefer Boulevard, construction of Easton Valley Parkway, widening of White Rock Road from the Silva Valley Interchange in El Dorado County to Sunrise Boulevard, and connectivity of International Drive to Old Placerville Road.
- HOV lanes must be extended from Sunrise Boulevard to downtown Sacramento (or, as an interim project, to Watt Avenue).
- HOV enhancements to existing interchanges must be provided, such as bypass lanes at existing metered on-ramps.

Improvements to these merge and diverge segments of U.S. 50 must be coordinated with Caltrans and the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

The City's CIP has identified some of the improvements identified above. Caltrans is conducting the U.S. 50 HOV Lane Project Plus Community Enhancement Project, which will evaluate the extension of eastbound and westbound HOV lanes on U.S. 50 to downtown Sacramento, and as stated before. As stated before, the 50 Corridor Mobility Partnership was an effort set forth by jurisdictions along the U.S. 50 corridor, including representatives from the City of Folsom, City of Rancho Cordova, Sacramento County, El Dorado County, and several private land owners, in order to prioritize improvements along the corridor.

Implementation of Mitigation Measure 3.15-1z would reduce the significant impacts on U.S. 50 freeway merge/diverge/weave areas to a less-than-significant level under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. However, several of the identified improvements fall under the jurisdiction of Caltrans or the County; therefore, neither the City nor the project applicant(s) can ensure that these improvements would be completed. Given these conditions, this impact would be **potentially significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-2 **Increased Demand for Alternative Modes of Transportation.** *Implementation of the project would create demand for alternative transportation mode facilities such as buses, LRT, and carpools in Rancho Cordova.*

NP

Because no project-related development would occur under the No Project Alternative, there would be no project-related demand on alternative modes of transportation; thus**, no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

The project includes a mix of residential densities, commercial uses, and pedestrian and bicycle facilities to promote options for movement beyond the use of motor vehicles. No LRT facilities are proposed as part of the specific plan; however, the City's Transit Master Plan identifies Rancho Cordova Parkway as a signature transit route with two transit stations along the perimeter of the project. The Transit Master Plan also identifies Sunrise Boulevard, Rancho Cordova Parkway, and Grant Line Road as bus routes, but no specific lines traveling through the SPA. The project would create demand for alternative modes of transportation such as buses, LRT, and carpools in Rancho Cordova. This increased demand for alternative transportation modes is considered a **potentially significant**, **direct** impact. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-2a: Participate in Capital Improvements for Transit Service.

The project applicant(s) shall participate in capital improvements for transit service consistent with the City's Transit Master Plan. The project's fair-share participation and the associated timing of the improvements shall be identified in the project conditions of approval and/or the project's development agreement. Improvements shall be coordinated, as necessary, with Sacramento RT.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department.

Mitigation Measure 3.15-2b: Consult with the 50 Corridor Transportation Management Association and Comply with the City of Rancho Cordova Transportation System Management Ordinance.

The project applicants shall consult with the 50 Corridor Transportation Management Association and comply with the City of Rancho Cordova transportation system management ordinance.

Implementation: Project Applicants.

Timing: Concurrent with construction of any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department.

Implementation of Mitigation Measures 3.15-2a and 3.15-2b would promote usage of alternative transportation modes and increase the supply of these modes. However, because neither the City nor the project applicant(s) can guarantee implementation of increased transit service within Rancho Cordova by Sacramento RT, the impact is potentially **significant and unavoidable** under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. If Sacramento RT cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-3 **Potential Inconsistencies with the City's General Plan Circulation Network.** *Alternatives to the Proposed Project are inconsistent with the City's adopted General Plan Circulation Network.*

NP

Because no project-related development would occur under the No Project Alternative, there would be no project-related inconsistency with the City's General Plan Circulation Network; thus**, no direct** or **indirect** impacts would occur. ***[Similar]***

NCP, BIM, CS, ID

Americanos Boulevard runs north/south east of Rancho Cordova Parkway within the SunCreek Specific Plan and is identified in the City General Plan. All project alternatives do not reflect the alignment of Americanos Boulevard through the SPA identified by the City General Plan. The following alternatives identify Americanos Boulevard as discontinuous through the SPA:

- Biological Impact Minimization Alternative
- Conceptual Strategy Alternative
- Increased Development Alternative

The EIR for the City General Plan does not address the alternative alignments described in the Biological Impact Minimization, Conceptual Strategy, and Increased Development alternatives.

Grant Line Road runs north/south on the east side of the SPA and has been identified by the City General Plan as a six-lane expressway. An expressway is defined by the General Plan's Circulation Element as a high-speed, limited access road, with no access directly from development. However, direct residential access has been identified by the following alternatives:

- No USACE Permit Alternative

- Biological Impact Minimization Alternative
- Increased Development Alternative

These inconsistencies are considered a **potentially significant**, **direct** impact. **No indirect** impacts would occur. ***[Greater]***

Mitigation Measure 3.15-3: Modify Specific Plan to Be Consistent with the City's General Plan.

Modify the specific plan under the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives so that they are consistent with the City General Plan Circulation Network.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department.

PP

Because the Proposed Project Alternative is consistent with the City's Adopted General Plan Circulation Network, there would be **no direct or indirect** impacts.

Implementation of Mitigation Measure 3.15-3 would make the specific plan consistent with the City General Plan Circulation Network and therefore would reduce the impact to a **less-than-significant** level under the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives.

3.15.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

This section addresses impacts of the project under cumulative (2032) conditions. Impacts are identified when the project's incremental contribution is "cumulatively considerable" and thus is considered significant.

Cumulative effects that would occur under each alternative development scenario are identified as follows: NP (No Project), NCP (No USACE Permit), PP (Proposed Project), BIM (Biological Impact Minimization), CS (Conceptual Strategy), and ID (Increased Development). Note that all cumulative impacts of the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development alternatives would be similar to those of the Proposed Project Alternative, while those of the No Project Alternative would be substantially less than those of the Proposed Project Alternative because no project-related development would occur.

IMPACT 3.15-4 **Increases to Peak-Hour and Daily Traffic Volumes, Resulting in Unacceptable Levels of Service, under Cumulative (2032) Conditions.** *Implementation of the project and other reasonably foreseeable development would cause an increase in A.M. peak traffic hour, P.M. peak traffic hour, and/or daily traffic volumes on area roadways, resulting in unacceptable LOS and warranting the need for improvements such as traffic signals and additional lanes under cumulative (2032) conditions.*

NP

Because no project-related development would occur under the No Project Alternative, there would be no project-generated traffic that would affect the regional transportation system; thus, **no direct** or **indirect** impacts would occur. ***[Lesser]***

Under all traffic-analysis scenarios that assume full project buildout under cumulative (2032) conditions (i.e., the Cumulative Plus Full Buildout scenario), project-related traffic under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would affect LOS at study-area intersections. Exhibits 3.15-27A, 3.15-27B, 3.15-27C, 3.15-30A, 3.15-30B, 3.15-30C, 3.15-33A, 3.15-33B, 3.15-33C, 3.15-36A, 3.15-36B, 3.15-36C, 3.15-39A, 3.15-39B, 3.15-39C, 3.15-42A, 3.15-42B, and 3.15-42C present peak-hour traffic volumes, lane configurations, and traffic control at study intersections under Cumulative No Project, Cumulative Plus No Federal Action, Cumulative Plus Project, Cumulative Plus Biological Impact Minimization, Cumulative Plus Conceptual Strategy, and Cumulative Plus Increased Development conditions. Exhibits 3.15-28, 3.15-31, 3.15-34, 3.15-37, 3.15-40, and 3.15-43 present ADT volumes on study roadway segments under Cumulative No Project, Cumulative Plus No USACE Permit, Cumulative Plus Project, Cumulative Plus Biological Impact Minimization, Cumulative Plus Conceptual Strategy, and Cumulative Plus Increased Development conditions. Exhibits 3.15-29A, 3.15-29B, 3.15-32A, 3.15-32B, 3.15-35A, 3.15-35B, 3.15-38A, 3.15-38B, 3.15-41A, 3.15-41B, 3.15-44A, and 3.15-44B present peak-hour traffic volumes on the U.S. 50 mainline and ramps under Cumulative No Project, Cumulative Plus No USACE Permit, Cumulative Plus Project, Cumulative Plus Biological Impact Minimization, Cumulative Plus Conceptual Strategy, and Cumulative Plus Increased Development conditions. As shown in these exhibits, project implementation would cause an increase in A.M. peak-hour, P.M. peak-hour, and/or daily traffic volumes at study area intersections, roadway segments, and freeway ramps. Impacts associated with this increased traffic were compared against the thresholds of significance previously identified. For the sake of brevity, only intersections, roadways, and freeway ramps where **direct, significant** impacts would occur are discussed below, followed by required mitigation measures. There would be **no indirect** impacts in this context. Tables 3.15-14, 3.15-15, and 3.15-16 show intersections, roadway segments, and freeway ramps that would be affected by project implementation. ***[Similar]***

Mitigation Measure Common to All Impacts under Impact 3.15-4: Participate in Identified Roadway Improvements.

To avoid repetition, the information contained in the following mitigation measure applies to all other mitigation measures required under Impact 3.15-4. Note that no mitigation measures are required for the No Project Alternative because, as described above, no direct or indirect impacts would occur.

The project applicant(s) shall participate in the necessary improvements identified in all of the following mitigation measures. The project's fair-share participation and the associated timing of the improvements shall be identified in the project conditions of approval and in the mitigation monitoring and reporting program for the project or in conjunction with and as an appendix to the specific plan (see mitigation measures following each identified impact).

The timing and enforcement (described below) would be the same for all identified mitigation measures associated with Impact 3.15-4.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department.

Please note that the improvements described in each of the following mitigation measures have not been designed, and therefore, project-specific impacts as a result of these improvements cannot be precisely identified or quantified.

Table 3.15-14
Intersection Levels of Service—Cumulative Conditions

Intersection	Control	No Project				No USACE Permit Alternative				Proposed Project				Biological Impact Minimization Alternative				Conceptual Strategy Alternative				Increased Development Alternative			
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. SR 16/Excelsior Road	Signal	170	F	187	F	**200**	**F**	**>200**	**F**	**200**	**F**	**>200**	**F**	**195**	**F**	190	F	**192**	**F**	**>200**	**F**	**195**	**F**	**>200**	**F**
2. SR 16/Eagles Nest Road	Signal	87	F	64	E	**124**	**F**	**101**	**F**	**135**	**F**	**109**	**F**	**123**	**F**	**97**	**F**	**112**	**F**	**101**	**F**	**121**	**F**	**100**	**F**
3. SR 16/Sunrise Boulevard	Signal	75	E	55	D	**83**	**F**	**81**	**F**	**99**	**F**	**79**	**E**	**95**	**F**	**75**	**E**	**91**	**F**	**76**	**E**	**84**	**F**	**76**	**E**
4. SR 16/Grant Line Road	Signal	149	F	79	E	**185**	**F**	**91**	**F**	**203**	**F**	**105**	**F**	**180**	**F**	**91**	**F**	**180**	**F**	**94**	**F**	**192**	**F**	**92**	**F**
5. Florin Road/Sunrise Boulevard	Signal	57	E	12	B	63	E	15	B	**81**	**F**	16	B	62	E	16	B	61	E	16	B	60	E	15	B
6. Grant Line Road/Sunrise Boulevard	Signal	111	F	105	F	**122**	**F**	**136**	**F**	**132**	**F**	**148**	**F**	**128**	**F**	**136**	**F**	**123**	**F**	**141**	**F**	**131**	**F**	**129**	**F**
7. Grant Line Road/Kiefer Boulevard	Signal	140	F	67	E	**174**	**F**	**89**	**F**	**>200**	**F**	**126**	**F**	**146**	**F**	**79**	**E**	**134**	**F**	**81**	**F**	**182**	**F**	**115**	**F**
8. Douglas Road/Grant Line Road	Signal	14	B	9	A	20	C	11	B	42	D	14	B	15	B	16	B	37	D	17	B	16	B	12	B
9. Douglas Road/Sunrise Boulevard	Signal	147	F	157	F	**182**	**F**	**186**	**F**	**191**	**F**	**>200**	**F**	**193**	**F**	**>200**	**F**	**192**	**F**	**200**	**F**	**198**	**F**	**>200**	**F**
10. Mather Field Road/Folsom Boulevard	Signal	84	F	115	F	83	F	116	F	85	F	117	F	83	F	116	F	81	F	116	F	84	F	119	F
11. Mather Field Road/U.S. 50 westbound ramps	Signal	32	C	22	C	33	C	23	C	33	C	22	C	36	D	22	C	33	C	23	C	34	C	22	C
12. Mather Field Road/U.S. 50 eastbound ramps	Signal	188	F	87	F	**>200**	**F**	83	F	**>200**	**F**	**99**	**F**	**>200**	**F**	**94**	**F**	**>200**	**F**	87	F	**200**	**F**	**98**	**F**
13. Mather Field Road/International Drive	Signal	>200	F	150	F	**>200**	**F**	**159**	**F**	**>200**	**F**	**157**	**F**	**>200**	**F**	152	F	**>200**	**F**	154	F	**>200**	**F**	**160**	**F**
14. Zinfandel Drive/International Drive	Signal	192	F	187	F	**>200**	**F**	**197**	**F**	**>200**	**F**	**197**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**192**	**F**	**>200**	**F**	**199**	**F**
15. Zinfandel Drive/White Rock Road	Signal	135	F	151	F	**141**	**F**	**169**	**F**	**143**	**F**	**157**	**F**	137	F	149	F	139	F	**166**	**F**	**146**	**F**	**156**	**F**
16. Zinfandel Drive/U.S. 50 eastbound ramps	Signal	132	F	192	F	135	F	**>200**	**F**	**138**	**F**	197	F	134	F	196	F	134	F	**207**	**F**	**140**	**F**	196	F
17. Zinfandel Drive/U.S. 50 westbound ramps	Signal	23	C	18	B	23	C	18	B	23	C	18	B	23	C	18	B	23	C	18	B	23	C	17	B
18. Sunrise Boulevard/White Rock Road	Signal	>200	F	122	F	**>200**	**F**	**128**	**F**	**>200**	**F**	**135**	**F**	**>200**	**F**	126	F	**>200**	**F**	122	F	**>200**	**F**	**129**	**F**
19. Sunrise Boulevard/Folsom Boulevard	Signal	>200	F	175	F	**>200**	**F**	**188**	**F**	**>200**	**F**	**191**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**186**	**F**	**>200**	**F**	>200	F
20. Sunrise Boulevard/U.S. 50 eastbound ramps	Signal	112	F	76	E	116	F	**83**	**F**	**117**	**F**	**88**	**F**	**120**	**F**	**90**	**F**	**117**	**F**	80	E	**119**	**F**	**91**	**F**
21. Sunrise Boulevard/U.S. 50 westbound ramps	Signal	102	F	>200	F	104	F	**>200**	**F**	**108**	**F**	**>200**	**F**	**107**	**F**	**>200**	**F**	**108**	**F**	**>200**	**F**	**107**	**F**	**>200**	**F**

Table 3.15-14
Intersection Levels of Service—Cumulative Conditions (Continued)

Intersection	Control	No Project				No USACE Permit Alternative				Proposed Project				Biological Impact Minimization Alternative				Conceptual Strategy Alternative				Increased Development Alternative			
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
22. Sunrise Boulevard/Zinfandel Drive	Signal	188	F	192	F	175	F	**>200**	**F**	**178**	**F**	**>200**	**F**	180	F	**199**	**F**	178	F	**>200**	**F**	176	F	**200**	**F**
23. Hazel Avenue/Folsom Boulevard	Signal	>200	F	>200	F	>200	F	**>200**	**F**	**>200**	**F**	**>200**	**F**	>200	F	**>200**	**F**	>200	F	**>200**	**F**	>200	F	**>200**	**F**
24. Hazel Avenue/U.S. 50 eastbound ramps	Signal	91	F	>200	F	**101**	**F**	**>200**	**F**	**100**	**F**	**>200**	**F**	90	F	**>200**	**F**	**101**	**F**	>200	F	**96**	**F**	**>200**	**F**
25. Hazel Avenue/U.S. 50 westbound ramps	Signal	>200	F	>200	F	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**
26. Hazel Avenue/Gold Country Boulevard	Signal	>200	F	430	F	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	236	F	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**
27. White Rock Road/Grant Line Road	Signal	146	F	184	F	**170**	**F**	**>200**	**F**	**189**	**F**	**>200**	**F**	**180**	**F**	**>200**	**F**	**172**	**F**	**>200**	**F**	**173**	**F**	**>200**	**F**
28. White Rock Road/Kilgore Road	Signal	159	F	188	F	**178**	**F**	189	F	**169**	**F**	192	F	**173**	**F**	191	F	155	F	178	F	**182**	**F**	186	F
29. Zinfandel Drive/Eagles Nest Road/Douglas Rd	Signal	183	F	142	F	**234**	**F**	**163**	**F**	**>200**	**F**	**188**	**F**	**>200**	**F**	**173**	**F**	**>200**	**F**	**184**	**F**	**>200**	**F**	**184**	**F**
30. Sunrise Blvd/Kiefer Blvd	Signal	22	C	23	C	34	C	**103**	**F**	**65**	**E**	**105**	**F**	36	D	**84**	**F**	35	C	**86**	**F**	48	D	**91**	**F**
31. Rancho Cordova Parkway /U.S. 50 westbound ramps	Signal	115	F	133	F	119	F	**152**	**F**	**129**	**F**	**149**	**F**	117	F	**147**	**F**	**127**	**F**	**146**	**F**	**127**	**F**	**145**	**F**
32. Rancho Cordova Parkway/U.S. 50 eastbound ramps[a]	Signal	>200	F	>200	F	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**
33. Rancho Cordova Parkway/Easton Valley Parkway	Signal	>200	F	>200	F	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**	**>200**	**F**
34. Rancho Cordova Parkway/White Rock Road	Signal	>200	F	184	F	>200	F	**>200**	**F**	**>200**	**F**	**189**	**F**	>200	F	**199**	**F**	>200	F	**190**	**F**	**>200**	**F**	**>200**	**F**
35. Americanos Boulevard/White Rock Road	Signal	47	D	35	D	**59**	**E**	41	D	**59**	**E**	43	D	55	D	41	D	**57**	**E**	39	D	**58**	**E**	43	D
36. Rancho Cordova Parkway/Douglas Road	Signal	23	C	26	C	48	D	**105**	**F**	**62**	**E**	**102**	**F**	42	D	53	D	48	D	54	D	51	D	**62**	**E**
37. Americanos Boulevard/Douglas Road	Signal	27	C	26	C	42	D	32	C	**64**	**E**	55	D	45	D	44	D	50	D	50	D	50	D	41	D
38. Sunrise Boulevard/Chrysanthy Boulevard	Signal	36	D	10	A	50	D	12	B	**63**	**E**	12	B	**59**	**E**	12	B	**56**	**E**	12	B	**59**	**E**	12	B
39. Rancho Cordova Parkway/Chrysanthy Boulevard	Signal	22	C	17	B	42	D	22	C	**117**	**F**	47	D	37	D	23	C	41	D	22	C	49	D	24	C
40. Americanos Boulevard/Chrysanthy Boulevard	Signal	25	C	19	B	22	C	35	D	**80**	**E**	**173**	**F**	51	D	18	B	20	C	21	C	41	D	48	D
41. Rancho Cordova Parkway/Kiefer Boulevard	Signal	25	C	29	C	**69**	**E**	42	D	26	C	26	C	43	D	**74**	**E**	48	D	**109**	**F**	**65**	**E**	27	C
42. Sunrise Boulevard/International Boulevard	Signal	154	F	>200	F	**179**	**F**	**>200**	**F**	**189**	**F**	**>200**	**F**	**185**	**F**	**>200**	**F**	**169**	**F**	**>200**	**F**	**173**	**F**	**>200**	**F**

Notes: LOS = level of service; U.S. 50 = U.S. Highway 50

Average intersection delay reported for all signalized intersections. Delay reported in seconds per vehicle.

Shaded areas indicate deficiency. **Bold** indicates impact.

A: While Synchro reports this intersection as operating acceptably, a review of the simulation results suggest that queues would form at the off ramp. Thus, operations are identified as LOS F.

Source: Data Compiled by Fehr & Peers in 2010 and 2011.

Table 3.15-15
Roadway Segment Levels of Service—Cumulative Conditions

Roadway Segment	Lanes	No Project			No USACE Permit Alternative			Proposed Project			Biological Impact Minimization Alternative			Conceptual Strategy Alternative			Increased Development Alternative		
		ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
1. SR 16—Excelsior Road to Eagles Nest Road	2	21,900	1.22	F	**24,400**	**1.36**	**F**	**25,500**	**1.42**	**F**	**24,000**	**1.33**	**F**	**24,100**	**1.34**	**F**	24,900	**1.38**	**F**
2. SR 16—Sunrise Boulevard to Grant Line Road	2	26,140	1.45	F	26,440	1.47	F	**28,340**	**1.57**	**F**	26,640	1.48	F	26,540	1.47	F	**16,940**	**1.50**	**F**
3. Kiefer Boulevard—Grant Line Road to north of SR 16	2	6,300	0.35	A	6,800	0.38	A	7,200	0.40	A	6,800	0.38	A	6,800	0.38	A	6,800	0.38	A
4. Mather Boulevard—Femoyer Street to Douglas Road	4	22,300	0.62	B	24,200	0.67	B	26,100	0.73	C	24,200	0.67	B	24,400	0.68	B	24,800	0.69	B
5. Douglas Road—Mather Boulevard to Sunrise Boulevard	4	26,000	0.72	C	28,500	0.79	C	30,700	0.85	D	28,400	0.79	C	28,700	0.80	C	29,200	0.81	D
6. International Drive—South White Rock Road to Zinfandel Drive	6	60,800	1.13	F	61,400	1.14	F	61,700	1.14	F	61,300	1.14	F	61,400	1.14	F	61,500	1.14	F
7. International Drive—Zinfandel Drive to Kilgore Road	6	65,600	1.21	F	66,800	1.24	F	67,600	1.25	F	66,700	1.24	F	66,800	1.24	F	67,100	1.24	F
8. White Rock Road—Zinfandel Drive to Sunrise Boulevard	6	42,400	0.79	C	42,500	0.79	C	42,500	0.79	C	42,500	0.79	C	42,500	0.79	C	42,500	0.79	C
9. White Rock Road—Sunrise Boulevard to Grant Line Road	6x[1]	52,790	0.65	C	52,890	0.65	C	52,990	0.65	C	52,990	0.65	C	52,890	0.65	C	52,990	0.65	C
10. Folsom Boulevard—Zinfandel Drive to Sunrise Boulevard	4	28,600	0.79	C	28,700	0.80	C	28,700	0.80	C	28,700	0.80	C	28,700	0.80	C	28,700	0.80	C
11. Folsom Boulevard—Sunrise Boulevard to Hazel Avenue	4	27,900	0.78	C	27,900	0.78	C	28,000	0.78	C	27,900	0.78	C	27,900	0.78	C	28,000	0.78	C
12. Mather Field Road—Folsom Boulevard to U.S. 50 westbound ramps	4	41,200	1.14	F	41,400	1.15	F	41,600	1.16	F	41,400	1.15	F	41,400	1.15	F	41,400	1.15	F
13. Mather Field Road—U.S. 50 eastbound ramps to International Drive	6	67,800	1.26	F	68,800	1.27	F	69,900	1.29	F	68,700	1.27	F	68,900	1.28	F	69,100	1.28	F
14. Zinfandel Drive—Folsom Boulevard to U.S. 50 westbound ramps	4	30,800	0.86	D	31,100	0.86	D	31,200	0.87	D	31,000	0.86	D	31,000	0.86	D	31,100	0.86	D
15. Zinfandel Drive—U.S. 50 eastbound ramps to White Rock Road	6	78,000	1.44	F	78,700	1.46	F	79,000	1.46	F	78,600	1.46	F	78,600	1.46	F	78,800	1.46	F
16. Zinfandel Drive—White Rock Road to International Drive	6	42,200	0.78	C	42,800	0.79	C	43,100	0.80	C	42,800	0.79	C	42,800	0.79	C	43,000	0.80	C
17. Sunrise Boulevard—Gold Country Boulevard to Coloma Road	6	97,400	1.80	F	99,000	1.83	F	**100,000**	**1.85**	**F**	98,800	1.83	F	99,000	1.83	F	99,400	1.84	F
18. Sunrise Boulevard—Coloma Road to U.S. 50 westbound ramps	6	97,900	1.81	F	99,900	1.85	F	**101,000**	**1.87**	**F**	99,700	1.85	F	99,900	1.85	F	**100,300**	**1.86**	**F**
19. Sunrise Boulevard—U.S. 50 eastbound ramps to Folsom Boulevard	6	60,400	1.12	F	62,400	1.16	F	**63,500**	**1.18**	**F**	62,200	1.15	F	62,400	1.16	F	62,800	1.16	F
20. Sunrise Boulevard—Folsom Boulevard to White Rock Road	6	55,700	1.03	F	57,900	1.07	F	**59,100**	**1.09**	**F**	57,700	1.07	F	57,900	1.07	F	**58,300**	**1.08**	**F**
21. Sunrise Boulevard—White Rock Road to Douglas Road	6	41,300	0.76	C	45,300	0.84	D	47,500	0.88	D	44,700	0.83	D	45,100	0.84	D	46,000	0.85	D
22. Sunrise Boulevard—SR 16 to Grant Line Road	6	26,400	0.49	A	28,500	0.53	A	30,100	0.56	A	27,900	0.52	A	28,100	0.52	A	28,900	0.54	A
23. Hazel Avenue—Winding Way to U.S. 50 westbound ramps	6	121,100	2.24	F	121,900	2.26	F	122,600	2.27	F	121,800	2.26	F	121,900	2.26	F	122,100	2.26	F
24. Grant Line Road—White Rock Road to Douglas Road	4h[2]	52,520	1.31	F	**55,520**	**1.39**	**F**	**59,220**	**1.48**	**F**	**55,520**	**0.39**	**F**	**56,120**	**1.40**	**F**	**56,520**	**1.41**	**F**
25. Grant Line Road—Douglas Road to SR 16	4h	35,390	0.88	D	**38,090**	**0.95**	**E**	**42,990**	**1.07**	**F**	**38,990**	**0.97**	**E**	**38,890**	**0.97**	**E**	**39,490**	**0.99**	**E**
26. Grant Line Road—SR 16 to Sunrise Boulevard	4h	28,810	0.72	C	30,810	0.77	C	32,610	0.82	D	30,910	0.77	C	31,210	0.78	C	31,310	0.78	C
27. Douglas Road—Sunrise Boulevard to Rancho Cordova Parkway	4	26,930	0.75	C	32,030	0.89	D	**36,530**	**1.01**	**F**	31,430	0.87	D	32,230	0.90	D	**33,030**	**0.92**	**E**
28. Douglas Road—Americanos Boulevard to Grant Line Road	4	18,230	0.51	A	18,730	0.52	A	19,030	0.53	A	18,830	0.52	A	18,630	0.52	A	19,030	0.53	A
29. Sunrise Boulevard—Kiefer Boulevard to SR 16	6	35,900	0.66	B	41,000	0.76	C	42,400	0.79	C	39,500	0.73	C	39,700	0.74	C	41,200	0.76	C

Table 3.15-15
Roadway Segment Levels of Service—Cumulative Conditions (Continued)

Roadway Segment	Lanes	No Project			No USACE Permit Alternative			Proposed Project			Biological Impact Minimization Alternative			Conceptual Strategy Alternative			Increased Development Alternative		
		ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS
30. Douglas Road—Rancho Cordova Parkway to Americanos Boulevard	4	15,430	0.43	A	15,530	0.43	A	15,730	0.44	A	15,730	0.44	A	15,530	0.43	A	15,730	0.44	A
31. Chrysanthy Boulevard—Sunrise Boulevard to Rancho Cordova Parkway	4	6,800	0.19	A	6,900	0.19	A	7,200	0.20	A	6,900	0.19	A	7,000	0.19	A	7,000	0.19	A
32. Chrysanthy Boulevard—Rancho Cordova Parkway to Americanos Boulevard	4	9,200	0.26	A	9,800	0.27	A	10,700	0.30	A	9,800	0.27	A	10,000	0.28	A	10,100	0.28	A
33. Kiefer Boulevard—Zinfandel Drive to Sunrise Boulevard	4	3,900	0.11	A	8,600	0.24	A	9,400	0.26	A	8,000	0.22	A	8,100	0.23	A	9,300	0.26	A
34. Kiefer Boulevard—Sunrise Boulevard to Rancho Cordova Parkway	4	5,600	0.16	A	15,300	0.43	A	16,000	0.44	A	14,000	0.39	A	14,500	0.40	A	15,500	0.43	A
35. Zinfandel Drive—Mather Boulevard to Douglas Road	6	29,300	0.52	A	30,600	0.57	A	32,700	0.61	B	30,600	0.57	A	30,800	0.57	A	31,300	0.58	A
36. Zinfandel Drive—Douglas Road to Kiefer Boulevard	2	5,600	0.31	A	5,800	0.32	A	5,800	0.32	A	5,800	0.32	A	5,700	0.32	A	5,800	0.32	A
37. Zinfandel Drive—Kiefer Boulevard to SR 16	2	6,300	0.35	A	6,400	0.36	A	6,400	0.36	A	6,300	0.35	A	6,400	0.36	A	6,300	035	A
38. Sunrise Boulevard—Douglas Road to Chrysanthy Boulevard	6	53,900	1.00	E	**57,200**	**1.06**	**F**	**58,500**	**1.08**	**F**	**56,900**	**1.05**	**F**	**56,800**	**1.05**	**F**	**57,900**	**1.07**	**F**
39. Sunrise Boulevard—Chrysanthy Boulevard to Kiefer Boulevard	6	37,800	0.70	B	41,700	0.77	C	43,100	0.80	C	41,200	0.76	C	41,100	0.76	C	42,400	0.79	C
40. Rancho Cordova Parkway—U.S. 50 to Easton Valley Parkway	6x	60,700	0.75	D	61,700	0.76	D	62,600	0.77	D	61,700	0.76	D	61,800	0.76	D	62,000	0.77	D
41. Rancho Cordova Parkway—Easton Valley Parkway to White Rock Road	6x	55,800	0.69	C	56,900	0.70	D	57,600	0.71	D	56,800	0.70	D	56,900	0.70	D	57,200	0.71	D
42. Rancho Cordova Parkway—White Rock Road to Douglas Road	6	18,800	0.35	A	20,600	0.38	A	21,100	0.39	A	20,700	0.38	A	20,700	0.38	A	21,000	0.39	A
43. Rancho Cordova Parkway—Douglas Road to Chrysanthy Boulevard	4	26,700	0.74	C	**36,200**	**1.01**	**F**	**41,300**	**1.15**	**F**	**36,200**	**1.01**	**F**	**36,800**	**1.02**	**F**	**38,200**	**1.06**	**F**
44. Rancho Cordova Parkway—Chrysanthy Boulevard to Kiefer Boulevard	4	28,900	0.80	D	**33,100**	**0.92**	**E**	**34,600**	**0.96**	**E**	**32,500**	**0.90**	**E**	32,300	0.90	D	**33,800**	**0.94**	**E**
45. Americanos Boulevard—Rancho Cordova Parkway to White Rock Road	6	28,400	0.53	A	30,600	0.57	A	31,900	0.59	A	30,400	0.56	A	30,700	0.57	A	31,100	0.58	A
46. Americanos Boulevard—White Rock Road to Douglas Road	4	24,300	0.68	B	26,500	0.74	C	29,100	0.81	D	25,900	0.72	C	26,700	0.74	C	27,200	0.76	C
47. Americanos Boulevard—Douglas Road to Chrysanthy Boulevard	4	17,100	0.48	A	20,900	0.58	A	25,500	0.71	C	19,500	0.54	A	21,300	0.59	A	21,500	0.60	A

Notes: ADT= Average Daily Traffic (Two-way); LOS = level of service; SR = State Route; U.S. 50 = U.S. Highway 50; V/C = volume-to-capacity

[1] h = Assumed to be a limited-access expressway.

[2] h = Assumed to have high access control.

Shaded areas indicate deficiency. **Bold** indicates impact.

Source: Data Compiled by Fehr & Peers in 2010 and 2011.

Table 3.15-16
Merge/Diverge/Weave Levels of Service—Cumulative Conditions

Freeway Ramp	Maneuver	No Project				Plus No USACE Permit				Proposed Project				Plus Biological Impact Minimization				Plus Conceptual Strategy				Plus Increased Development			
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
EASTBOUND U.S. 50																									
Mather Field Road direct off-ramp	Diverge	66	F	52	F	67	F	52	F	66	F	54	F	66	F	53	F	66	F	49	F	66	F	49	F
Mather Field Road loop on-ramp	Merge	45	F	34	D	45	F	35	D	39	F	35	F	46	F	33	D	45	F	32	D	46	F	32	D
Mather Field Road direct on-ramp	Merge	46	F	38	F	47	F	39	F	39	F	38	F	47	F	38	F	47	F	35	E	47	F	35	E
Zinfandel Drive direct off-ramp	Diverge	24	F	15	F	25	F	16	F	24	F	17	F	25	F	15	F	24	F	11	B	25	F	11	B
Zinfandel Drive loop on-ramp	Merge	28	C	29	D	28	D	29	D	31	D	30	D	28	D	29	D	28	C	26	C	28	D	26	C
Zinfandel Drive direct on-ramp	Merge	31	D	31	D	31	D	30	D	33	D	35	E	31	D	31	D	31	D	32	D	31	D	32	D
Sunrise Boulevard loop/direct on-ramp Rancho Cordova Parkway direct off-ramp	Weave	39	F	36	E	39	E	36	E	39	F	37	E	40	F	36	E	39	E	36	E	39	F	36	E
Rancho Cordova Parkway direct on-ramp Hazel Avenue direct off-ramp	Weave	51	F	44	F	54	F	44	F	53	F	46	F	53	F	45	F	52	F	47	F	52	F	45	F
Hazel Avenue loop/direct on-ramp Aerojet direct off-ramp	Weave	74	F	49	E	74	F	49	E	74	F	51	E	74	F	50	D	74	F	49	E	74	F	49	E
WESTBOUND U.S. 50																									
Hazel Avenue direct off-ramp	Diverge	32	D	37	E	33	D	37	E	34	D	37	E	33	D	38	E	33	D	37	E	33	D	37	E
Hazel Avenue loop on-ramp	Merge	25	C	28	C	26	C	28	C	27	C	27	C	26	C	28	C	25	C	28	C	25	C	28	C
Hazel Avenue direct on-ramp Rancho Cordova Parkway direct off-ramp	Weave	41	E	46	F	44	F	49	F	45	F	47	F	43	E	48	F	44	F	48	F	44	F	48	F
Rancho Cordova Parkway direct on-ramp Sunrise Boulevard direct off-ramp	Weave	38	E	43	F	38	E	43	F	40	E	42	E	38	E	42	E	39	E	33	E	39	E	42	E
Zinfandel Drive direct off-ramp	Diverge	40	E	36	E	42	E	36	E	43	E	35	D	41	E	35	E	42	E	40	E	42	E	35	E
Zinfandel Drive loop on-ramp	Merge	32	D	26	C	36	F	26	C	41	F	40	E	34	F	25	C	34	F	35	F	34	F	25	C
Zinfandel Drive direct on-ramp	Merge	26	C	28	D	29	D	28	D	39	E	28	C	21	C	34	D	28	C	39	E	28	C	35	E
Mather Field Road direct off-ramp	Diverge	48	F	40	E	52	F	42	E	54	F	40	E	46	F	43	F	51	F	45	F	51	F	40	E
Mather Field Road loop on-ramp	Merge	43	F	38	F	46	F	36	F	42	F	41	F	40	F	44	F	46	F	47	F	46	F	38	F
Mather Field Road direct on-ramp	Merge	29	D	25	C	34	D	23	C	36	F	33	D	28	C	31	D	33	D	34	D	33	D	25	C

Notes: LOS = level of service; U.S. 50 = U.S. Highway 50.

[1] Density in passenger cars per mile per lane for merge/diverge analysis only.

[2] LOS computed using Highway Capacity Software (HCS) 2000 software for the merge/diverge analysis consistent with *Highway Capacity Manual* (HCM) 2000 methodologies. Weave analysis evaluated using the Leisch Method for Weaving Analysis.

Shaded areas indicate deficiency where calculation indicates that demand exceeds capacity.

Source: Data Compiled by Fehr & Peers in 2010 and 2011

If need be, site-specific impacts of the identified improvements would be assessed pursuant to CEQA requirements when specific intersection and roadway improvement plans are developed, separate from the Rio del Oro DEIR/DEIS. Any such necessary environmental review would be completed before final approval of the improvements identified in the mitigation measures. No such additional review may be necessary, however, if the effects of such improvements are consistent with what can generally be expected of such improvements, as set forth immediately below.

Based on review of existing available environmental documentation, field review at a reconnaissance level, and review of aerial photography, it is anticipated that, at worst, the construction of these intersection and roadway improvements could directly adversely affect wetland resources and associated grassland habitat area and could result in construction-related environmental effects, including but not limited to:

- impacts related to construction traffic, noise, air quality, water quality, and drainage;
- impacts on cultural resources; and
- impacts on special-status plants and animals and their habitats.

In addition to construction-related impacts, implementation of these improvements could result in long-term effects on water quality and drainage. The impacts that could arise from the planned improvements will be measured using the significance thresholds identified in each section of Chapter 3 of this DEIR/DEIS.

Once a planned roadway is designed, the City will retain a qualified biologist to conduct a reconnaissance survey to determine type(s) of habitat to be removed, and whether wetlands or special-status species are present. The City will also conduct a cultural resources records search to determine whether any known cultural resources are present.

The mitigation measures recommended in Chapter 3 of this DEIR/DEIS would be applied (where applicable) to mitigate any such effects, if significant, to less-than-significant levels. For example, measures will be implemented to ensure no net loss of wetlands. Best management practices and Sacramento Metropolitan Air Quality Management District measures will be implemented for water and air quality effects, and preconstruction surveys would be performed where sensitive habitat is present (and if special-status species or habitat is present, the biological resources protection measures would be implemented). The relocation of any utility pole or other utilities will be coordinated with the appropriate service provider to ensure that there would be no impact on the service provider. Additionally, if permits or other authorization are required, they will be secured and the conditions will be followed.

For improvements to the following intersections and roadway improvements, the following impacts (in addition to the above) could result from implementation of required improvements:

- direct impacts on LRT service in the area—Sunrise Boulevard/Folsom Boulevard (Intersection 19);

- direct impacts from required grade separation structure—Sunrise Boulevard/Zinfandel Drive and Hazel Avenue/Folsom Boulevard intersections (Intersections 22 and 23, respectively);

- direct impacts on the Folsom South Canal—Sunrise Boulevard/International Drive intersection (Intersections 42);

- direct impacts from required new river crossings of the American River—Sunrise Boulevard between Gold Country Boulevard and Coloma Road and Sunrise Boulevard between Coloma Road and the U.S. 50 westbound ramps (Roadway Segments 17 and 18, respectively); direct impacts from potential removal of approximately 80 utility poles, 60 street lights, approximately 50 large trees, and commercial/industrial property, resulting from improvements to Sunrise Boulevard between Folsom Boulevard and White Rock Road (Roadway Segment 20); and

- direct impacts from potential removal of approximately 60 utility poles, 100 street lights, approximately 40 large trees (primarily oak and landscaped trees), and commercial/industrial property, resulting from improvements to Sunrise Boulevard between White Rock Road and Douglas Road (Roadway Segment 21).

The following impacts and mitigation measures apply only to those intersections, roadways, and freeway ramps where significant, direct impacts would occur. Summary impacts are followed by required mitigation measures. Note that no mitigation measures are required for Impacts 3.15-4a through 3.15-4xx under the No Project Alternative. As stated above in the summary discussion of Impact 3.15-4, under this alternative there would be no project-related traffic that would affect the regional transportation system; therefore, there would be no cumulative impacts under the No Project Alternative.

IMPACT 3.15-4a **Unacceptable LOS at the SR 16/Excelsior Road Intersection (Intersection 1) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F both in the A.M. and P.M. peak traffic hours with and without traffic from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions. However, project traffic would increase delay at this intersection by more than 5 seconds during the A.M. and P.M. peak traffic hours. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4a: Participate in Improvements to the SR 16/Excelsior Road Intersection (Intersection 1).

To ensure that the SR 16/Excelsior Road intersection operates at an acceptable LOS E or better, the following improvements should be made to the intersection:

- Configure the northbound approach with one left-turn lane, two through lanes, and one right-turn lane.
- Configure the southbound approach with one left-turn lane, two through lanes, and one right-turn lane.
- Configure the eastbound approach with one left-turn lane, two through lanes, and one right-turn lane.
- Configure the westbound approach with two left-turn lanes, two through lanes, and one right-turn lane.

Improvements to the SR 16/Excelsior Road intersection are contained within the *Sunridge Specific Plan Public Facilities Financing Plan* and zoning conditions. The CEQA Findings of Fact and Statement of Overriding Considerations for the Sunrise Douglas Community Plan/Sunridge Specific Plan Project state that physical improvement of this intersection is feasible.

Improvements to this intersection must be coordinated with Caltrans and the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4a would reduce the significant impact on Intersection 1 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS E or better. However, the identified improvements fall under the jurisdiction of

Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4b **Unacceptable LOS at the SR 16/Eagles Nest Road Intersection (Intersection 2) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F in the A.M. and/or P.M. peak traffic hours with and without traffic from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions. However, project traffic would increase delay at this intersection by more than 5 seconds during the A.M. and P.M. peak traffic hours. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4b: Participate in Improvements to the SR 16/Eagles Nest Road Intersection (Intersection 2).

To ensure that the SR 16/Eagles Nest Road intersection operates at an acceptable LOS E or better, one of the two following configurations should be implemented:

- Configure the northbound and southbound approaches with one left-turn lane, two through lanes, and one right-turn lane; or
- Configure the westbound and eastbound approaches with two left-turn lanes, two through lanes, and one right-turn lane.

Improvements to the SR 16/Eagles Nest Road intersection are contained within the *Sunridge Specific Plan Public Facilities Financing Plan* and zoning conditions. The CEQA Findings of Fact and Statement of Overriding Considerations for the Sunrise Douglas Community Plan/Sunridge Specific Plan Project state that physical improvement of this intersection is feasible.

Improvements to this intersection must be coordinated with Caltrans and the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4b would reduce the significant impact on Intersection 2 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS E or better. However, the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4c **Unacceptable LOS at the SR 16/Sunrise Boulevard Intersection (Intersection 3) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would degrade from an unacceptable LOS E in the A.M. peak traffic hour and an acceptable LOS D in the P.M. peak traffic hour to an unacceptable LOS E or worse with traffic from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions. Additionally, project traffic would increase delay at this intersection by more than 5 seconds during the A.M. and P.M. peak traffic hours. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4c: Participate in Improvements to the SR 16/Sunrise Boulevard Intersection (Intersection 3).

To ensure that the SR 16/Sunrise Boulevard intersection operates at an acceptable LOS D or better, an additional eastbound and westbound through lane and a second eastbound left-turn lane must be added.

Improvements to the SR 16/Sunrise Boulevard intersection are contained within the County Development Fee Program, are scheduled for Measure A funding, and are within the *Mather Field Specific Plan Financing Plan*. Implementation of the improvements described above, including the necessary widening of SR 16, would assist in reducing traffic impacts on this intersection.

Improvements to this intersection must be coordinated with Caltrans, the County, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4c would reduce the significant impact on Intersection 3 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS D or better. However, the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4d **Unacceptable LOS at the Grant Line Road/SR16 Intersection (Intersection 4) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would degrade an unacceptable LOS E or F in the A.M. and P.M. peak traffic hours to an unacceptable LOS F in both the A.M. and P.M. peak traffic hours with traffic from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives

under cumulative (2032) conditions. Additionally, project traffic would increase delay at this intersection by more than 5 seconds during the A.M. and P.M. peak traffic hours. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4d: Participate in Improvements to the Grant Line Road/SR16 Intersection (Intersection 4).

To ensure that the Grant Line Road/SR16 intersection operates at an acceptable LOS D or better, all of the following improvements are required:

- The northbound approach must be reconfigured to consist of one left-turn lane, three through lanes, and one right-turn lane.
- The southbound approach must be reconfigured to consist of one left-turn lane, three through lanes, and one right-turn lane.
- The eastbound approach must be reconfigured to consist of two left-turn lanes, one through lane, and a shared through/right-turn lane.
- The westbound approach must be reconfigured to consist of one left-turn lane, two through lanes, and one right-turn lane.
- These improvements would require widening of SR 16 and Grant Line Road 1,000 feet on all sides of the intersection.

Improvements to the SR 16/Grant Line Road intersection are contained within the County Development Fee Program, are scheduled for Measure A funding, and are within the *Mather Field Specific Plan Financing Plan.* Implementation of the improvements described above, including the necessary widening of SR 16, would assist in reducing traffic impacts on this intersection; with them, this intersection would operate at an acceptable LOS.

Improvements to this intersection must be coordinated with Caltrans, the County, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4d would reduce the significant impact on Intersection 4 under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, these identified improvements fall under the jurisdiction of the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4e **Unacceptable LOS at the Florin Road/Sunrise Boulevard (Intersection 5) under Cumulative (2032) Conditions.**

NCP, BIM, CS, ID

A **direct, less-than-significant** impact would occur to this intersection under cumulative (2032) conditions for the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives because this intersection would not degrade to an unacceptable level. ***[Lesser]***

PP

This signalized intersection would degrade from an acceptable LOS E in the A.M. peak traffic hour to an unacceptable LOS F in the A.M. peak traffic hour with traffic from the Proposed Project Alternative under cumulative (2032) conditions. Additionally, project traffic would increase delay at this intersection by more than 5 seconds during the A.M. peak traffic hour. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4e: Participate in Improvements to the Florin Road/Sunrise Boulevard Intersection (Intersection 5).

To ensure that the Florin Road/Sunrise Boulevard intersection operates at an acceptable LOS E or better, all of the following improvement is required:

- Optimize signal timing and phasing.

Implementation of the improvements described above would assist in reducing traffic impacts on this intersection. Improvements to this intersection must be coordinated with the County, and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4e would reduce the significant impact on Intersection 5 under the Proposed Project Alternative under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, these identified improvements fall under the jurisdiction of the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4f **Unacceptable LOS at the Sunrise Boulevard/Grant Line Road Intersection (Intersection 6) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F in the A.M. and P.M. peak traffic hours with and without traffic from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions. However, project traffic would increase delay at this intersection by more than 5 seconds during the A.M. and P.M. peak traffic hours. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4f: Participate in Improvements to the Sunrise Boulevard/Grant Line Road Intersection (Intersection 6).

To ensure that the Sunrise Boulevard/Grant Line Road intersection operates at an acceptable LOS, the following improvements must be implemented:

- Add an additional southbound right-turn lane.
- Convert the northbound approach to consist of one left-turn lane and one shared through-right lane.
- Provide protected phasing for the northbound and southbound left-turns.

Improvements to this intersection must be coordinated with the County and other potentially affected oversight agencies.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4f would reduce the significant impact on Intersection 6 under development of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a less-than-significant level, by allowing the intersection to operate at an acceptable LOS. However, the identified improvements fall under the jurisdiction of the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable**. If the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4g Unacceptable LOS at the Grant Line Road/Kiefer Boulevard Intersection (Intersection 7) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

This signalized intersection would degrade from an unacceptable LOS F during the A.M. peak traffic hour and LOS E during the P.M. peak traffic hour to an unacceptable LOS F in the A.M. and/or P.M. peak traffic hours with project traffic under cumulative (2032) conditions. Additionally, project traffic would increase delay at this intersection by more than 5 seconds during the A.M. and P.M. peak traffic hours. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4g: Participate in Improvements to the Grant Line Road/Kiefer Boulevard Intersection (Intersection 7).

To ensure that the Grant Line Road/Kiefer Boulevard intersection operates at an acceptable LOS D or better, the eastbound and westbound approaches must consist of one left-turn lane, one through lane, and one right-turn lane.

Improvements to this intersection must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4g would reduce the significant impact on Intersection 7 under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, portions of this intersection fall under the jurisdiction of the County; therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of all of the identified improvements. Thus, this impact is potentially **significant and unavoidable.** If the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4h Unacceptable LOS at the Sunrise Boulevard/Douglas Road Intersection (Intersection 9) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. However, project traffic would increase the average intersection delay by more than 5 seconds in both the A.M. and P.M. peak traffic hours. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4h: Participate in Improvements to the Sunrise Boulevard/Douglas Road Intersection (Intersection 9).

To improve LOS at the Sunrise Boulevard/Douglas Road intersection, all approaches must be reconfigured to consist of two left-turn lanes, three through lanes, and one right-turn lane.

However, even with these improvements, this intersection would continue to operate at an unacceptable LOS. For this intersection to operate at an acceptable LOS, additional roadway connectivity is required. To achieve this connectivity, the Kiefer Boulevard Extension between Rancho Cordova and Sacramento must be implemented. Additional intersection improvements could be implemented consistent with the City's Circulation Element/Plan, including partial grade separation of the intersection and/or aggressive at-grade treatments such as triple left-turn lanes, enhanced-capacity right-turn treatments, or conversion into a continuous-flow intersection.

Improvements to this intersection are contained within the *Sunridge Specific Plan Public Financing Plan*, but this public financing plan would not be able to fund all of the improvements described above. These intersection improvements must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4h would partially reduce the significant impact on Intersection 9 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions. However, implementation of this measure would not reduce the impact to a less-than-significant level. For the intersection to operate at an acceptable LOS D or better and to completely offset the impacts of the project, additional improvements (consistent with the City's Circulation Element/Plan and CIP) are required. However, the required additional connectivity on Kiefer Boulevard between Rancho Cordova and Sacramento falls under the jurisdiction of the County; therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of this improvement. The feasibility of the aggressive at-grade or partial grade-separated alternatives, such as partial grade separation, capacity-enhancing right-turn treatments, or implementation of a continuous-flow intersection, has not been determined as no specific designs have been developed and environmental constraints have not been identified. Given these conditions, this impact is potentially **significant and unavoidable**. If the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4i **Unacceptable LOS at the Mather Field Road/U.S. 50 Eastbound Ramps Intersection (Intersection 12) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. However, project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak traffic hours in both the A.M. and P.M. peak traffic hours. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4i: Participate in Improvements to the Mather Field Road/U.S. 50 Eastbound Ramps Intersection (Intersection 12).

To ensure that the Mather Field Road/U.S. 50 eastbound ramps intersection operates at an acceptable LOS D or better, the following improvements must be made:

- Convert the eastbound right-turn into a "free" right-turn. This will require a receiving lane south of the intersection extending at least 1000 feet.
- Add a southbound through lane

Improvements to this intersection are identified in the City's Circulation Element/Plan and included in the City's CIP, and must be coordinated with Caltrans.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4i would reduce the significant impact on Intersection 12 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS D or better. However, the required improvement to U.S. 50 falls under the jurisdiction of Caltrans; therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of this improvement. Thus, this impact is potentially **significant and unavoidable**. If Caltrans cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4j Unacceptable LOS at Mather Field Road/International Drive (Intersection 13) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak traffic hours. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4j: Participate in Improvements at the Mather Field Road/International Drive Intersection (Intersection 13).

To ensure that the Mather Field Road/International Drive intersection operates at an acceptable LOS D or better, the following improvements must be made:

- Convert the westbound approach to consist of three through lanes and three left-turn lanes.
- Convert the north bound right-turn lane into a "free" right-turn. This would require a receiving lane east of the intersection extending at least 1,000 feet.

Because the required configuration would demand an excessive right-of-way take, alternative mitigations may be considered. Additional roadway connectivity in the area, through measures such as implementation of the Kiefer Boulevard Extension to Sacramento, extension of Routier Road to the south, completion of the International Drive–Old Placerville Road connection, and construction of the potential tunnel under Mather Field, has the potential to shift traffic volumes to reduce traffic impacts at the intersection. These additional roadway connectivity measures are identified in the City's Circulation Element/Plan and included in the City's CIP. Implementation of these improvements would assist in reducing traffic impacts on this intersection by providing acceptable operations.

Improvements to this intersection must be coordinated with the County and other regulatory agencies because of the proximity of some of these improvements to Mather Field.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4j would reduce the significant impact on Intersection 13 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level. The identified roadway connectivity improvements (consistent with the City's Circulation Element/Plan and CIP) would shift traffic volumes and reduce traffic impacts at the intersection. However, the Kiefer Boulevard Extension and International Drive–Old Placerville Road connection fall under the jurisdiction of the County, and the Routier Road extension and tunnel construction under Mather Field would require coordination with other regulatory agencies because of their proximity to the airstrip. Therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of all the identified improvements. Given these conditions, this impact is potentially **significant and unavoidable**. If the County and other responsible agencies (such as the Federal Aviation Administration [FAA]) cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4k Unacceptable LOS at the Zinfandel Drive/International Drive Intersection (Intersection 14) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with or without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in both the A.M. and P.M. peak traffic hours. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4k: Participate in Improvements to the Zinfandel Drive/International Drive Intersection (Intersection 14).

Improvements must be made to improve LOS at the Zinfandel Drive/International Drive intersection. Specifically, all approaches should be reconfigured to provide three left-turn, four through, and one right-turn lane. Additionally, capacity enhancements are needed for the right-turn movements.

These improvements would reduce the cumulative impact caused by the proposed project and alternatives under consideration by providing acceptable LOS. However, widening International Drive and Zinfandel Drive to four through lanes is inconsistent with the City's Circulation Element/Plan because City policy identifies a maximum roadway cross-section of six lanes or fewer.

To be consistent with the City's Circulation Element/Plan, aggressive at-grade improvements are required, such as partial grade separation, capacity-enhancing right-turn treatments on all approaches, or implementation of a continuous-flow intersection. Additionally, improved roadway connectivity, such as the extension of Kiefer Boulevard, International Drive–Old Placerville Road connection, and/or construction of the tunnel under Mather Field would shift traffic volumes and reduce traffic at the intersection.

The additional roadway connections described above and aggressive at-grade intersection treatments are identified in the City's Circulation Element/Plan and included in the City's CIP. Implementation of these improvements would assist in reducing traffic impacts on this intersection by providing acceptable operations.

Improvements to this intersection must be coordinated with the County and other regulatory agencies because of the proximity of some of these improvements to Mather Field (such as the FAA).

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, County Department of Transportation, and FAA.

Implementation of Mitigation Measure 3.15-4k would reduce the significant impact on Intersection 14 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less than significant level. However, implementation of these improvements falls under the jurisdiction of the County, Caltrans, and the FAA. Therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of all the identified improvements. Given these conditions, this impact is potentially **significant and unavoidable**. If the FAA and other regulatory agencies cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term, assuming the improvements are determined to be feasible.

IMPACT 3.15-4l **Unacceptable LOS at the Zinfandel Drive/White Rock Road Intersection (Intersection 15) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project-generated traffic under cumulative (2032) conditions would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4l: Participate in Improvements to the Zinfandel Drive/White Rock Road Intersection (Intersection 15).

Improvements must be made to improve LOS at the Zinfandel Drive/White Rock Road intersection. Specifically, all approaches should be reconfigured to provide three left-turn, four through, and one right-turn lane. Additionally, capacity enhancements are needed for the right-turn movements.

Improvements to the Zinfandel Drive/White Rock Road intersection are identified in the City's Circulation Element/Plan and included in the City's CIP. Implementation of the identified improvements would assist in reducing traffic impacts on this intersection by providing acceptable LOS. However, these improvements include widening the facility by more than six lanes, which is inconsistent with the City General Plan. Alternatively, partial grade separation could be implemented consistent with the City's Circulation Element/Plan and CIP; however, aggressive at-grade treatments such as partial grade separation have not been designed, and they could have geometric and/or environmental constraints that may make the treatments infeasible.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department.

Implementation of Mitigation Measure 3.15-4l would reduce the significant impact on Intersection 15 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level. However, since one improvement is inconsistent with the City General Plan, and the other (partial grade separation) has not been designed, the improvements may be infeasible due to consistency, geometric, and/or environmental constraints. Therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of all the identified improvements. Given these conditions, this impact is potentially **significant and unavoidable**. If the other regulatory agencies cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term, assuming that the improvements are determined to be feasible.

IMPACT 3.15-4m Unacceptable LOS at the Zinfandel Drive/U.S. 50 Eastbound Ramps Intersection (Intersection 16) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4m: Participate in Improvements to the Zinfandel Drive/U.S. 50 Eastbound Ramps Intersection (Intersection 16).

To ensure that the Zinfandel Drive/U.S. 50 eastbound ramps intersection operates at an acceptable LOS D or better, the following improvements are required:

- Configure the northbound approach to consist of four through lanes and a shared through/right-turn lane.
- Configure the eastbound approach to consist of two left-turn lanes, two through lanes, and a free right-turn lane.
- Configure the westbound approach to consist of three right-turn lanes on the westbound approach.

Improvements to this intersection are identified in the City's Circulation Element/Plan and included in the City's CIP. Implementation of these improvements would assist in reducing traffic impacts on this intersection by providing acceptable operation. Intersection improvements must be coordinated with Caltrans.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4m would reduce the significant impact on Intersection 16 from the No USACE Permit, Proposed Project, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, the identified improvements fall under the jurisdiction of Caltrans; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable.** If Caltrans cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4n **Unacceptable LOS at the Sunrise Boulevard/White Rock Road Intersection (Intersection 18) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4n: Participate in Improvements to the Sunrise Boulevard/White Rock Road Intersection (Intersection 18).

To ensure that the Sunrise Boulevard/White Rock Road intersection operates at an acceptable LOS, grade separation must be implemented at this intersection.

Some funding for intersection improvements to this intersection is identified in the *Mather Field Specific Plan Public Financing Plan* (Zinfandel Drive Extension), and in the City's Circulation Element/Plan, and included in the City's CIP. However, the grade separation treatment was not identified as a Tier 1 improvement nor has it been designed; it could have geometric and/or environmental constraints that may make the treatment infeasible. No other feasible improvements are available at this intersection to ensure that it operates at an acceptable level.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4n would reduce the significant impact on Intersection 18 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, because the feasibility of grade separation at this location has not been determined, these identified improvements may not be feasible. No other feasible improvements are available at this intersection to ensure acceptable operations; therefore, this impact is considered **significant and unavoidable.** If the grade separation treatment is determined to be feasible, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4o **Unacceptable LOS at the Sunrise Boulevard/Folsom Boulevard Intersection (Intersection 19) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4o: Participate in Improvements to the Sunrise Boulevard/Folsom Boulevard Intersection (Intersection 19).

To ensure that the Sunrise Boulevard/Sunrise Boulevard intersection operates at an acceptable LOS, grade separation must be implemented at this intersection.

Some funding for intersection improvements to this intersection is identified in the City's Circulation Element/Plan and included in the City's CIP. However, the grade separation treatment was not identified as a Tier 1 improvement nor has it been designed; it could have geometric and/or environmental constraints that may make the treatment infeasible. No other feasible improvements are available at this intersection to ensure that it operates at an acceptable level. Additionally, grade separation may be infeasible because of geometric constraints at this intersection caused by the grade-separated LRT tracks.

These improvements must be coordinated with Sacramento RT.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4o would reduce significant impacts on Intersection 19 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, grade separation may not be possible because of geometric constraints associated with the grade-separated LRT tracks and nearby freeway over-crossing; therefore, this improvement may not be feasible. No other feasible improvements are available, and there is no assurance that the required improvements would be implemented. Given these conditions, this impact is considered **significant and unavoidable.** If Sacramento RT cooperates in permitting the improvements, and the improvements are determined to be feasible, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4p **Unacceptable LOS at the Sunrise Boulevard/U.S. 50 Eastbound Ramps Intersection (Intersection 20) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS E or worse during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase

the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4p: Participate in Improvements to the Sunrise Boulevard/U.S. 50 Westbound Ramps Intersection (Intersection 20).

To ensure that the Sunrise Boulevard/U.S. 50 eastbound ramps intersection operates at an acceptable LOS D or better, the following improvements must be implemented:

- Add a fourth southbound through lane; this would require widening of the freeway overpass.
- Convert the eastbound right-turn lanes to a "free" right-turn with an adequate receiving lane on Sunrise Boulevard.

Improvements to this intersection must be coordinated with Caltrans.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4p would reduce significant impacts on Intersection 20 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable.** If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4q **Unacceptable LOS at the Sunrise Boulevard/U.S. 50 Westbound Ramps Intersection (Intersection 21) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4q: Participate in Improvements to the Sunrise Boulevard/U.S. 50 Westbound Ramps Intersection (Intersection 21).

To ensure that the Sunrise Boulevard/U.S. 50 westbound ramps intersection operates at an acceptable LOS D or better, the following improvements must be implemented:

- Add a fourth southbound through lane; this would require widening of the freeway overpass.

- Convert the westbound right-turn lanes to a "free" right-turn with an adequate receiving lane on Sunrise Boulevard.

Improvements to this intersection must be coordinated with Caltrans.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4q would reduce significant impacts on Intersection 21 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, this impact is potentially **significant and unavoidable.** If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4r Unacceptable LOS at the Sunrise Boulevard/Zinfandel Drive Intersection (Intersection 22) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4r: Participate in Improvements to the Sunrise Boulevard/Zinfandel Drive Intersection (Intersection 22).

For the intersection to operate at an acceptable LOS D or better, grade separation of the intersection is required. This improvement is consistent with the City's Circulation Element/Plan and associated CIP; however, the grade-separation treatment has not been designed, and it could have geometric and/or environmental constraints that may make the treatment infeasible.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4r would reduce the significant impact on Intersection 22 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, though consistent with the City's Circulation Element/Plan, the grade-separation treatment has not been designed; it could have geometric and/or

environmental constraints that may make the treatment infeasible. Therefore, because the improvement may be infeasible, this impact is considered **significant and unavoidable**. If the grade separation alternative were deemed feasible, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4s **Unacceptable LOS at the Hazel Avenue/Folsom Boulevard Intersection (Intersection 23) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4s: Participate in Improvements to the Hazel Avenue/Folsom Boulevard Intersection (Intersection 23).

For the intersection to operate at an acceptable LOS D or better, grade separation of the intersection is required. This improvement is consistent with the City's Circulation Element/Plan; however, the grade-separation treatment has not been designed, and it could have geometric and/or environmental constraints that may make the treatment infeasible.

Improvements to this intersection must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4s would reduce the significant impact on Intersection 23 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions, reducing the impact to a less-than-significant level. However, the feasibility of grade separation at this location has not been determined. However, because the improvement may have undetermined potentially significant impacts, and because this intersection falls under the jurisdiction of the County, neither the City nor the project applicant(s) would have control over the timing or implementation of the improvement necessary to provide acceptable operations at the intersection. Thus, the impact is potentially **significant and unavoidable**. If the County cooperates in permitting the identified improvements and they are determined to be feasible, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4t **Unacceptable LOS at the Hazel Avenue/U.S. 50 Eastbound Ramps Intersection (Intersection 24) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average

intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4t: Participate in Improvements to the Hazel Avenue/U.S. 50 Eastbound Ramps Intersection (Intersection 24).

To ensure that the Hazel Avenue/U.S. 50 eastbound ramps intersection operates at an acceptable LOS D, a fourth through lane must be added to the southbound approach; this would require widening of the freeway overpass. Improvements to this interchange must be coordinated with Caltrans and the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4t would reduce the significant impact on Intersection 24 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable level. However, because the identified improvements fall under the jurisdiction of Caltrans and the County, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, the impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4u Unacceptable LOS at the Hazel Avenue/U.S. 50 Westbound Ramps Intersection (Intersection 25) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4u: Participate in Improvements to the Hazel Avenue/U.S. 50 Westbound Ramps Intersection (Intersection 25).

Substantial improvements must be made to ensure that the Hazel Avenue/U.S. 50 westbound ramps intersection operates at an acceptable level. Specifically, the following improvements should be made:

- The northbound approach should be reconfigured to consist of four through lanes and a free right-turn lane (this would require prohibiting northbound left turns to Tributary Point Drive).
- The southbound approach should be reconfigured to consist of four through lanes and a right-turn lane.
- The eastbound approach should be reconfigured to consist of one free right-turn lane.

- The westbound approach should be reconfigured to consist of one left-turn lane, two through lanes, and one free right-turn lane.

However, these improvements would prohibit northbound access to development west of the intersection and may be deemed infeasible if that access must be maintained. In addition, the displaced trips from the restricted movement would degrade operations at the Gold Country Boulevard/Hazel Avenue intersection.

Improvements to this intersection must be coordinated with Caltrans and the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4u would reduce the significant impact on Intersection 24 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, because the identified improvements fall under the jurisdiction of Caltrans and the County, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, the impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4v Unacceptable LOS at the Hazel Avenue/Gold Country Boulevard Intersection (Intersection 26) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4v: Participate in Improvements to the Hazel Avenue/Gold Country Boulevard Intersection (Intersection 27).

Due to the excessive northbound and southbound through movement traffic demand, to ensure that the Hazel Avenue/Gold Country Boulevard intersection operates at an acceptable LOS, the intersection requires grade separation. However, there are significant geographic constraints associated with Hazel Avenue, primarily because of the existing bridge crossing of the American River just north of this intersection. Additionally, the grade-separation treatment has not been designed, and it could have geometric and/or environmental constraints that may make the treatment infeasible.

Improvements to this intersection must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4v would reduce the significant impact on Intersection 27 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, because the feasibility of grade separation at this location has not been determined and the geographic and environmental constraints identified above, this improvement may be infeasible or may have undetermined potentially significant impacts. Additionally, this intersection falls under the jurisdiction of the County. Because of the geographic feasibility constraints and the fact that neither the City nor the project applicant(s) would have control over the timing or implementation of the improvements, this impact is considered **significant and unavoidable.** If the County cooperates in allowing the improvements to move forward, and the improvement is determined to be feasible, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4w **Unacceptable LOS at the Grant Line Road/White Rock Road Intersection (Intersection 27) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4w: Participate in Improvements to the Grant Line Road/White Rock Road Intersection (Intersection 27).

To ensure that the Grant Line Road/White Rock Road intersection operates at an acceptable level, all of the following improvements are required:

- The northbound approach must be reconfigured to consist of one left-turn lane and three through lanes.
- The westbound approach must be reconfigured to consist of three through lanes and three left-turn lanes.
- The eastbound approach must be reconfigured to consist of four through lanes and one right-turn lane; this would require widening of White Rock Road east of the intersection for at least 1,000 feet.

An alternative to these improvements is partial grade separation of the intersection as identified in the City's Circulation Element/Plan; however, the grade-separation treatment has not been designed, and it could have geometric and/or environmental constraints that may make the treatment infeasible. Also, additional connectivity, such as the improvements to the White Rock Road corridor and construction of Easton Valley Parkway from Rancho Cordova Parkway to the Silva Valley interchange.

Improvements to this intersection must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4w would reduce the significant impact on Intersection 27 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, the feasibility of the alternative improvement, grade separation, at this location has not been determined and the improvement may have undetermined potentially significant impacts. The identified improvements fall under the jurisdiction of the County, neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, the impact is considered **significant and unavoidable**. If the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4x **Unacceptable LOS at the Kilgore Road/White Rock Road Intersection (Intersection 28) under Cumulative (2032) Conditions.**

NCP, PP, BIM, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods under the No USACE Permit, Proposed Project, Biological Impact Minimization, and Increased Development Alternatives. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4x: Participate in Improvements to the Kilgore Road/White Rock Road Intersection (Intersection 14).

To ensure acceptable operations at the Kilgore Road/White Rock Road intersection, the following improvements must be implemented:

- The northbound and southbound approaches must be reconfigured to consist of one left-turn lane, two through lanes, and one right-turn lane.

The westbound approach must be reconfigured to consist of three left-turn lanes, two through lanes, and one right-turn lane; this would require three receiving lanes south of the intersection.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

CS

A **direct, less-than-significant** impact would occur to this intersection under cumulative (2032) conditions for the Conceptual Strategy Alternative because this intersection would not degrade to an unacceptable level. No **indirect** impacts would occur. ***[Lesser]***

Implementation of Mitigation Measure 3.15-4x would reduce significant impacts on Intersection 28 from the No USACE Permit, Proposed Project, Biological Impact Minimization, and Increased Development Alternatives

under cumulative (2032) conditions to a **less-than-significant** level, by allowing this intersection to operate at an acceptable LOS D or better.

IMPACT 3.15-4y **Unacceptable LOS at the Zinfandel Drive/Eagles Nest Road/Douglas Road Intersection (Intersection 29) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4y: Participate in Improvements to the Zinfandel Drive/Eagles Nest Road/Douglas Road Intersection (Intersection 29).

To ensure that the Zinfandel Drive/Eagles Nest Road/Douglas Road intersection operates at an acceptable level, all of the following improvements are required:

- The northbound and southbound approaches must be reconfigured to consist of one left-turn lane, two through lanes, and one right-turn lane.
- The westbound approach must be reconfigured to consist of one left-turn lane, two through lanes, and one "free" right-turn lane.

Improvements to this intersection must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4y would reduce the significant impact on Intersection 29 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, the identified improvements fall under the jurisdiction of the County, and therefore neither the City nor the project applicant(s) would have control over their timing or implementation. Thus, the impact is potentially **significant and unavoidable**. If the County cooperates in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4z **Unacceptable LOS at the Sunrise Boulevard/Kiefer Boulevard Intersection (Intersection 30) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

Operations at this signalized intersection would degrade from an acceptable LOS C to an unacceptable LOS E during the A.M. peak traffic hour under the Proposed Project Alternative and LOS F during the P.M. peak traffic

hour with project traffic under all project alternatives in cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4z: Participate in Improvements to the Sunrise Boulevard/Kiefer Boulevard Intersection (Intersection 30).

To ensure that the Sunrise Boulevard/Kiefer Boulevard intersection operates at an acceptable LOS D or better, the following improvements are required:

The eastbound and westbound right-turn movements require additional capacity treatment, such as overlap phasing. This requires u-turn movements to be prohibited on the northbound and southbound approaches.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4z would reduce significant impacts on Intersection 30 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a **less-than-significant** level, by allowing this intersection to operate at an acceptable LOS D or better.

IMPACT 3.15-4aa Unacceptable LOS at the Rancho Cordova Parkway/U.S. 50 Westbound Ramps Intersection (Intersection 31) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4aa: Participate in Improvements to the Rancho Cordova Parkway/U.S. 50 Westbound Ramps Intersection (Intersection 31).

To ensure that the Rancho Cordova Parkway/U.S. 50 westbound ramps intersection operates at an acceptable LOS, all of the following improvements are required:

- The westbound approach must be reconfigured to consist of one shared through/left-turn lane and two left-turn lanes. This improvement would require widening of the southbound freeway over-crossing to three lanes.

Improvements to this intersection must be coordinated with Caltrans.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4aa would reduce the significant impact on Intersection 31 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable level. However, the interchange has not been designed, and because there are geometric constraints associated with U.S. 50, Folsom Boulevard, the LRT tracks, and the Folsom South Canal, these improvements may be infeasible. Additionally, the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Given these conditions, this impact is considered **significant and unavoidable.** If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

It is worthwhile to note that a detailed analysis of the U.S. 50/Rancho Cordova Parking Interchange was performed in August 2010 (Final Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, Fehr & Peers, 2010). This study used a detailed micro-simulation model and updated land use forecasts to evaluate the interchange, as well as mainline conditions. This analysis found that this intersection would operate acceptably in 2037.

IMPACT 3.15-4bb **Unacceptable LOS at the Rancho Cordova Parkway/U.S. 50 Eastbound Ramps Intersection (Intersection 32) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4bb: Participate in Improvements to the Rancho Cordova Parkway/U.S. 50 Eastbound Ramps Intersection (Intersection 32).

To ensure that the Rancho Cordova Parkway/U.S. 50 eastbound ramps intersection operates at an acceptable LOS, all of the following improvements are required:

- The eastbound approach must be reconfigured to consist of one shared through/left-turn lane and two left-turn lanes. This improvement would require widening of the freeway off-ramp to three lanes.

Improvements to this intersection must be coordinated with Caltrans.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4bb would reduce the significant impact on Intersection 32 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased

Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by reducing overall delay. However, the interchange has not been designed, and because there are geometric constraints associated with U.S. 50, Folsom Boulevard, the LRT tracks, and the Folsom South Canal, these improvements may be infeasible. Additionally, the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Given these conditions, this impact is considered **significant and unavoidable.** If Caltrans and the County cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

It is worthwhile to note that a detailed analysis of the US 50/Rancho Cordova Parking Interchange was performed in August 2010 (Final Traffic Operations Report: US 50/Rancho Cordova Parkway Interchange, Fehr & Peers, 2010). This study used a detailed micro-simulation model and updated land use forecasts to evaluate the interchange, as well as mainline conditions. This study identified that intersection operations failure was actually due to queue spillback from the metered on-ramp and mainline congestion, rather than off-ramp volume exceeding capacity.

IMPACT 3.15-4cc **Unacceptable LOS at the Rancho Cordova Parkway/Easton Valley Parkway Intersection (Intersection 33) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4cc: Participate in Improvements to the Rancho Cordova Parkway/Easton Valley Parkway Intersection (Intersection 33).

For the intersection to operate at an acceptable LOS D or better, grade separation of the intersection is required. This improvement is consistent with the City's Circulation Element/Plan and associated CIP; however, the grade-separation treatment has not been designed, and it could have geometric and/or environmental constraints that may make the treatment infeasible.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4cc would reduce the significant impact on Intersection 33 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. However, though consistent with the City's Circulation Element/Plan, the grade-separation treatment has not been designed; it could have geometric and/or environmental constraints that may make the treatment infeasible. Therefore, because the improvement may be infeasible, this impact is considered **significant and unavoidable**. If the grade separation alternative were deemed feasible, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4dd **Unacceptable LOS at the Rancho Cordova Parkway/White Rock Road Intersection (Intersection 34) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and/or P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4dd: Participate in Improvements to the Rancho Cordova Parkway/White Rock Road Intersection (Intersection 34).

To improve operations at the Rancho Cordova Parkway/White Rock Road intersection, the intersection must be reconfigured to the following:

- Two left-turn lanes, four through lanes, and one right-turn lane on all approaches.
- A free right-turn lane on the southbound approach.

However, these improvements are inconsistent with the City General Plan. Alternatively, aggressive at-grade improvements (such as implementation of a continuous-flow intersection) or partial grade separation are required, consistent with the City's Circulation Element/Plan and associated CIP, could be implemented.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4dd would reduce the significant impact on Intersection 34 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS. Because the aggressive at-grade treatments have not been designed, they could have geometric and/or environmental constraints that may make the treatments infeasible. Because the feasibility of improvements necessary to fully reduce this impact to a less-than-significant level is unknown, this impact is considered potentially **significant and unavoidable.** If the aggressive at-grade treatments are determined to be feasible, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4ee **Unacceptable LOS at the White Rock Road/Americanos Boulevard Intersection (Intersection 35) under Cumulative (2032) Conditions.**

NCP, PP, CS, ID

Operations at this signalized intersection would degrade from an acceptable LOS D to an unacceptable LOS E during the A.M. peak traffic hour with project traffic from the No USACE Permit, Proposed Project, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4ee: Participate in Improvements to the White Rock Road/Americanos Boulevard Intersection (Intersection 35).

To ensure that the White Rock Road/Americanos Boulevard intersection operates at an acceptable LOS during the A.M. peak traffic hour, the northbound and southbound approaches must be reconfigured to consist of two left-turn lanes, three through lanes, and an exclusive right-turn lane. Improvements to this intersection must be coordinated with the County and Aerojet General Corporation (Aerojet).

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, County Department of Transportation, and Aerojet.

BIM

A **direct, less-than-significant** impact would occur to this intersection under cumulative (2032) conditions for the Biological Impact Minimization Alternative because this intersection would not degrade to an unacceptable level. No **indirect** impact would occur. ***[Lesser]***

Implementation of Mitigation Measure 3.15-4ee would reduce the significant impact on Intersection 35 from the No USACE Permit, Proposed Project, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this intersection to operate at an acceptable LOS D or better. However, future north-south connectivity falls under the jurisdiction of the County and may be precluded by operations at Aerojet; therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of this improvement. Thus, this impact is potentially **significant and unavoidable.** If the County and Aerojet cooperate in allowing the improvements to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4ff **Unacceptable LOS at the Rancho Cordova Parkway/Douglas Road Intersection (Intersection 36) under Cumulative (2032) Conditions.**

NCP, PP, ID

Operations at this signalized intersection would degrade from an acceptable LOS C to an unacceptable LOS E or worse during the A.M. and/or P.M. peak traffic hour with project traffic from the No USACE Permit, Proposed Project, and Increased Development Alternatives under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4ff: Participate in Improvements to the Douglas Road/Jaeger Road Intersection (Intersection 36).

To ensure acceptable operations at the Rancho Cordova Parkway/Douglas Road intersection, optimize signal timing and phasing and provide additional capacity treatment to the eastbound right-turn, such as an overlap phase.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

BIM, CS

A **direct, less-than-significant** impact would occur to this intersection under cumulative (2032) conditions for the Biological Impact Minimization and Conceptual Strategy Alternatives because this intersection would not degrade to an unacceptable level. No **indirect** impact would occur. ***[Lesser]***

Implementation of Mitigation Measure 3.15-4ff would reduce the significant impact on Intersection 36 from the No USACE Permit, Proposed Project, and High Density Alternatives under cumulative (2032) conditions to a **less-than-significant level**, by allowing this intersection to operate at an acceptable LOS D or better.

IMPACT 3.15-4gg Unacceptable LOS at the Americanos Boulevard/Douglas Road Intersection (Intersection 37) under Cumulative (2032) Conditions.

NCP, BIM, CS, ID

A **direct, less-than-significant** impact would occur to this intersection under cumulative (2032) conditions for the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives because this intersection would not degrade to an unacceptable level. No **indirect** impact would occur. ***[Lesser]***

PP

Operations at this signalized intersection would degrade from an acceptable LOS C to an unacceptable LOS E during the A.M. peak traffic hour with project traffic from the Proposed Project Alternative under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur.

Mitigation Measure 3.15-4gg: Participate in Improvements to the Americanos Boulevard/Douglas Road Intersection (Intersection 37).

To ensure acceptable operations at the Americanos Boulevard/Douglas Road intersection, optimize signal timing and phasing.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4gg would reduce the significant impact on Intersection 37 from the Proposed Project Alternative under cumulative (2032) conditions to a **less-than-significant** level, by allowing this intersection to operate at an acceptable LOS D or better.

IMPACT 3.15-4hh **Unacceptable LOS at the Sunrise Boulevard/ Chrysanthy Boulevard Intersection (Intersection 38) under Cumulative (2032) Conditions.**

NCP

A **direct, less-than-significant** impact would occur to this intersection under cumulative (2032) conditions for the No USACE Permit Alternatives because this intersection would not degrade to an unacceptable level. No **indirect** impact would occur. ***[Lesser]***

PP, BIM, CS, ID

Operations at this signalized intersection would degrade from an acceptable LOS D to an unacceptable LOS E during the A.M. peak traffic hour with project traffic from the Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4hh: Participate in Improvements to the Sunrise Boulevard/Chrysanthy Boulevard Intersection (Intersection 38).

To ensure that the Chrysanthy Boulevard/Sunrise Boulevard intersection operates at an acceptable LOS, a second westbound right-turn lane is needed.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4hh would reduce the significant impact on Intersection 38 from the Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a **less-than-significant** level, by allowing this intersection to operate at an acceptable LOS D or better.

IMPACT 3.15-4ii **Unacceptable LOS at the Rancho Cordova Parkway/ Chrysanthy Boulevard Intersection (Intersection 39) under Cumulative (2032) Conditions.**

NCP, BIM, CS, ID

A **direct, less-than-significant** impact would occur to this intersection under cumulative (2032) conditions for the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives because this intersection would not degrade to an unacceptable level. No **indirect** impact would occur. ***[Lesser]***

PP

Operations at this signalized intersection would degrade from an acceptable LOS C to an unacceptable LOS F during the A.M. peak traffic hour with project traffic from the Proposed Project Alternative under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur.

Mitigation Measure 3.15-4ii: Participate in Improvements to the Rancho Cordova Parkway/Chrysanthy Boulevard Intersection (Intersection 39).

To ensure acceptable operations at the Rancho Cordova Parkway/Chrysanthy Boulevard intersection, optimize signal timing and phasing.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4ii would reduce the significant impact on Intersection 39 from the Proposed Project Alternative under cumulative (2032) conditions to a **less-than-significant level**, by allowing this intersection to operate at an acceptable LOS D or better.

IMPACT 3.15-4jj Unacceptable LOS at the Americanos Boulevard/ Chrysanthy Boulevard Intersection (Intersection 40) under Cumulative (2032) Conditions.

NCP, BIM, CS, ID

A **direct, less-than-significant** impact would occur to this intersection under cumulative (2032) conditions for the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives because this intersection would not degrade to an unacceptable level. No **indirect** impact would occur. ***[Lesser]***

PP

Operations at this signalized intersection would degrade from an acceptable LOS C or better to an unacceptable LOS E or worse during the A.M. and P.M. peak traffic hours with project traffic from the Proposed Project Alternative under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur.

Mitigation Measure 3.15-4jj: Participate in Improvements to the Americanos Boulevard/Chrysanthy Boulevard Intersection (Intersection 40).

To ensure acceptable operations at the Americanos Boulevard/Chrysanthy Boulevard intersection, optimize signal timing and phasing.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4jjwould reduce the significant impact on Intersection 40 from the Proposed Project Alternative under cumulative (2032) conditions to a **less-than-significant level**, by allowing this intersection to operate at an acceptable LOS D or better.

IMPACT 3.15-4kk **Unacceptable LOS at the Rancho Cordova Parkway/Kiefer Boulevard Intersection (Intersection 41) under Cumulative (2032) Conditions.**

NCP, BIM, CS, ID

Operations at this signalized intersection would degrade from an acceptable LOS C to an unacceptable LOS E or worse during the A.M. or P.M. peak traffic hour with project traffic from the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Greater]***

Mitigation Measure 3.15-4kk: Participate in Improvements to the Rancho Cordova Parkway/Kiefer Boulevard Intersection (Intersection 41).

To ensure that the Rancho Cordova Parkway/Kiefer Boulevard intersection operates at an acceptable LOS, the signal timing of the intersection needs to be adjusted appropriately to the new balance of traffic with the project.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

PP

A **direct, less-than-significant** impact would occur to this intersection under cumulative (2032) conditions for the Proposed Project Alternative because this intersection would not degrade to an unacceptable level. No **indirect** impact would occur.

Implementation of Mitigation Measure 3.15-4kk would reduce the significant impact on Intersection 41 from the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a **less-than-significant** level, by allowing this intersection to operate at an acceptable LOS D or better.

IMPACT 3.15-4ll **Unacceptable LOS at the Sunrise Boulevard/International Drive Intersection (Intersection 42) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This signalized intersection would operate at an unacceptable LOS F during the A.M. and P.M. peak traffic hours with and without project traffic under cumulative (2032) conditions. Project traffic would increase the average intersection delay by more than 5 seconds in the A.M. and P.M. peak periods. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4ll: Participate in Improvements to the Sunrise Boulevard/International Drive Intersection (Intersection 42).

To improve LOS at the Sunrise Boulevard/International Drive intersection, the intersection must be reconfigured to consist of three left-turn lanes, three through lanes, and two right-turn lanes. However, even with these improvements, this intersection would operate at an unacceptable LOS. To further

improve operations and to fully reduce the impact, aggressive at-grade improvements (such as implementation of a continuous-flow intersection) or partial grade separation is required, consistent with the City's Circulation Element/Plan and associated CIP.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4ll would partially reduce the significant impact on Intersection 42 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions. However, implementation of this measure would not reduce the impact to a less-than-significant level because, at-grade or partial grade separation is required. Because the aggressive at-grade treatments have not been designed, they could have geometric and/or environmental constraints that may make the treatments infeasible. Because the feasibility of improvements necessary to fully reduce this impact to a less-than-significant level is unknown, this impact is considered **significant and unavoidable.** If the aggressive at-grade treatments are determined to be feasible, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4mm **Unacceptable LOS on State Route 16 between Excelsior Road and Eagles Nest Road (Roadway Segment 1) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

This roadway segment would operate at an unacceptable LOS F with and without project traffic under cumulative (2032) conditions. However, the V/C ratio would degrade by more than 0.05 with project-related traffic. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4mm: Participate in Improvements to State Route 16 between Excelsior Road to Eagles Nest Road (Roadway Segment 1).

Improvements must be made to ensure that SR 16 operates at an acceptable LOS between Excelsior Road and Eagles Nest Road; specifically, this roadway segment should be widened to four lanes. Improvements beyond this mitigation are identified in the City's Circulation Element; specifically, SR 16 is identified as a six-lane expressway, however full funding of this improvement has not been identified.

Improvements to this roadway segment must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4mm would reduce the significant impact on Roadway Segment 1 under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by

allowing this roadway segment to operate at an acceptable LOS. However, the identified improvement would fall under the jurisdiction of the County and Caltrans; therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of the improvements. Given these conditions, this impact is potentially **significant and unavoidable.** If the County and Caltrans cooperate in allowing the identified improvement to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4nn **Unacceptable LOS on State Route 16 between Sunrise Boulevard and Grant Line Road (Roadway Segment 2) under Cumulative (2032) Conditions.**

NCP, BIM, CS

A **direct, less-than-significant** impact would occur to this roadway segment under cumulative (2032) conditions for the No USACE Permit, Biological Impact Minimization, and Conceptual Strategy Alternatives because this roadway segment would not degrade to an unacceptable level. **No indirect** impact would occur. ***[Lesser]***

PP, ID

This roadway segment would operate at an unacceptable LOS F with and without project traffic under cumulative (2032) conditions. However, the V/C ratio would degrade by more than 0.05 with project related traffic from the Proposed Project and Increased Development Alternatives. This **direct** impact would be **significant**. **No indirect** impact would occur. ***[Similar]***

Mitigation Measure 3.15-4nn: Participate in Improvements to State Route 16 between Sunrise Boulevard and Grant Line Road (Roadway Segment 2).

Improvements must be made to ensure that SR 16 operates at an acceptable LOS between Sunrise Boulevard and Grant Line Road; specifically, this roadway segment should be widened to four lanes. Improvements beyond this mitigation are identified in the City's Circulation Element; specifically, SR 16 is identified as a six-lane expressway, however full funding of this improvement has not been identified.

Improvements to this roadway segment must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4nn would reduce the significant impact on Roadway Segment 2 under the Proposed Project and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this roadway segment to operate at an acceptable LOS. However, the identified improvement would fall partially under the jurisdiction of the County and Caltrans, therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of the improvements. Given these conditions, this impact is potentially **significant and unavoidable.** If the County and Caltrans cooperate in allowing the identified improvement to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4oo **Unacceptable LOS on Sunrise Boulevard between Gold Country Boulevard and Coloma Road (Roadway Segment 17) under Cumulative (2032) Conditions.**

NCP, BIM, CS, ID

A **direct, less-than-significant** impact would occur to this roadway segment under cumulative (2032) conditions for the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives because this roadway segment would not degrade to an unacceptable level. No **indirect** impact would occur. ***[Lesser]***.

PP

This roadway segment would operate at an unacceptable LOS F with and without project traffic under cumulative (2032) conditions. However, the V/C ratio would degrade by more than 0.05 with project related traffic from the Proposed Project Alternative. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4oo: Participate in Improvements to Sunrise Boulevard between Gold Country Boulevard and Coloma Road (Roadway Segment 17).

Improvements must be made to Sunrise Boulevard between Gold Country Boulevard and Coloma Road to improve operations; specifically, this roadway segment should be widened to eight lanes. The identified improvement would more than offset the impacts specifically related to the project on the roadway segment. However, because of other development in the region that would substantially increase traffic levels, the roadway segment would continue to operate at an unacceptable LOS even with the capacity improvements identified to mitigate SunCreek impacts. The identified improvement is consistent with the County Mobility Study; however, it is inconsistent with the City's Circulation Element/Plan because City policy requires a maximum roadway cross section of six lanes. Moreover, without additional river crossings, there are no parallel capacity improvements to relieve Sunrise Boulevard on this segment. Additional river crossings would result in significant environmental effects (i.e., loss of riparian habitat and loss of structures).

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department (additional river crossings would require coordination with other agencies such as CPUC, DFG, USACE, Caltrans, etc.)

Implementation of Mitigation Measure 3.15-4oo would reduce the significant impact on Roadway Segment 17 from the Proposed Project Alternative under cumulative (2032) conditions to a less-than-significant level by offsetting impacts of project traffic. However, because the improvement (widening of Sunrise Boulevard) is inconsistent with the City's Circulation Element/Plan and therefore may not be implemented, and because the potential for additional river crossings is limited and would require coordination and approval by other regulatory agencies in which neither the City nor project applicant(s) have any control over the timing or implementation of additional river crossings, this impact is considered **significant and unavoidable.**

IMPACT 3.15-4pp **Unacceptable LOS on Sunrise Boulevard between Coloma Road and U.S. 50 Westbound Ramps (Roadway Segment 18) under Cumulative (2032) Conditions.**

NCP, BIM, CS

A **direct, less-than-significant** impact would occur to this roadway segment under cumulative (2032) conditions for the No USACE Permit, Biological Impact Minimization, and Conceptual Strategy Alternatives because this roadway segment would not degrade to an unacceptable level. **No indirect** impact would occur. ***[Lesser]***

PP, ID

This roadway segment would operate at an unacceptable LOS F with and without project traffic under cumulative (2032) conditions. However, the V/C ratio would degrade by more than 0.05 with project related traffic from the Proposed Project and Increased Development Alternatives. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4pp: Participate in Improvements to Sunrise Boulevard between Coloma Road and U.S. 50 Westbound Ramps (Roadway Segment 18).

Improvements must be made to improve operations on Sunrise Boulevard between Coloma Road and U.S. 50 westbound ramps; specifically, this roadway segment should be widened to eight lanes. The identified improvement would more than offset the impacts specifically related to the Rio del Oro project on the roadway segment. However, because of other development in the region that would substantially increase traffic levels, the roadway segment would continue to operate at an unacceptable LOS even with the capacity improvements identified to mitigate SunCreek impacts. The identified improvement is consistent with the County Mobility Study; however, it is inconsistent with the City's Circulation Element/Plan because City policy requires a maximum roadway cross section of six lanes. Moreover, without additional river crossings, there are no parallel capacity improvements to relieve Sunrise Boulevard on this segment. Additional river crossings would result in significant environmental effects (i.e., loss of riparian habitat and loss of structures).

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department (additional river crossings would require coordination with other agencies such as CPUC, DFG, USACE, Caltrans, etc.)

Implementation of Mitigation Measure 3.15-4pp would reduce the significant impact on Roadway Segment 18 from the Proposed Project and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level by offsetting impacts of project traffic. However, because the improvement (widening of Sunrise Boulevard) is inconsistent with the City's Circulation Element/Plan and therefore may not be implemented, and because the potential for additional river crossings is limited and would require coordination and approval by other regulatory agencies in which neither the City nor project applicant(s) have any control over the timing or implementation of additional river crossings, this impact is considered **significant and unavoidable.**

IMPACT 3.15-4qq **Unacceptable LOS on Sunrise Boulevard between the U.S. 50 eastbound ramps and Folsom Boulevard (Roadway Segment 19) under Cumulative (2032) Conditions.**

NCP, BIM, CS, ID

A **direct, less-than-significant** impact would occur to this roadway segment under cumulative (2032) conditions for the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives because this roadway segment would not degrade to an unacceptable level. **No indirect** impact would occur. ***[Lesser]***.

PP

This roadway segment would operate at an unacceptable LOS F with and without project traffic under cumulative (2032) conditions. However, the V/C ratio would degrade by more than 0.05 with project related traffic from the Proposed Project Alternative. This **direct** impact would be **significant**. **No indirect** impacts would occur.

Mitigation Measure 3.15-4qq: Participate in Improvements to Sunrise Boulevard between the U.S. 50 eastbound ramps and Folsom Boulevard (Roadway Segment 19).

Improvements must be made to Sunrise Boulevard between the U.S. 50 eastbound ramps and Folsom Boulevard to improve operations; specifically, this roadway segment should be widened to eight lanes. The identified improvement would more than offset the impacts specifically related to the project on the roadway segment. However, because of other development in the region that would substantially increase traffic levels, the roadway segment would continue to operate at an unacceptable LOS even with the capacity improvements identified to mitigate SunCreek impacts. The identified improvement is consistent with the County Mobility Study; however, it is inconsistent with the City's Circulation Element/Plan because City policy requires a maximum roadway cross section of six lanes. Moreover, without additional river crossings, there are no parallel capacity improvements to relieve Sunrise Boulevard on this segment. Additional river crossings would result in significant environmental effects (i.e., loss of riparian habitat and loss of structures).

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department (additional river crossings would require coordination with other agencies such as CPUC, DFG, USACE, Caltrans, etc.)

Implementation of Mitigation Measure 3.15-4qq would reduce the significant impact on Roadway Segment 19 from the Proposed Project Alternative under cumulative (2032) conditions to a less-than-significant level by offsetting impacts of project traffic. However, because the improvement (widening of Sunrise Boulevard) is inconsistent with the City's Circulation Element/Plan and therefore may not be implemented, and because the potential for additional river crossings is limited and would require coordination and approval by other regulatory agencies in which neither the City nor project applicant(s) have any control over the timing or implementation of additional river crossings, this impact is considered **significant and unavoidable.**

IMPACT 3.15-4rr **Unacceptable LOS on Sunrise Boulevard between Folsom Boulevard and White Rock Road (Roadway Segment 20) under Cumulative (2032) Conditions.**

NCP, BIM, CS

A **direct, less-than-significant** impact would occur to this roadway segment under cumulative (2032) conditions for the No USACE Permit, Biological Impact Minimization, and Conceptual Strategy Alternatives because this roadway segment would not degrade to an unacceptable level. **No indirect** impact would occur. ***[Lesser]***

PP, ID

This roadway segment would operate at an unacceptable LOS F with and without project traffic under cumulative (2032) conditions. However, the V/C ratio would degrade by more than 0.05 with project related traffic from the Proposed Project and Increased Development Alternatives. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4rr: Participate in Improvements to Sunrise Boulevard between Folsom Boulevard and White Rock Road (Roadway Segment 20).

Improvements must be made to ensure that Sunrise Boulevard operates at an acceptable LOS between Folsom Boulevard and White Rock Road; specifically, this roadway segment should be widened to eight lanes. With implementation of this identified improvement, this segment would operate at an acceptable LOS, but the improvement is inconsistent with the City's Circulation Element/Plan because City policy requires a maximum roadway cross section of six lanes.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4rr would reduce the significant impact on Roadway Segment 20 from the Proposed Project and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this roadway segment to operate at an acceptable LOS D or better. However, because this identified improvement (widening of Sunrise Boulevard) is inconsistent with the City's Circulation Element/Plan and therefore may not be implemented, the impact is considered **significant and unavoidable.**

IMPACT 3.15-4ss Unacceptable LOS on Grant Line Road between White Rock Road and Douglas Road (Roadway Segment 24) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

This roadway segment would operate at an unacceptable LOS F with and without project traffic under cumulative (2032) conditions. However, the V/C ratio would degrade by more than 0.05 with project-related traffic. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4ss: Participate in Improvements to Grant Line Road between White Rock Road and Douglas Road (Roadway Segment 24).

Improvements must be made to ensure that Grant Line Road operates at an acceptable LOS between White Rock Road and Douglas Road; specifically, this roadway segment should be widened to four lanes. Improvements beyond this mitigation are identified in the City's Circulation Element; specifically, Grant Line Road is identified as a six-lane expressway. However, full funding of this improvement has not been identified.

Improvements to this roadway segment must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4ss would reduce the significant impact on Roadway Segment 24 under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this roadway segment to operate at an acceptable LOS. However, the identified improvement would fall partially under the jurisdiction of the County, therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of the improvements. Given these conditions, this impact is potentially **significant and unavoidable.** If the County cooperates in allowing the identified improvement to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4tt **Unacceptable LOS on Grant Line Road between Douglas Road and State Route 16 (Roadway Segment 25) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

Operations on this roadway segment would degrade from an acceptable LOS D to an unacceptable LOS E or LOS F with project traffic from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4tt: Participate in Improvements to Grant Line Road between Douglas Road and State Route 16 (Roadway Segment 25).

To ensure that Grant Line Road operates at an acceptable LOS D or better between Douglas Road and SR 16, this roadway segment should be widened to six lanes.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4tt would reduce the significant impact on Roadway Segment 25 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a **less-than-significant** level, by allowing this roadway segment to operate at an acceptable LOS D or better.

IMPACT 3.15-4uu **Unacceptable LOS on Douglas Road between Sunrise Boulevard and Rancho Cordova Parkway (Roadway Segment 27) under Cumulative (2032) Conditions.**

NCP, BIM, CS

A **direct, less-than-significant** impact would occur to this roadway segment under cumulative (2032) conditions for the No USACE Permit, Biological Impact Minimization, and Conceptual Strategy Alternatives because this roadway segment would not degrade to an unacceptable level. **No indirect** impact would occur. ***[Lesser]***

PP, ID

Operations on this roadway segment would degrade from an acceptable LOS C to an unacceptable LOS E or LOS F with project traffic from the Proposed Project and Increased Development Alternatives under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4uu: Participate in Improvements to Douglas Road between Sunrise Boulevard and Rancho Cordova Parkway (Roadway Segment 27).

To ensure that Douglas Road operates at an acceptable LOS D or better between Sunrise Boulevard and Rancho Cordova Parkway, this roadway segment should be widened to six lanes.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4uu would reduce the significant impact on Roadway Segment 27 from the Proposed Project and Increased Development Alternatives under cumulative (2032) conditions to a **less-than-significant** level, by allowing this roadway segment to operate at an acceptable LOS D or better.

IMPACT 3.15-4vv Unacceptable LOS on Sunrise Boulevard between Douglas Road and Chrysanthy Boulevard (Roadway Segment 38) under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

Operations on this roadway segment would degrade from an unacceptable LOS E to an unacceptable LOS F, and the V/C ratio would increase by 0.05 or more, with project traffic under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4vv: Participate in Improvements to Sunrise Boulevard between Douglas Road and Chrysanthy Boulevard (Roadway Segment 38).

Improvements must be made to ensure that Sunrise Boulevard operates at an acceptable LOS D or better between Douglas Road and Chrysanthy Boulevard; specifically, this roadway segment should be widened to eight lanes. With implementation of this improvement, this segment would operate at an acceptable LOS; however, the improvement is inconsistent with the City's Circulation Element/Plan because City policy requires a maximum roadway cross section of six lanes or fewer.

An alternative to this improvement is additional connectivity, such as the extensions of Chrysanthy Boulevard to Kiefer Boulevard, Jaeger Road to Grant Line Road, and Kiefer Boulevard to Sacramento.

Improvements to this roadway segment must be coordinated with the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department and County Department of Transportation.

Implementation of Mitigation Measure 3.15-4vv would reduce the significant impact on Roadway Segment 38 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level, by allowing this roadway segment to operate at an acceptable LOS D or better. However, this identified improvement (widening of Sunrise Boulevard) is inconsistent with the City's Circulation Element/Plan and therefore may not be implemented. Furthermore, the alternative addition of roadway connectivity, which could also reduce this impact to a less-than-significant level, falls under the jurisdiction of the County; therefore, neither the City nor the project applicant(s) would have control over its timing or implementation. Thus, this impact is considered **significant and unavoidable.** If the County cooperates in allowing the improvement to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

IMPACT 3.15-4ww **Unacceptable LOS on Rancho Cordova Parkway between Douglas Road and Chrysanthy Boulevard (Roadway Segment 43) under Cumulative (2032) Conditions.**

NCP, PP, BIM, CS, ID

Operations on this roadway segment would degrade from an acceptable LOS C to an unacceptable LOS F with project traffic under cumulative (2032) conditions. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4ww: Participate in Improvements to Rancho Cordova Parkway between Douglas Road and Chrysanthy Boulevard (Roadway Segment 43).

To ensure that Rancho Cordova Parkway operates at an acceptable LOS D or better between Douglas Road and Chrysanthy Boulevard, this roadway segment must be widened to six lanes.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

Implementation of Mitigation Measure 3.15-4ww would reduce the significant impact on Roadway Segment 43 from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a **less-than-significant** level, by allowing this roadway segment to operate at an acceptable LOS.

IMPACT 3.15-4xx **Unacceptable LOS on Rancho Cordova Parkway Chrysanthy Boulevard and Kiefer Boulevard (Roadway Segment 44) under Cumulative (2032) Conditions.**

NCP, PP, BIM, ID

Operations on this roadway segment would degrade from an acceptable LOS D to an unacceptable LOS E with project traffic from the No USACE Permit, Proposed Project, Biological Impact Minimization, and Increased Development Alternatives under cumulative (2032) **conditions**. This **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4xx: Participate in Improvements to Rancho Cordova Parkway between Chrysanthy Boulevard and Kiefer Boulevard (Roadway Segment 44).

To ensure that Rancho Cordova Parkway operates at an acceptable LOS D or better between Chrysanthy Boulevard and Kiefer Boulevard, this roadway segment must implement high access control or be widened to six lanes.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department

CS

A **direct, less-than-significant** impact would occur to this roadway segment under cumulative (2032) conditions for the Conceptual Strategy, and Increased Development Alternative because this roadway segment would not degrade to an unacceptable level. **No indirect** impact would occur. ***[Lesser]***

Implementation of Mitigation Measure 3.15-4xx would reduce the significant impact on Roadway Segment 44 for the No USACE Permit, Proposed Project, Biological Impact Minimization, and Increased Development Alternatives under cumulative (2032) conditions to a **less-than-significant** level, by allowing this roadway segment to operate at an acceptable LOS.

IMPACT 3.15-4yy Unacceptable LOS at Various Merge, Diverge, and Weave Segments of U.S. 50 under Cumulative (2032) Conditions.

NCP, PP, BIM, CS, ID

The following merge, diverge, and weave segments of U.S. 50 would operate at an unacceptable LOS F in the A.M. and/or P.M. peak traffic hours with and without project-related traffic under cumulative (2032) conditions:

- Eastbound U.S. 50
  - Mather Field Road direct off-ramp, diverge
  - Mather Field Road loop on-ramp, merge
  - Mather Field Road direct on-ramp, merge
  - Zinfandel Drive direct on-ramp, merge
  - Sunrise Boulevard loop/direct on-ramp to Rancho Cordova Parkway direct off-ramp, weave
  - Rancho Cordova Parkway direct on-ramp to Hazel Avenue direct off-ramp, weave
  - Rancho Cordova Parkway direct off-ramp, diverge
  - Hazel Avenue direct off-ramp, diverge
  - Hazel Avenue loop/direct on-ramp to Aerojet direct off-ramp, weave

- Westbound U.S. 50
  - Hazel Avenue direct on-ramp to Rancho Cordova Parkway direct off-ramp, weave
  - Rancho Cordova Parkway direct on-ramp to Sunrise Boulevard direct off-ramp, weave (No Project and No USACE Permit Alternatives only)
  - Zinfandel Drive loop on-ramp, merge
  - Mather Field Road direct off-ramp, diverge
  - Mather Field Road loop on-ramp, merge

Therefore, this **direct** impact would be **significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure 3.15-4yy: Participate in Improvements to U.S. 50 Merge, Diverge, and Weave Segments.

To ensure that project impacts to U.S. 50 merge, diverge, or weave areas are minimized, the following improvements to the U.S. 50 corridor are required:

- Ramp metering must be added on the Mather Field Road and Zinfandel Drive eastbound on-ramps
- An auxiliary lane must be constructed west of Mather Field Road in the eastbound direction.
- Traffic-signal timing at freeway interchanges must be coordinated with adjacent City intersections to minimize impacts of vehicle queue spillback onto U.S. 50.
- Parallel facilities to U.S. 50 must be constructed, including improvements to SR 16, extension of International Drive into and through the SPA, extension of Kiefer Boulevard, construction of Easton Valley Parkway, and connectivity of International Drive to Old Placerville Road.
- HOV enhancements to existing interchanges must be provided, such as bypass lanes at existing metered on-ramps.

Improvements to these merge, diverge, and weave areas must be coordinated with Caltrans and the County.

Implementation: Project Applicants.

Timing: As a condition of project approval and/or as a condition of the development agreement for any particular discretionary development application.

Enforcement: City of Rancho Cordova Public Works Department, Caltrans, and County Department of Transportation.

PP

Operations of the following merge segment of U.S. 50 would degrade from an acceptable LOS D in the A.M. peak traffic hour to an unacceptable LOS F in the A.M. peak traffic hour with project traffic under cumulative (2032) conditions.

- Westbound U.S. 50
  - Mather Field Road direct on-ramp, merge

Therefore, this **direct** impact would be **significant**. **No indirect** impacts would occur.

Mitigation Measure: Implement Mitigation Measure 3.15-4yy.

Implementation of Mitigation Measure 3.15-4yy would aid in reducing the significant impact from the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives under cumulative (2032) conditions to a less-than-significant level. The Circulation Element/Plan in the City General Plan and the City's CIP include many of the improvements identified above. However, several of the identified improvements fall under the jurisdiction of Caltrans and the County; therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of the improvements. Thus, this impact is potentially **significant and unavoidable**. If Caltrans and the County cooperate in allowing the improvement to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

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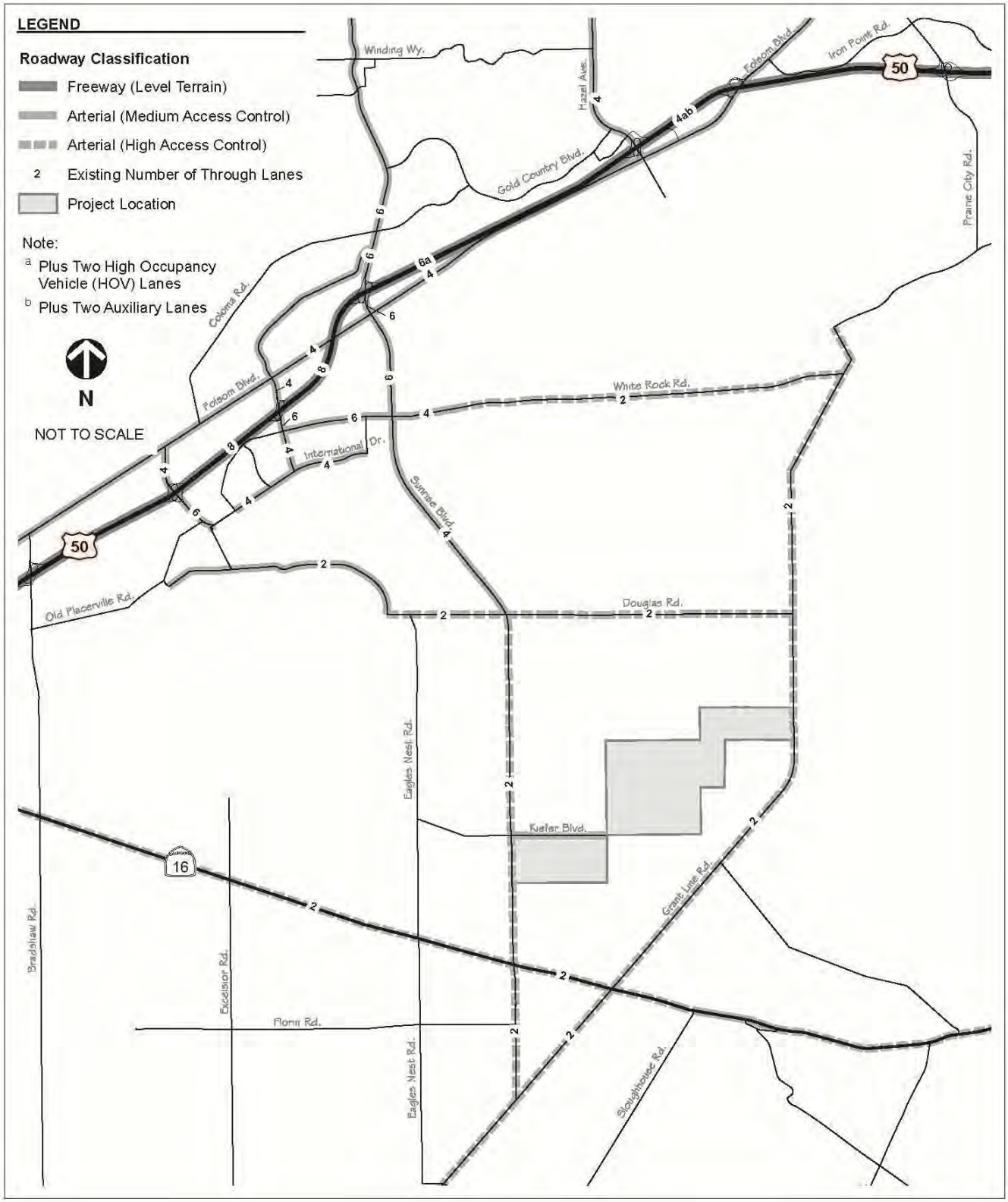
PROJECT LOCATION
EXHIBIT 3.15-1



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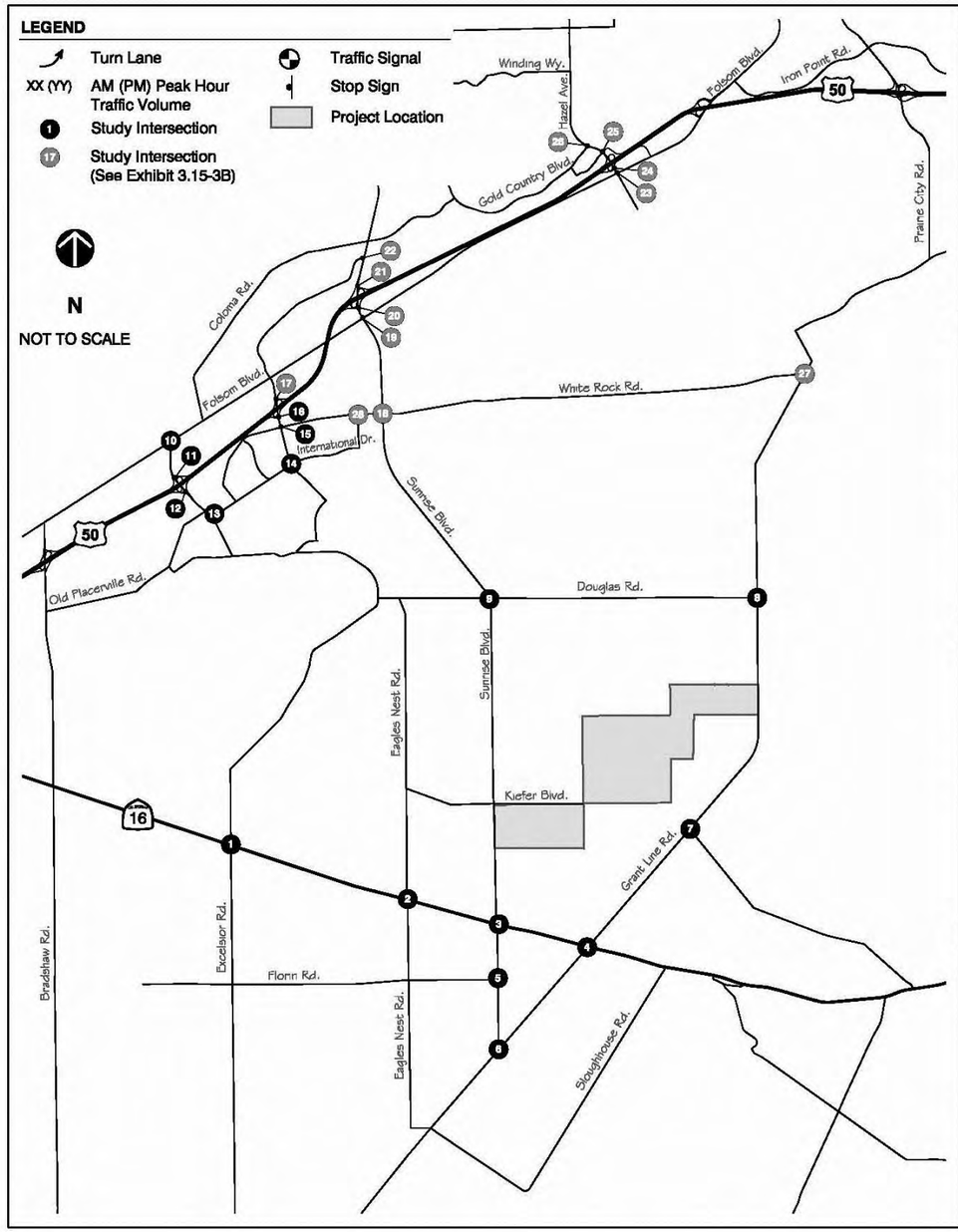
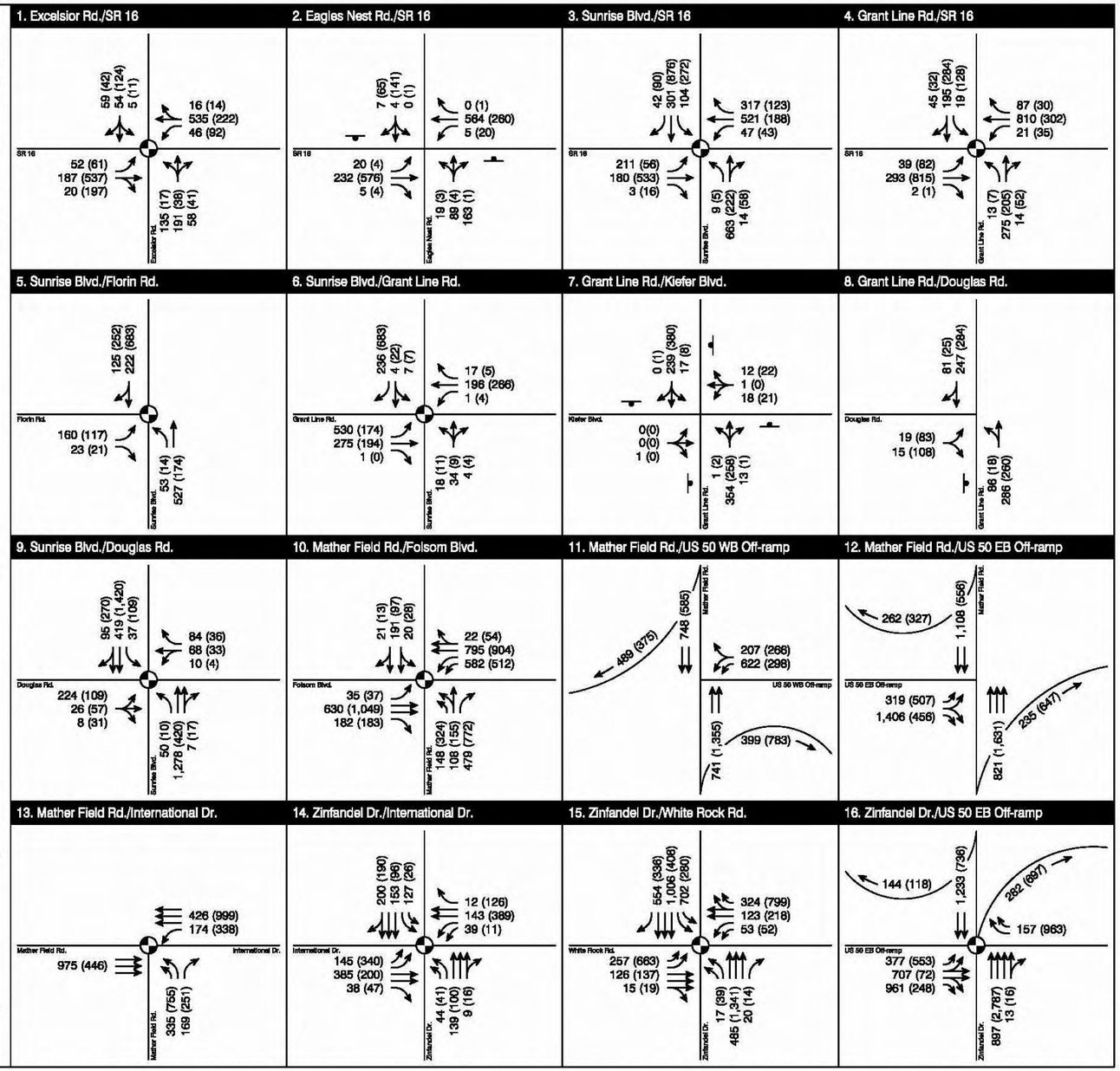
ROADWAY CLASSIFICATION AND NUMBER OF LANES - EXISTING CONDITIONS

EXHIBIT 3.15-2





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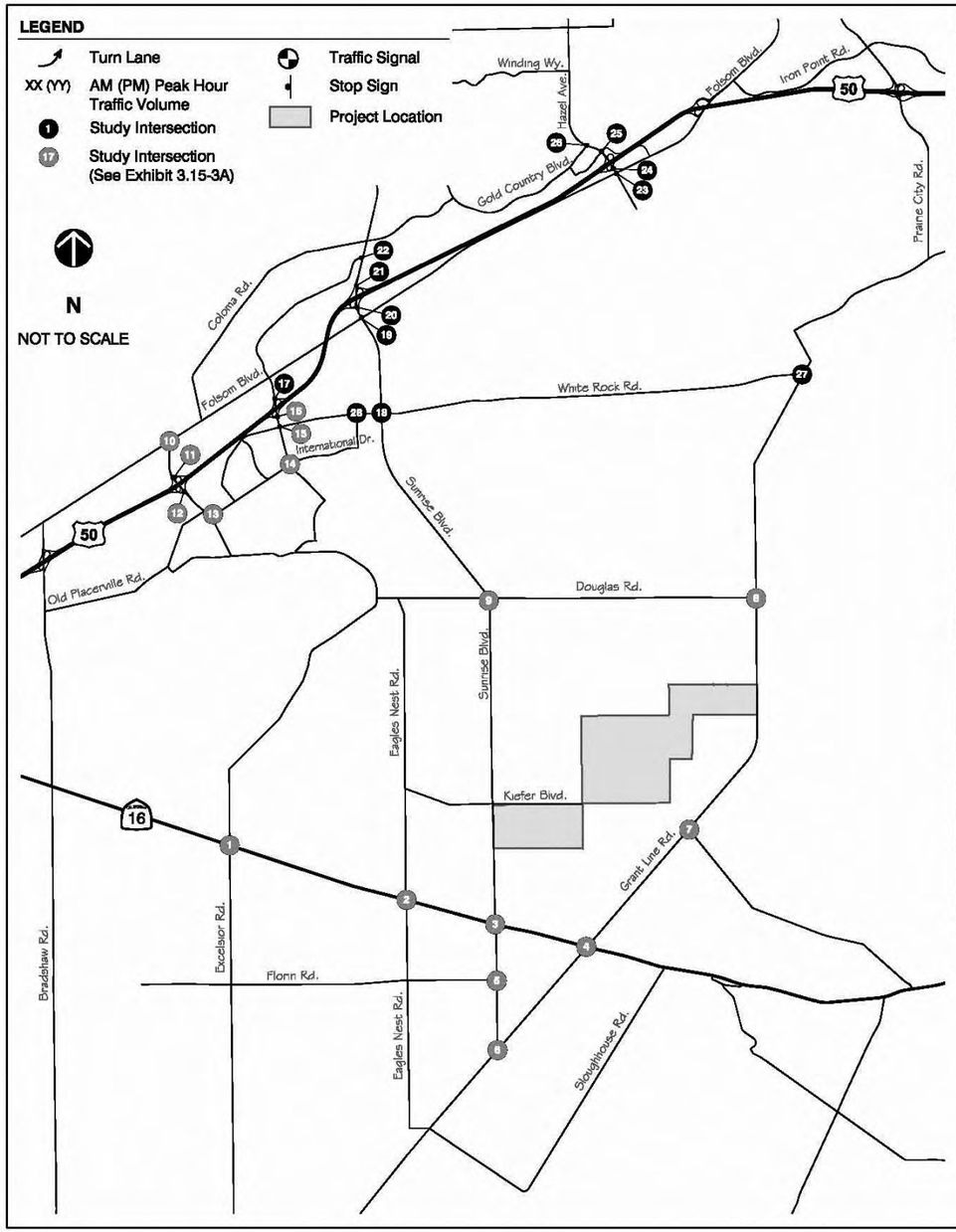
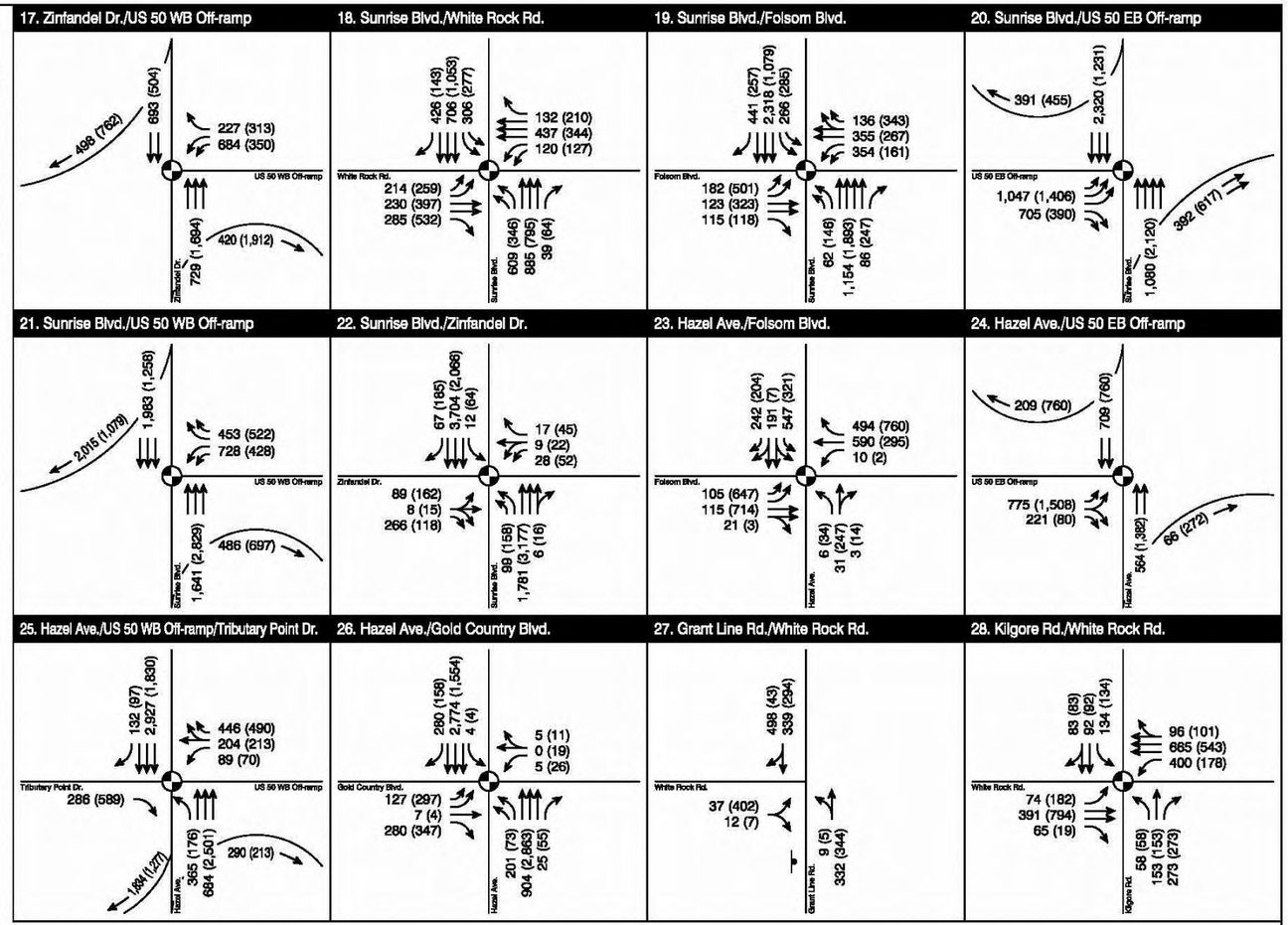
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING CONDITIONS

EXHIBIT 3.15-3A





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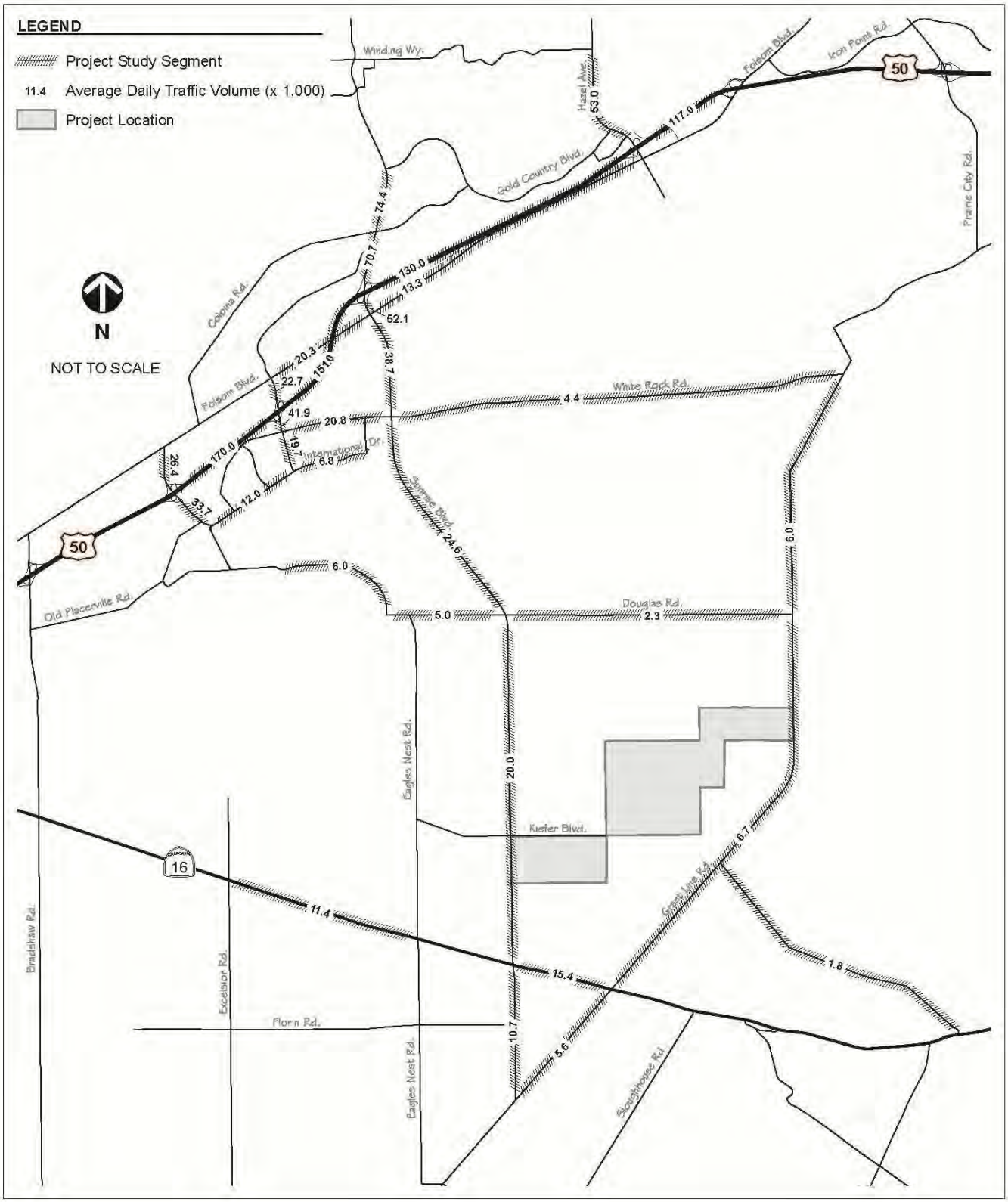
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING CONDITIONS

EXHIBIT 3.15-3B



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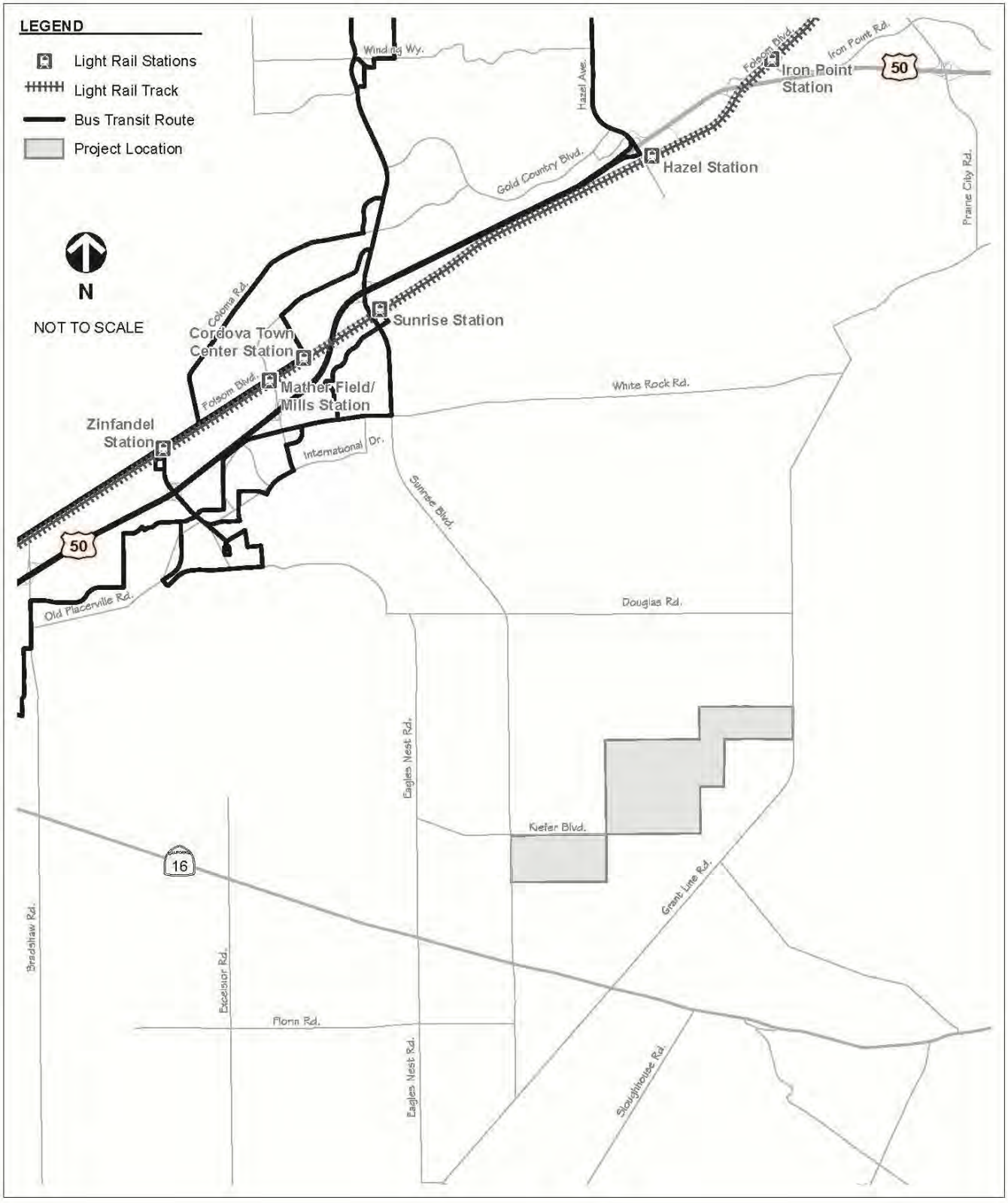
AVERAGE DAILY TRAFFIC VOLUME - EXISTING CONDITIONS
EXHIBIT 3.15-4



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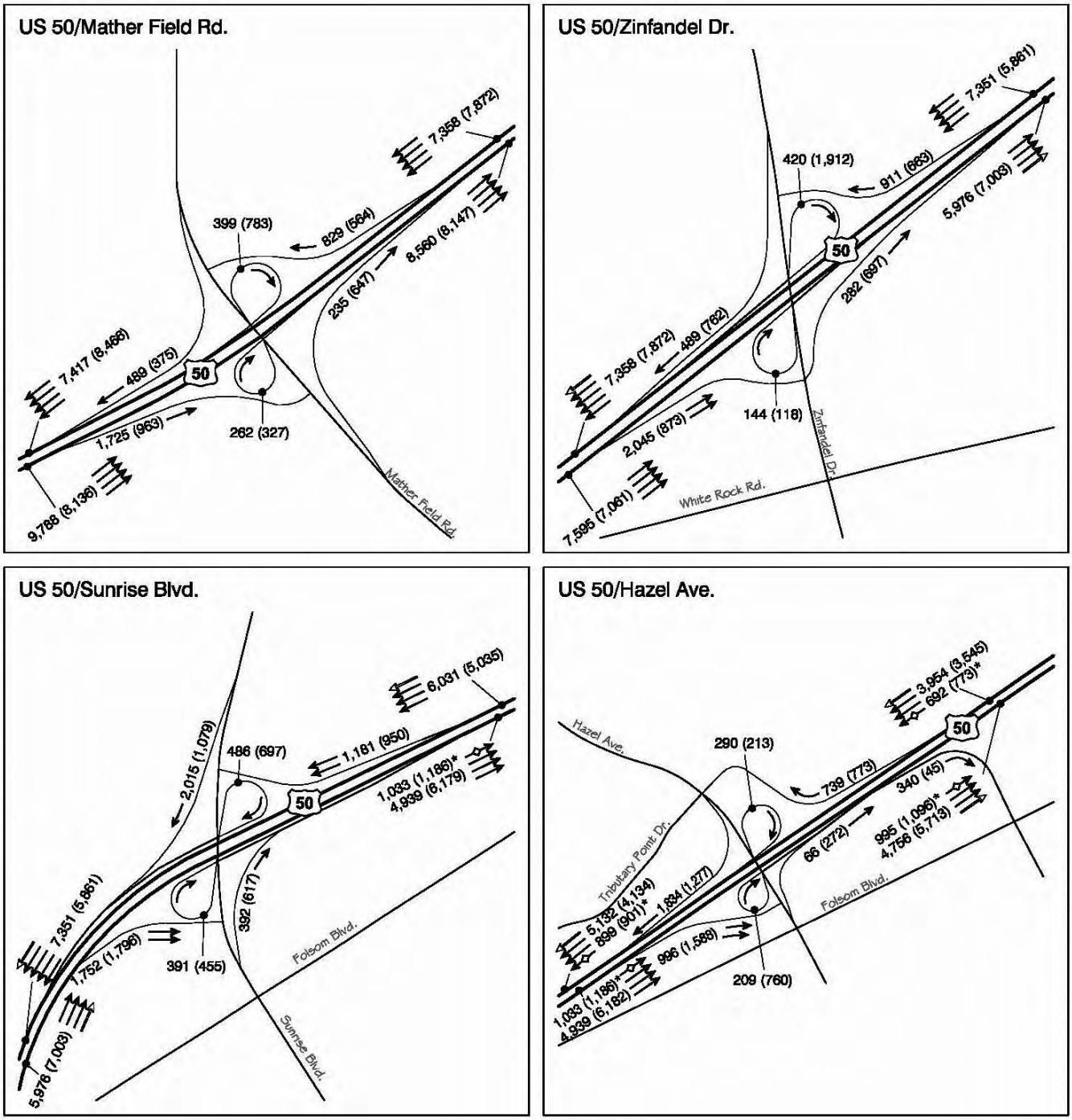
EXISTING TRANSIT FACILITIES
EXHIBIT 3.15-5



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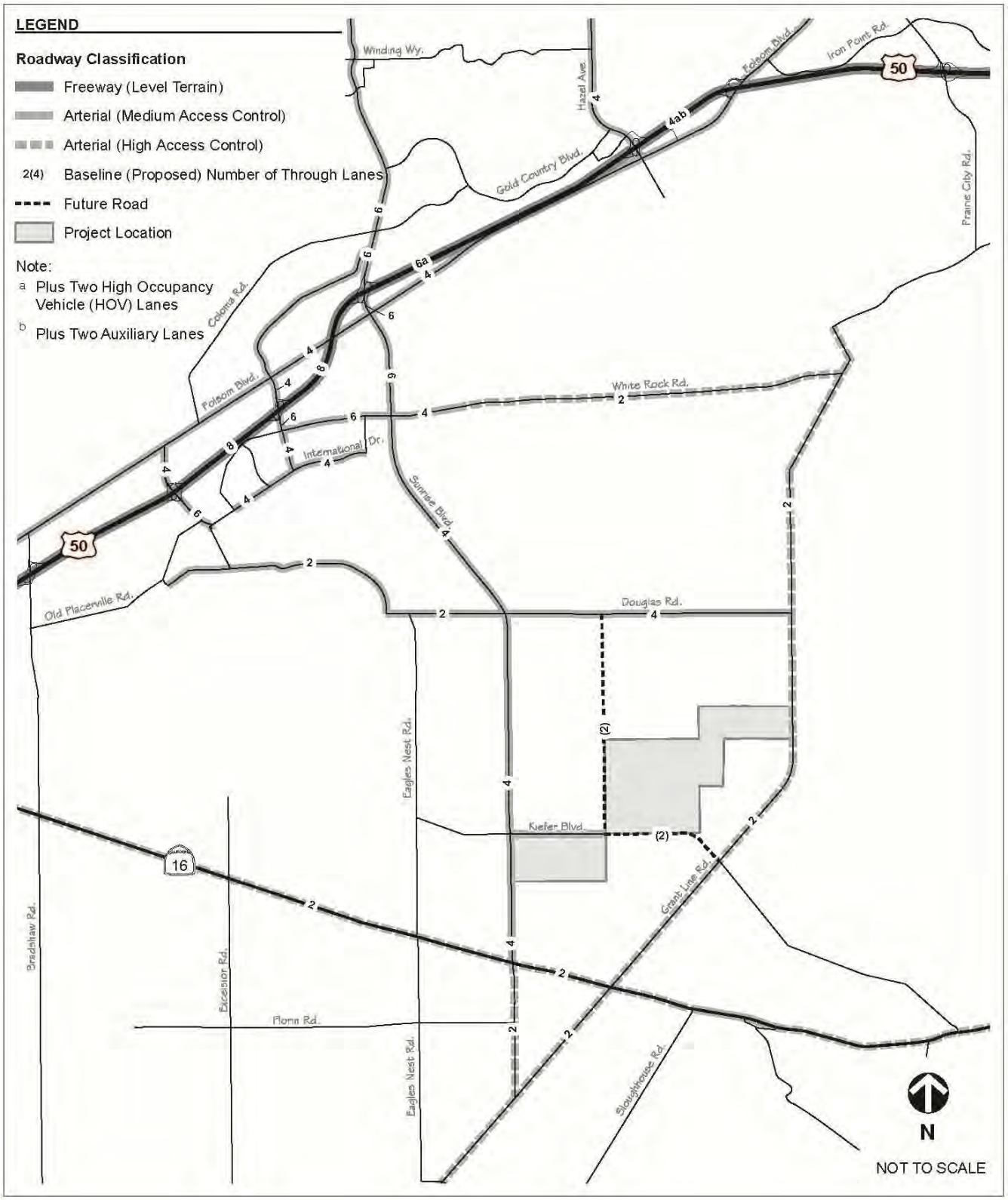
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - EXISTING CONDITIONS

EXHIBIT 3.15-6



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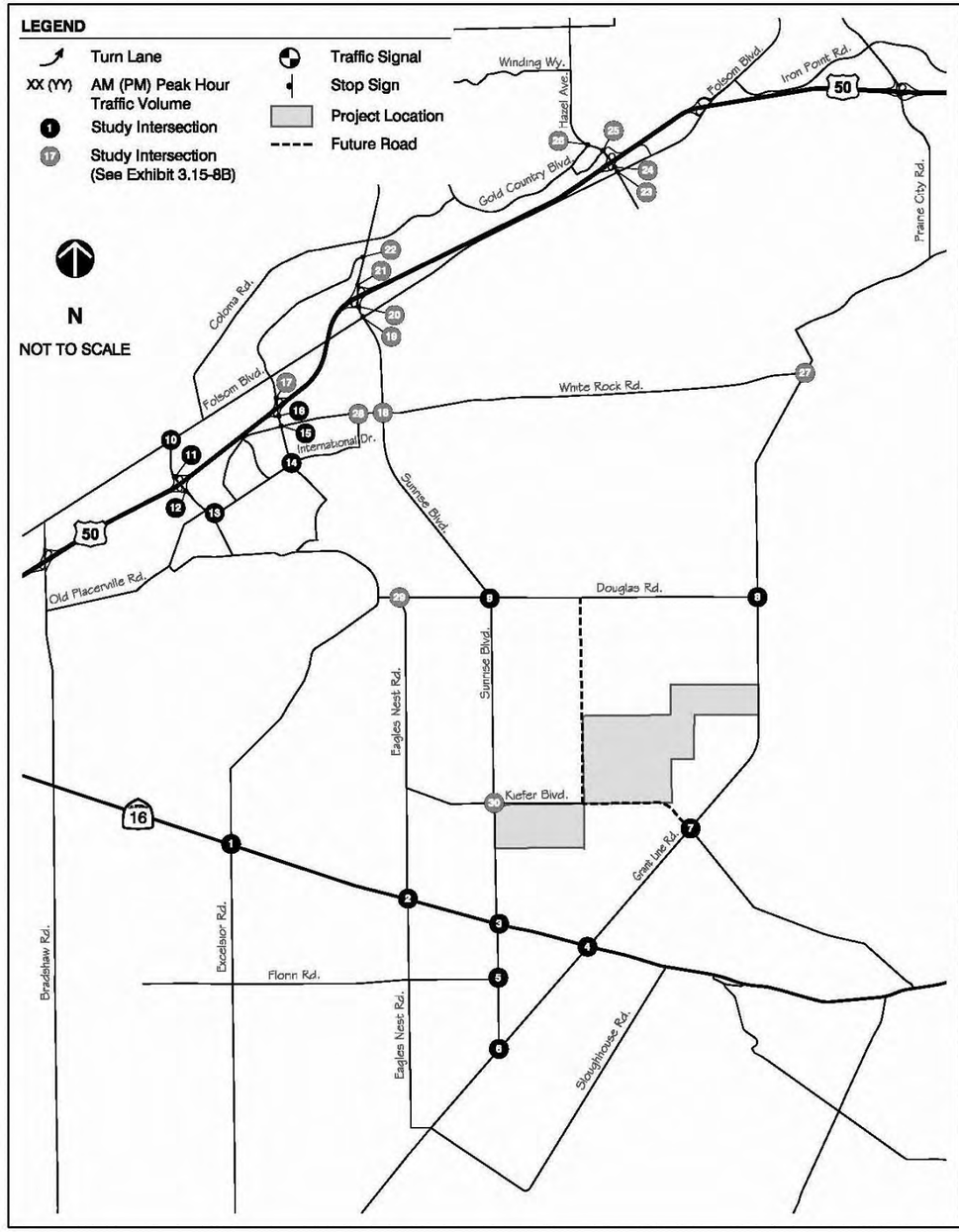
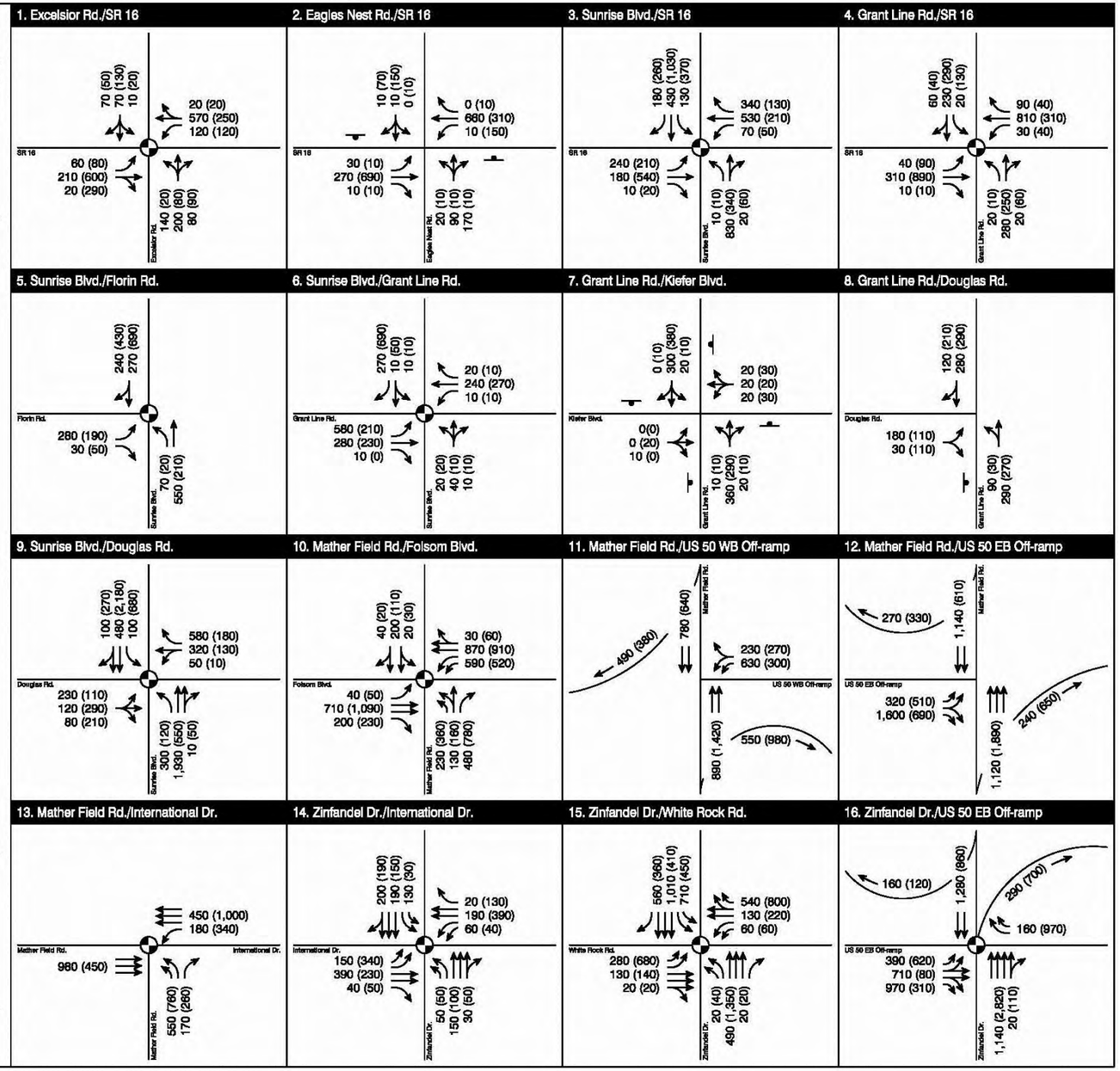
ROADWAY CLASSIFICATION AND NUMBER OF LANES - BASELINE CONDITIONS

EXHIBIT 3.15-7





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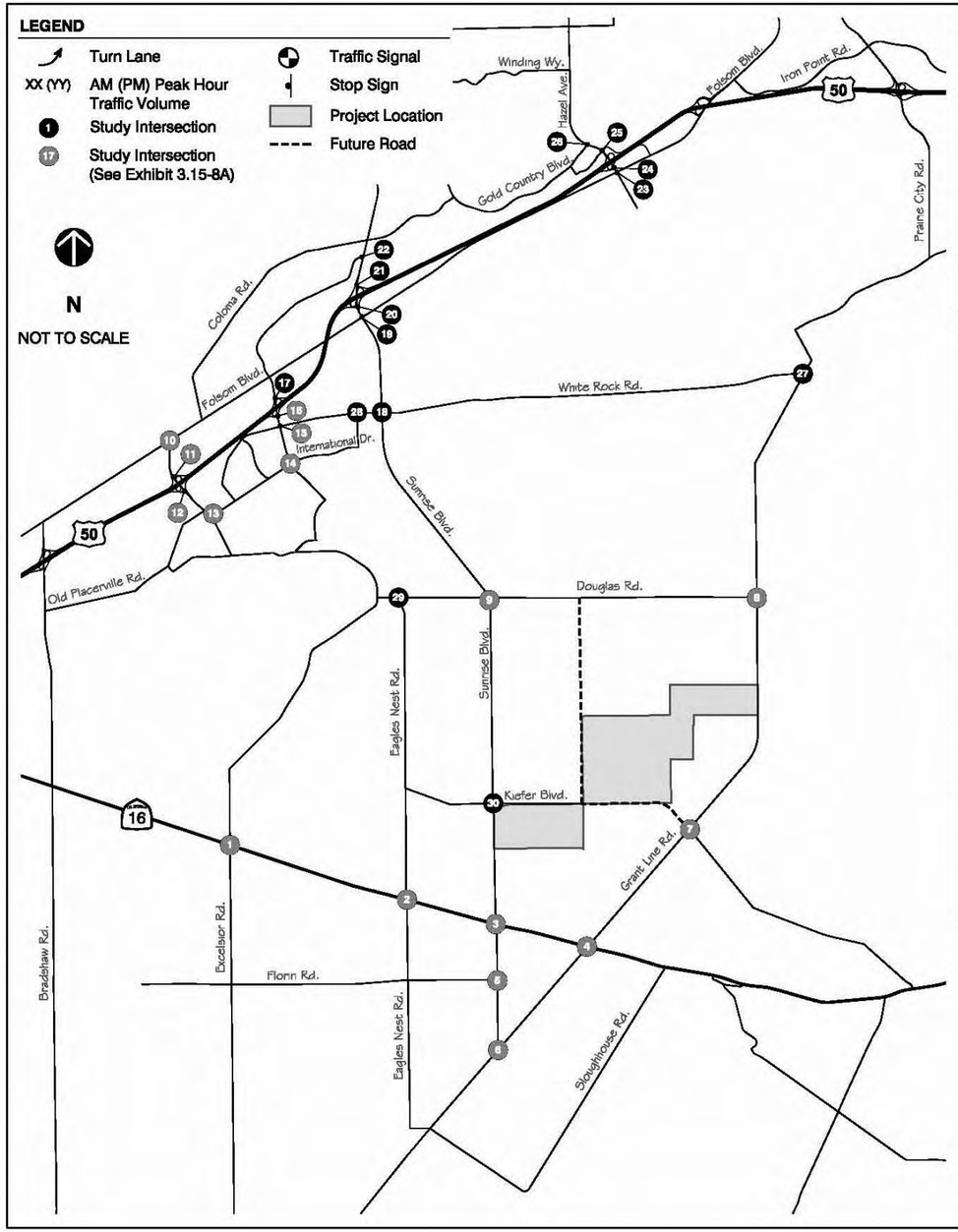
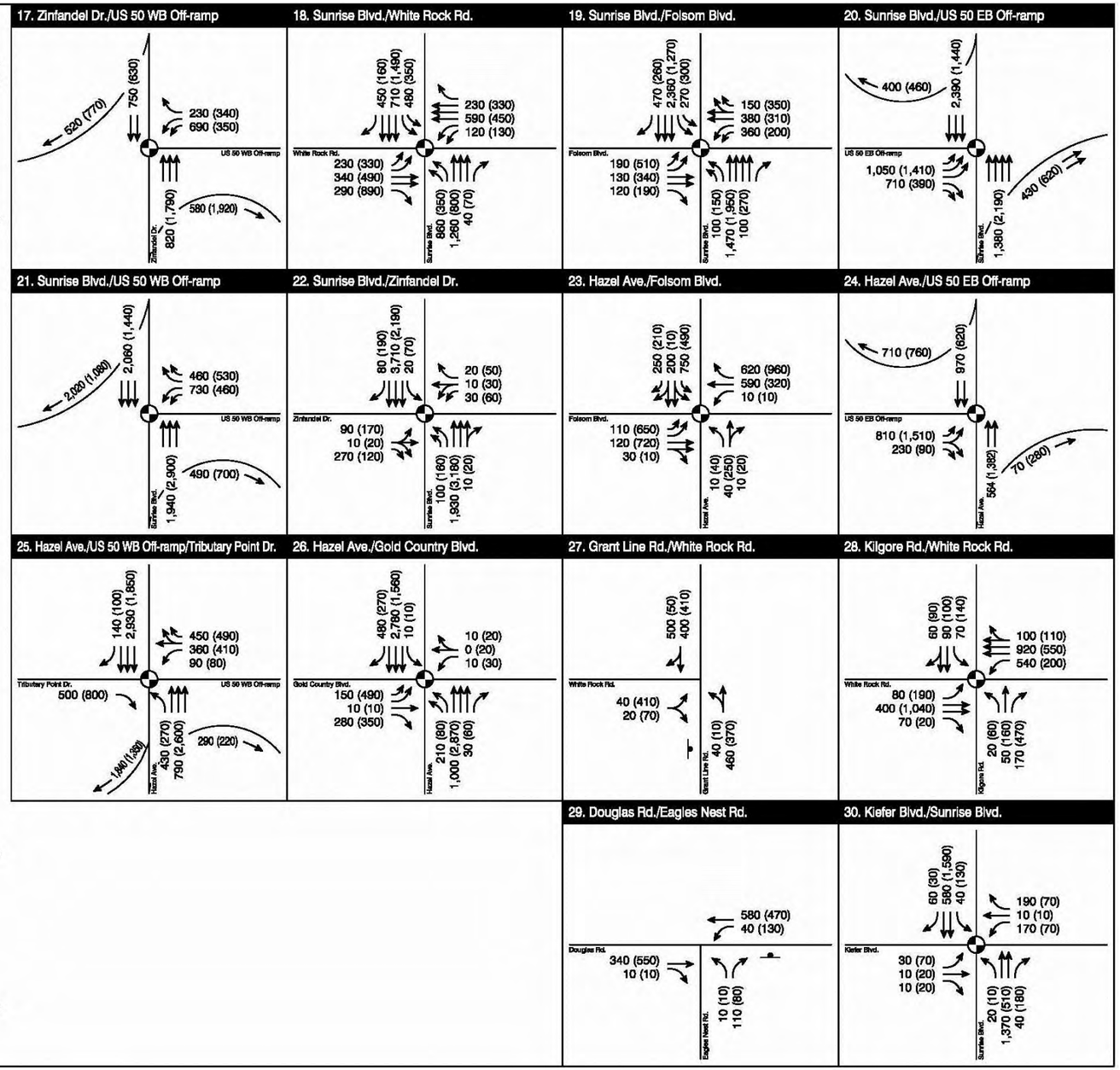
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE NO PROJECT CONDITIONS

EXHIBIT 3.15-8A





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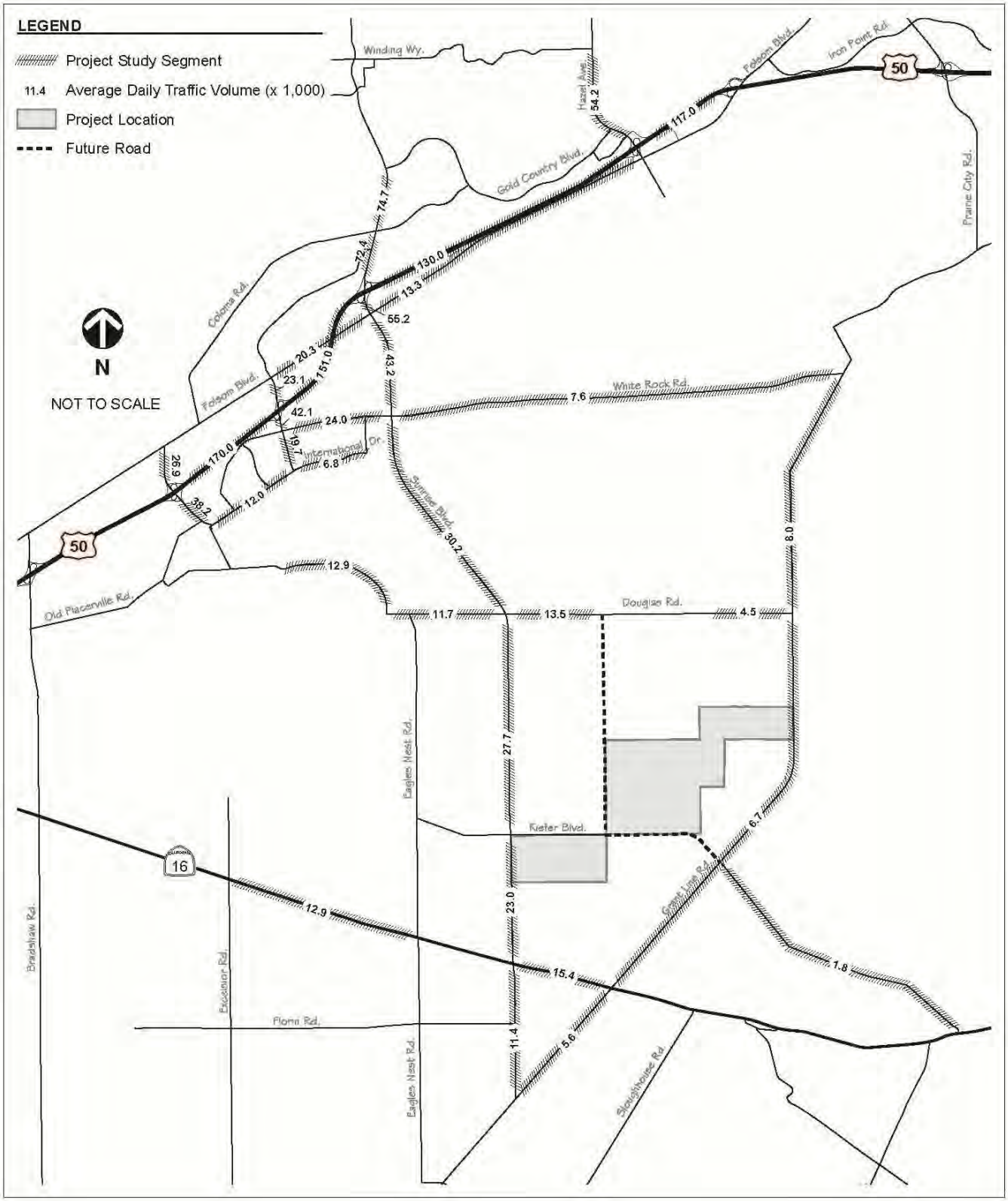
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE NO PROJECT CONDITIONS

EXHIBIT 3.15-8B



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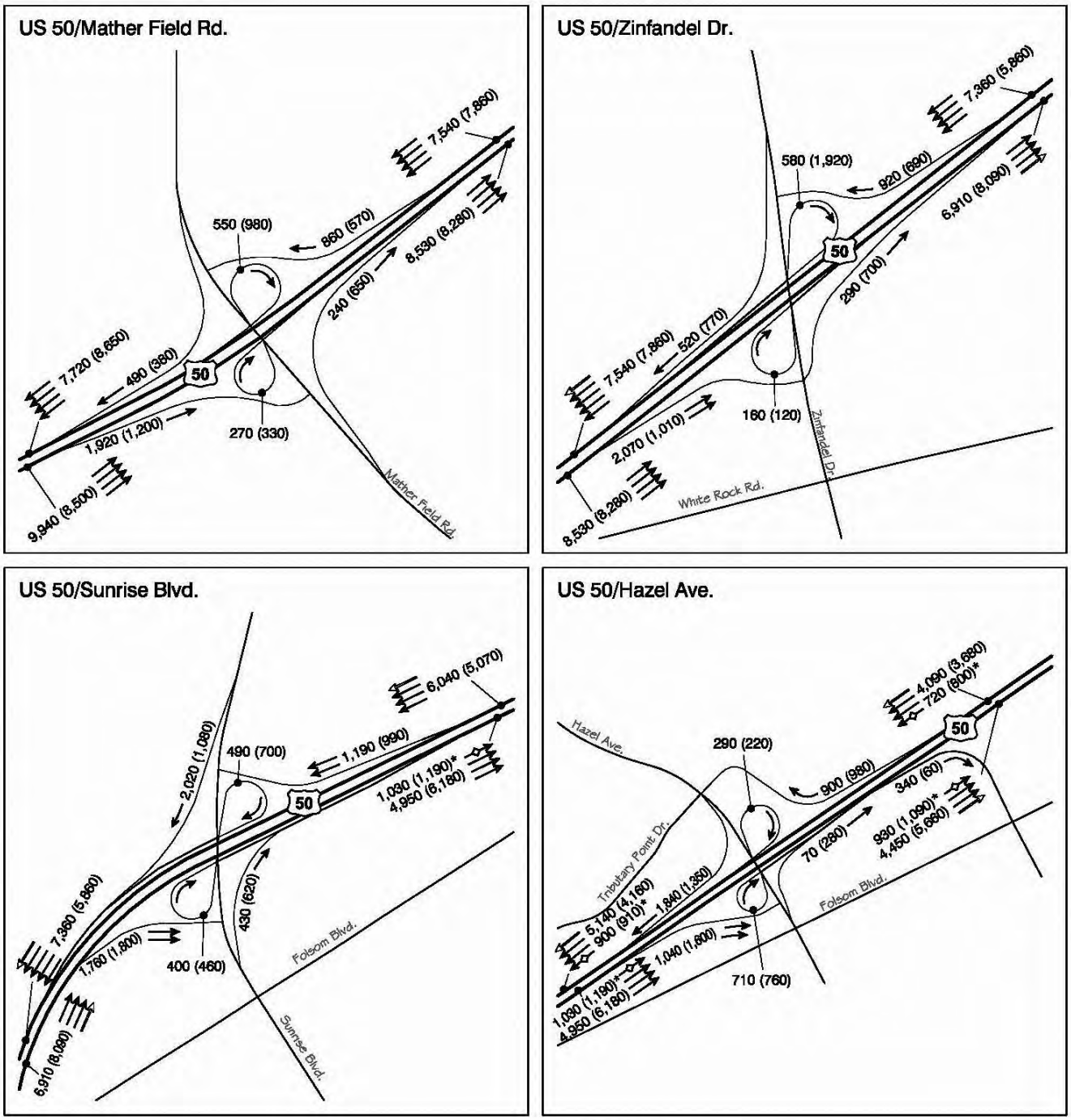
AVERAGE DAILY TRAFFIC VOLUME - BASELINE NO PROJECT CONDITIONS

EXHIBIT 3.15-9



LEGEND

XX (YY)	AM (PM) Peak Hour Traffic Volume (*HOV Peak Hour Traffic Volume Estimated)
→	Mixed Flow Travel Lane
⇒	Auxiliary Lane
◇→	HOV Lane

N

NOT TO SCALE

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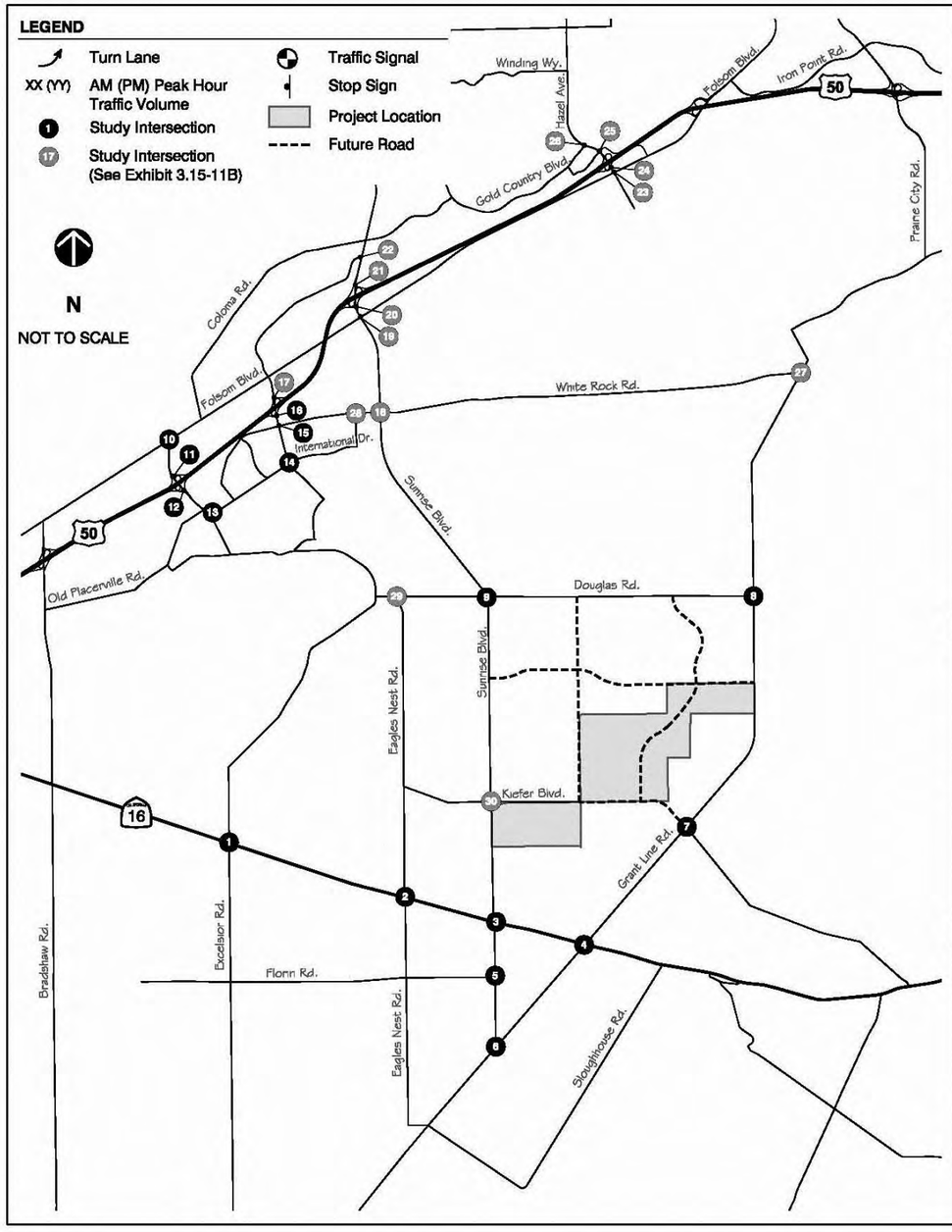
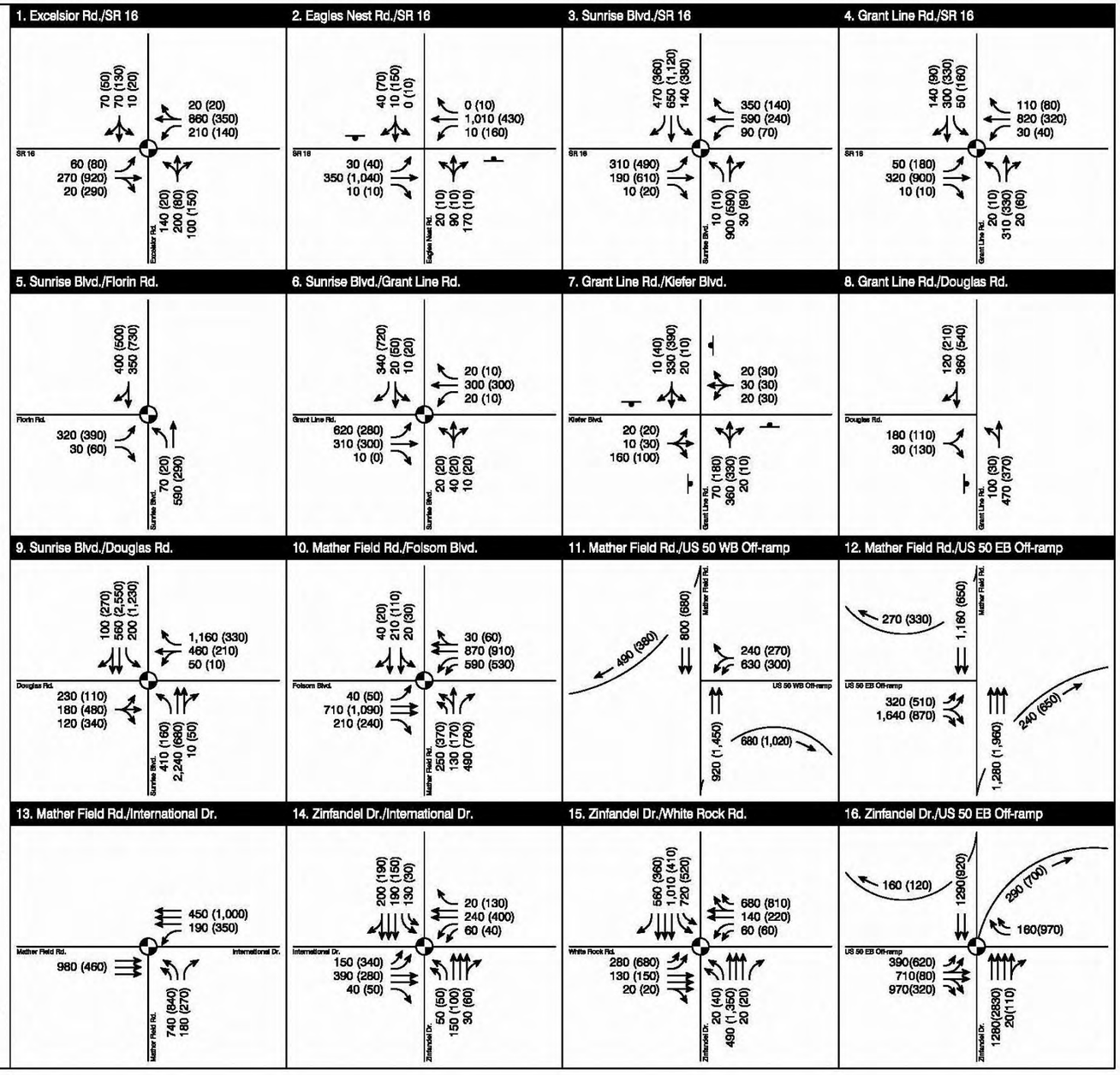
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - BASELINE NO PROJECT CONDITIONS

EXHIBIT 3.15-10





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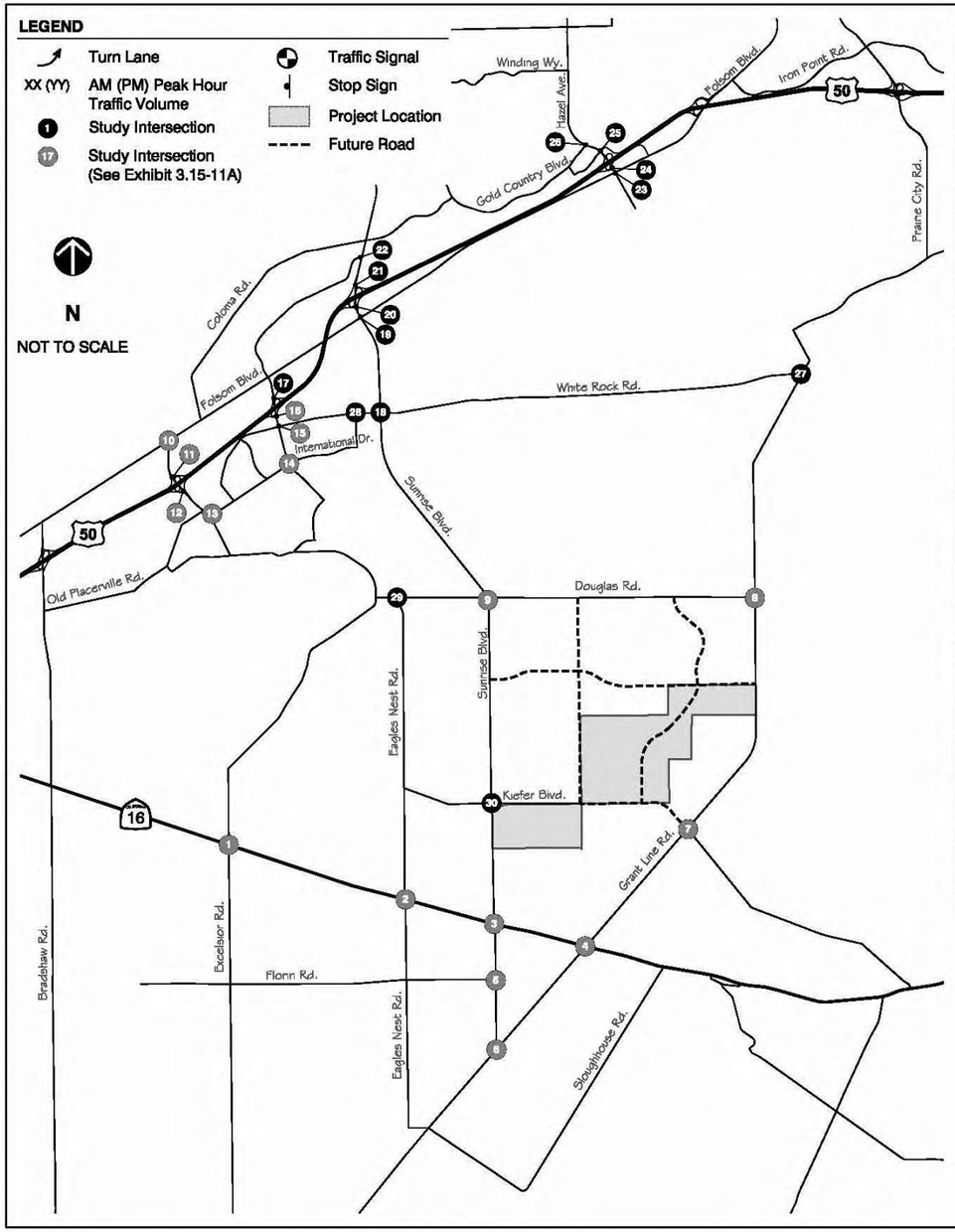
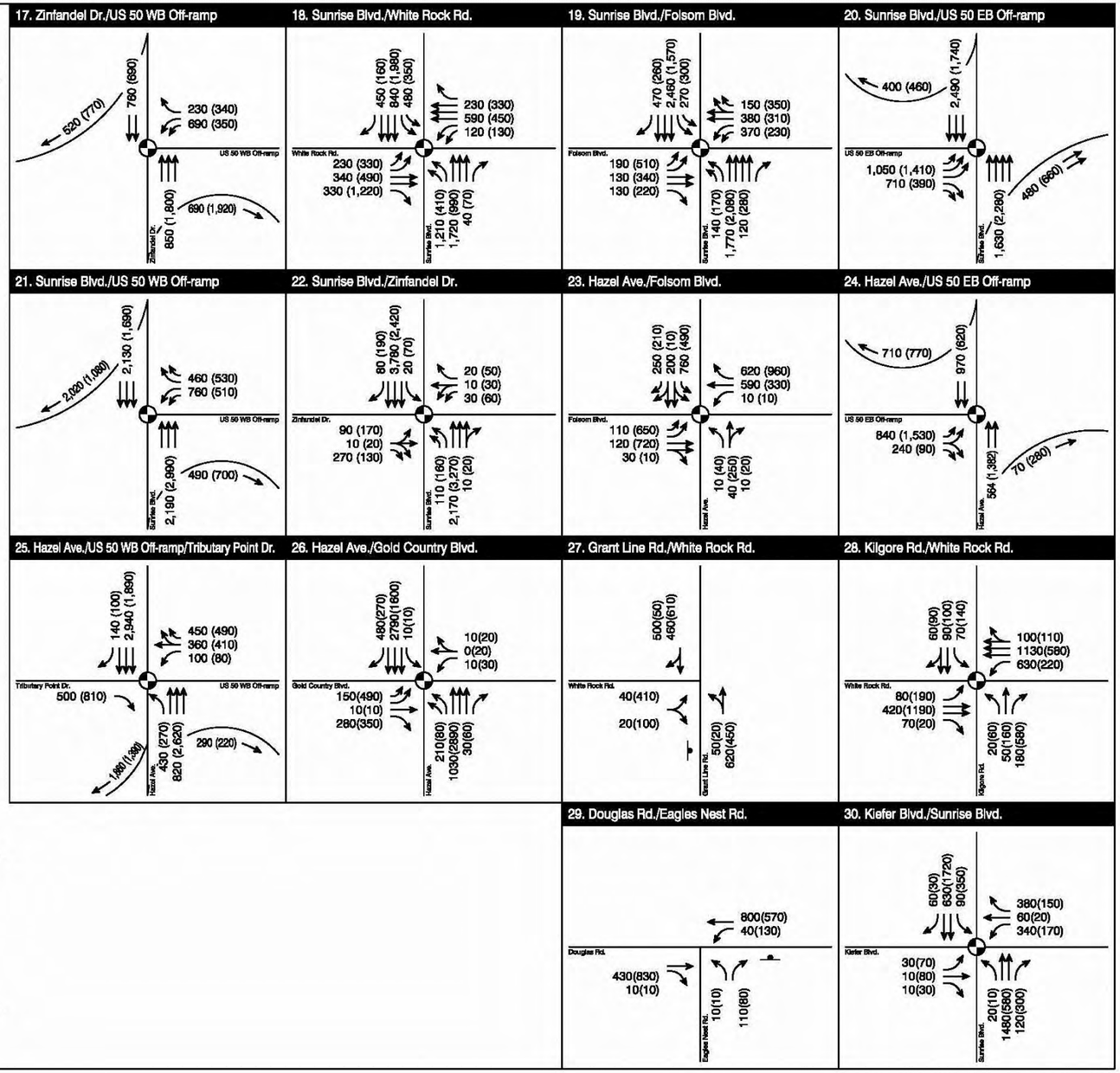
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE PLUS PROJECT CONDITIONS

EXHIBIT 3.15-11A





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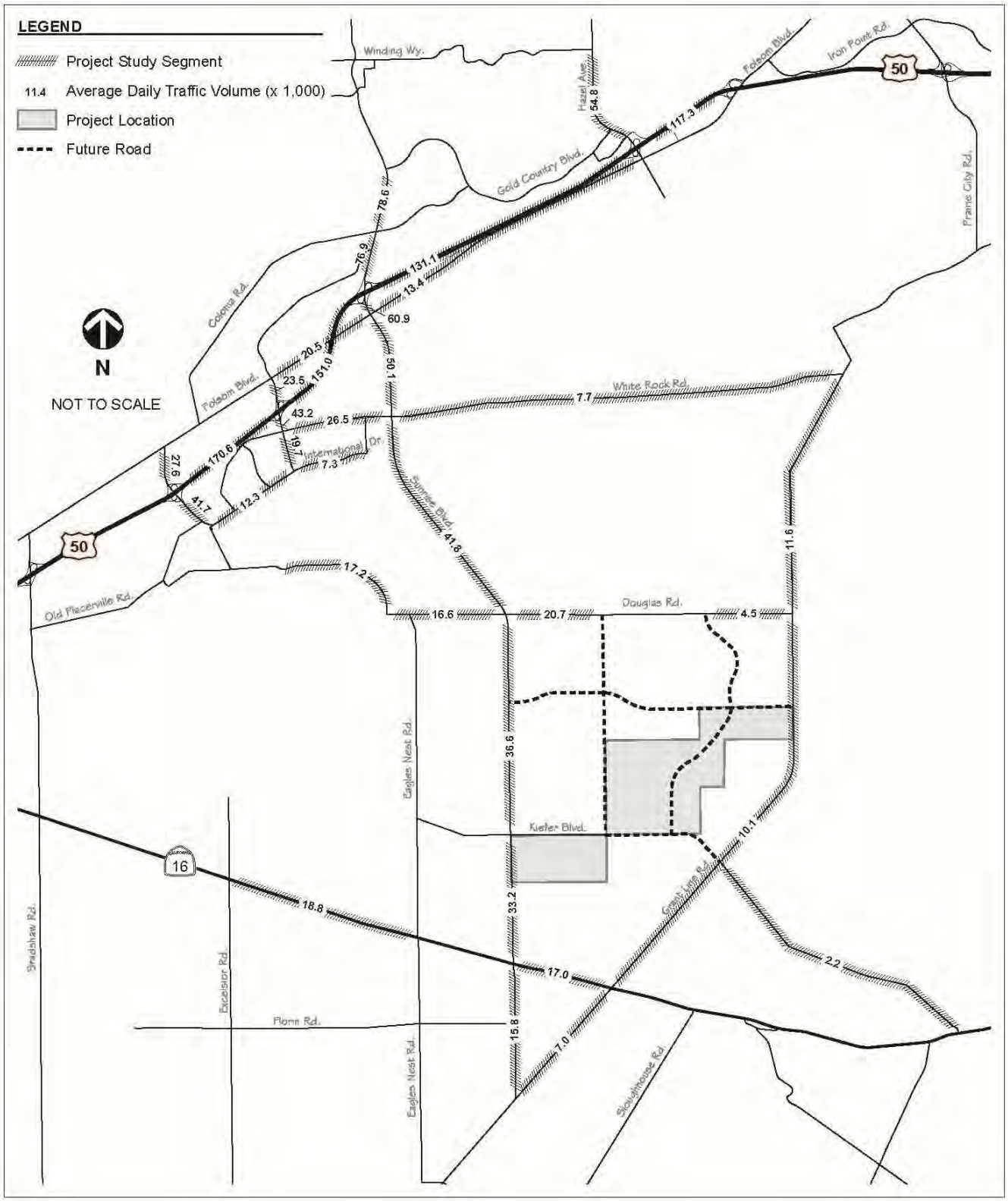
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE PLUS PROJECT CONDITIONS

EXHIBIT 3.15-11B



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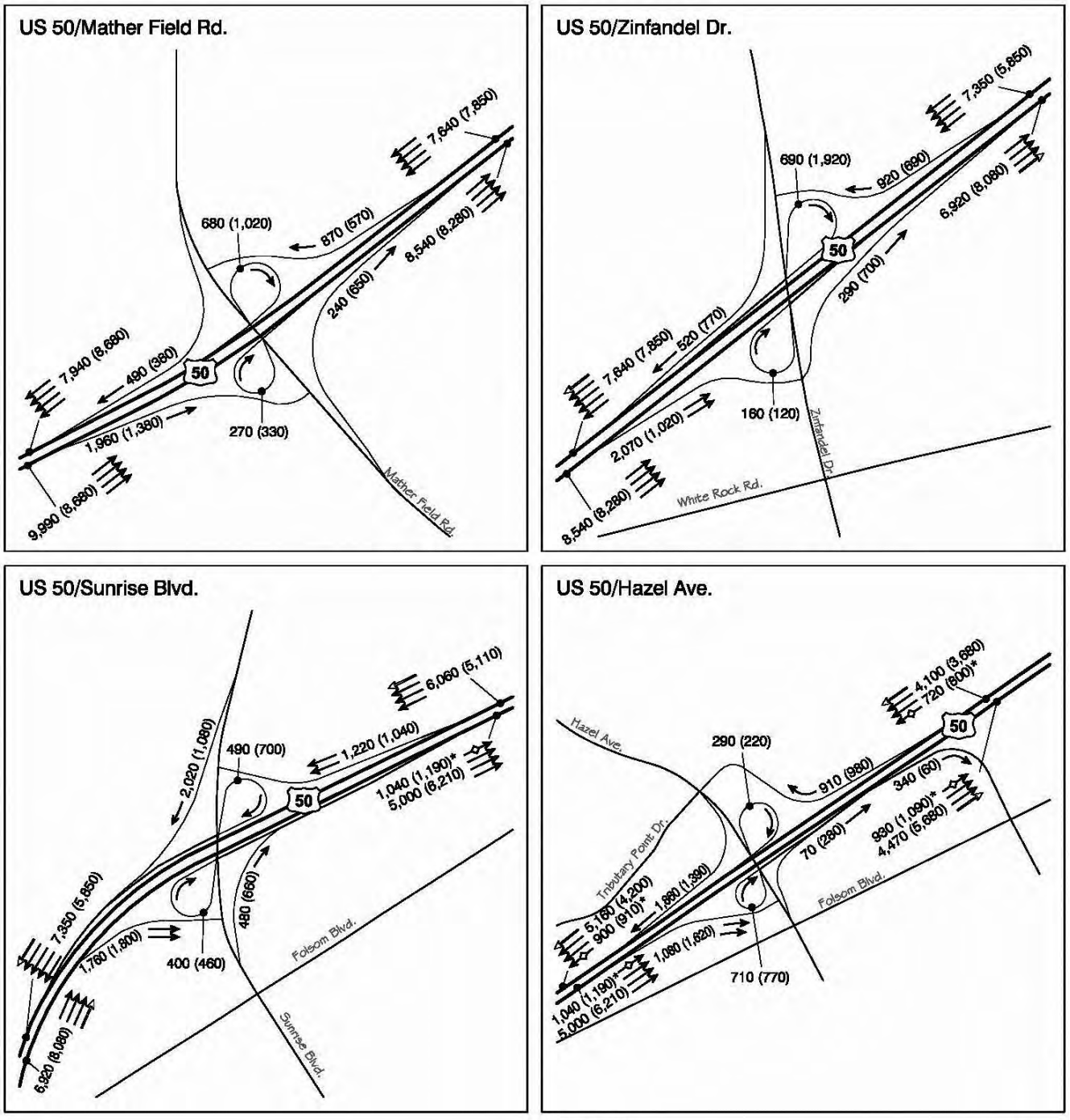
AVERAGE DAILY TRAFFIC VOLUME - BASELINE PLUS PROJECT CONDITIONS

EXHIBIT 3.15-12



LEGEND

XX (YY)	AM (PM) Peak Hour Traffic Volume (*HOV Peak Hour Traffic Volume Estimated)
→	Mixed Flow Travel Lane
→	Auxiliary Lane
◇→	HOV Lane

N

NOT TO SCALE

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TRANSPORTATION CONSULTANTS

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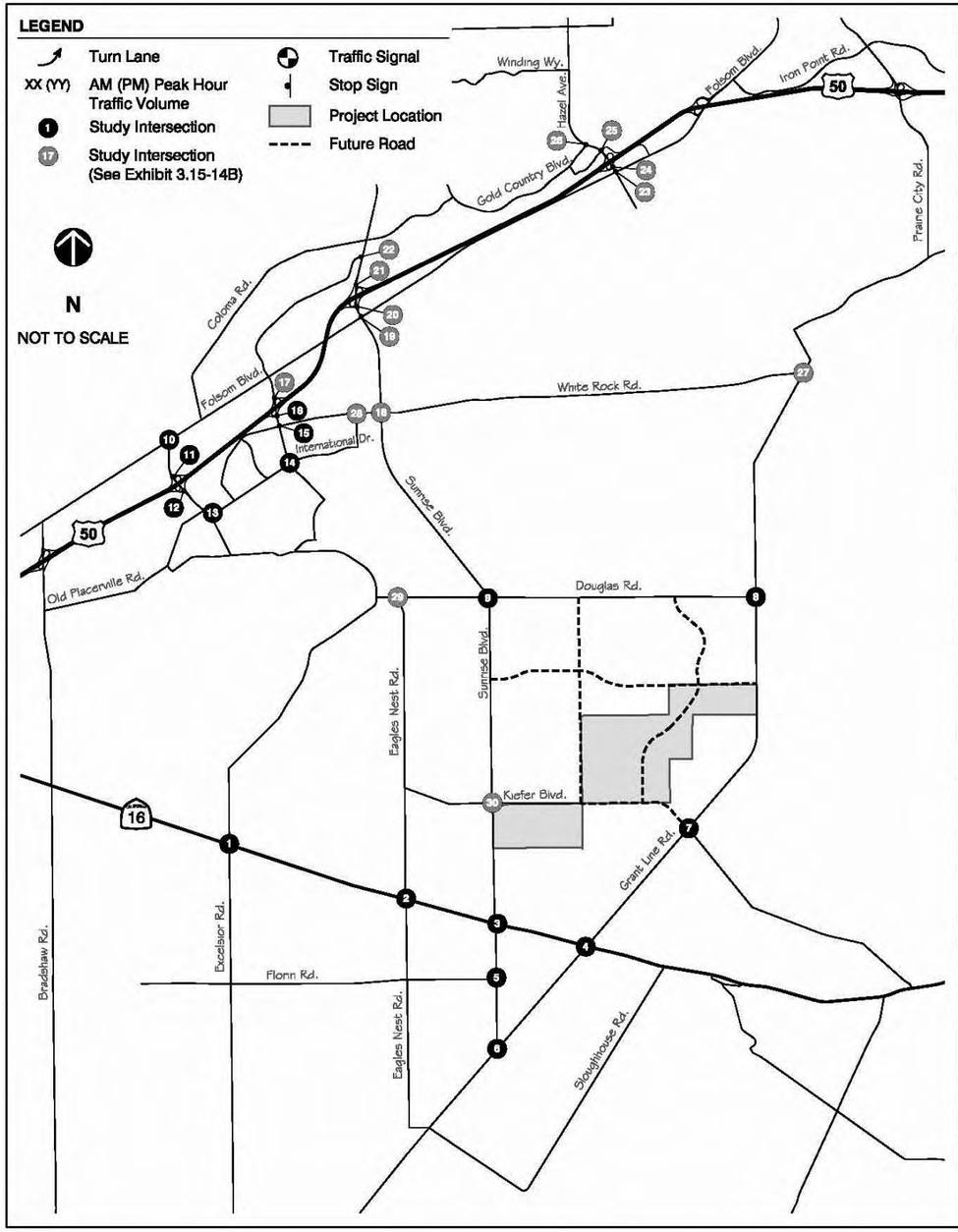
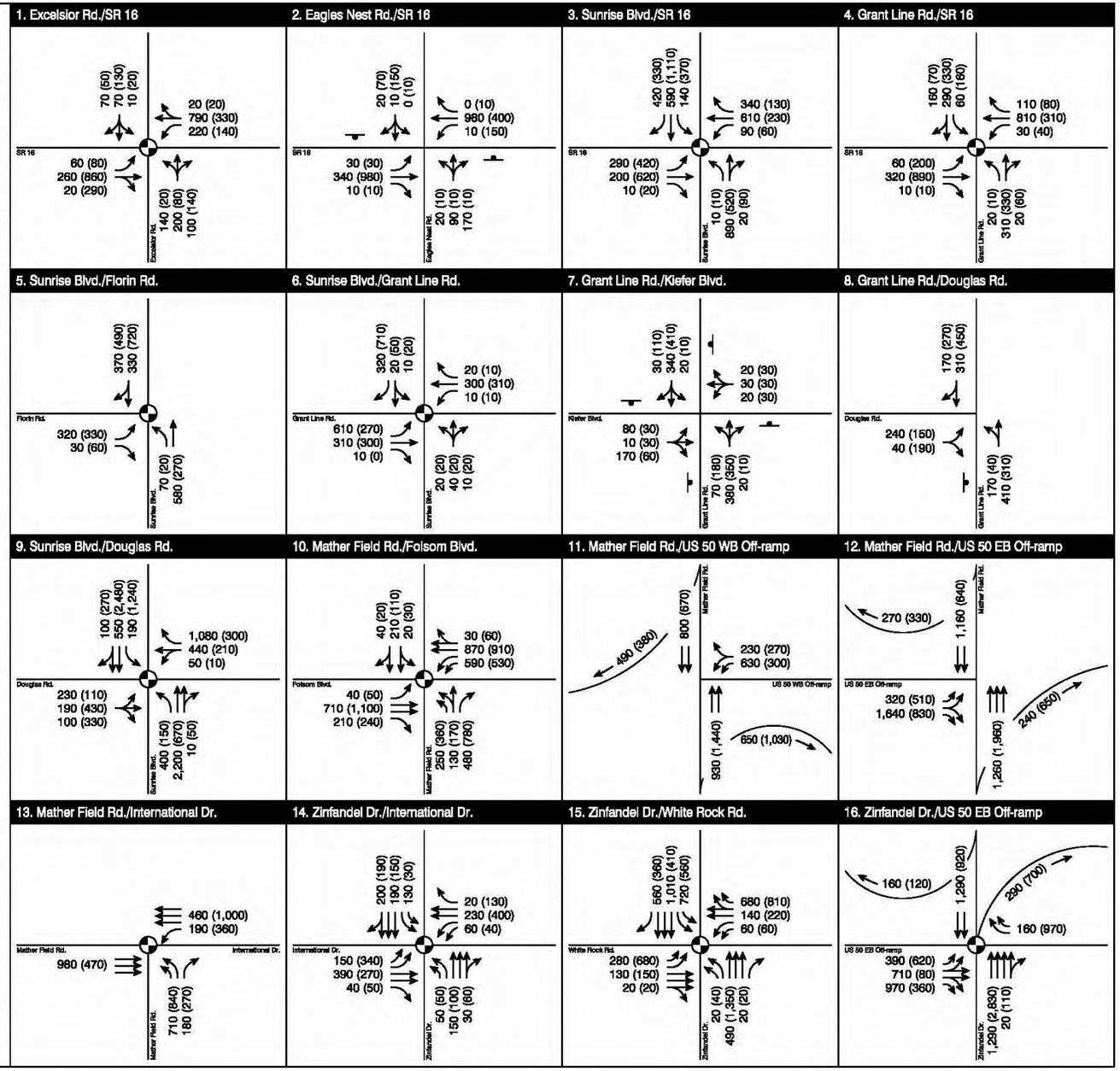
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - BASELINE PLUS PROJECT CONDITIONS

EXHIBIT 3.15-13





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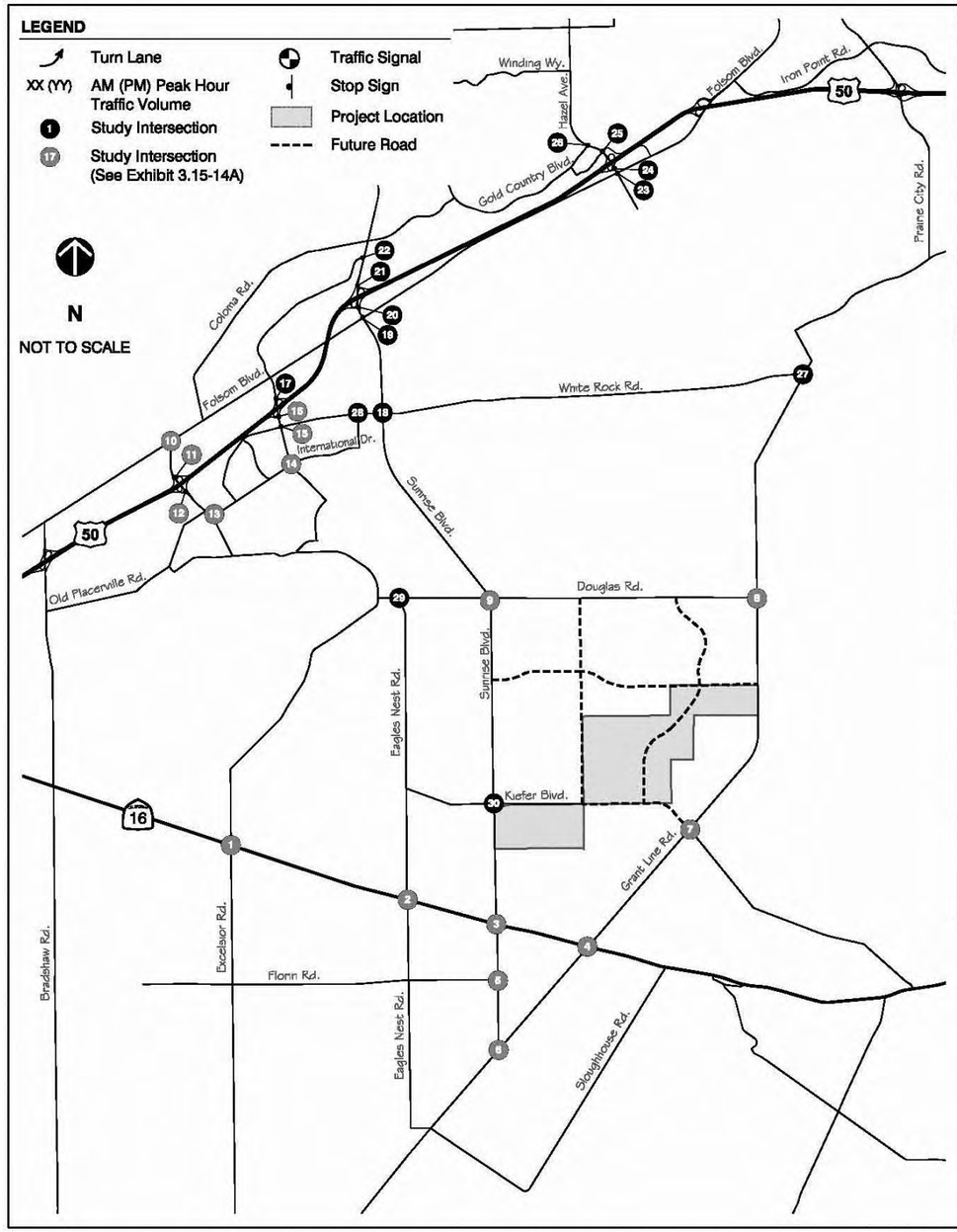
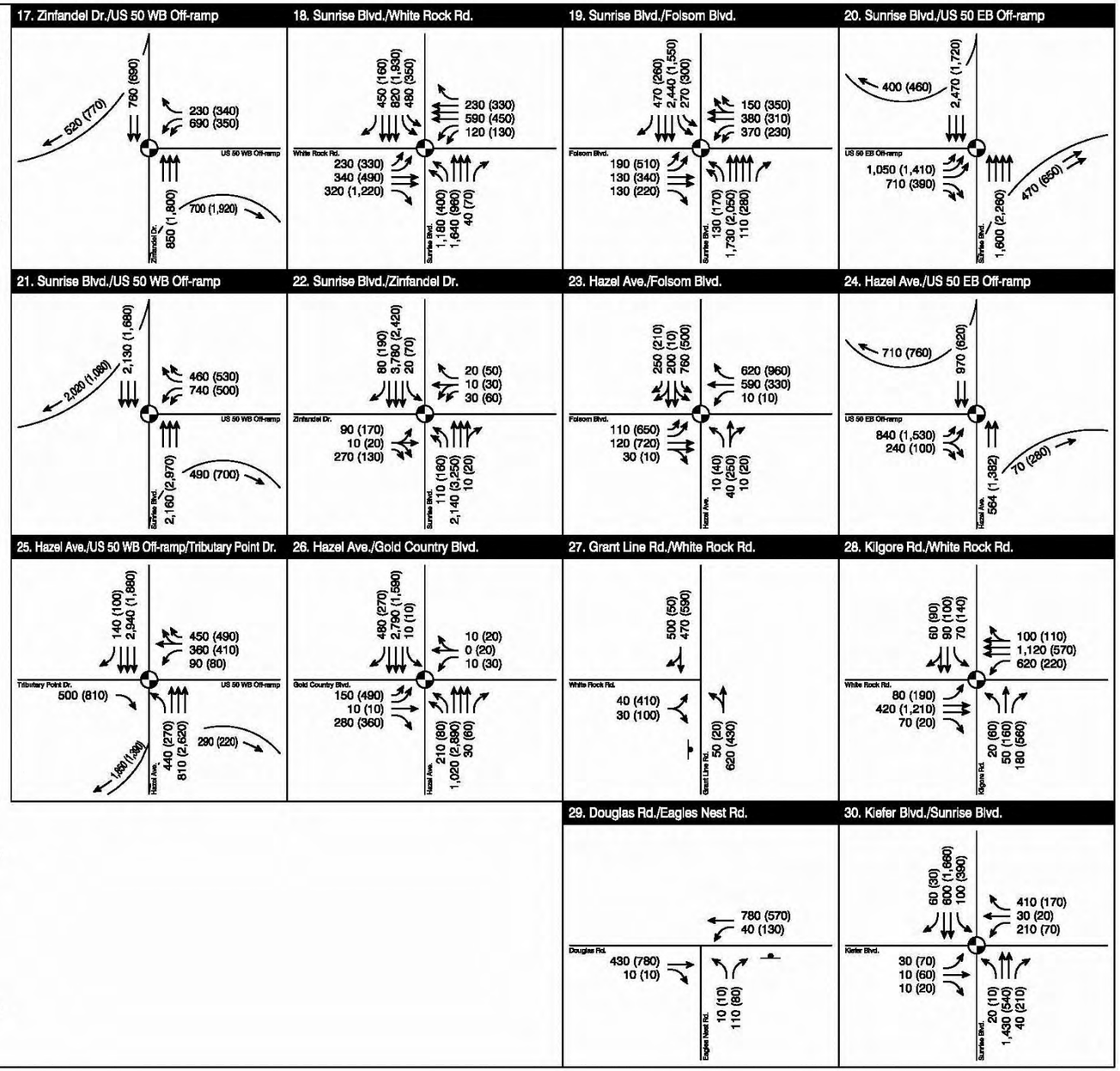
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE PLUS AGENCY CONCEPTUAL STRATEGY ALTERNATIVE

EXHIBIT 3.15-14A





FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 19, 2011 CEC
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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE PLUS AGENCY CONCEPTUAL STRATEGY ALTERNATIVE

EXHIBIT 3.15-14B

FEHR & PEERS
TRANSPORTATION CONSULTANTS
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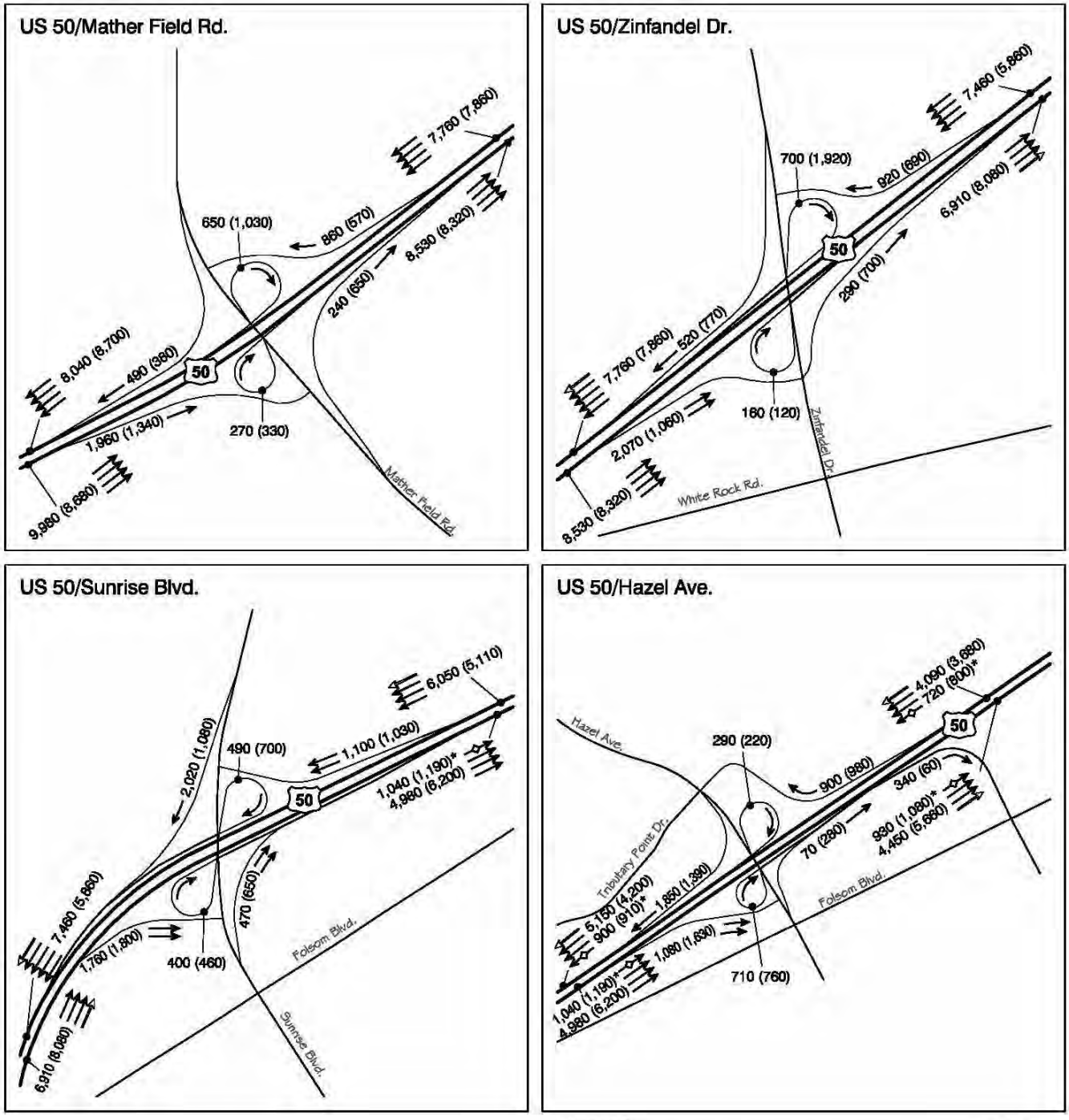
AVERAGE DAILY TRAFFIC VOLUME - BASELINE PLUS AGENCY CONCEPTUAL STRATEGY ALTERNATIVE

EXHIBIT 3.15-15



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TRANSPORTATION CONSULTANTS

Oct 18, 2011 FPA
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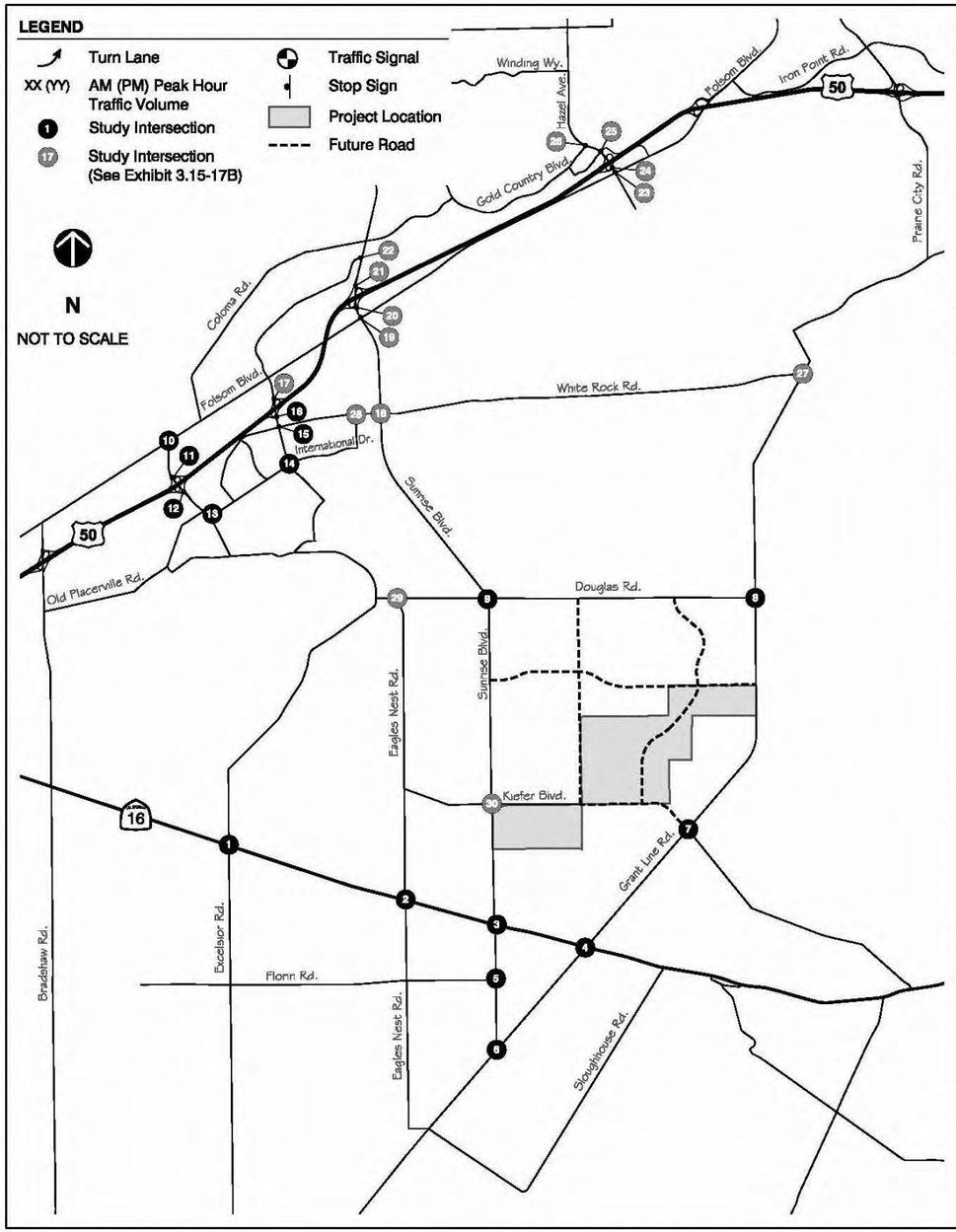
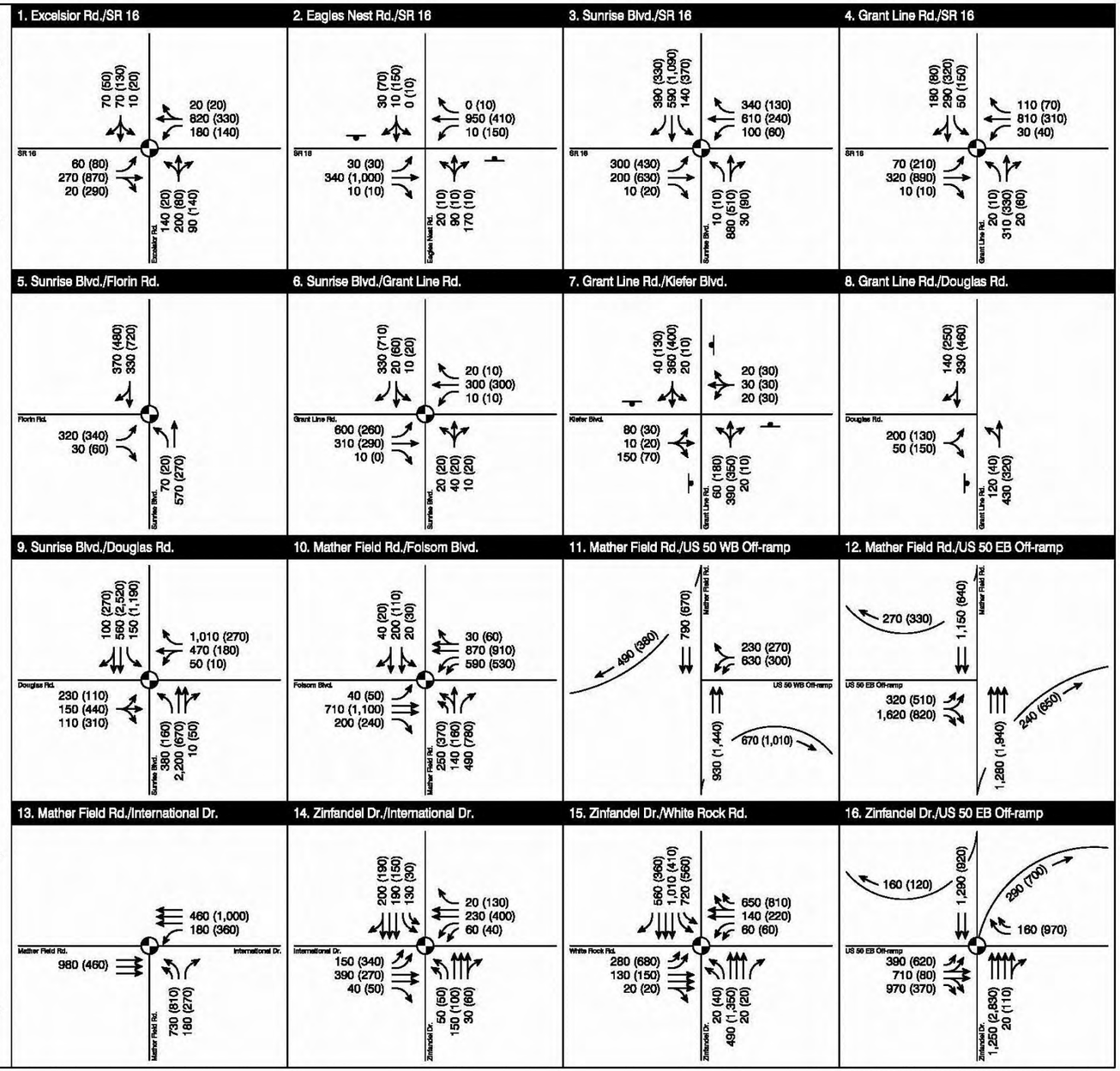
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - BASELINE PLUS AGENCY CONCEPTUAL STRATEGY ALTERNATIVE

EXHIBIT 3.15-16





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TRANSPORTATION CONSULTANTS

Oct 19, 2011 CEC
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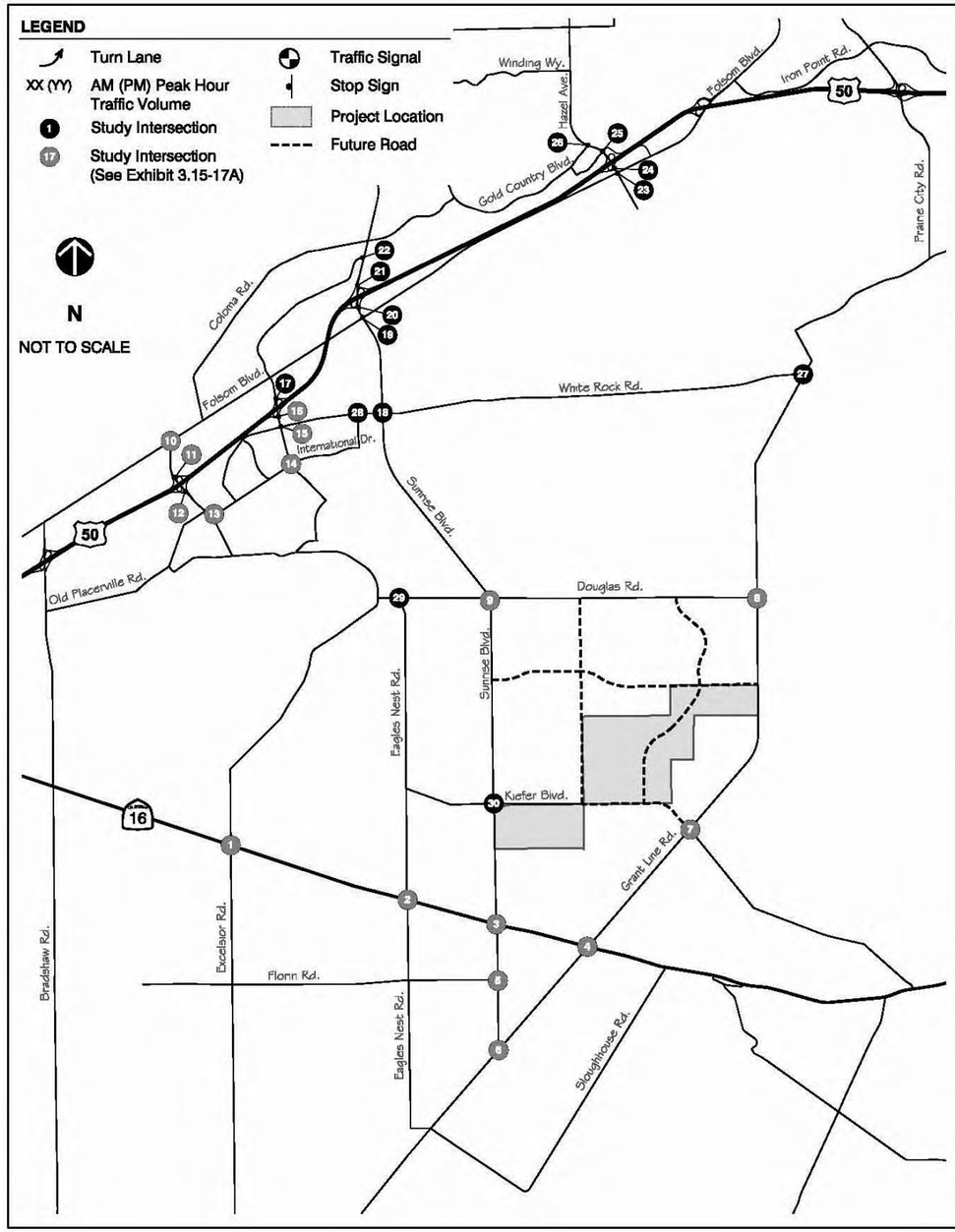
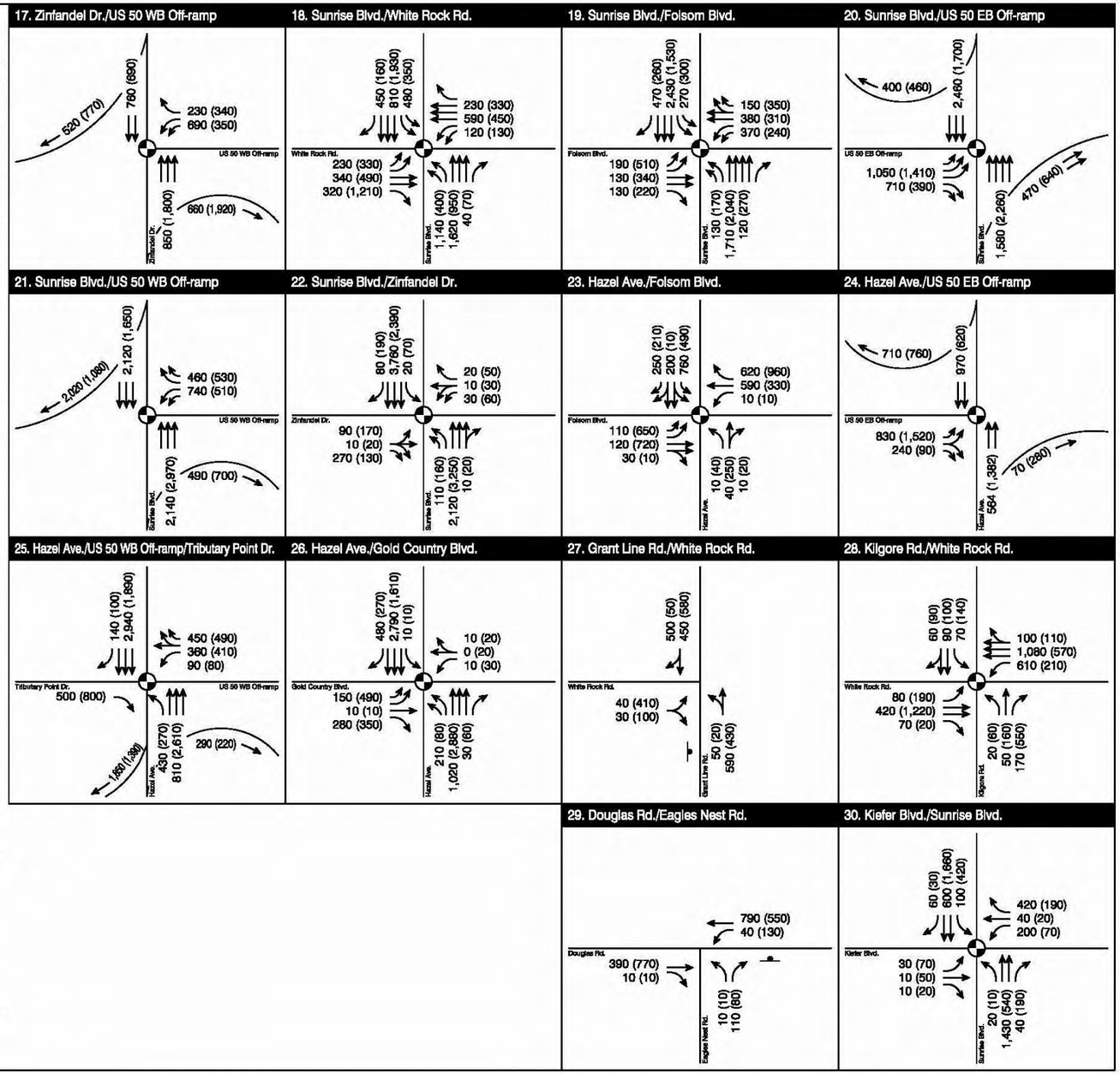
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE PLUS BIOLOGICAL IMPACT MINIMIZATION ALTERNATIVE

EXHIBIT 3.15-17A





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Oct 19, 2011 CEC
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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE PLUS BIOLOGICAL IMPACT MINIMIZATION ALTERNATIVE

EXHIBIT 3.15-17B

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TRANSPORTATION CONSULTANTS

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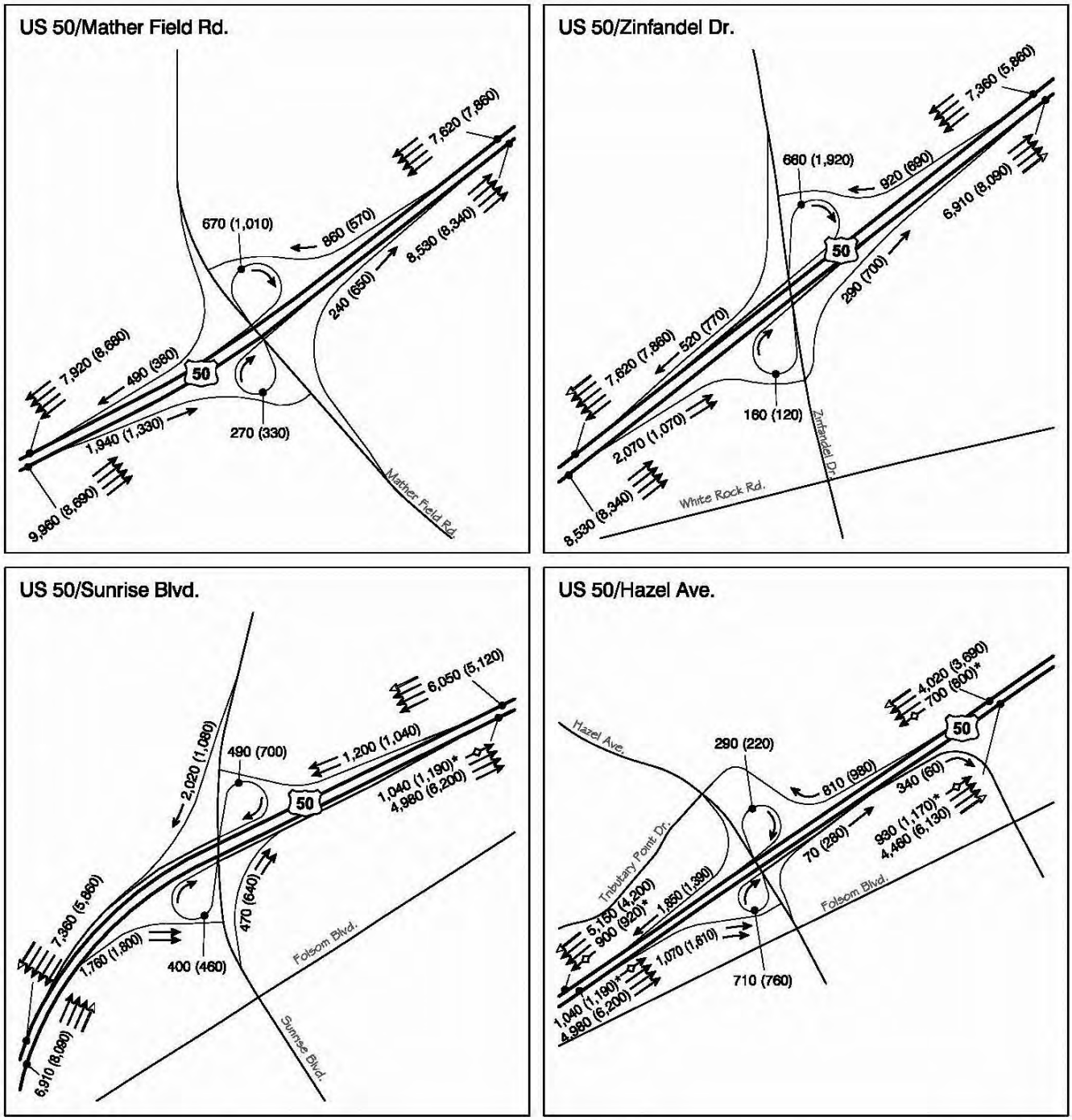
AVERAGE DAILY TRAFFIC VOLUME - BASELINE PLUS BIOLOGICAL IMPACT MINIMIZATION ALTERNATIVE

EXHIBIT 3.15-18



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TRANSPORTATION CONSULTANTS

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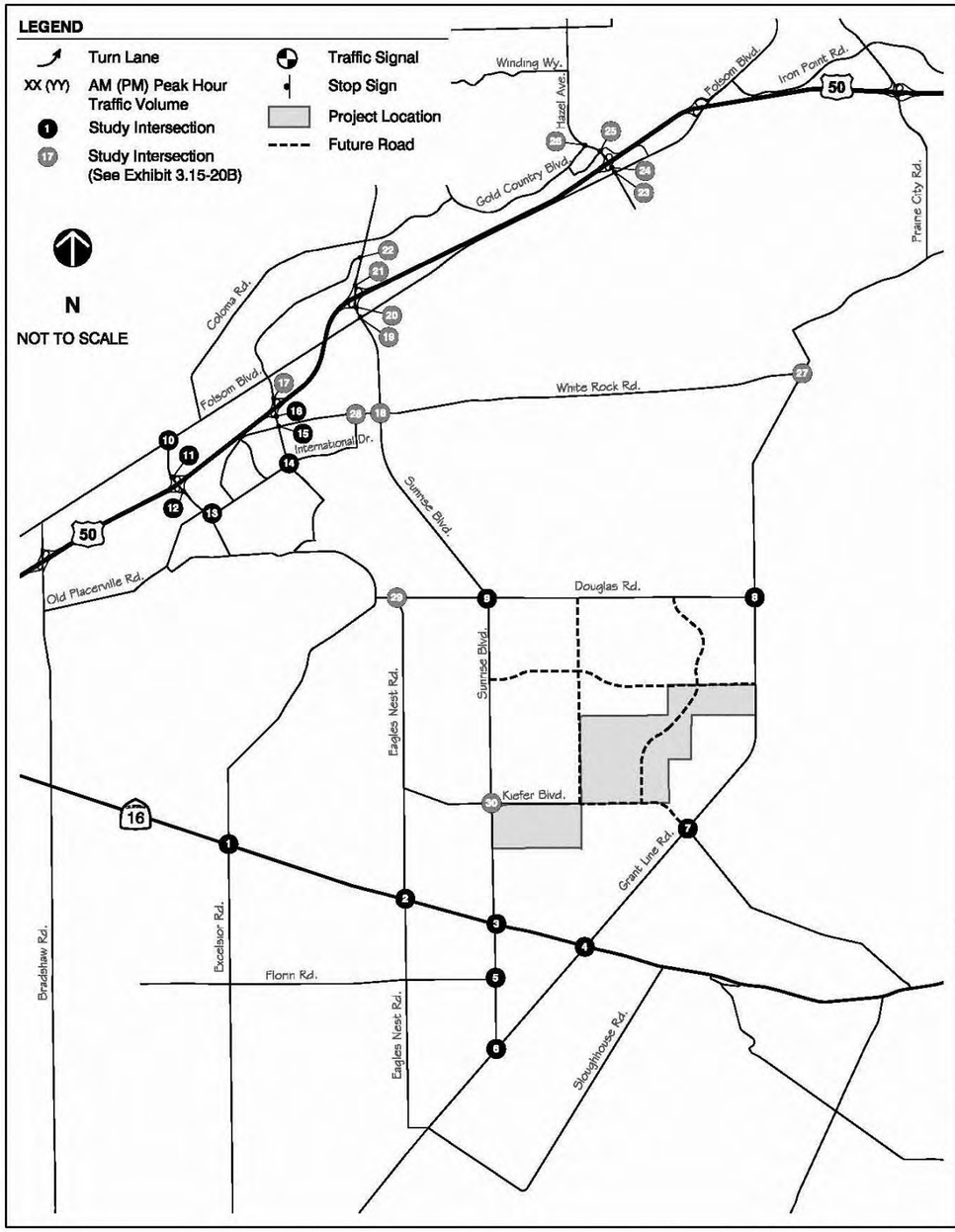
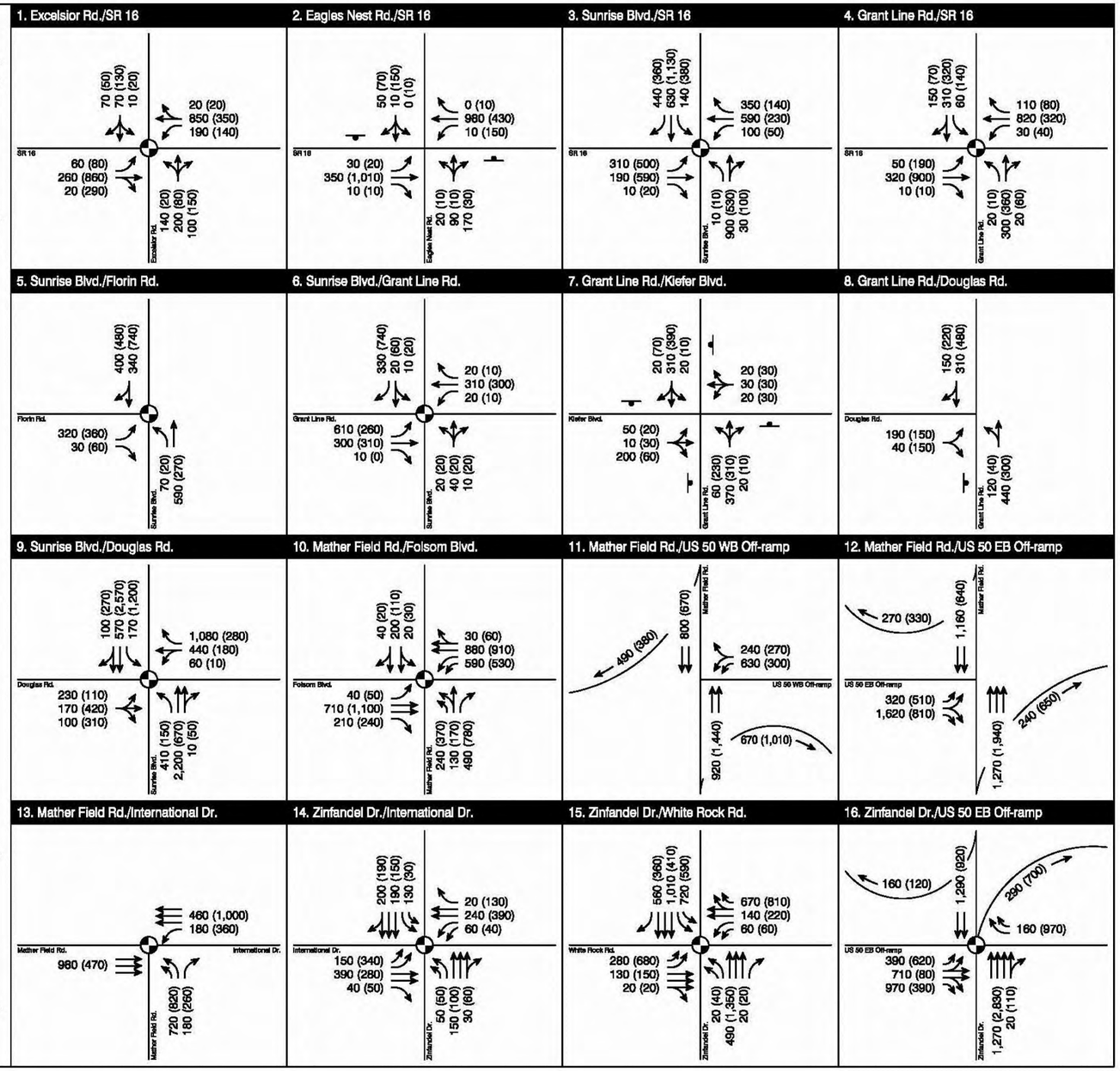
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - BASELINE PLUS BIOLOGICAL IMPACT MINIMIZATION ALTERNATIVE

EXHIBIT 3.15-19





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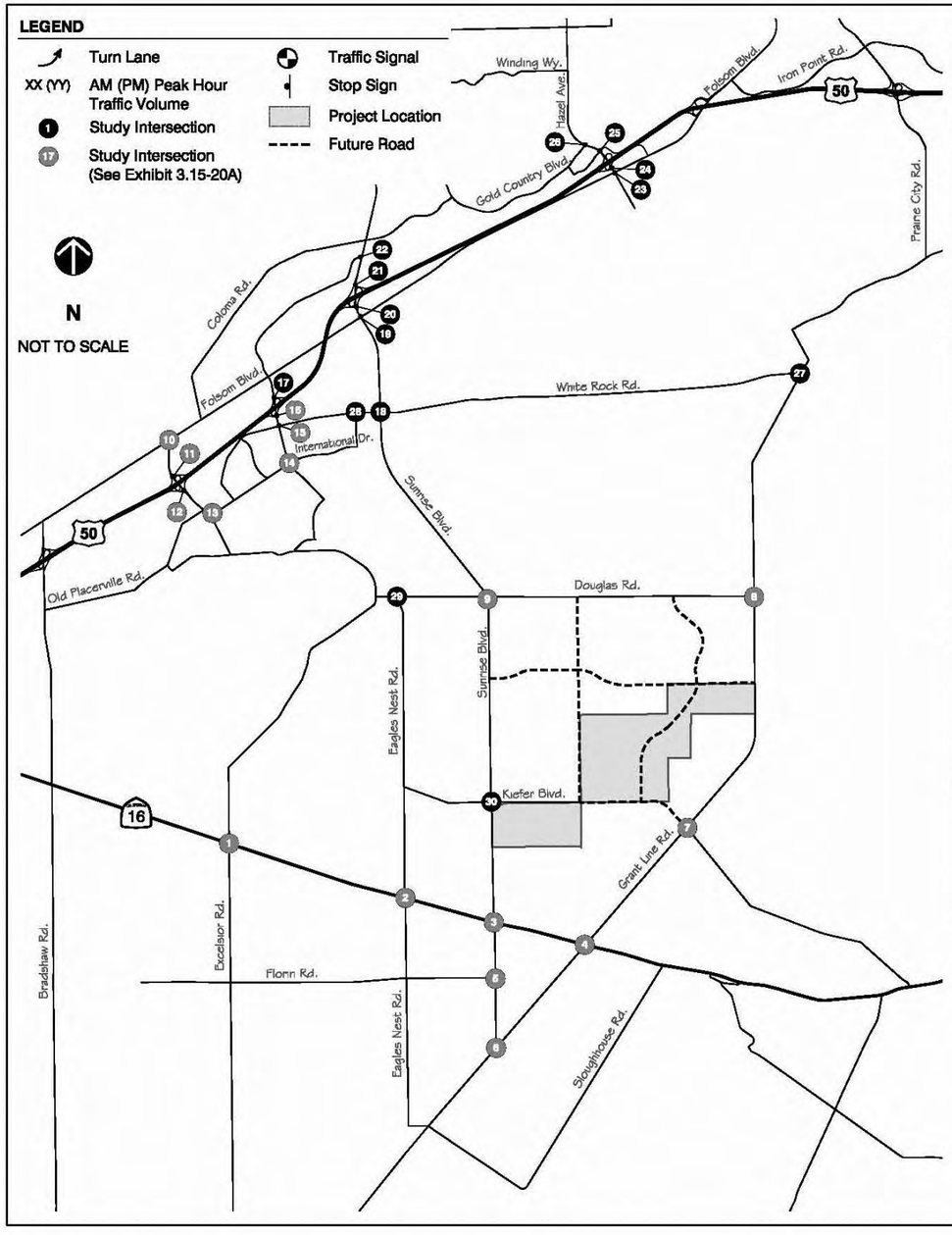
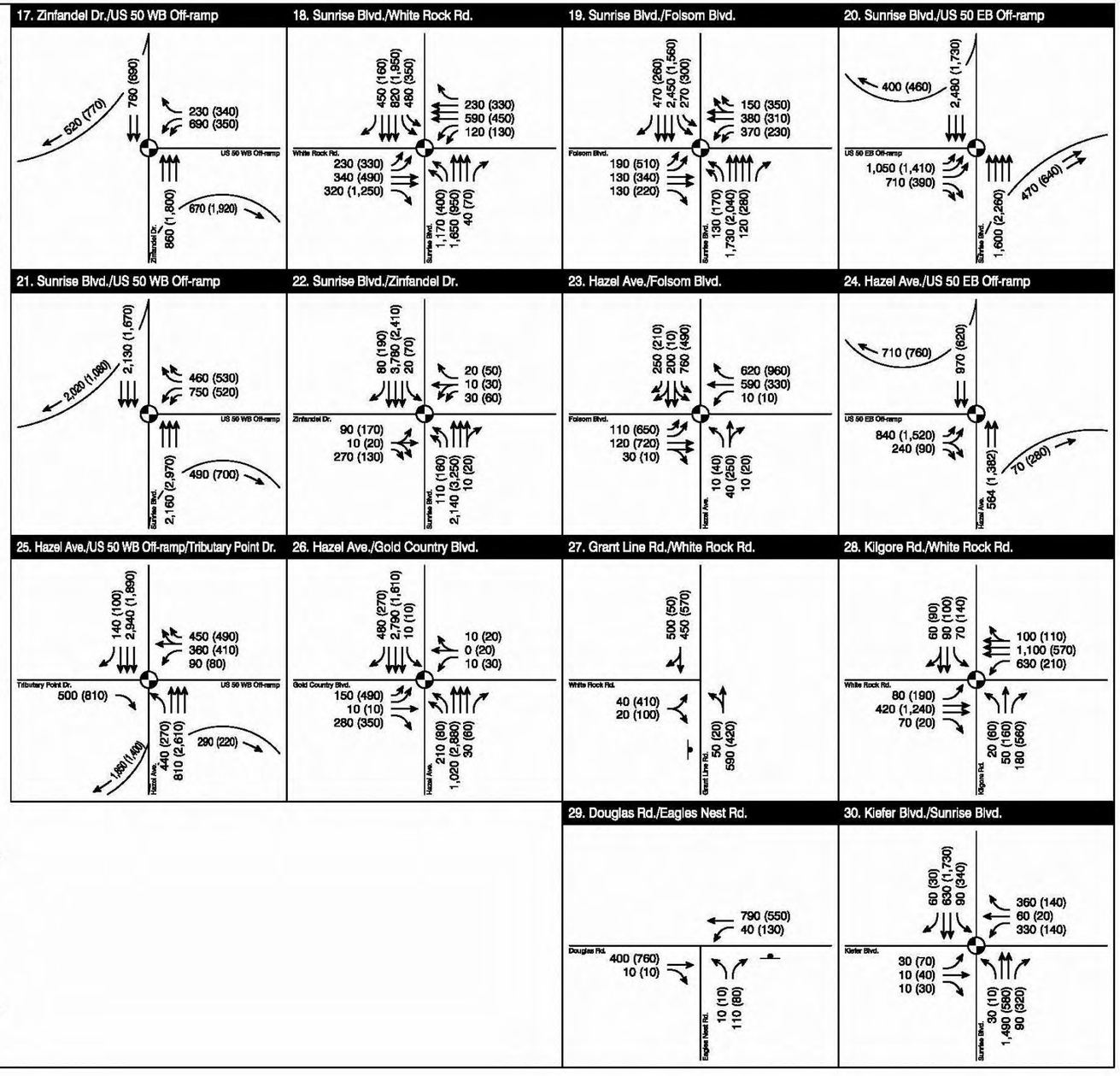
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - NO FEDERAL ACTION ALTERNATIVE

EXHIBIT 3.15-20A





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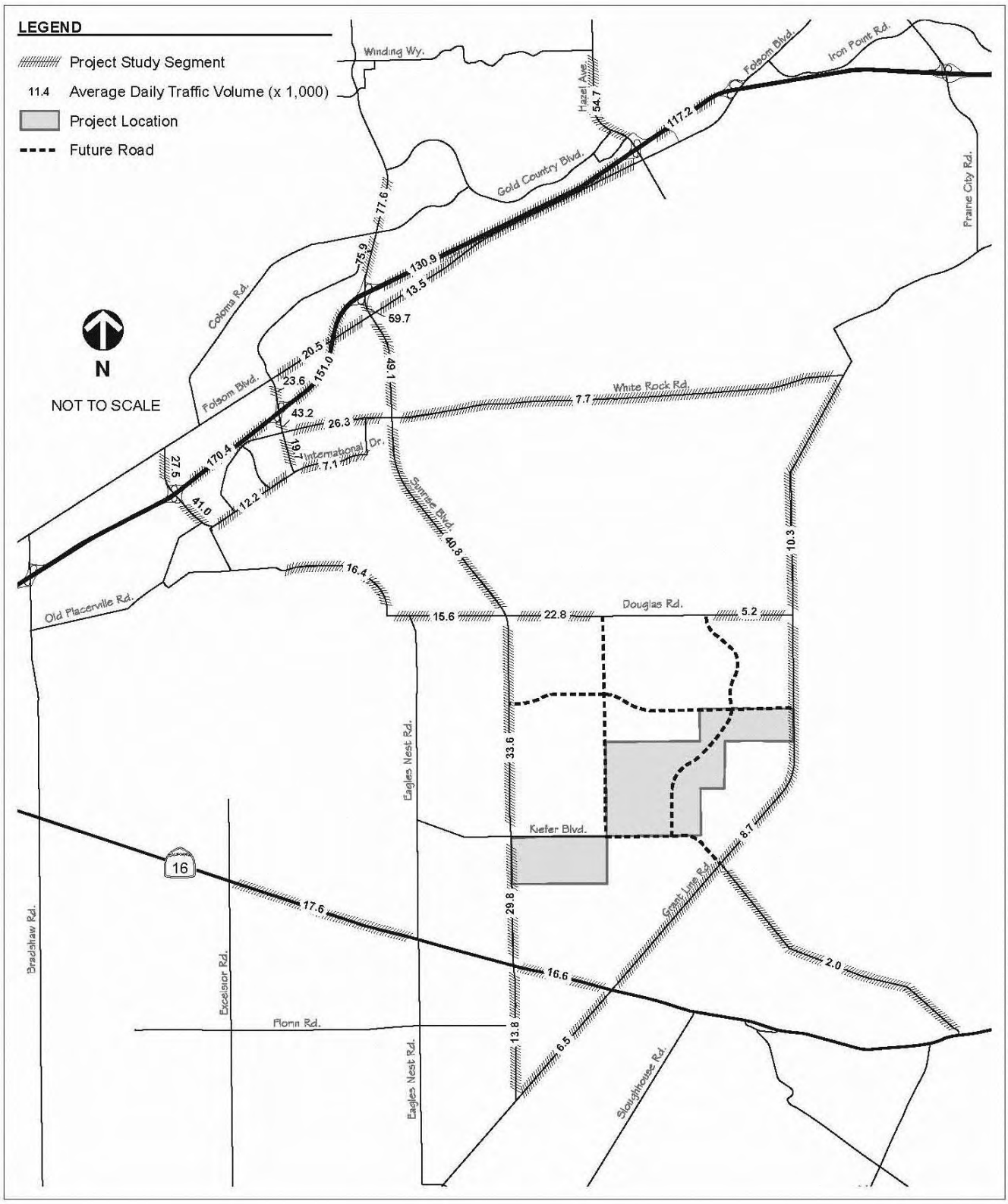
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE PLUS NO FEDERAL ACTION ALTERNATIVE

EXHIBIT 3.15-20B



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TRANSPORTATION CONSULTANTS
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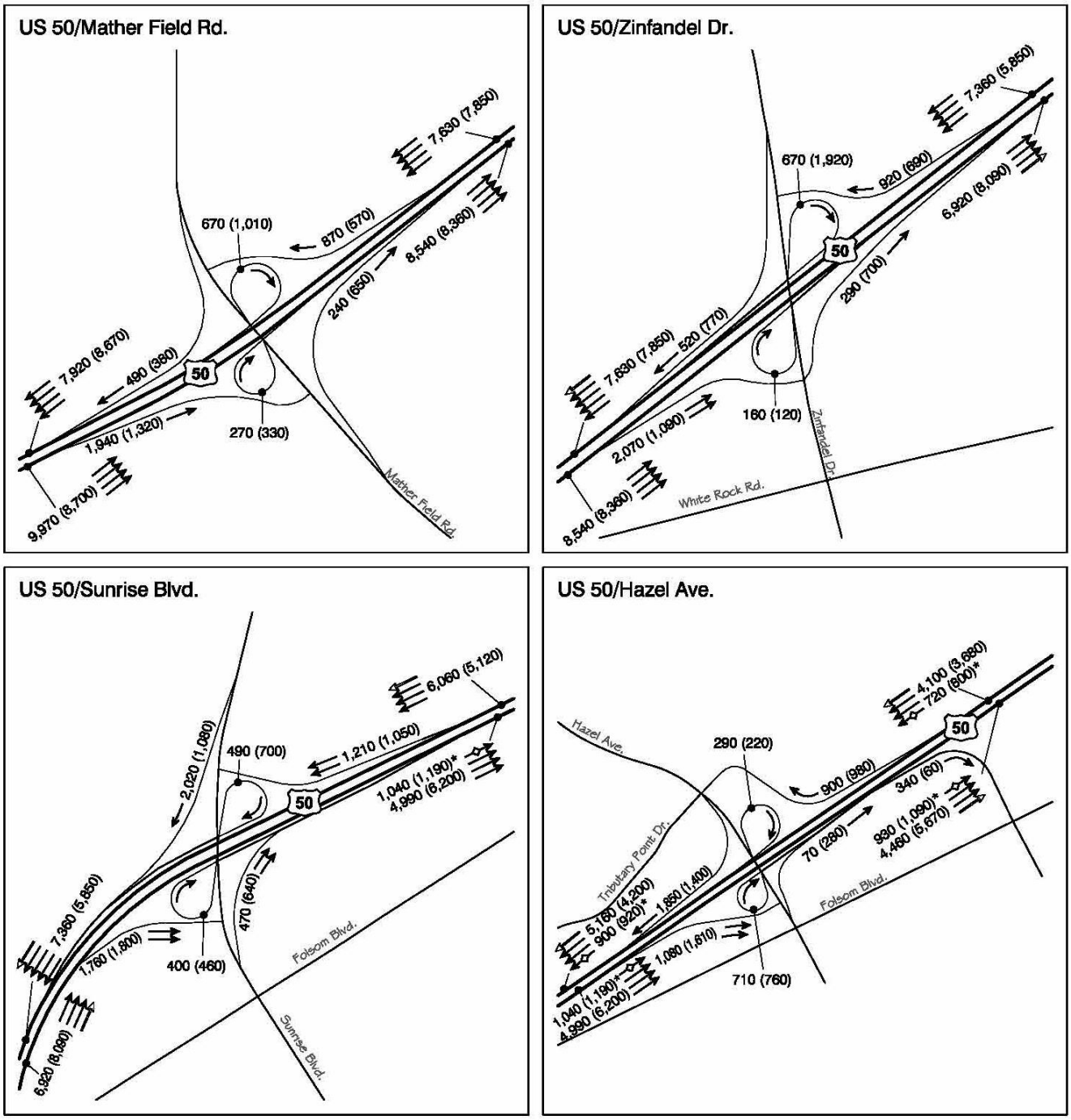
AVERAGE DAILY TRAFFIC VOLUME - BASELINE PLUS NO FEDERAL ACTION ALTERNATIVE

EXHIBIT 3.15-21



LEGEND

XX (YY)	AM (PM) Peak Hour Traffic Volume (*HOV Peak Hour Traffic Volume Estimated)
→	Mixed Flow Travel Lane
⇢	Auxiliary Lane
⇢◇	HOV Lane

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

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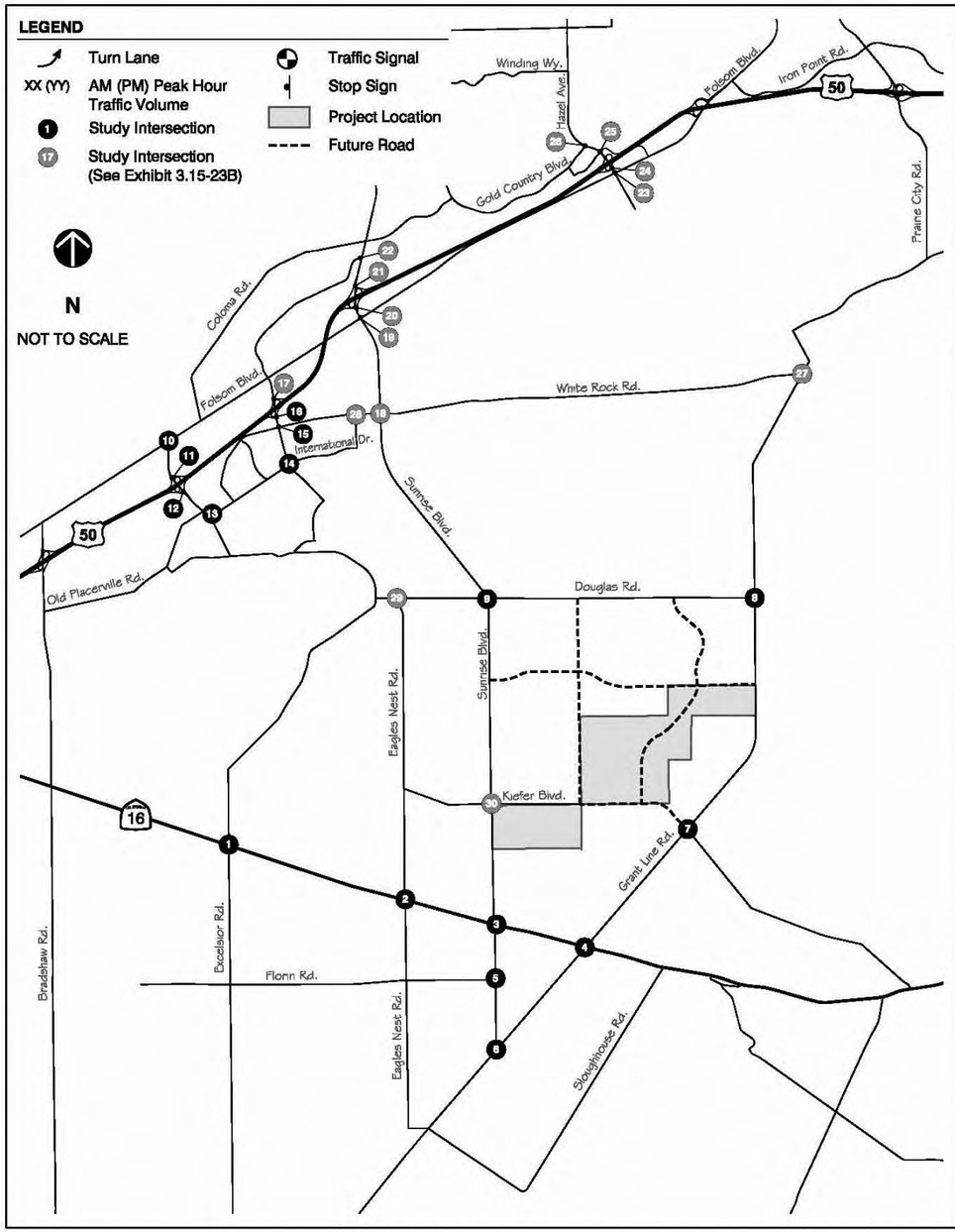
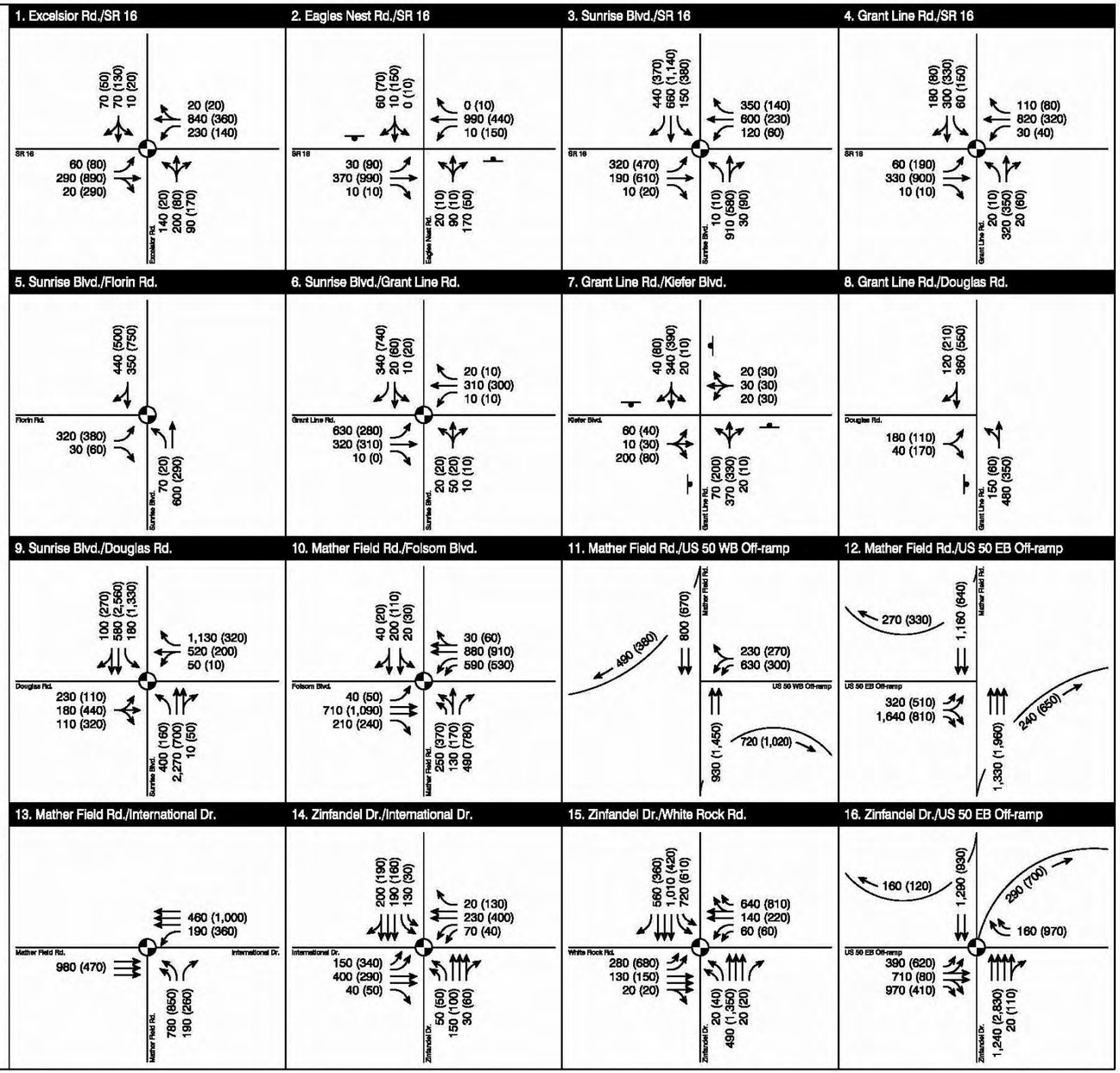
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - BASELINE PLUS NO FEDERAL ACTION ALTERNATIVE

EXHIBIT 3.15-22





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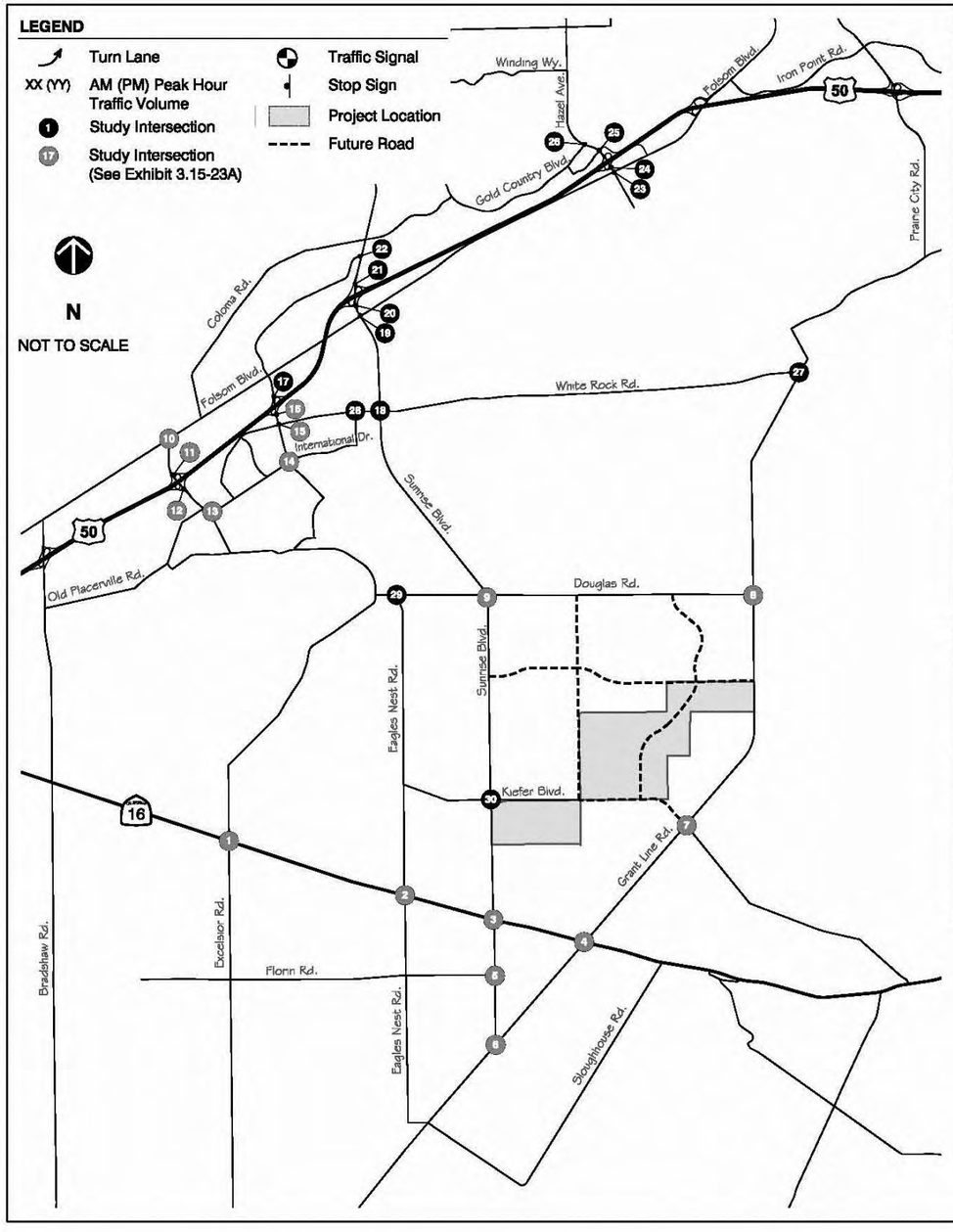
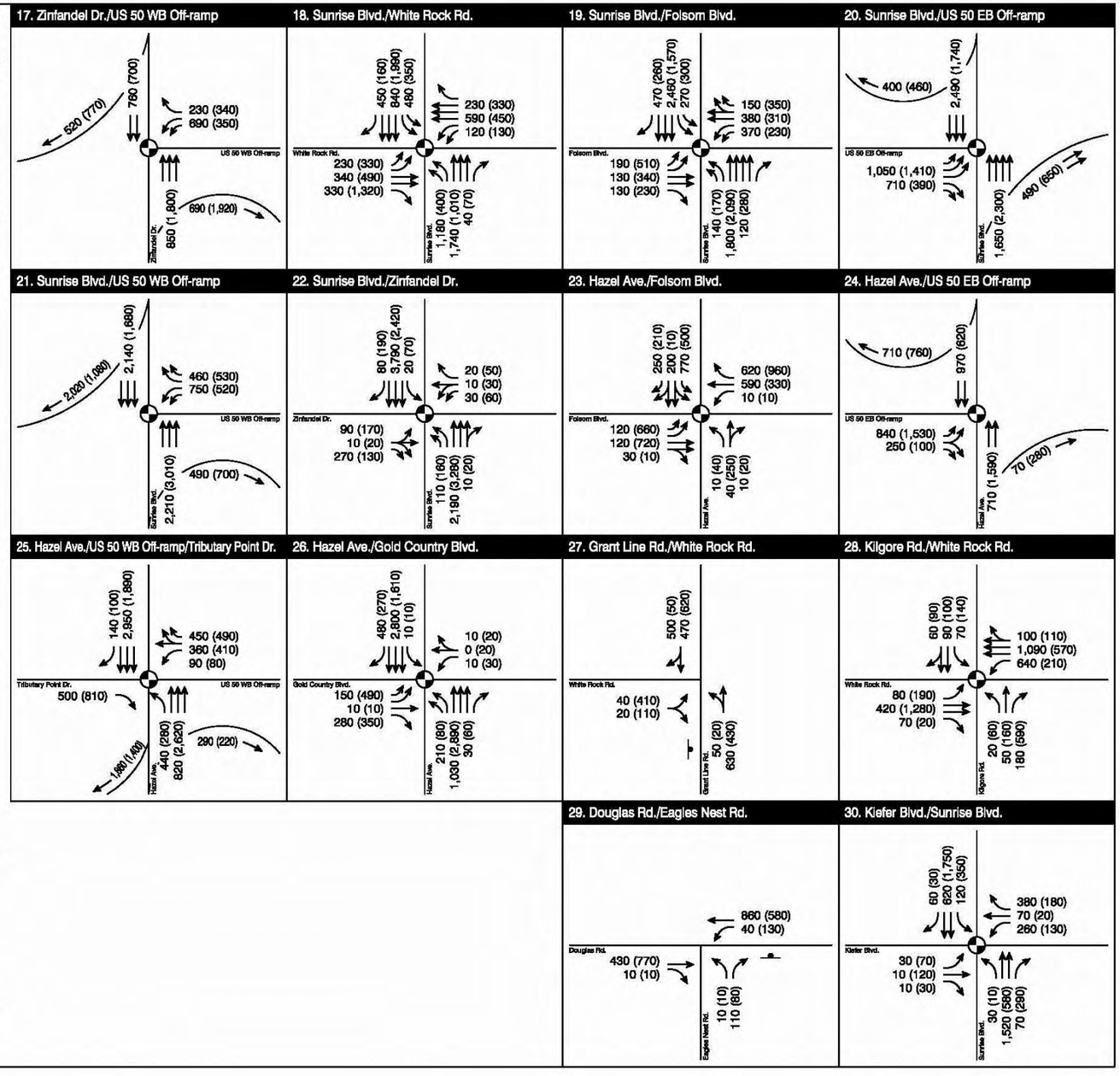
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE PLUS INCREASED DEVELOPMENT ALTERNATIVE

EXHIBIT 3.15-23A





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TRANSPORTATION CONSULTANTS

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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - BASELINE PLUS INCREASED DEVELOPMENT ALTERNATIVE

EXHIBIT 3.15-23B

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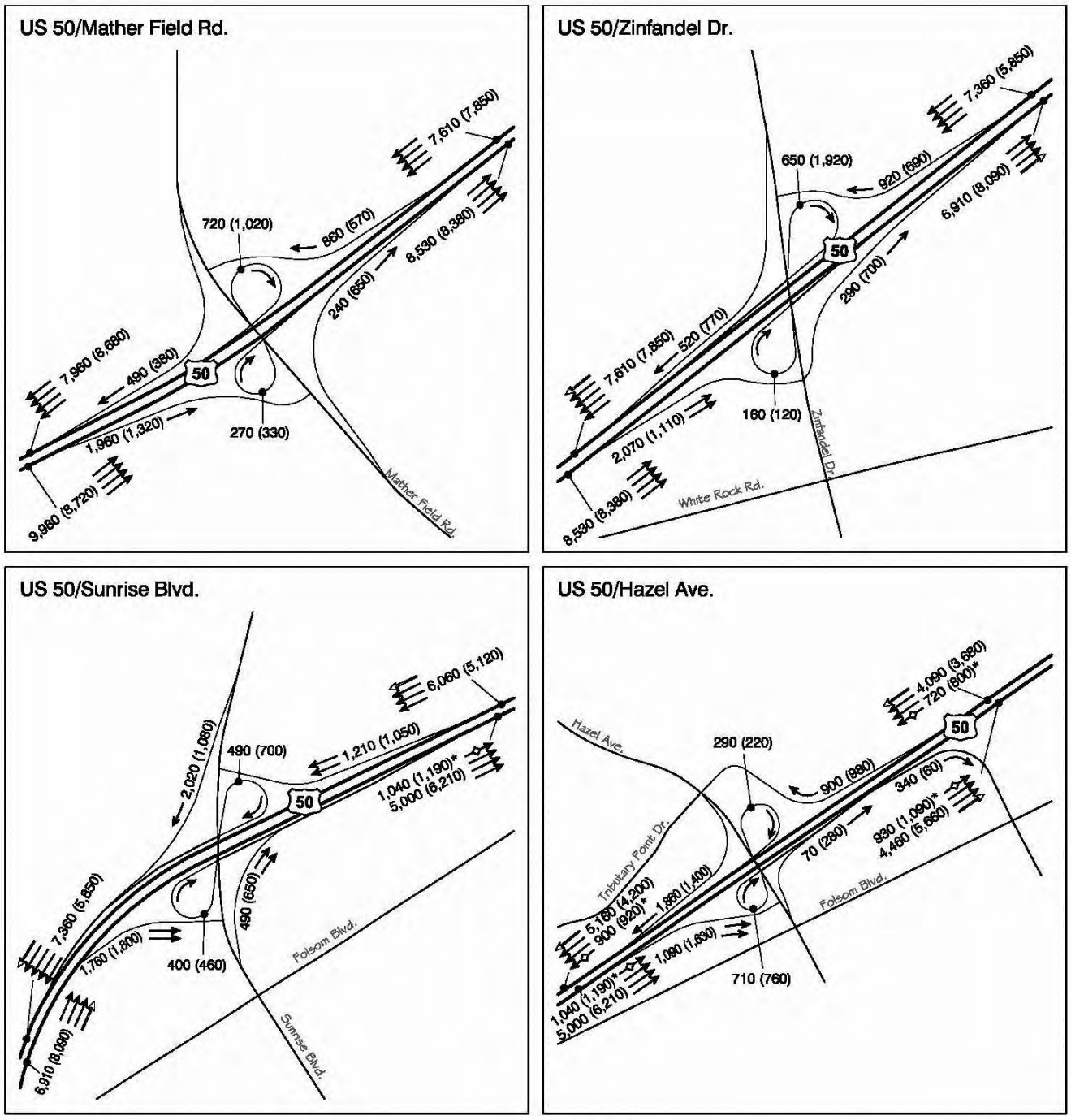
AVERAGE DAILY TRAFFIC VOLUME - BASELINE PLUS INCREASED DEVELOPMENT ALTERNATIVE

EXHIBIT 3.15-24



LEGEND

XX (YY)	AM (PM) Peak Hour Traffic Volume (*HOV Peak Hour Traffic Volume Estimated)
→	Mixed Flow Travel Lane
⇢	Auxiliary Lane
⇢◇	HOV Lane

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

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FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - BASELINE PLUS INCREASED DEVELOPMENT ALTERNATIVE

EXHIBIT 3.15-25

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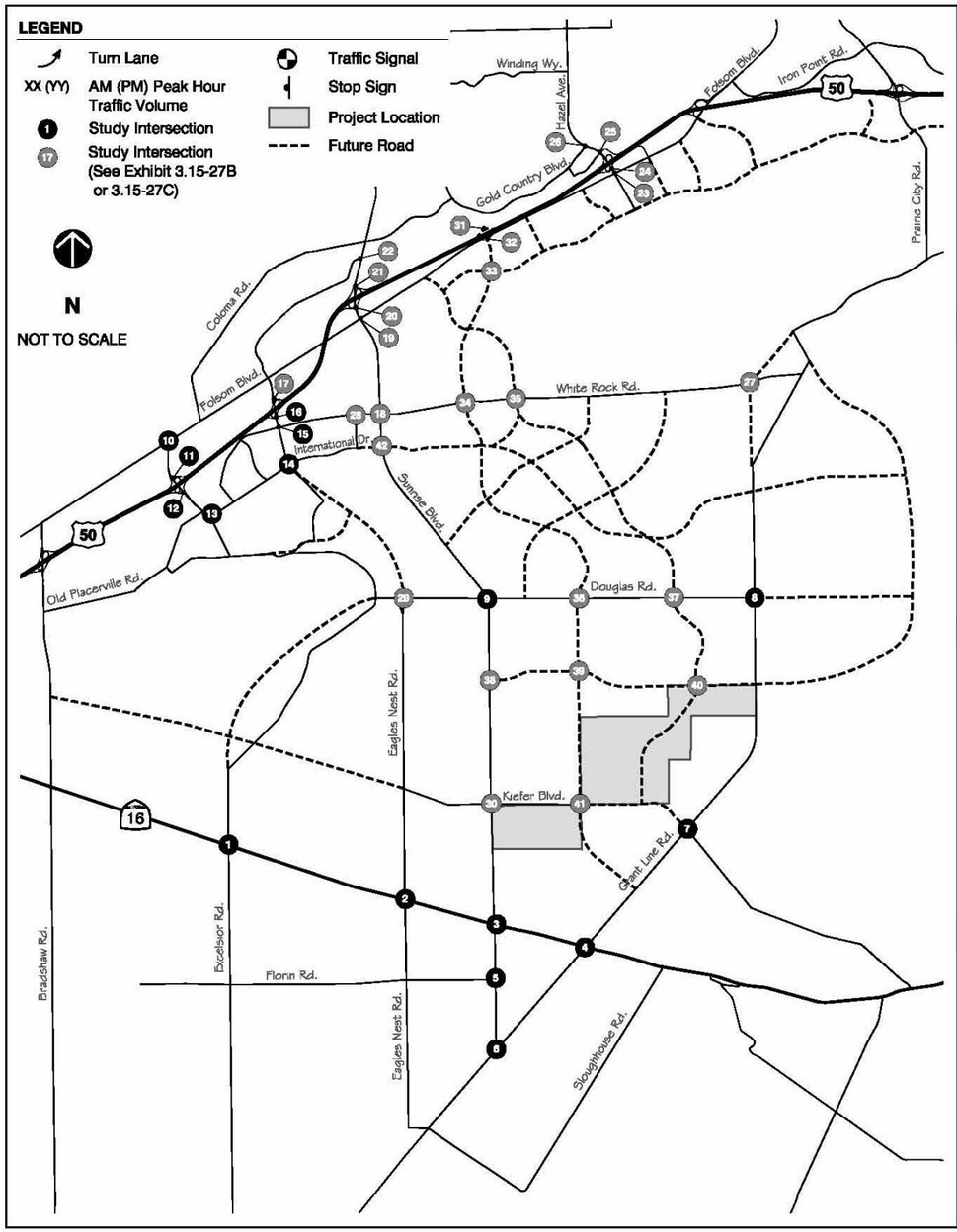
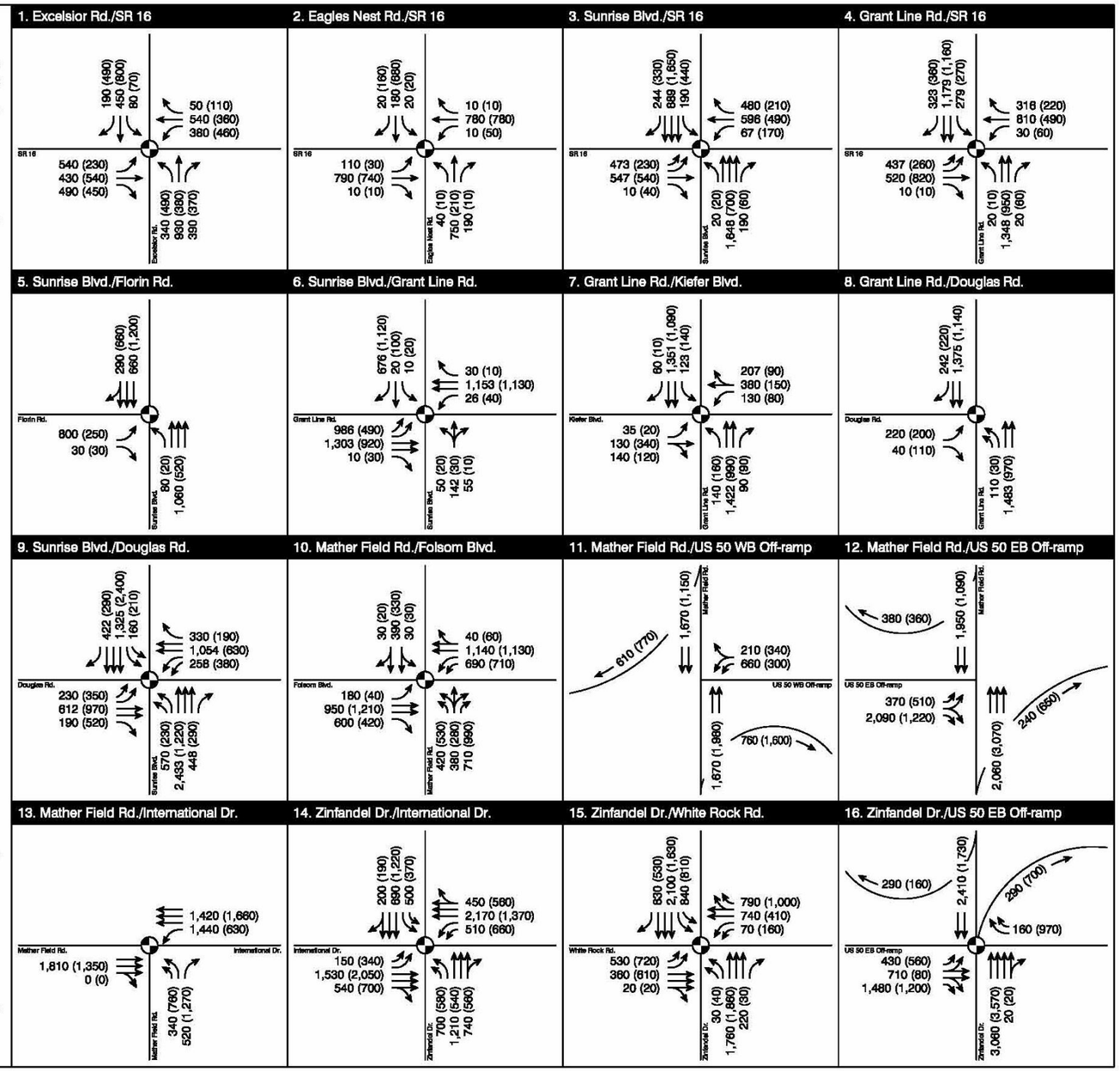
ROADWAY CLASSIFICATION AND NUMBER OF LANES - CUMULATIVE CONDITIONS

EXHIBIT 3.15-26





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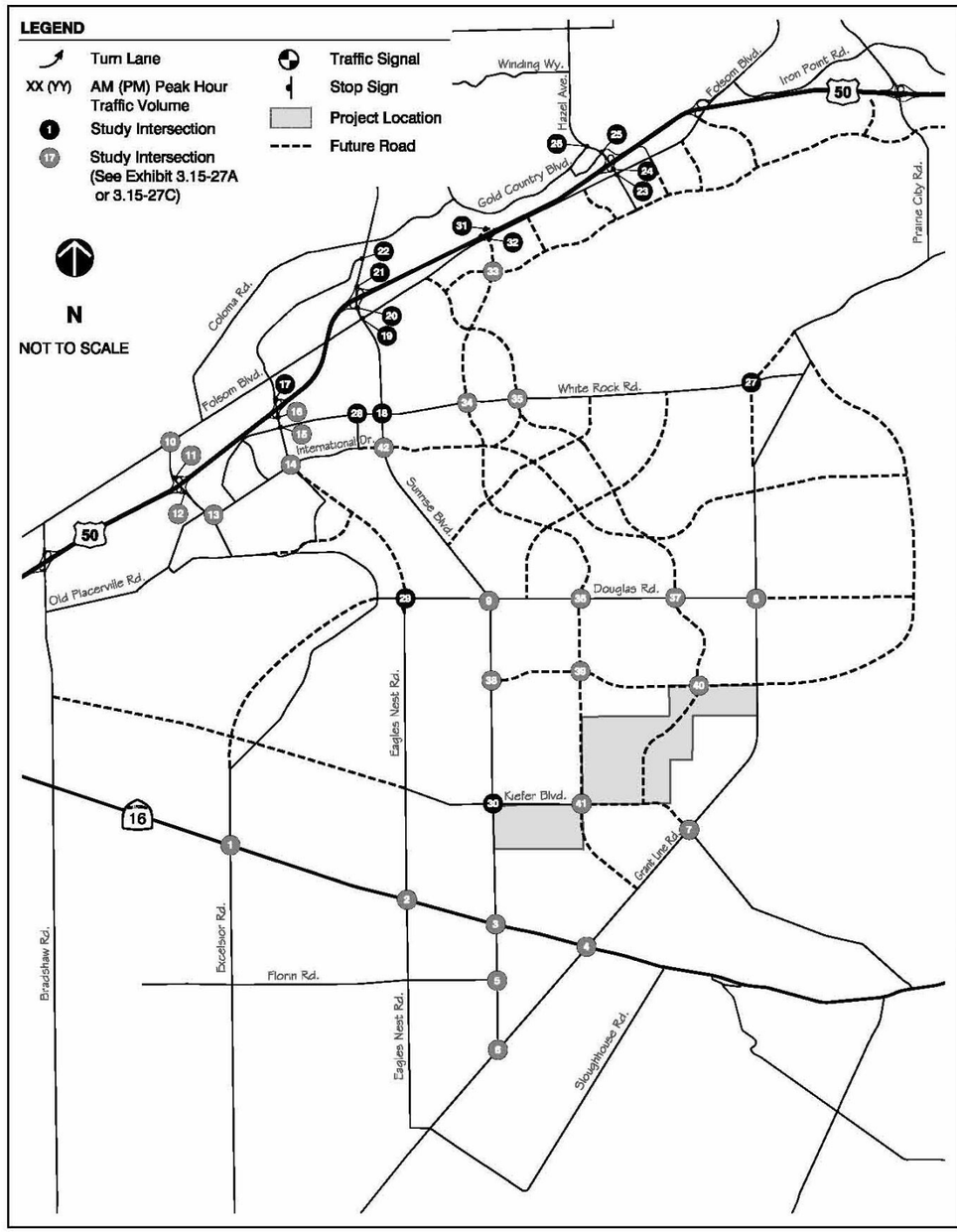
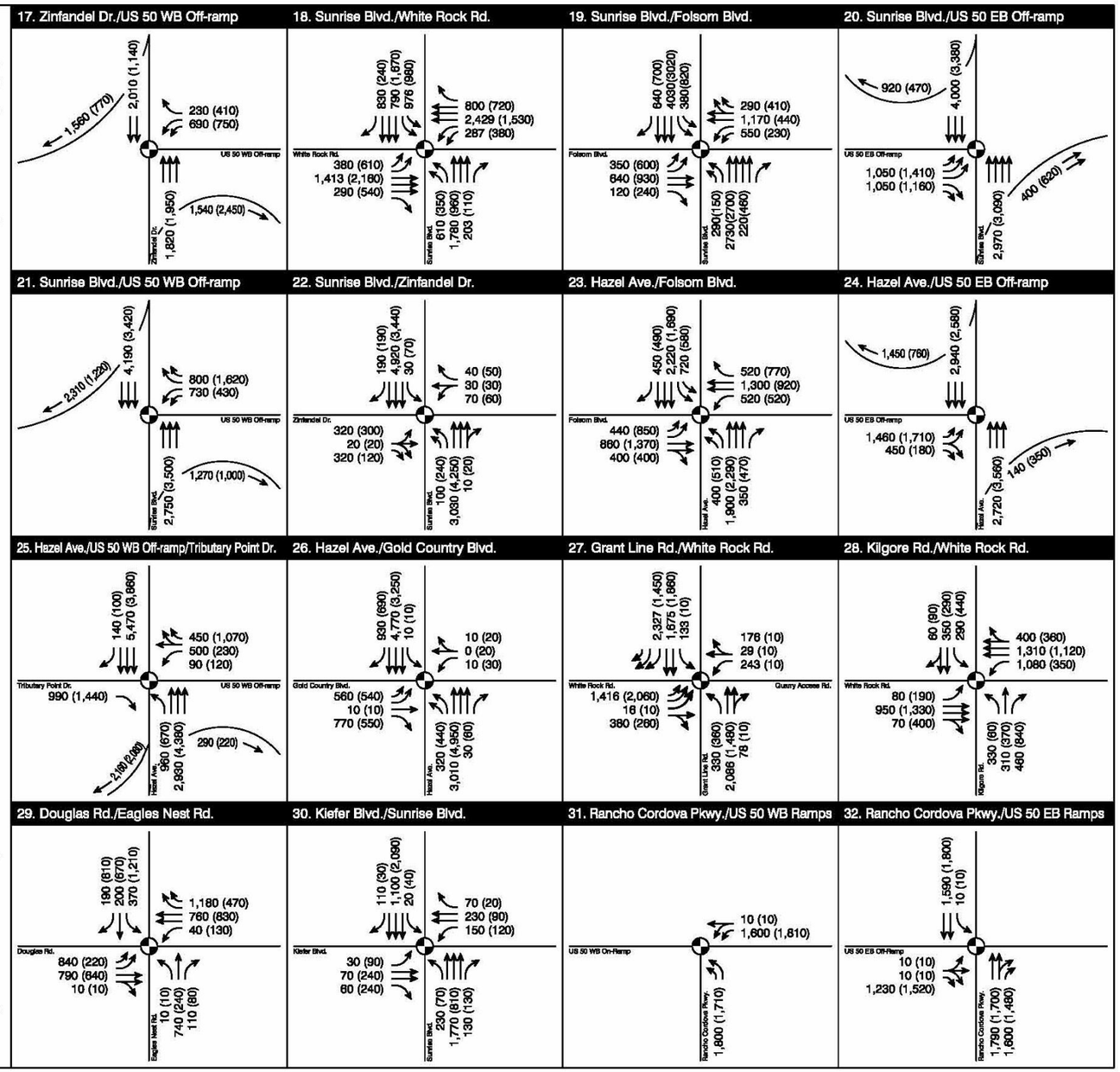
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE NO PROJECT CONDITIONS

EXHIBIT 3.15-27A





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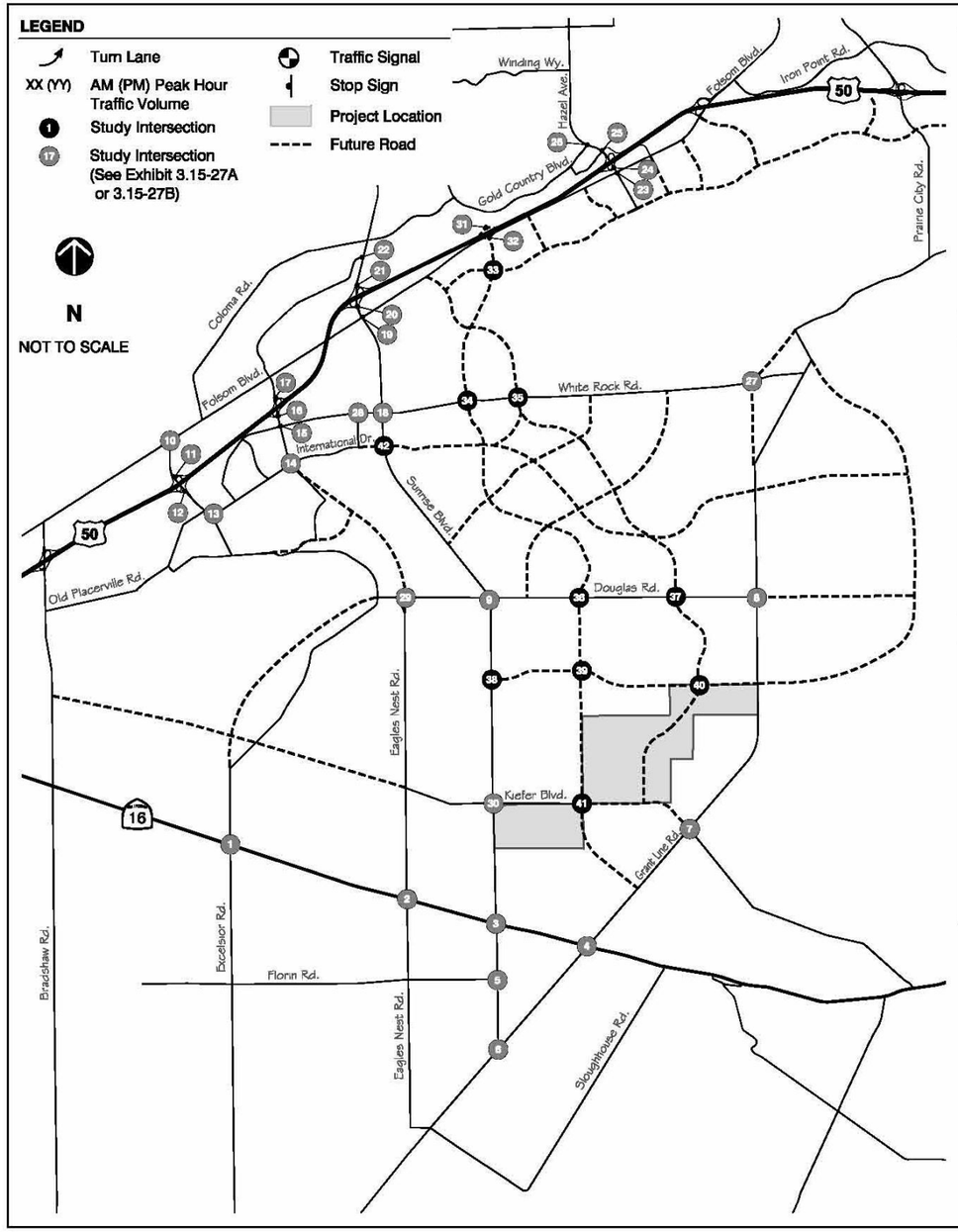
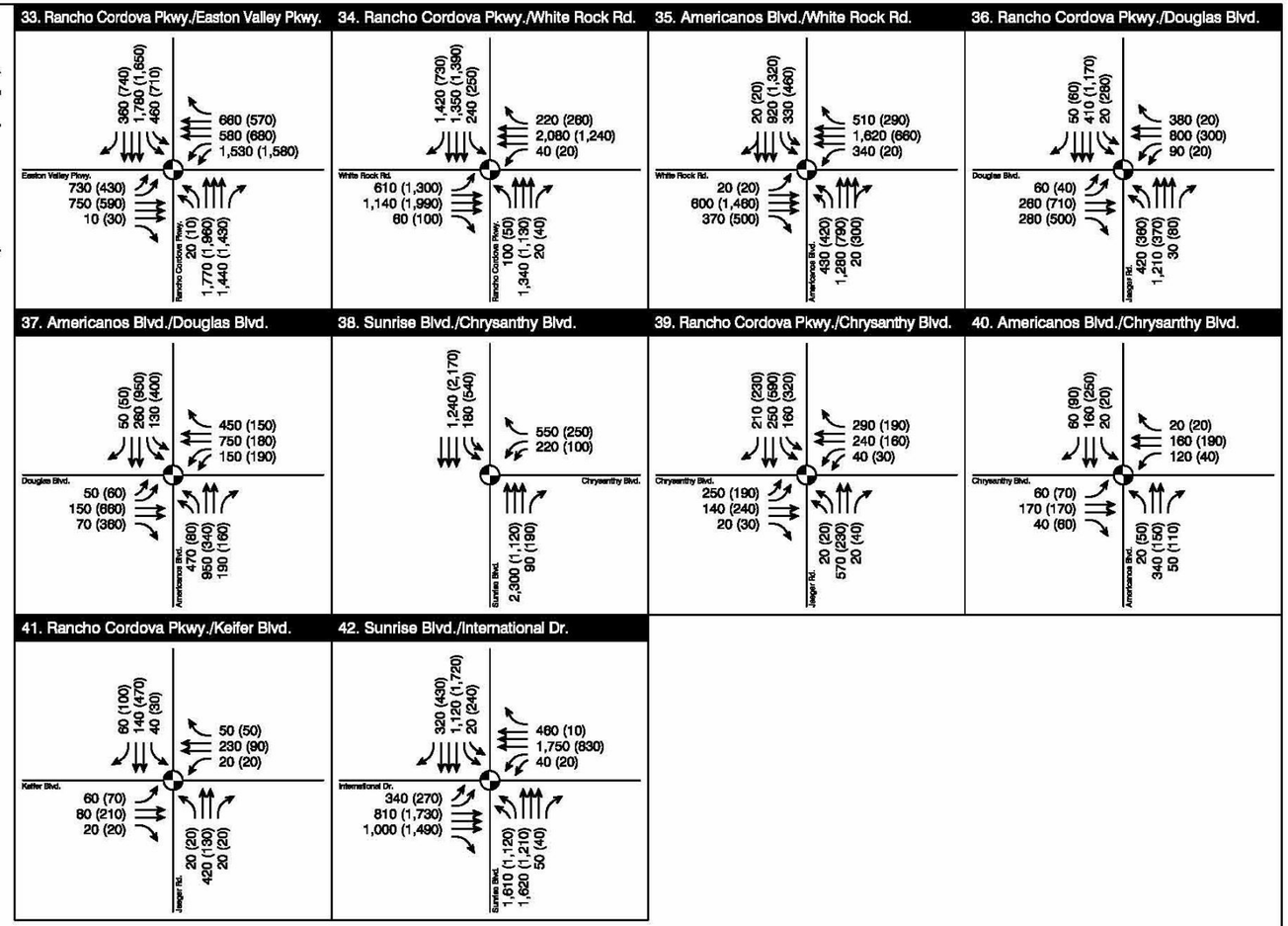
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE NO PROJECT CONDITIONS

EXHIBIT 3.15-27B





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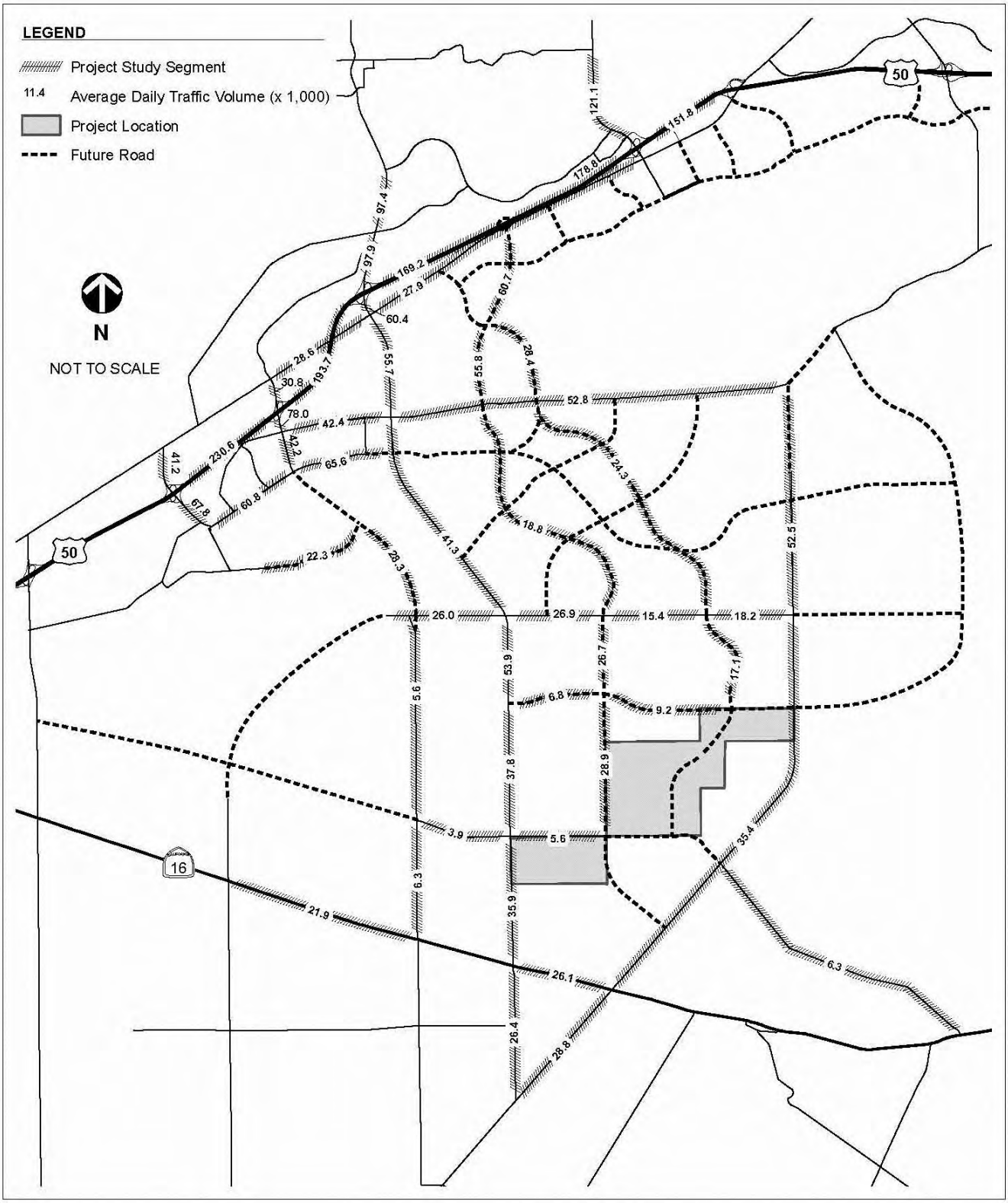
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE NO PROJECT CONDITIONS

EXHIBIT 3.15-27C



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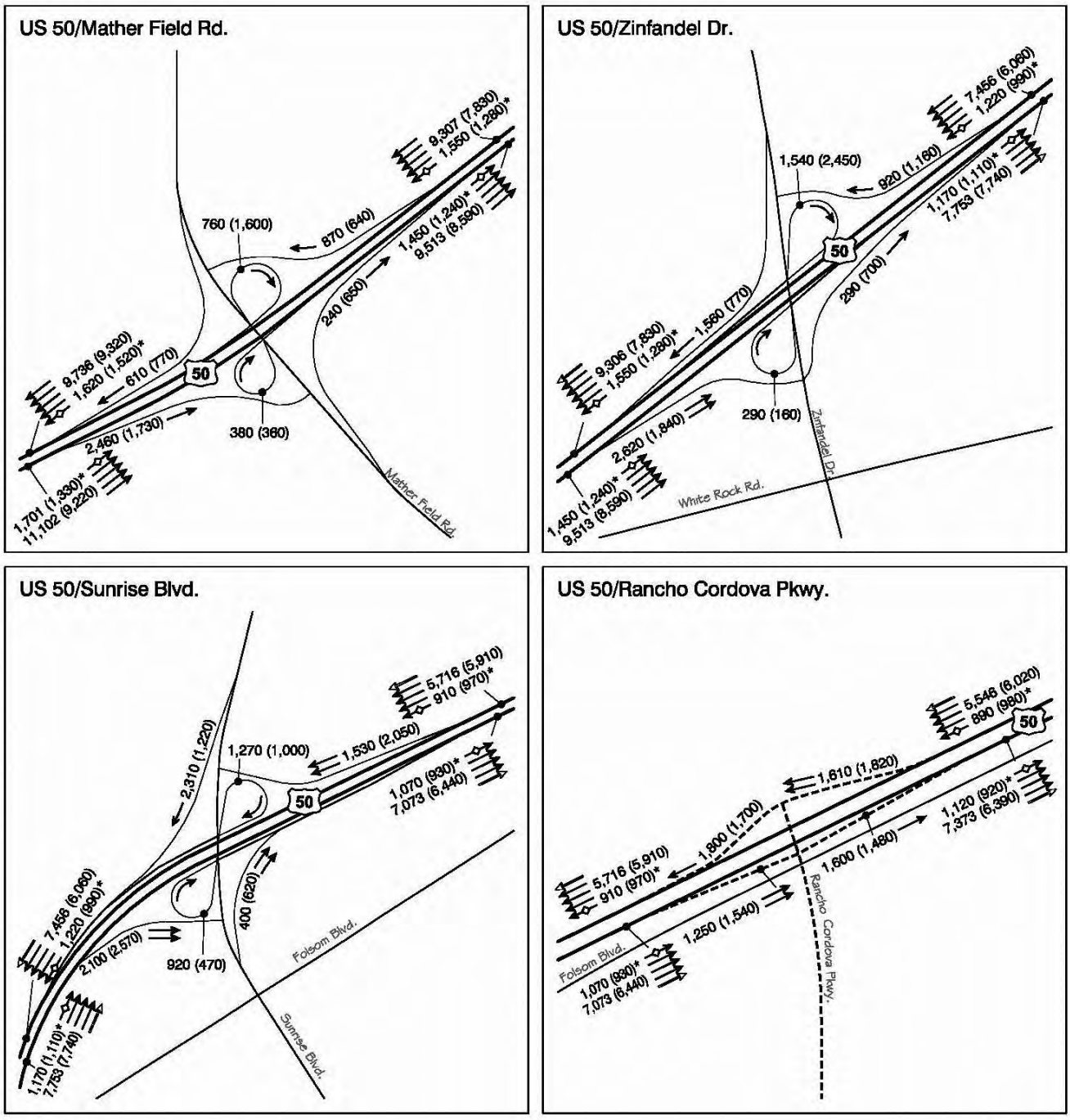
AVERAGE DAILY TRAFFIC VOLUME - CUMULATIVE NO PROJECT CONDITIONS

EXHIBIT 3.15-28



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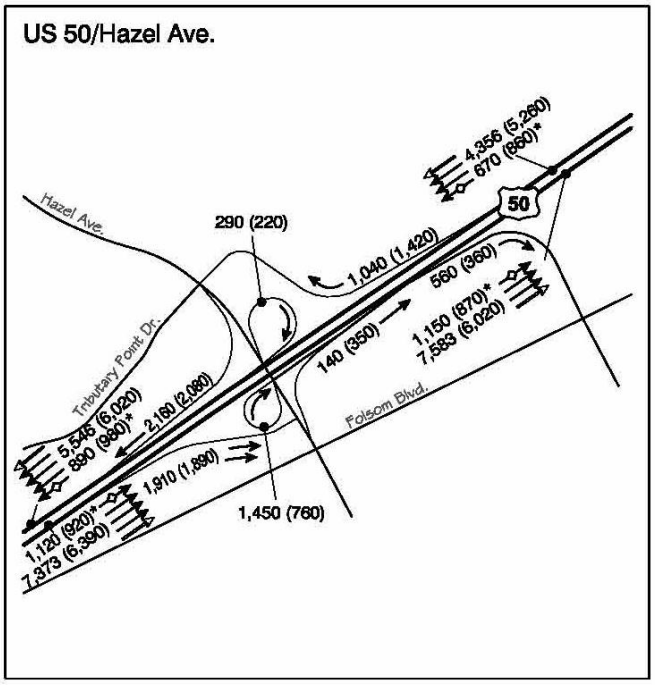
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE NO PROJECT CONDITIONS

EXHIBIT 3.15-29A



LEGEND

XX (YY)	AM (PM) Peak Hour Traffic Volume (*HOV Peak Hour Traffic Volume Estimated)
→	Mixed Flow Travel Lane
⟹	Auxiliary Lane
⊸◇→	HOV Lane

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 18, 2011 SP
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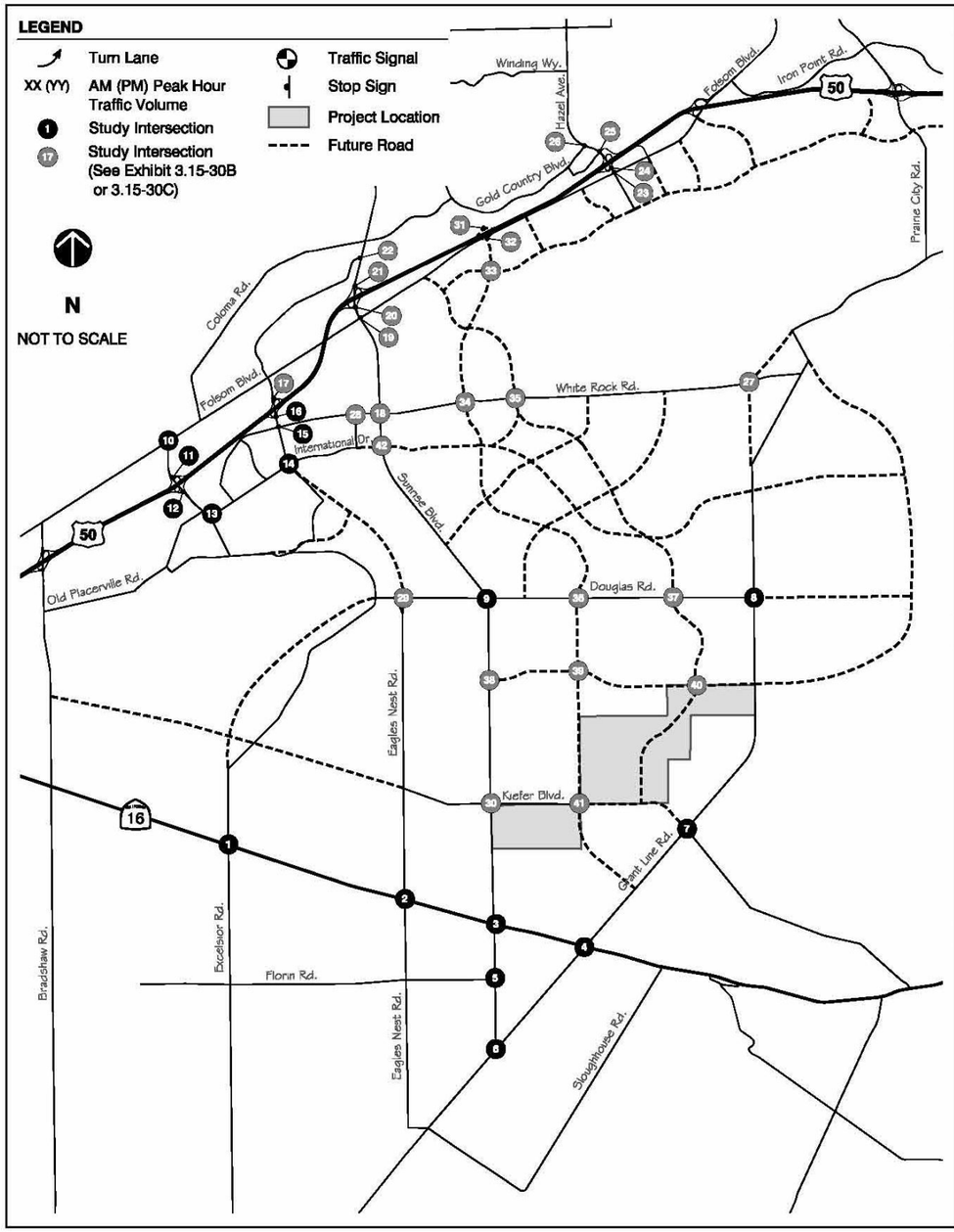
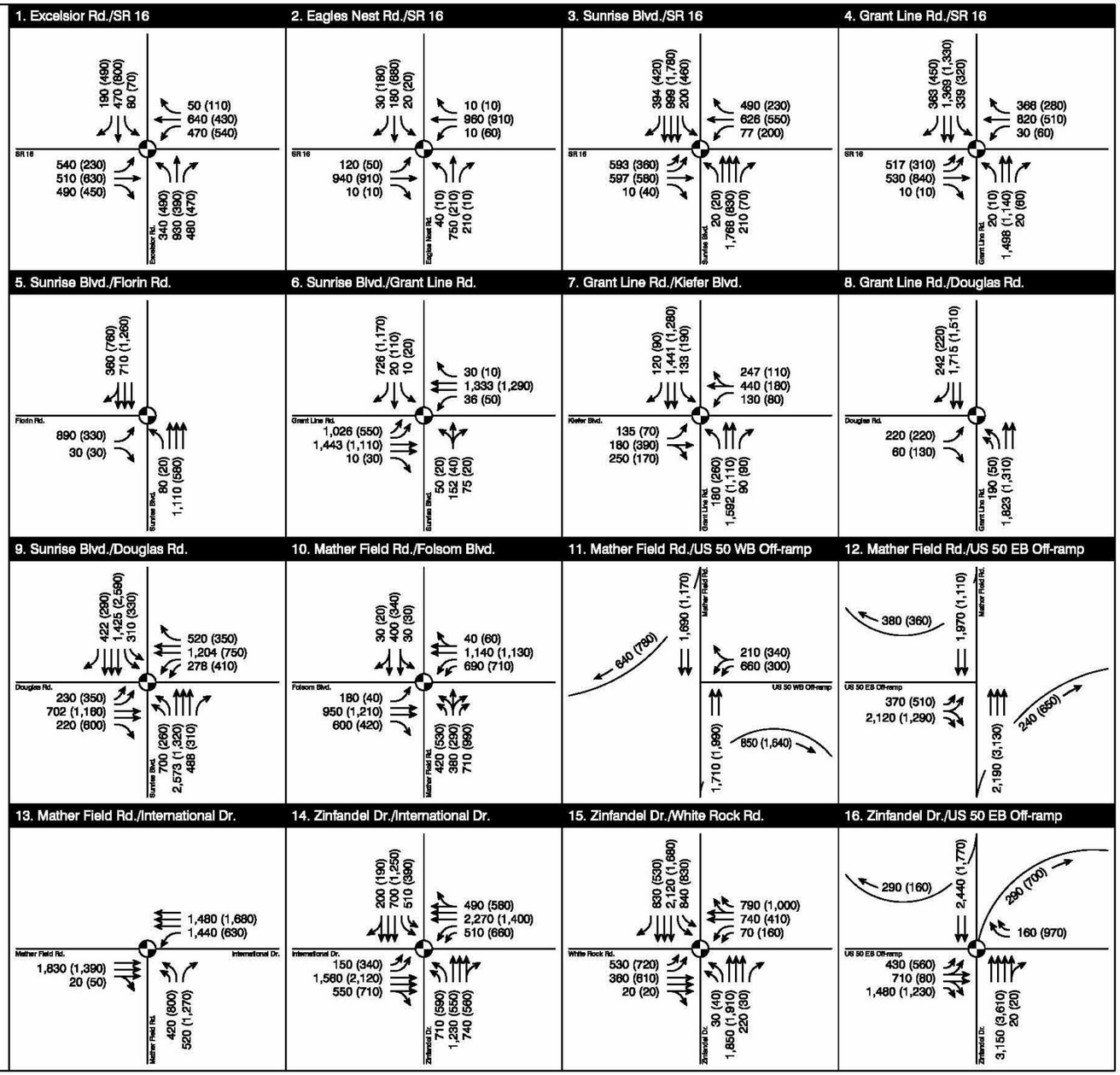
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE NO PROJECT CONDITIONS

EXHIBIT 3.15-29B





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TRANSPORTATION CONSULTANTS

Oct 19, 2011 SP
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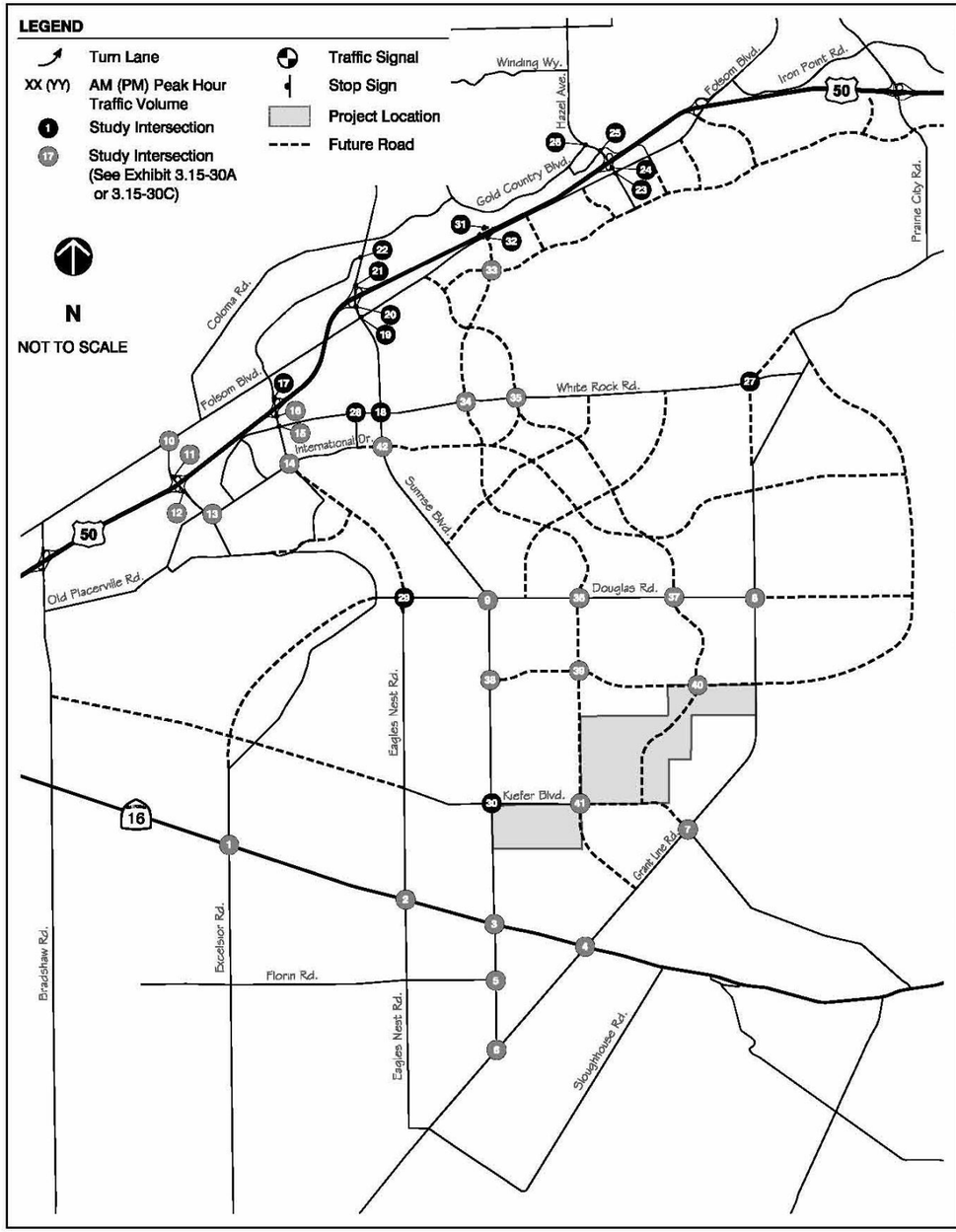
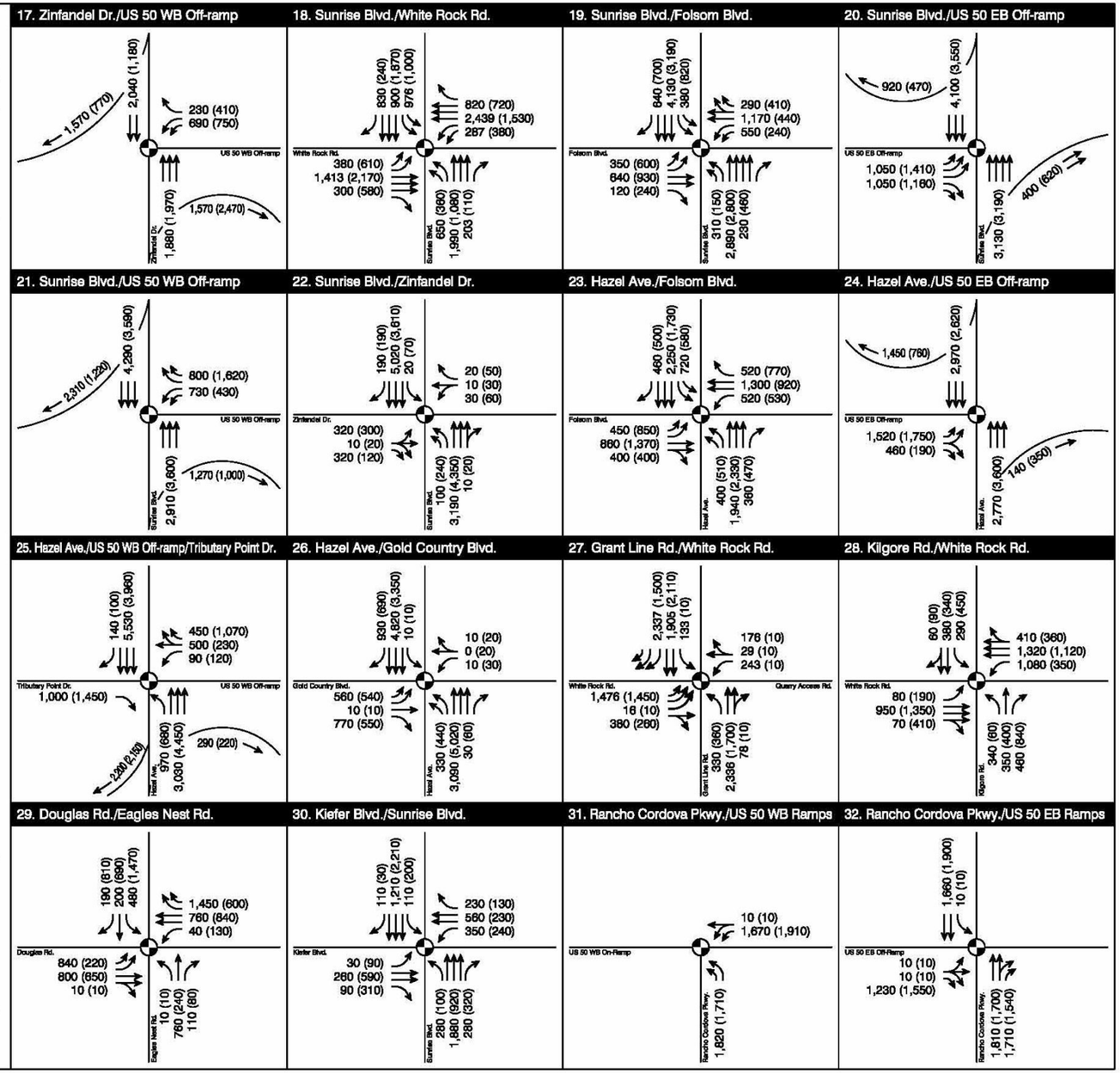
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS PROPOSED PROJECT CONDITIONS

EXHIBIT 3.15-30A





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TRANSPORTATION CONSULTANTS

Oct 19, 2011 SP
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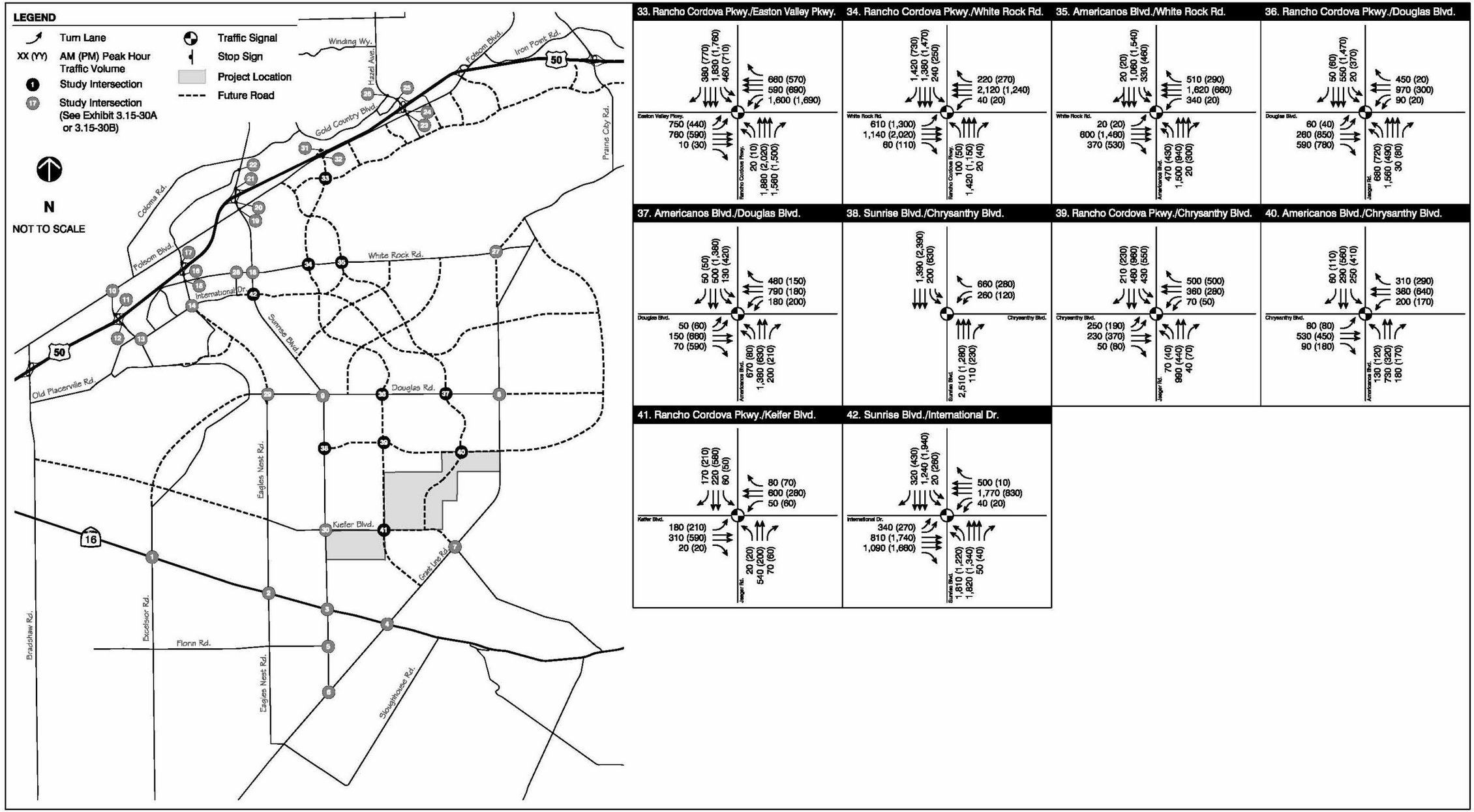
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS PROPOSED PROJECT CONDITIONS

EXHIBIT 3.15-30B



33. Rancho Cordova Pkwy./Easton Valley Pkwy.

34. Rancho Cordova Pkwy./White Rock Rd.

35. Americanos Blvd./White Rock Rd.

36. Rancho Cordova Pkwy./Douglas Blvd.

37. Americanos Blvd./Douglas Blvd.

38. Sunrise Blvd./Chrysanthy Blvd.

39. Rancho Cordova Pkwy./Chrysanthy Blvd.

40. Americanos Blvd./Chrysanthy Blvd.

41. Rancho Cordova Pkwy./Keifer Blvd.

42. Sunrise Blvd./International Dr.

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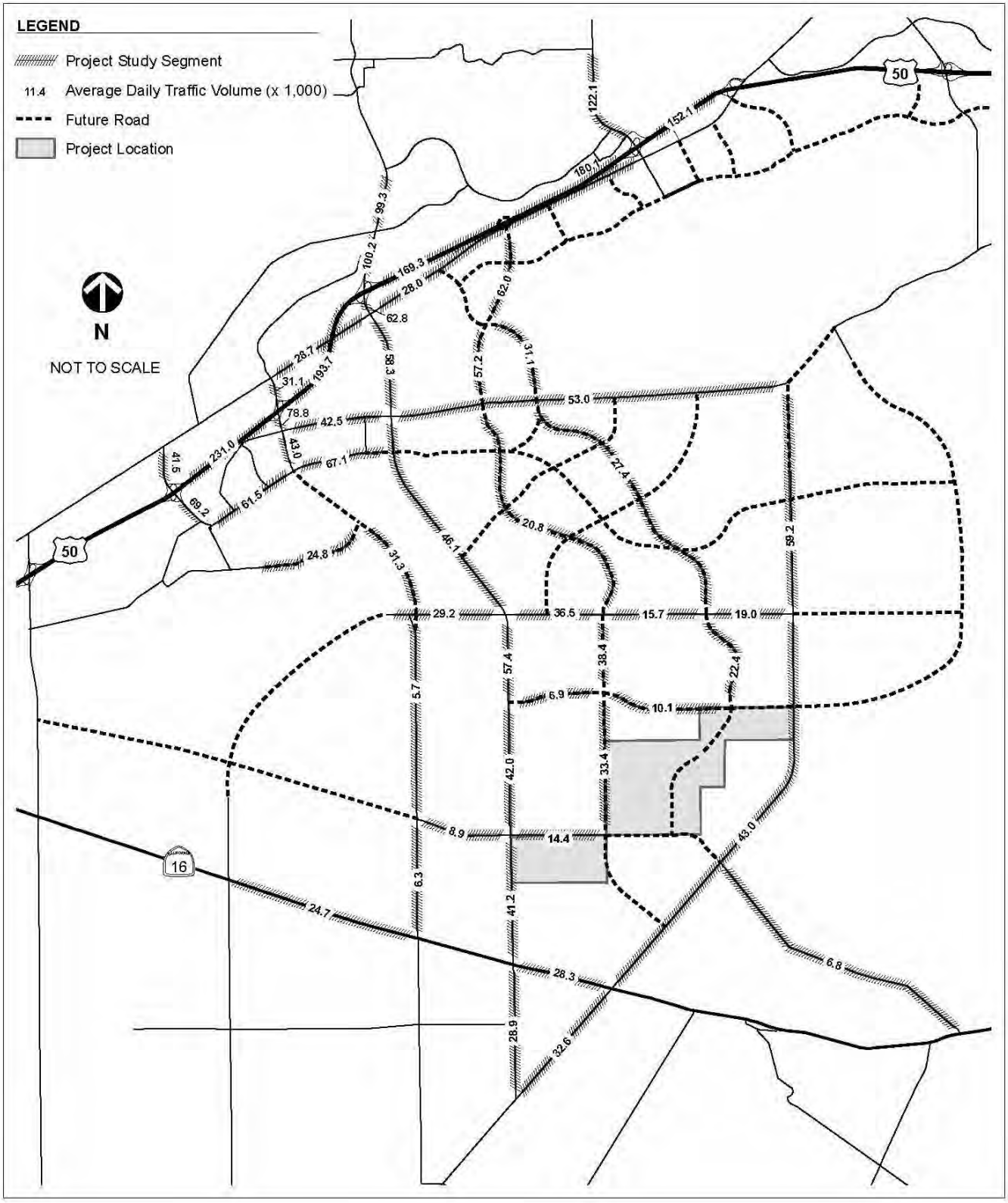
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS PROPOSED PROJECT CONDITIONS

EXHIBIT 3.15-30C



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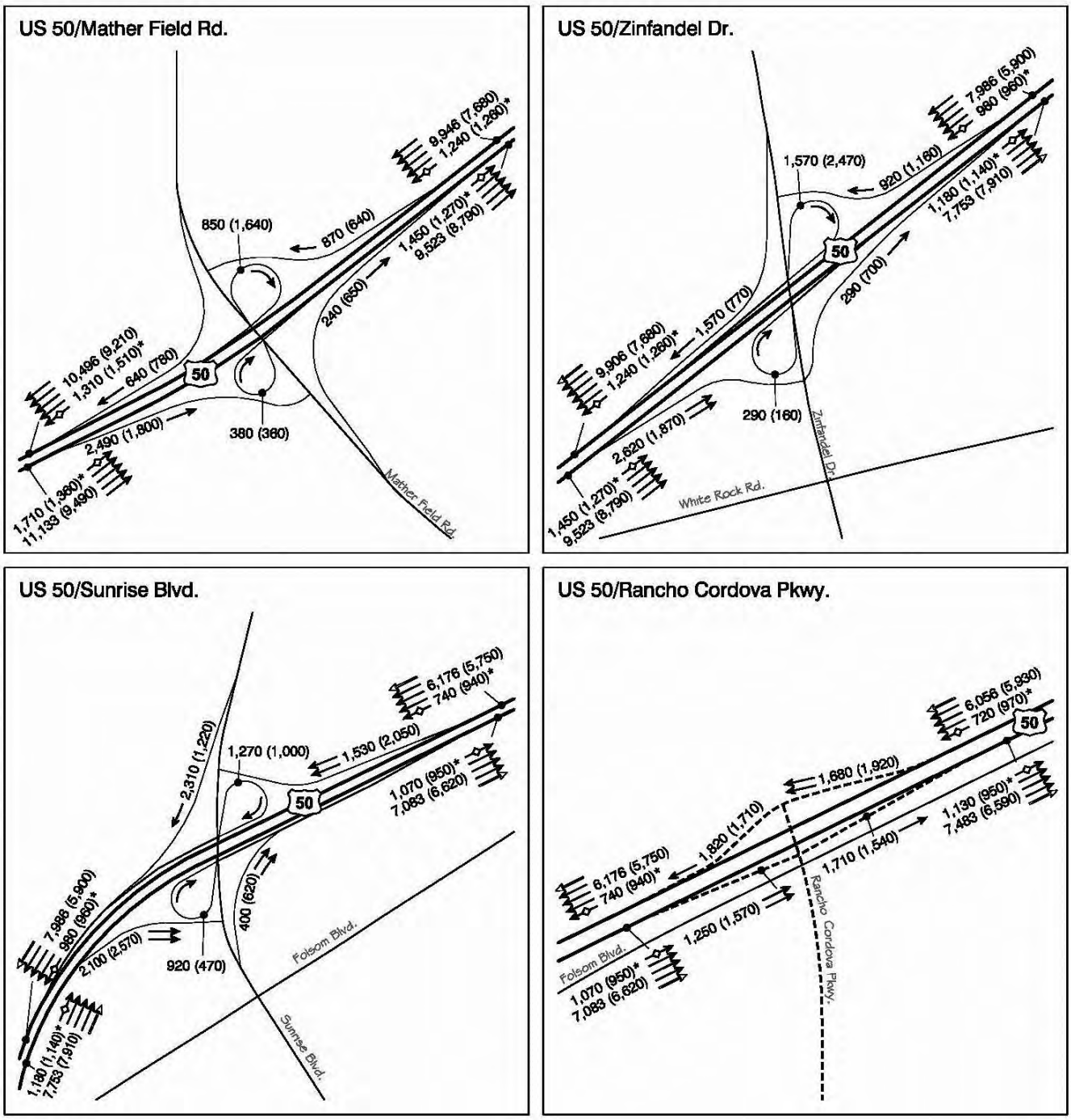
AVERAGE DAILY TRAFFIC VOLUME - CUMULATIVE PLUS PROJECT CONDITIONS

EXHIBIT 3.15-31



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volume
(*HOV Peak Hour Traffic Volume Estimated)

Mixed Flow Travel Lane

Auxiliary Lane

HOV Lane

Future Road

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 18, 2011 SP
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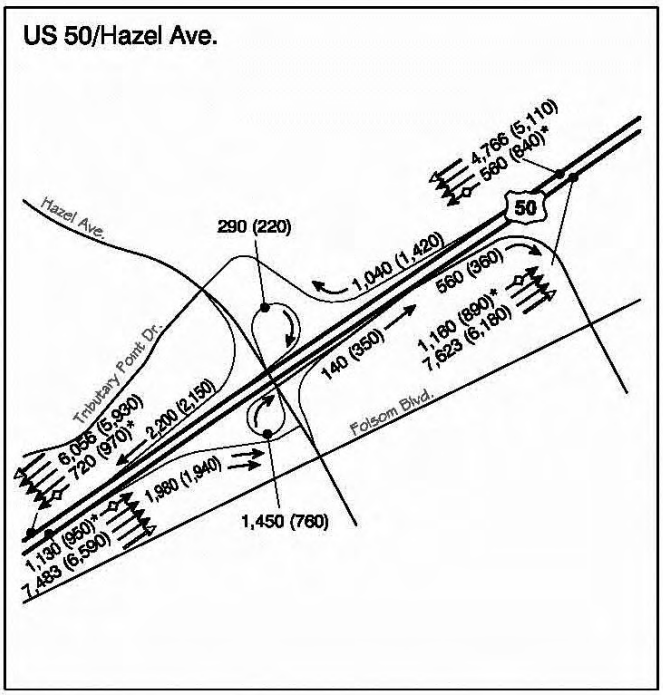
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE PLUS PROPOSED PROJECT CONDITIONS

EXHIBIT 3.15-32A



LEGEND

XX (YY)	AM (PM) Peak Hour Traffic Volume (*HOV Peak Hour Traffic Volume Estimated)
→	Mixed Flow Travel Lane
→	Auxiliary Lane
→◇→	HOV Lane

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 18, 2011 SP
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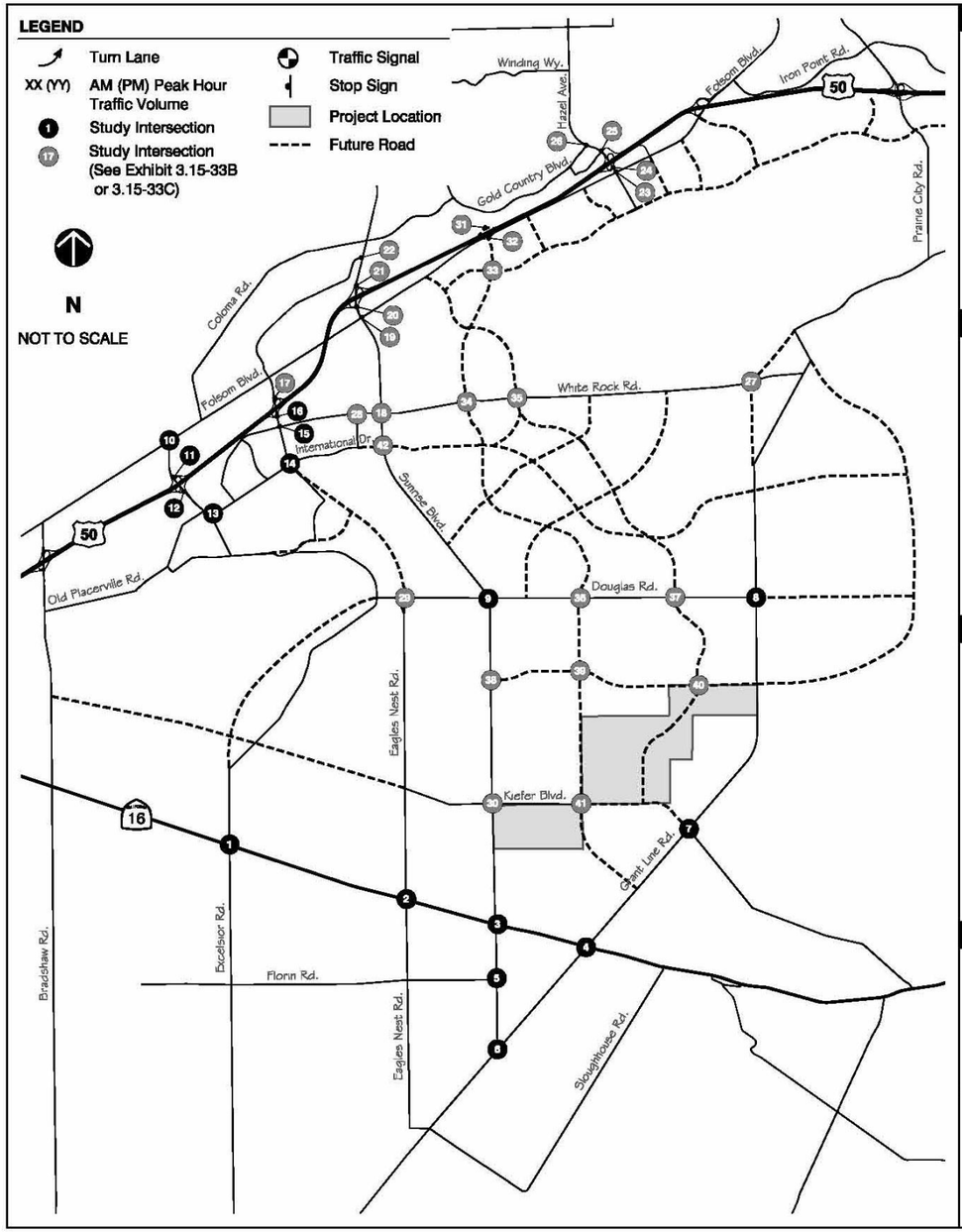
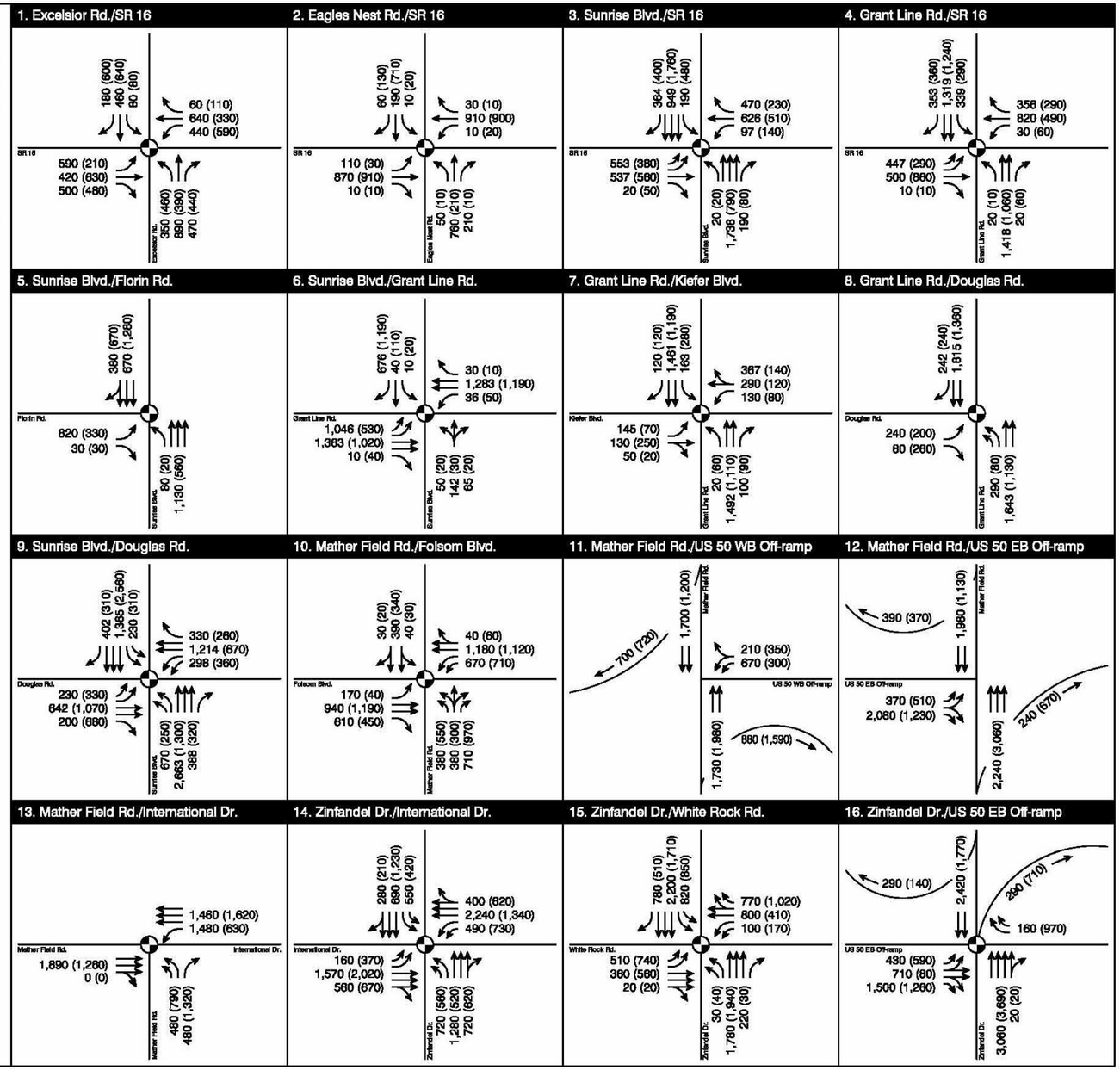
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE PLUS PROPOSED PROJECT CONDITIONS

EXHIBIT 3.15-32B





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TRANSPORTATION CONSULTANTS

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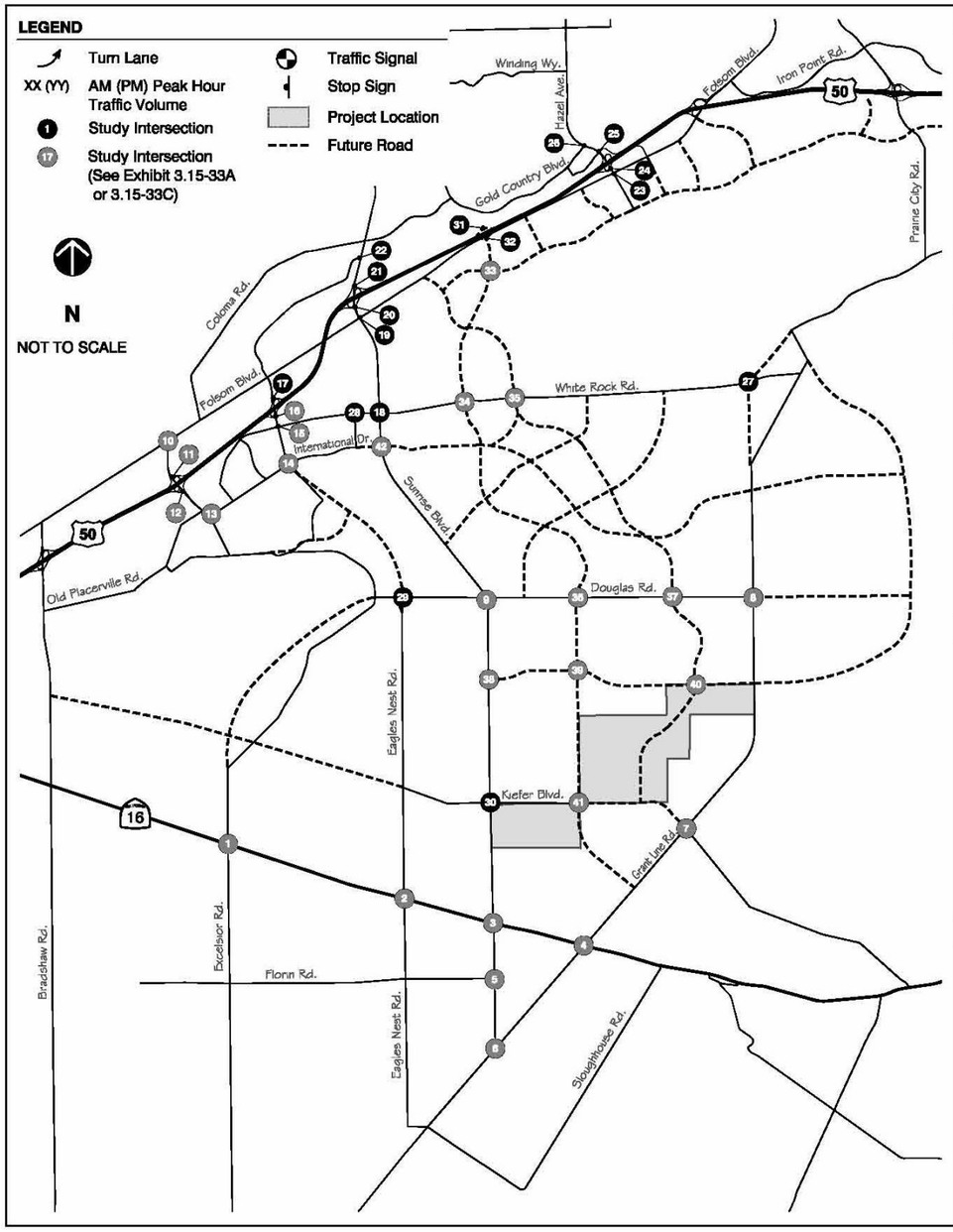
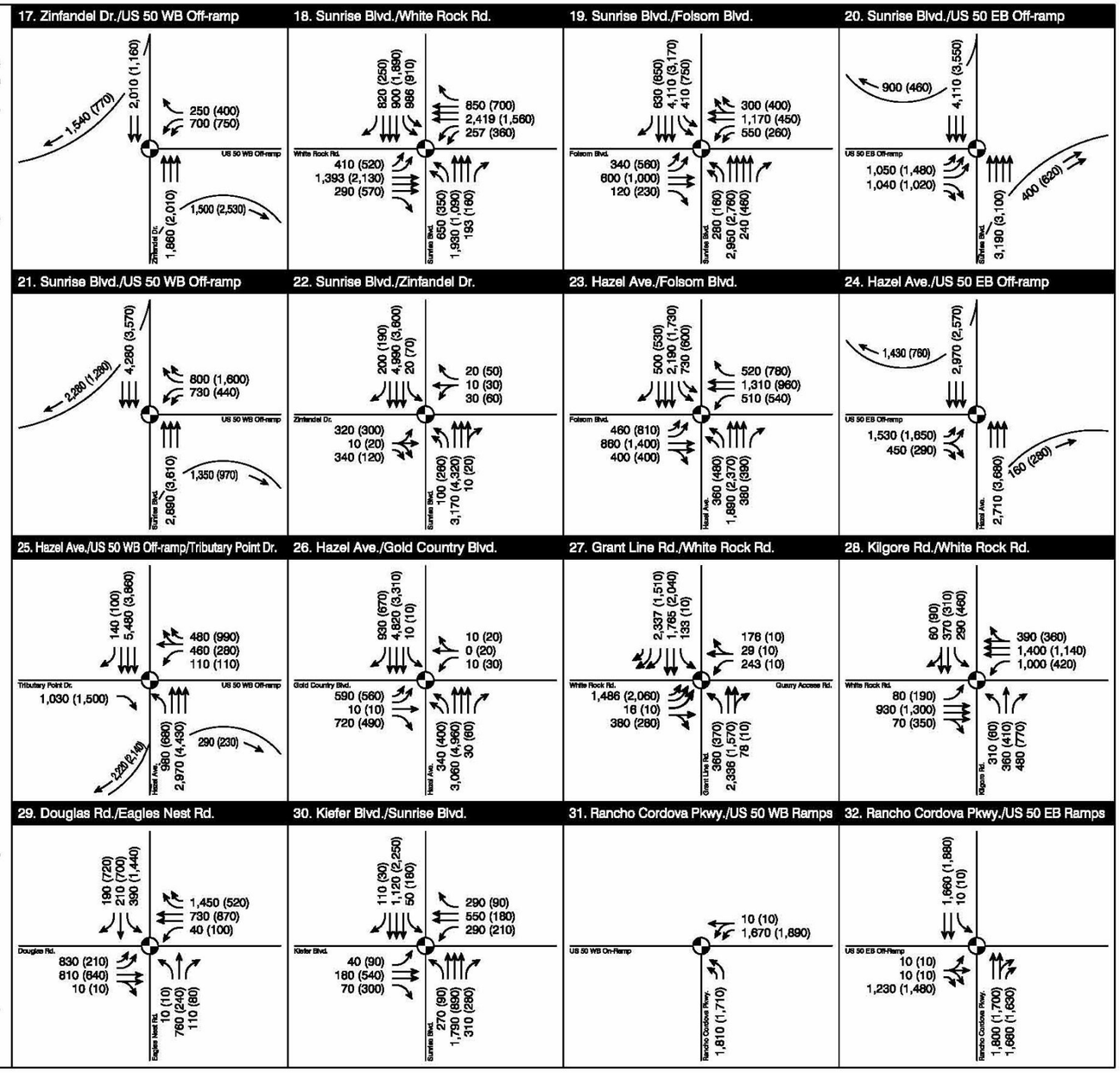
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS AGENCY CONCEPTUAL STRATEGY ALTERNATIVE CONDITIONS

EXHIBIT 3.15-33A





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TRANSPORTATION CONSULTANTS

Oct 19, 2011 SP
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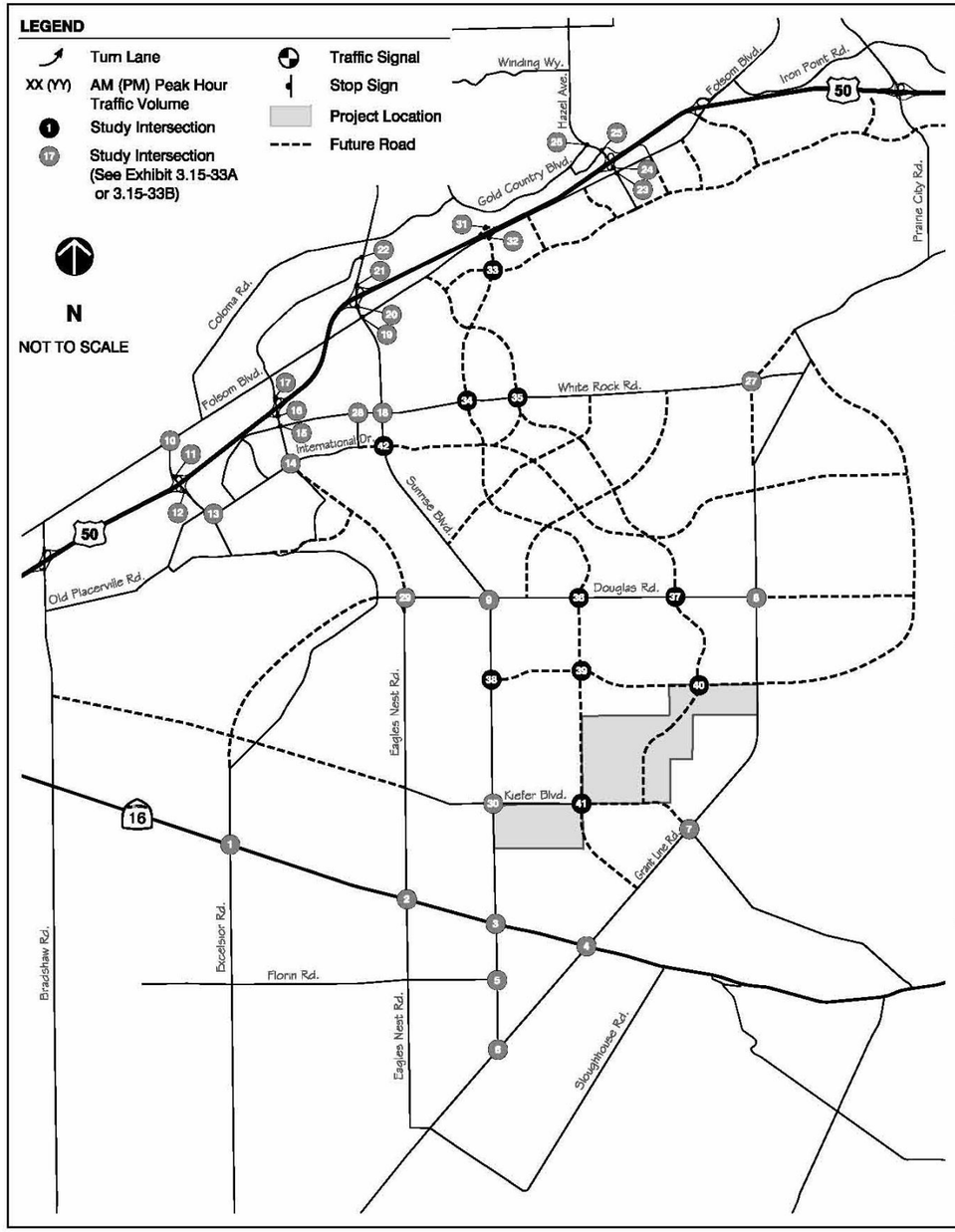
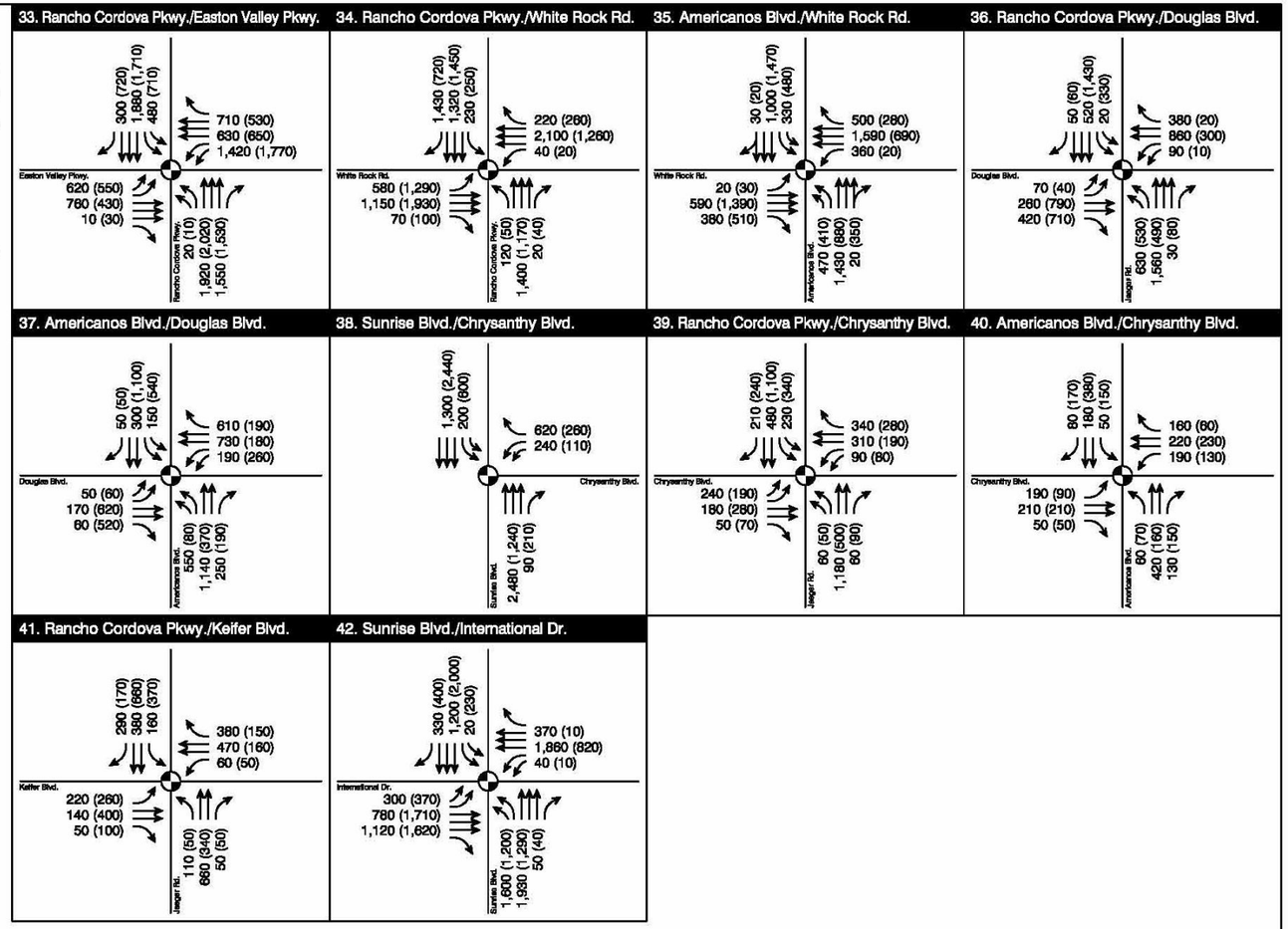
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS AGENCY CONCEPTUAL STRATEGY ALTERNATIVE CONDITIONS

EXHIBIT 3.15-33B





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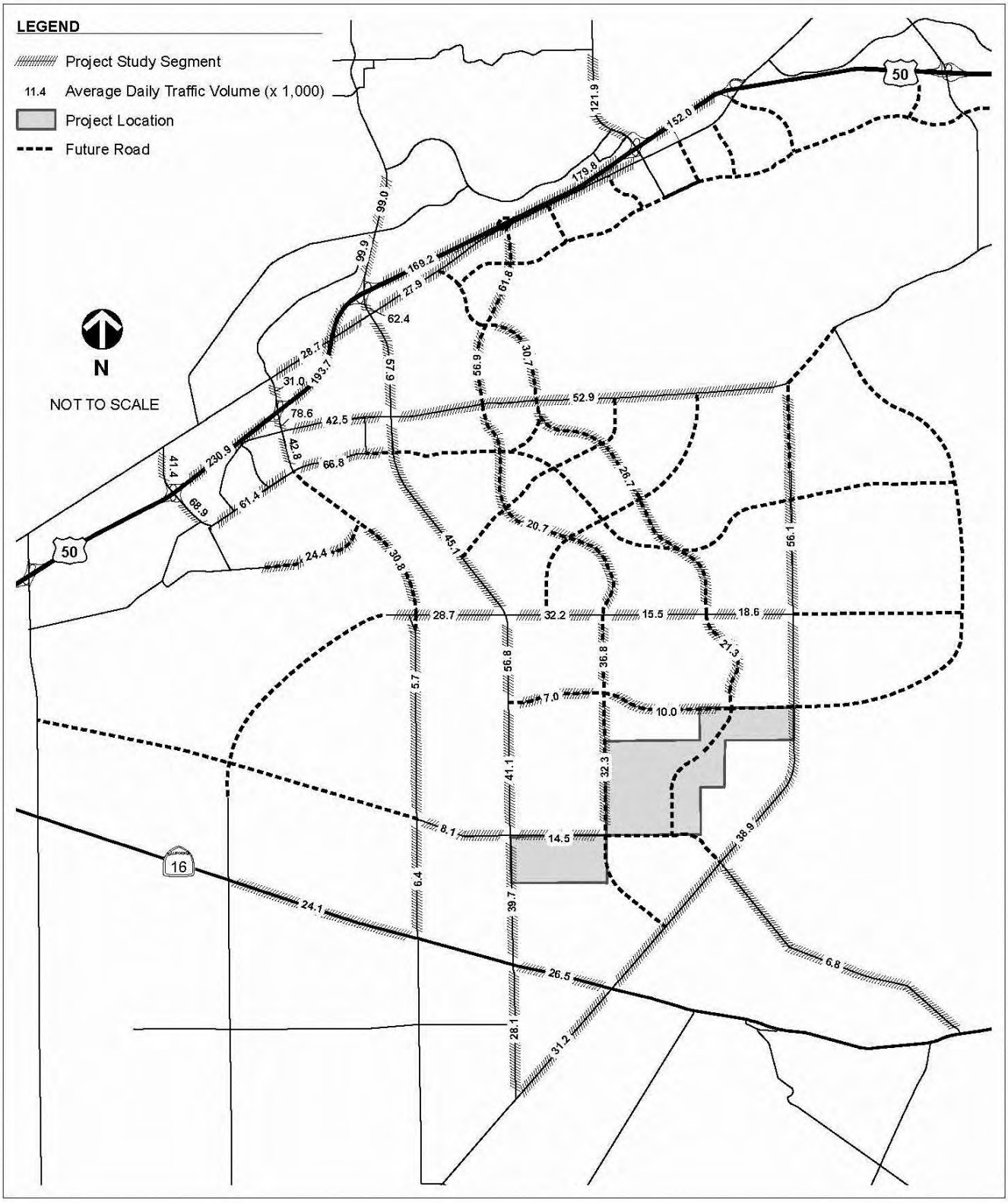
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS AGENCY CONCEPTUAL STRATEGY ALTERNATIVE CONDITIONS

EXHIBIT 3.15-33C



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AVERAGE DAILY TRAFFIC VOLUME - CUMULATIVE AGENCY CONCEPTUAL STRATEGY ALTERNATIVE

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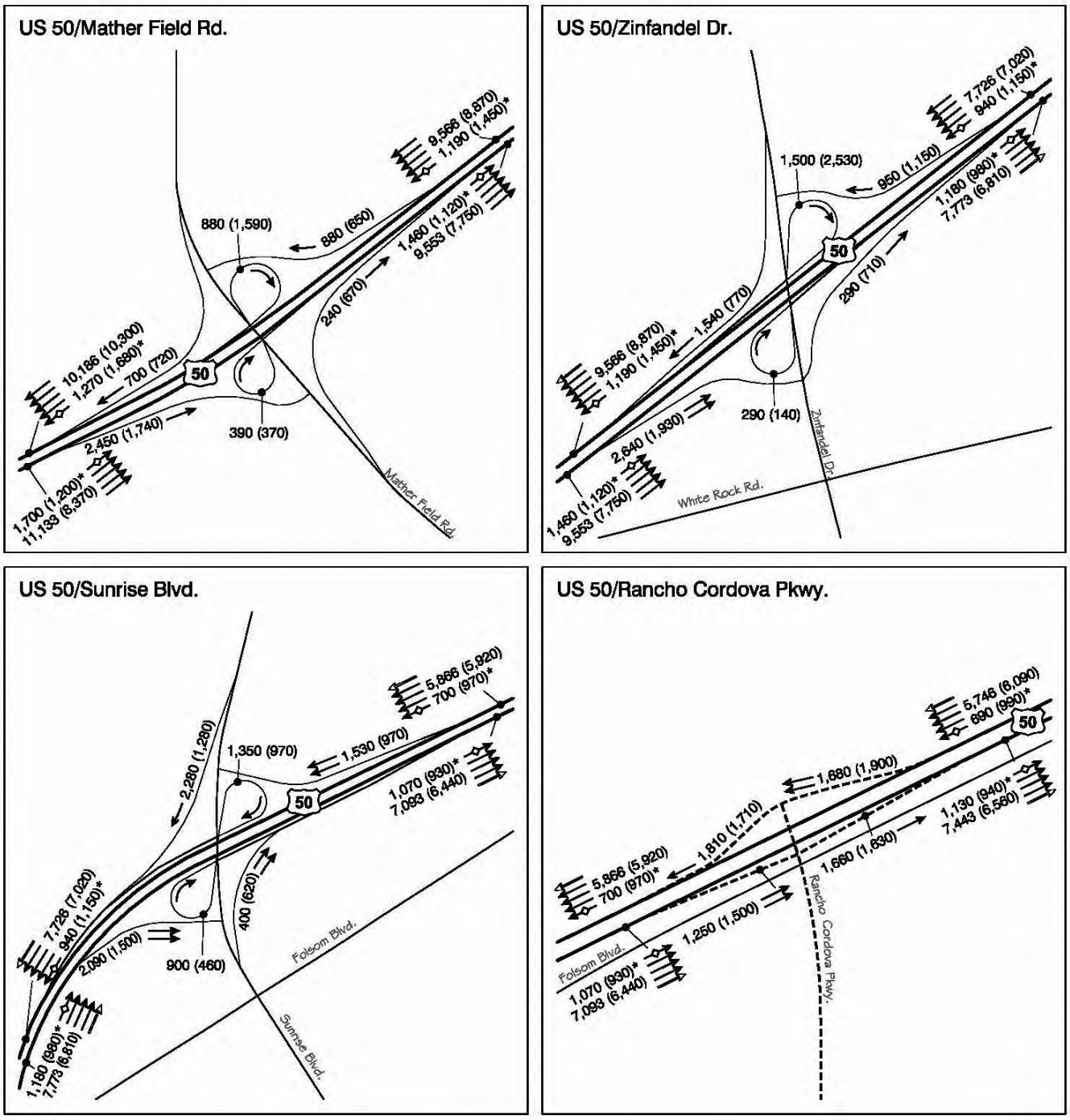
EXHIBIT 3.15-34



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volume
(*HOV Peak Hour Traffic Volume Estimated)

Mixed Flow Travel Lane

Auxiliary Lane

HOV Lane

Future Road

N

NOT TO SCALE

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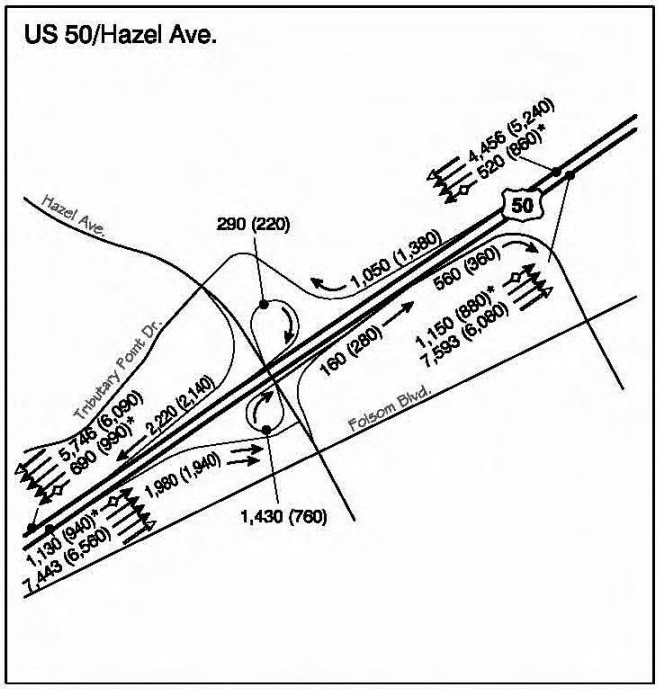
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE PLUS AGENCY CONCEPTUAL STRATEGY ALTERNATIVE

EXHIBIT 3.15-35A



FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE PLUS AGENCY CONCEPTUAL STRATEGY ALTERNATIVE

EXHIBIT 3.15-35B

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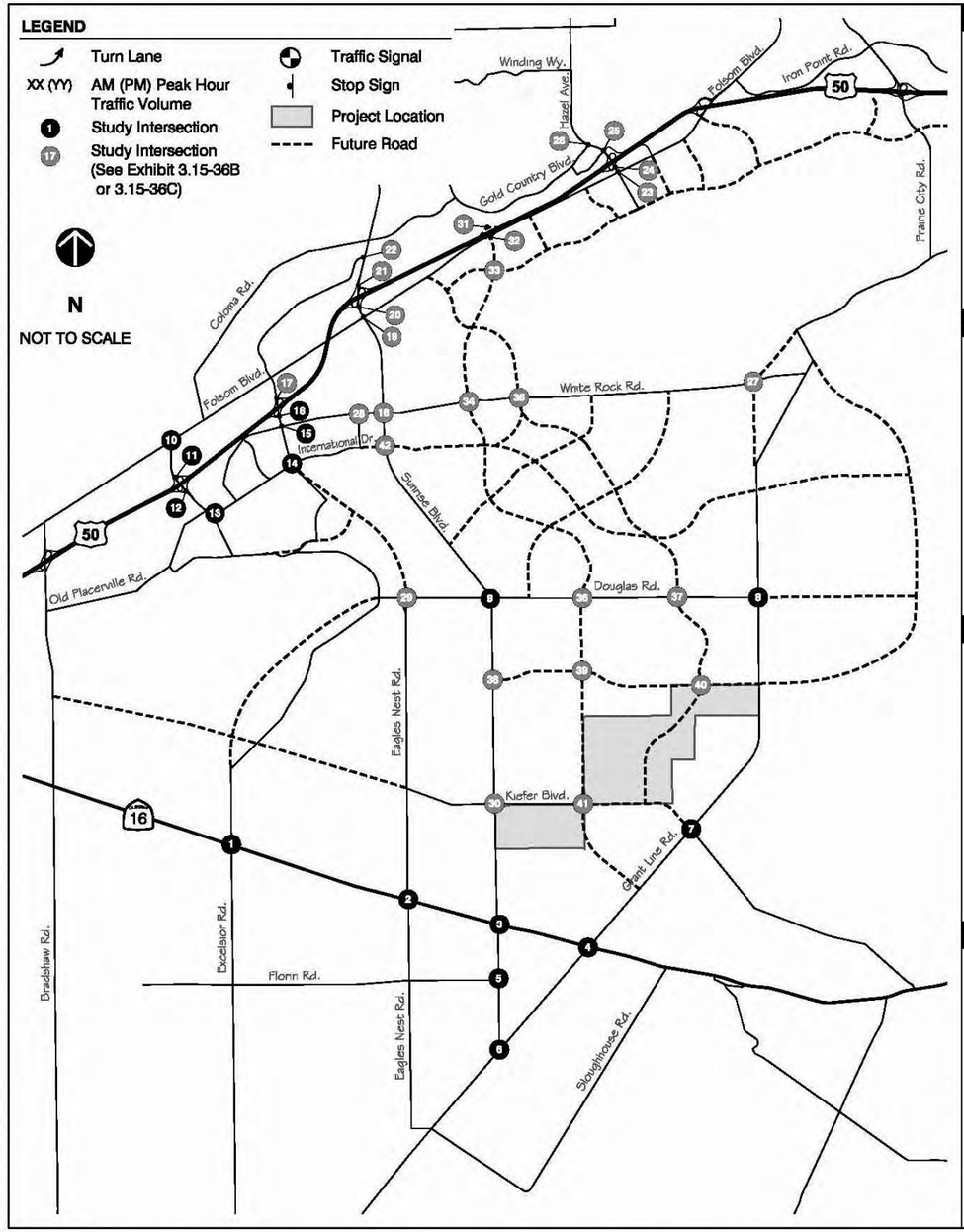

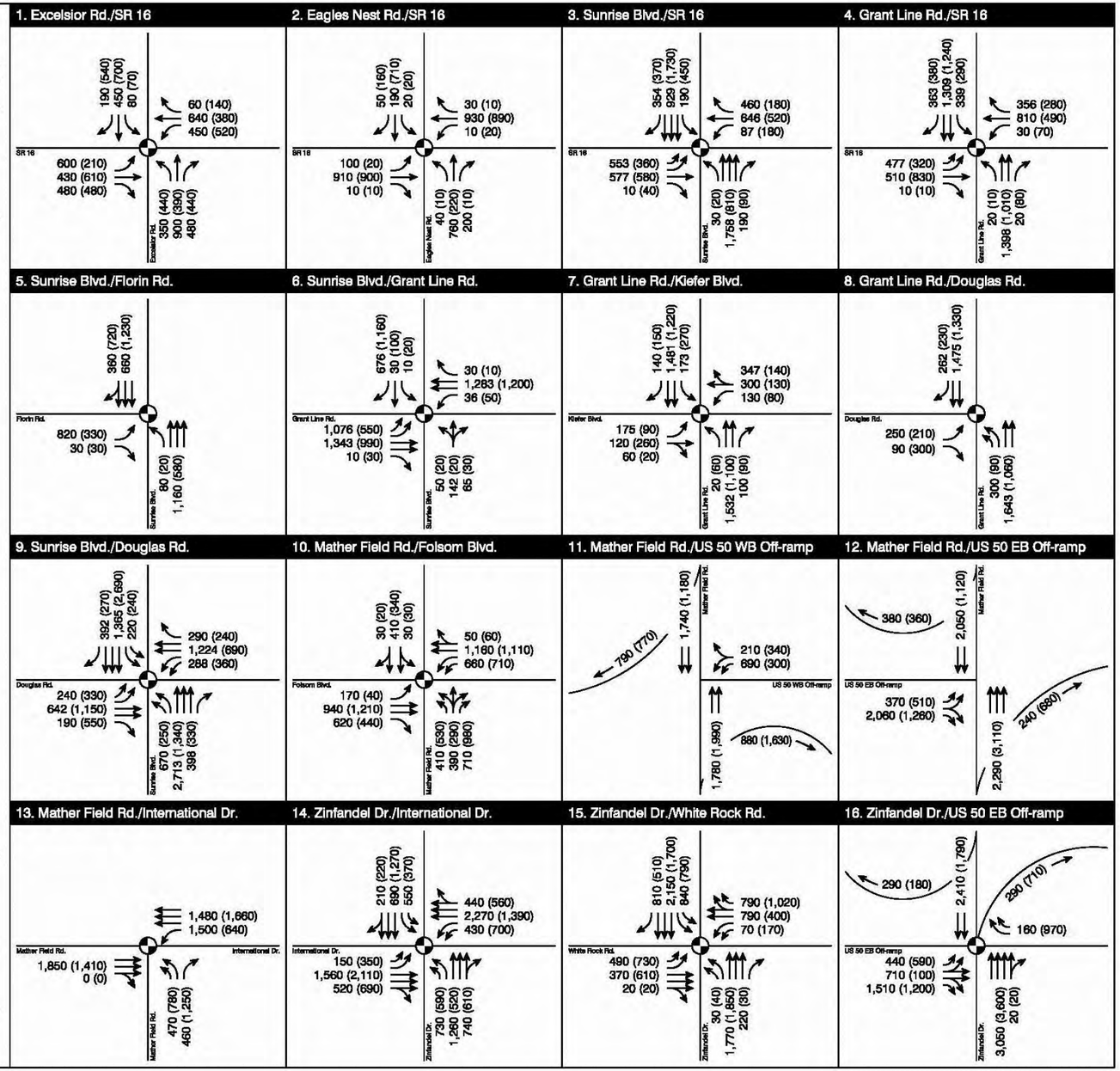

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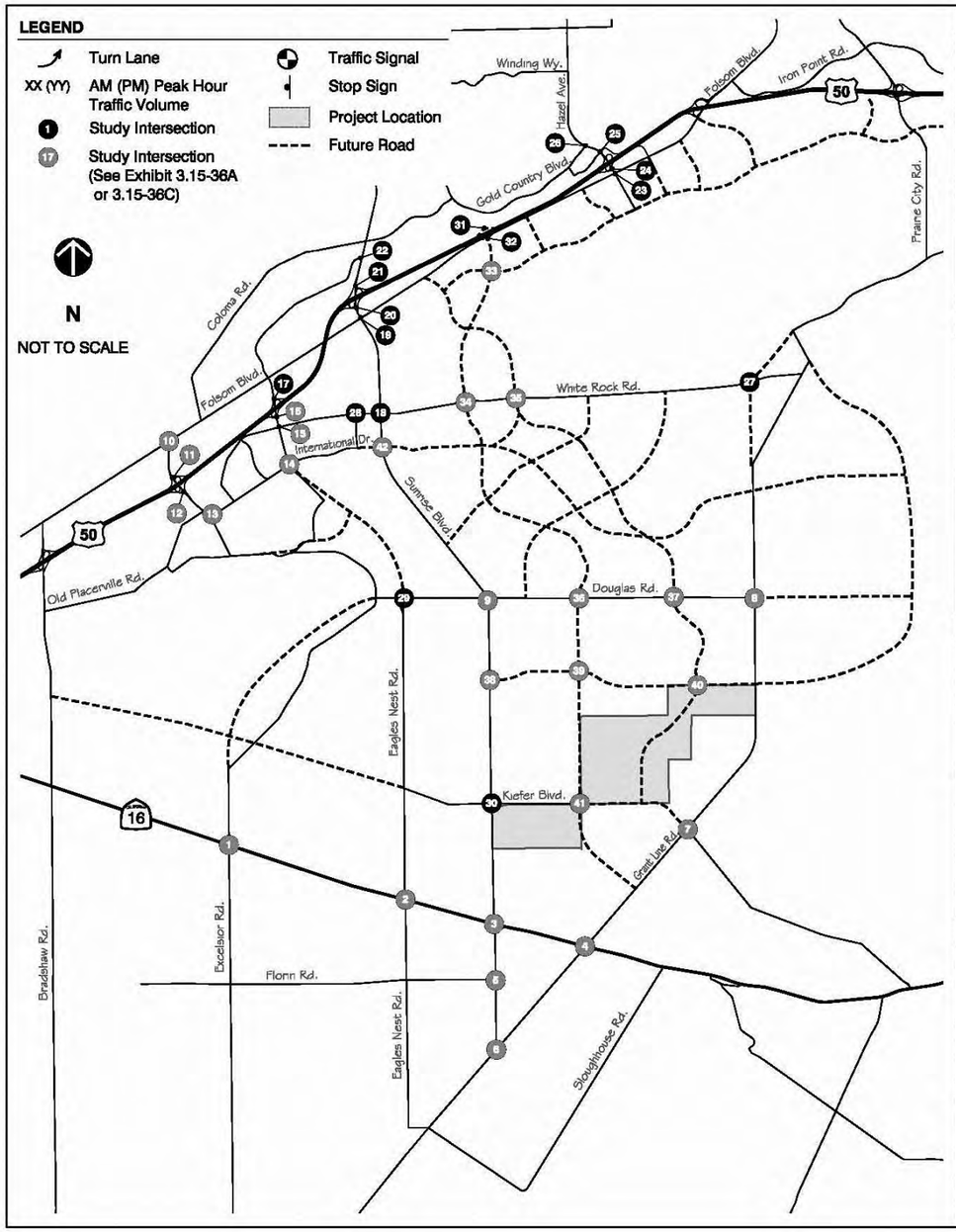
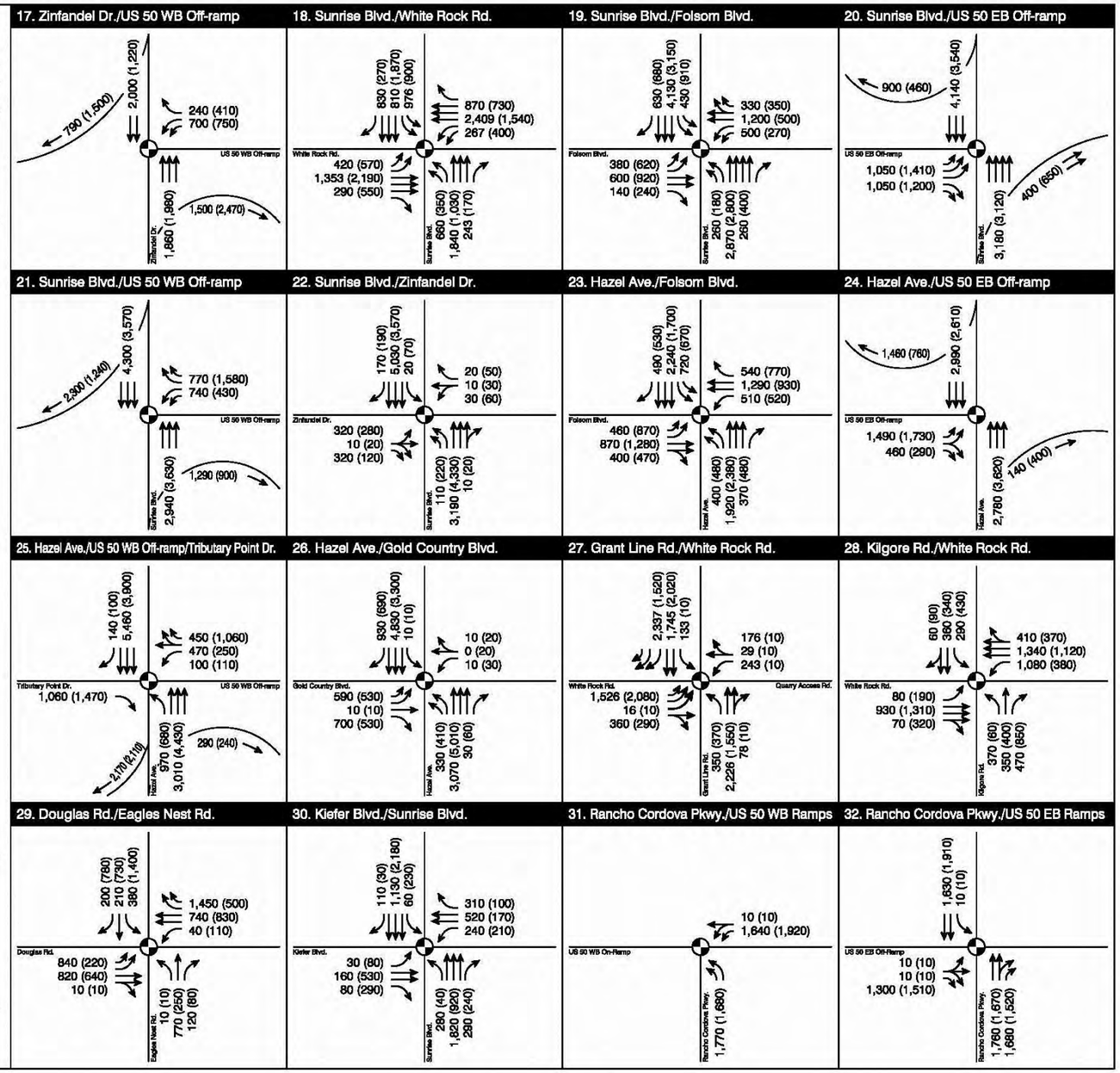
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS BIOLOGICAL IMPACT MINIMIZATION ALTERNATIVE CONDITIONS

EXHIBIT 3.15-36A





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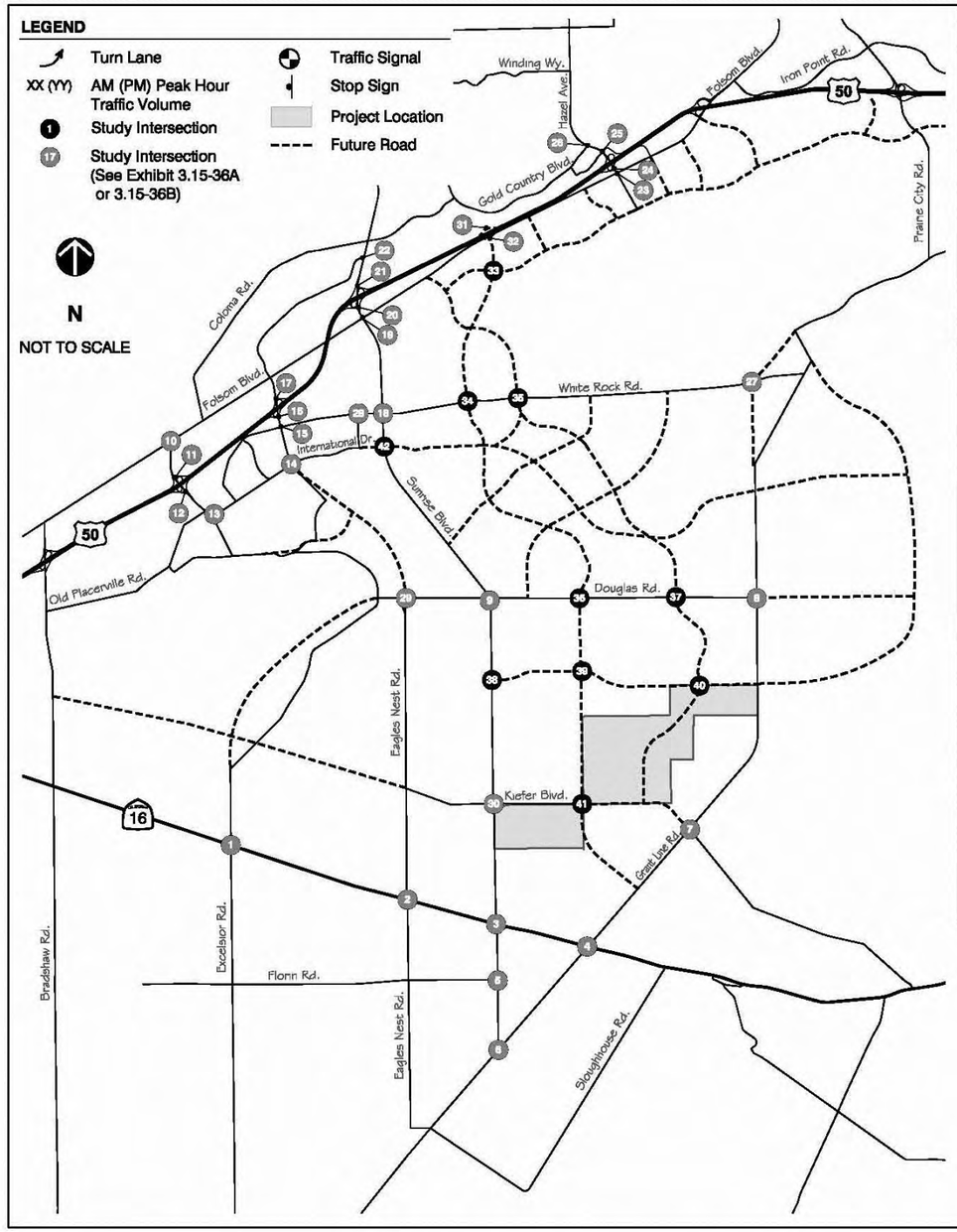
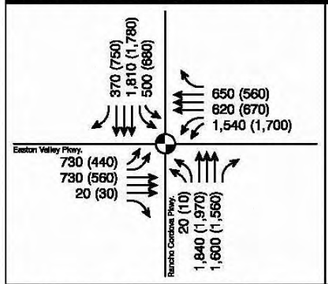
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS BIOLOGICAL IMPACT MINIMIZATION ALTERNATIVE CONDITIONS

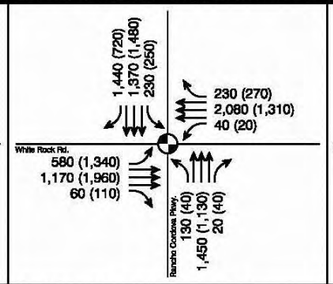
EXHIBIT 3.15-36B



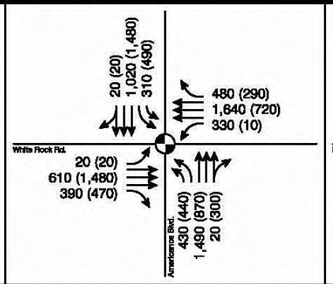
33. Rancho Cordova Pkwy./Easton Valley Pkwy.



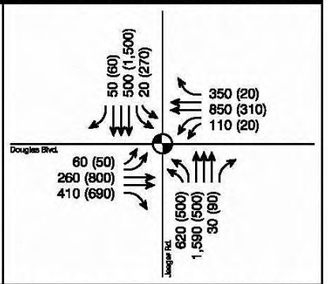
34. Rancho Cordova Pkwy./White Rock Rd.



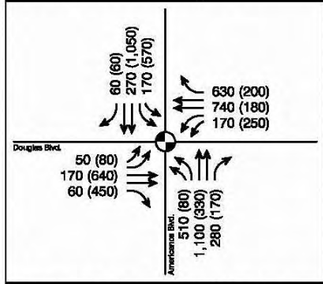
35. Americanos Blvd./White Rock Rd.



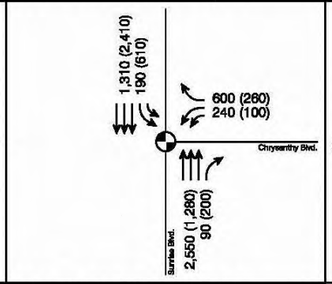
36. Rancho Cordova Pkwy./Douglas Blvd.



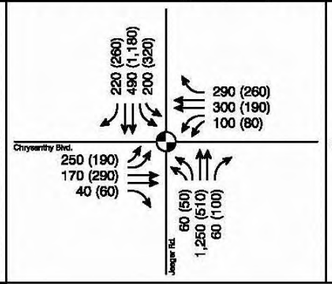
37. Americanos Blvd./Douglas Blvd.



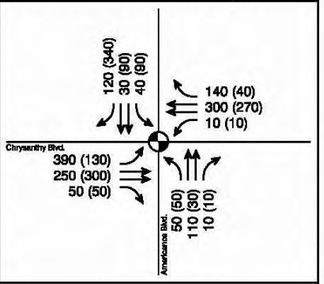
38. Sunrise Blvd./Chrysanthy Blvd.



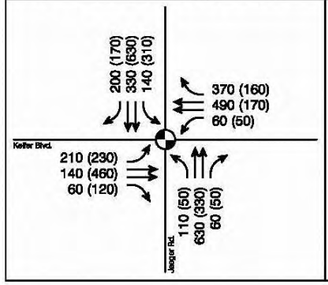
39. Rancho Cordova Pkwy./Chrysanthy Blvd.



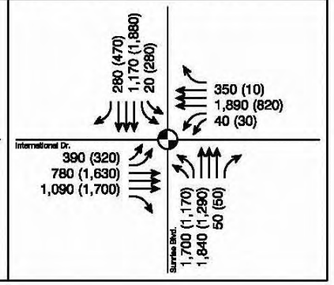
40. Americanos Blvd./Chrysanthy Blvd.



41. Rancho Cordova Pkwy./Keifer Blvd.



42. Sunrise Blvd./International Dr.



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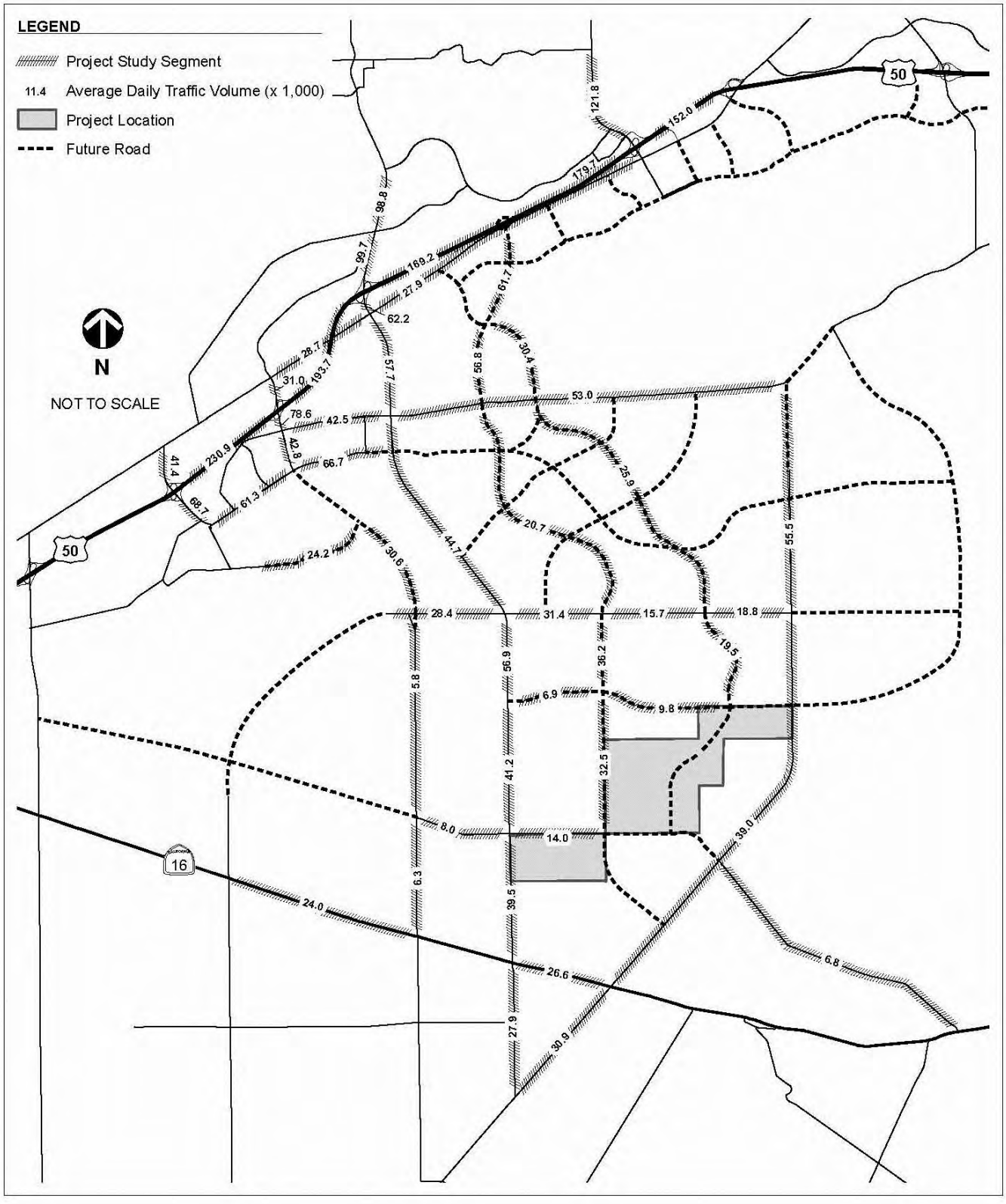
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS BIOLOGICAL IMPACT MINIMIZATION ALTERNATIVE CONDITIONS

EXHIBIT 3.15-36C



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AVERAGE DAILY TRAFFIC VOLUME - CUMULATIVE BIOLOGICAL IMPACT MINIMIZATION ALTERNATIVE

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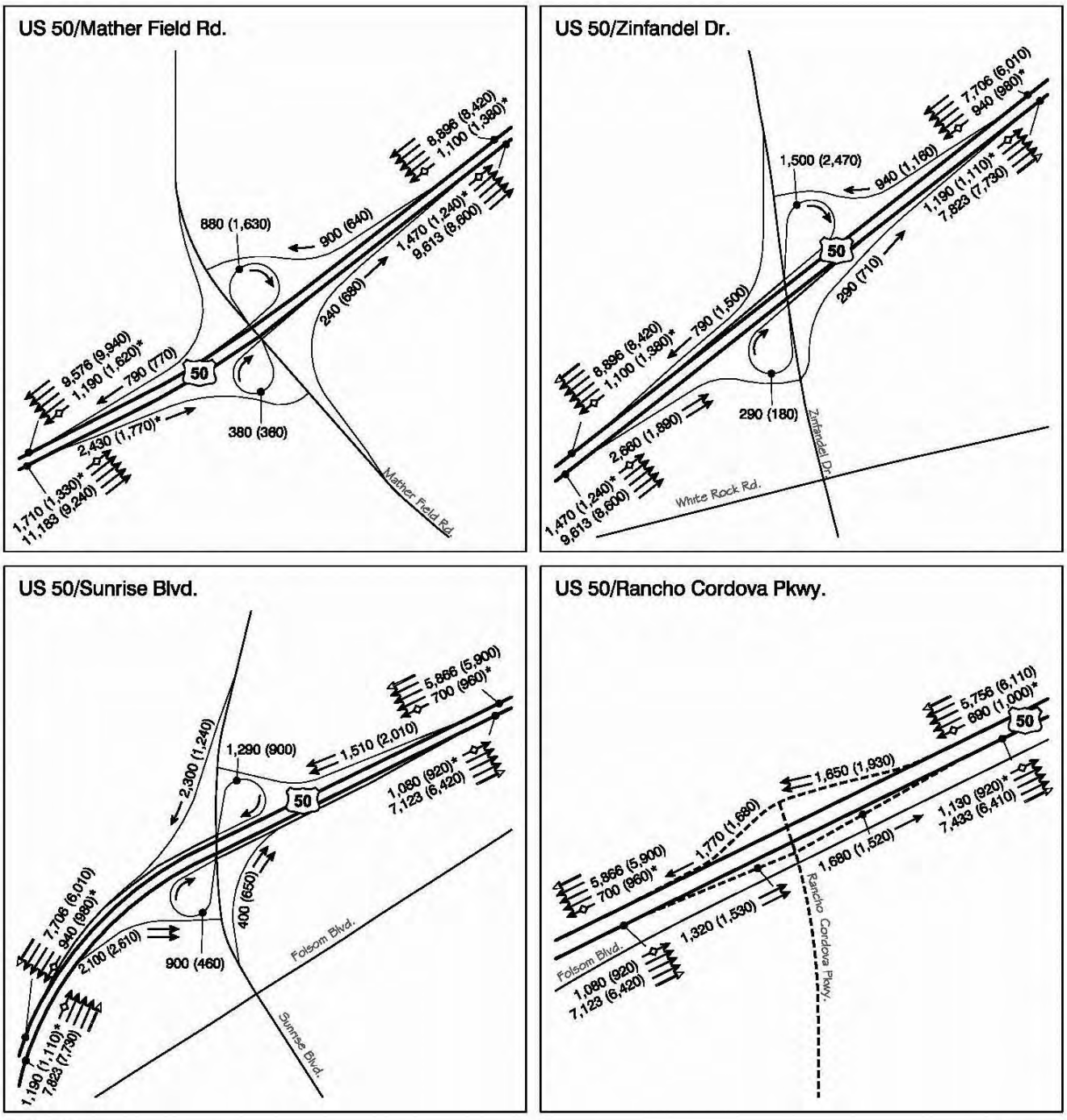
EXHIBIT 3.15-37



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volume
(*HOV Peak Hour Traffic Volume Estimated)

Mixed Flow Travel Lane

Auxiliary Lane

HOV Lane

Future Road

N

NOT TO SCALE

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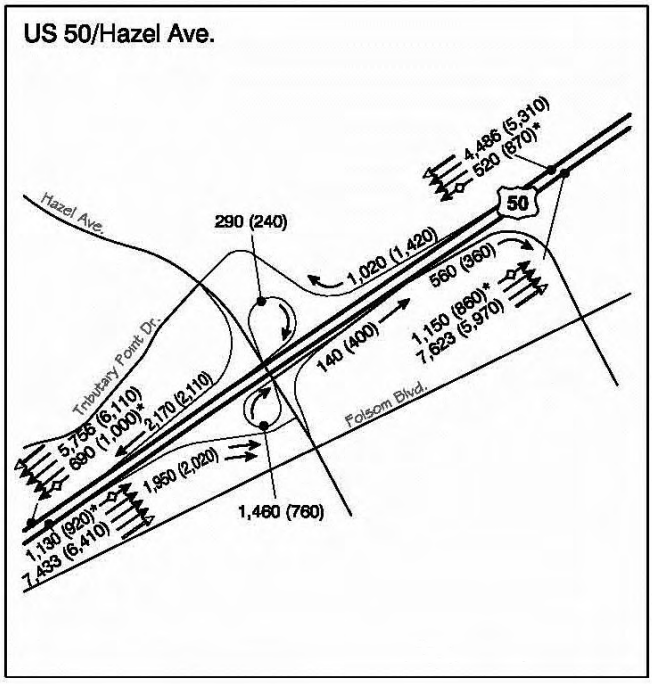
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE PLUS BIOLOGICAL IMPACT MINIMIZATION ALTERNATIVE

EXHIBIT 3.15-38A



LEGEND

XX (YY)	AM (PM) Peak Hour Traffic Volume (*HOV Peak Hour Traffic Volume Estimated)
→	Mixed Flow Travel Lane
⇒	Auxiliary Lane
⇒◇	HOV Lane

N

NOT TO SCALE

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Oct 18, 2011 SP
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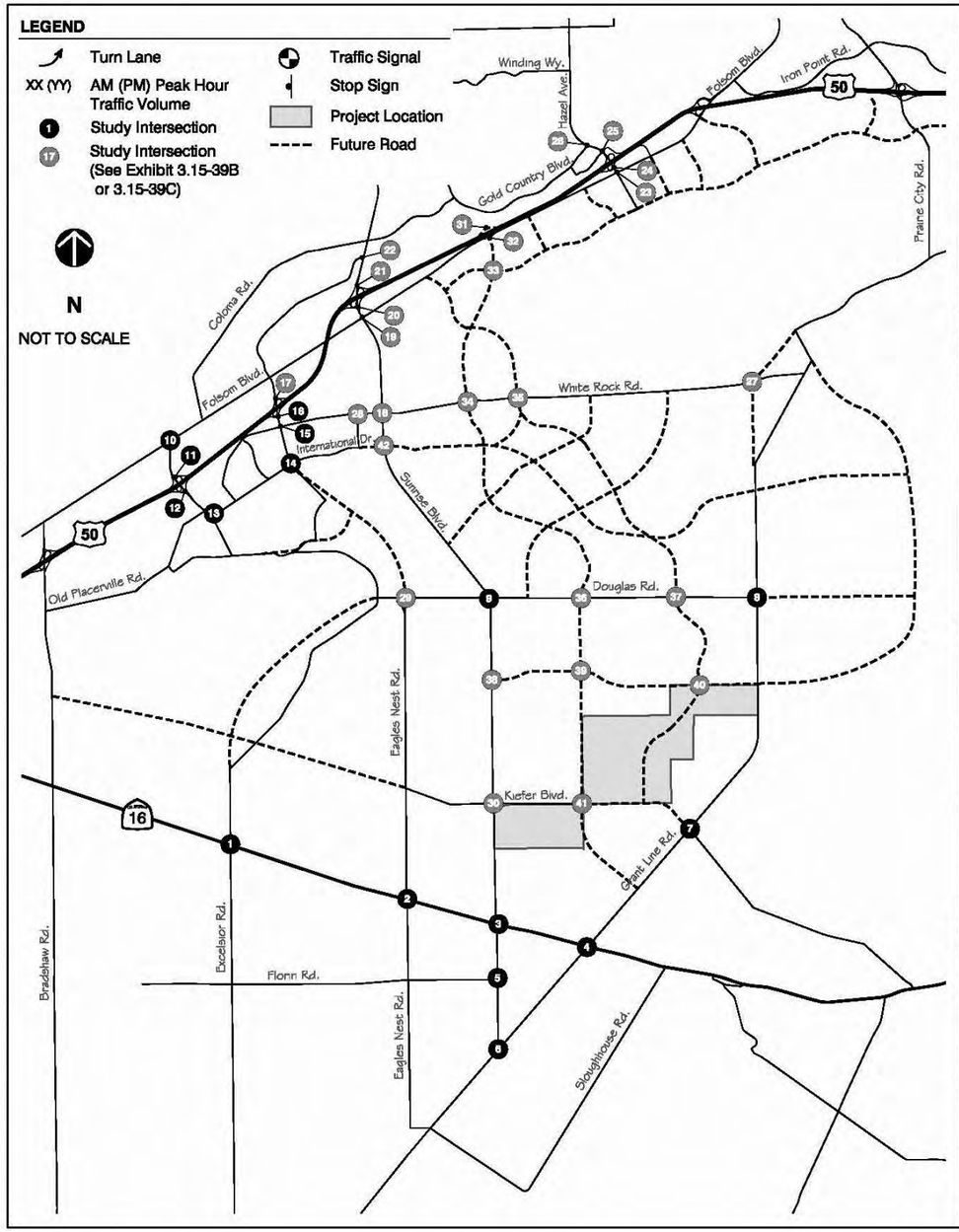
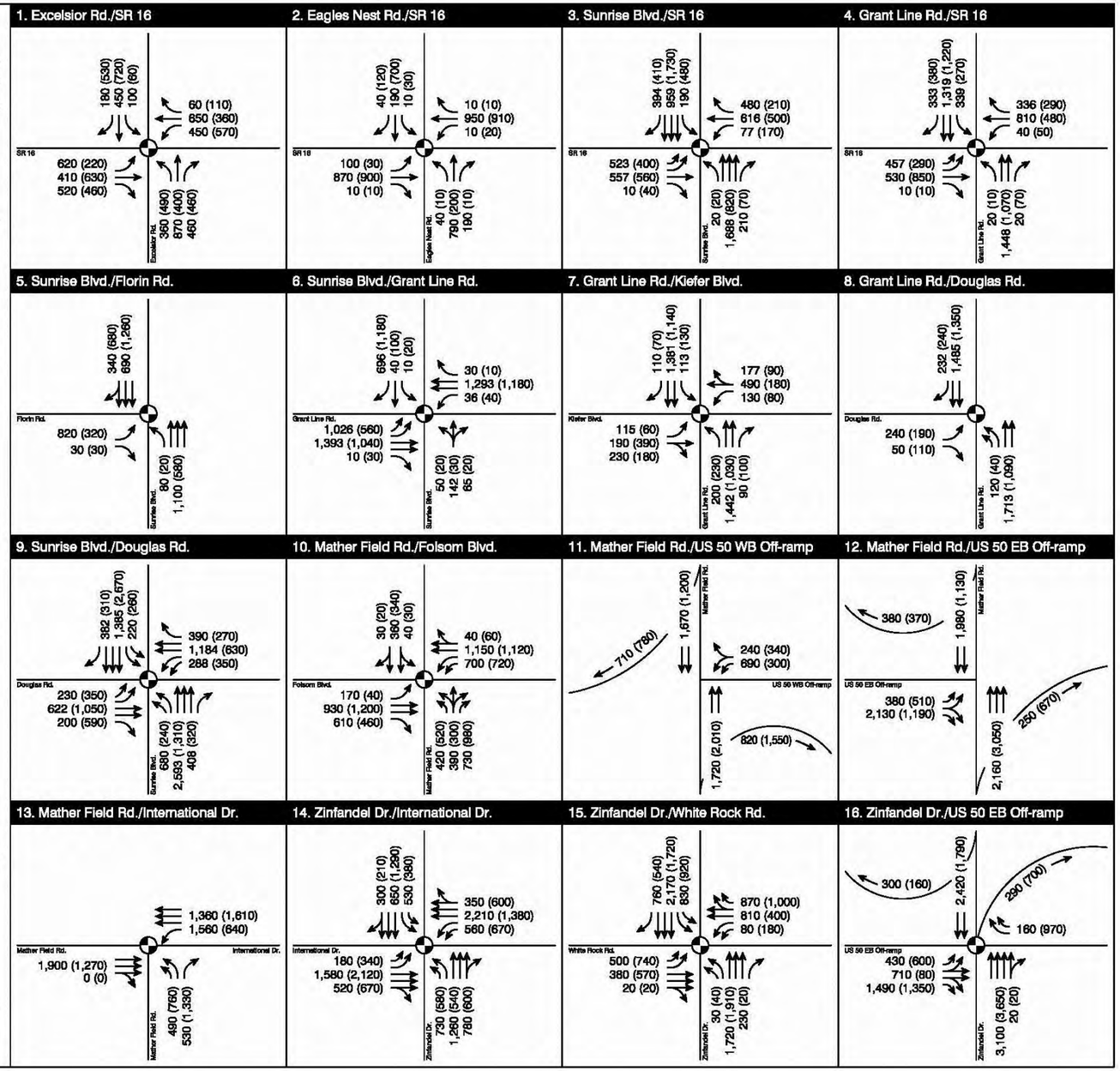
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE PLUS BIOLOGICAL IMPACT MINIMIZATION ALTERNATIVE

EXHIBIT 3.15-38B





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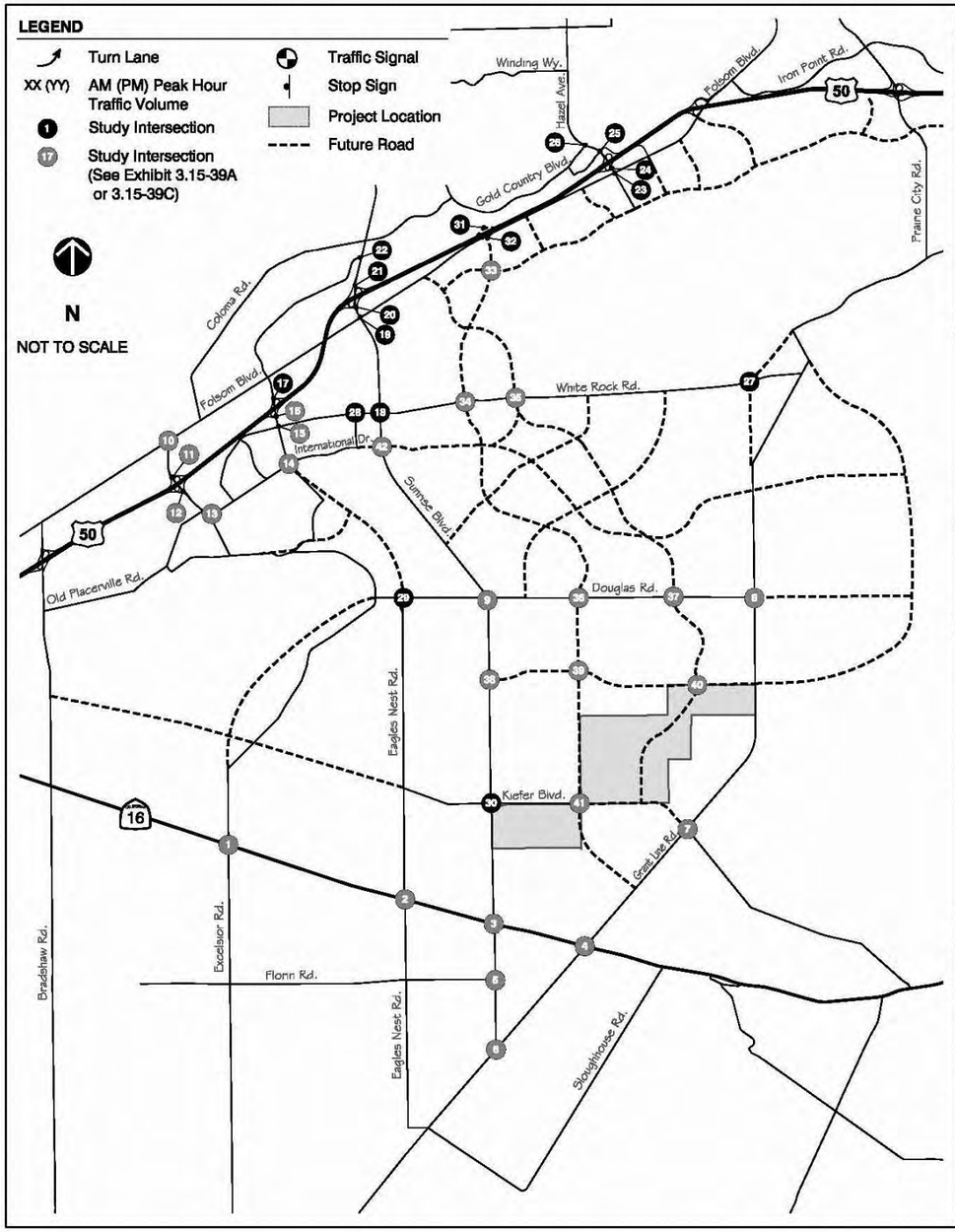
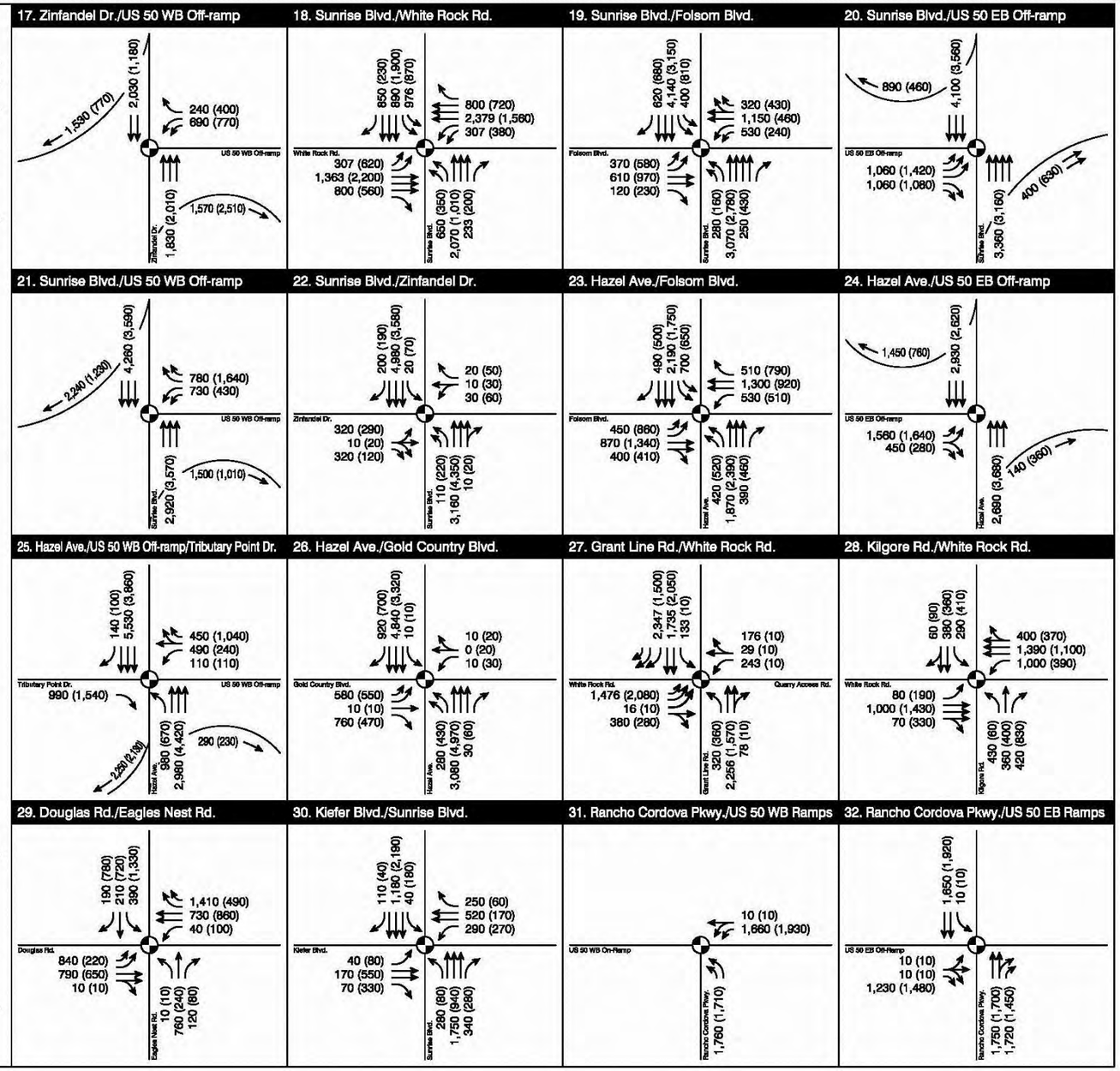
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS NO FEDERAL ACTION ALTERNATIVE CONDITIONS

EXHIBIT 3.15-39A





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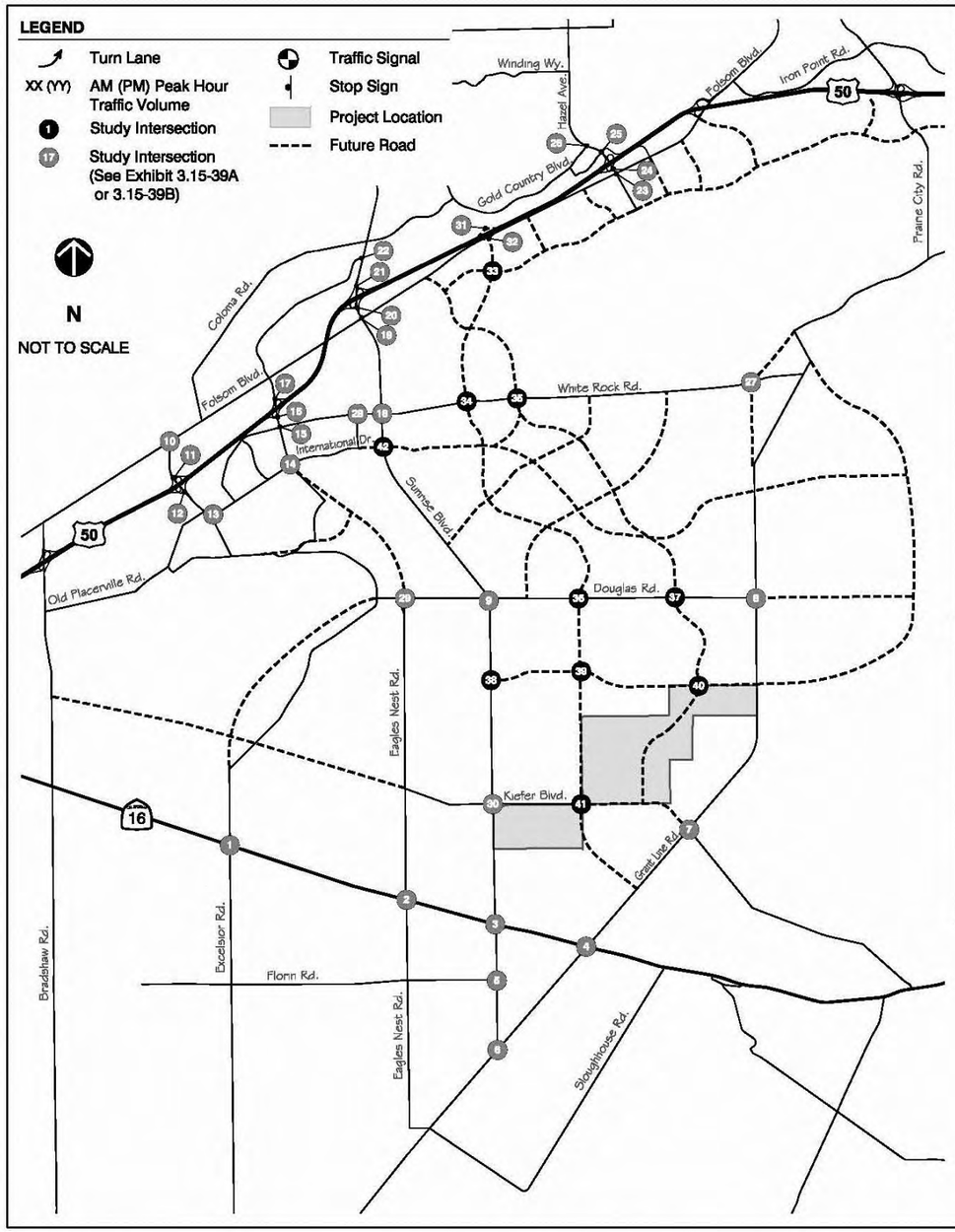
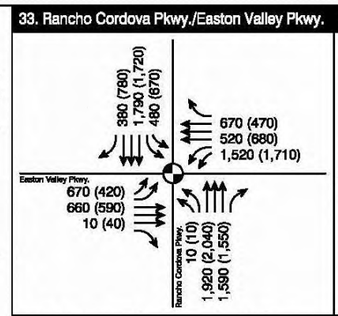
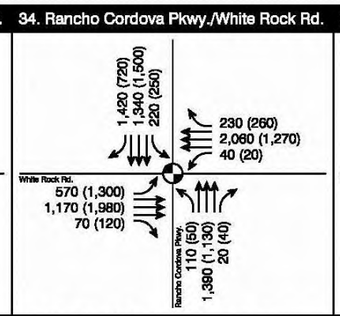
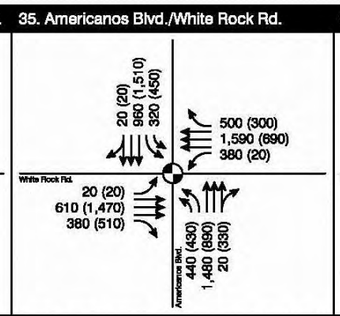
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS NO FEDERAL ACTION ALTERNATIVE CONDITIONS

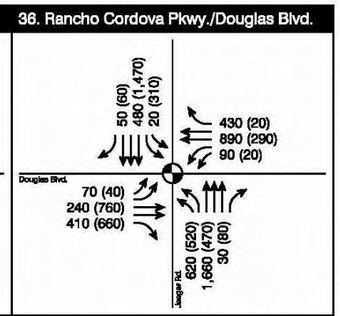
EXHIBIT 3.15-39B

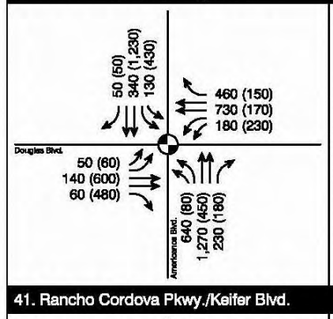


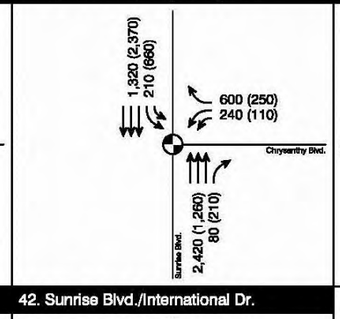


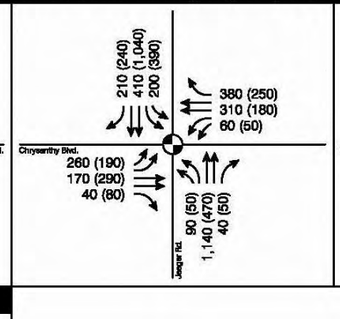


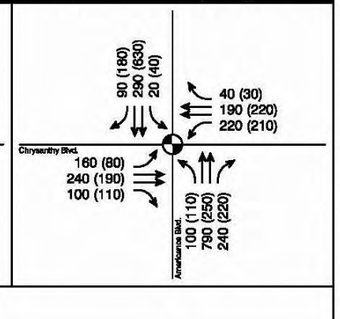


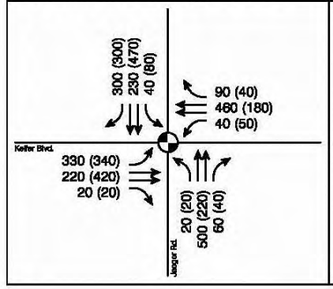


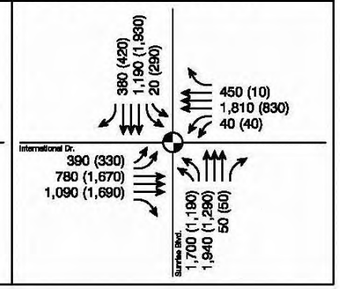












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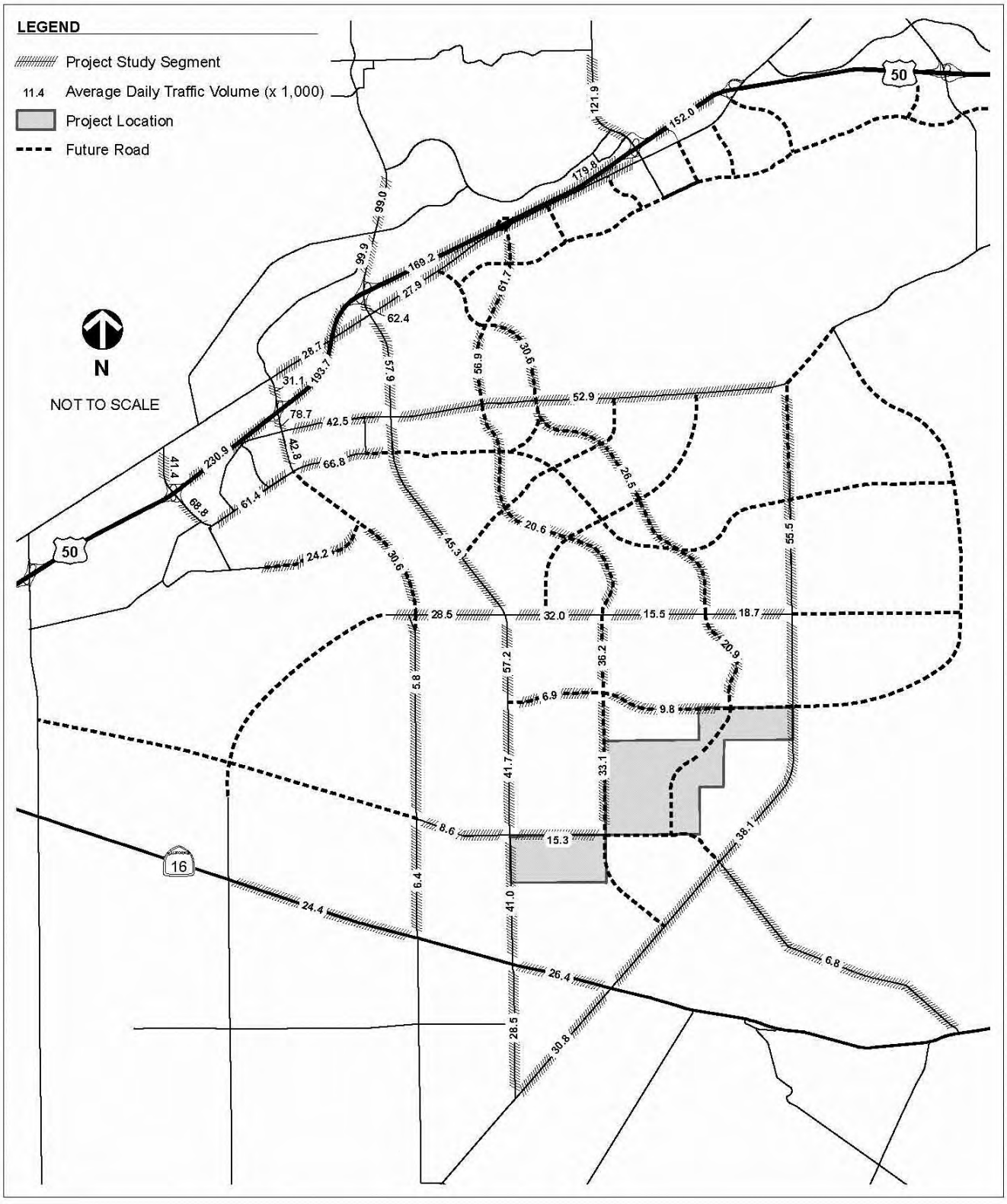
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS NO FEDERAL ACTION ALTERNATIVE CONDITIONS

EXHIBIT 3.15-39C



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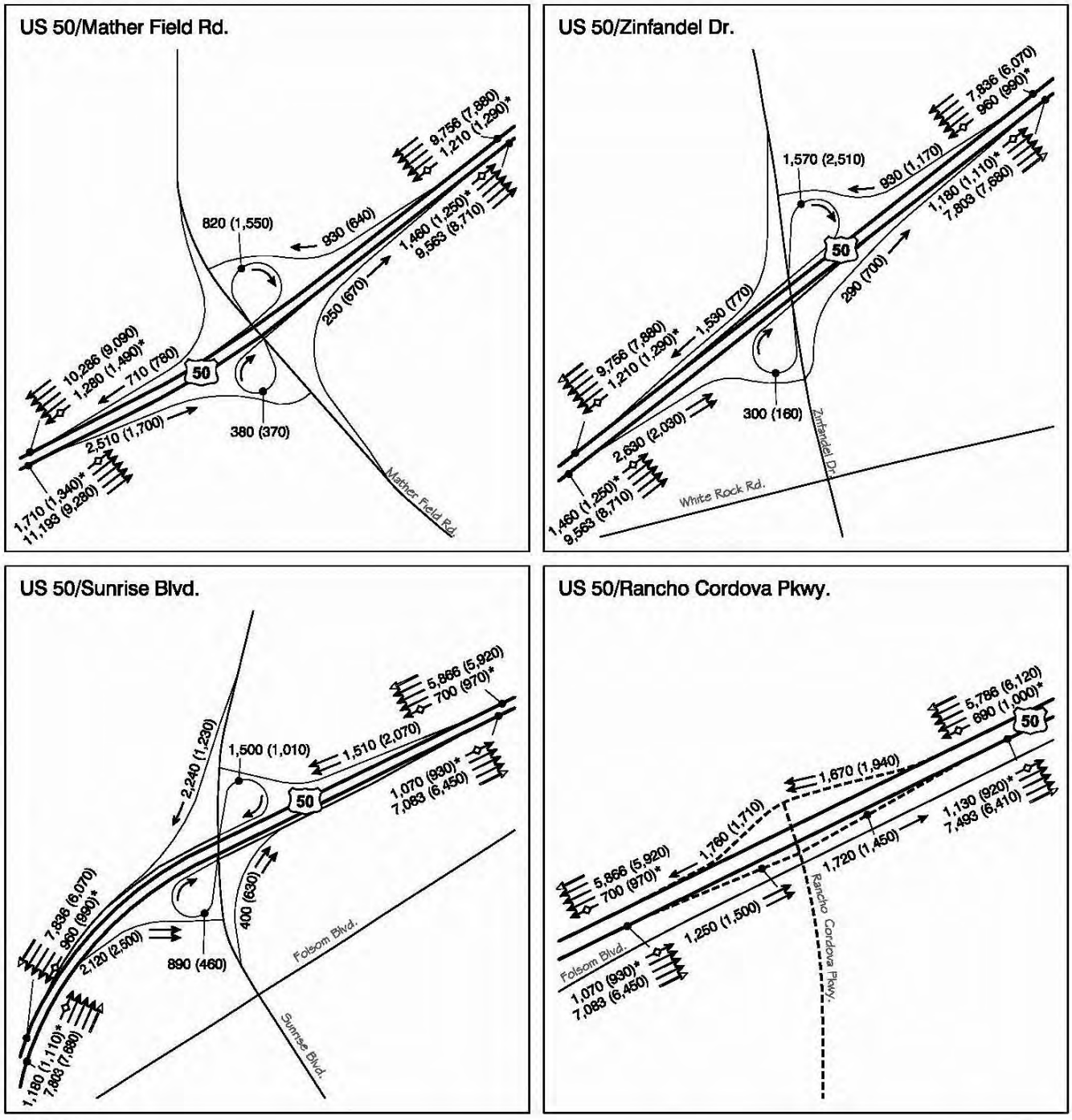
AVERAGE DAILY TRAFFIC VOLUME - CUMULATIVE NO FEDERAL ACTION ALTERNATIVE

EXHIBIT 3.15-40



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volume
(*HOV Peak Hour Traffic Volume Estimated)

Mixed Flow Travel Lane

Auxiliary Lane

HOV Lane

Future Road

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 18, 2011 SP
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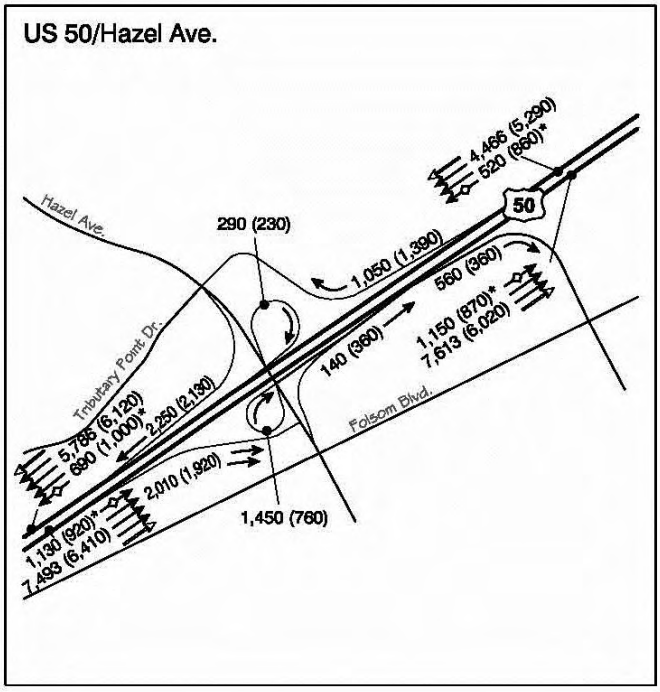
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE PLUS NO FEDERAL ACTION ALTERNATIVE

EXHIBIT 3.15-41A



LEGEND

XX (YY)	AM (PM) Peak Hour Traffic Volume (*HOV Peak Hour Traffic Volume Estimated)
→	Mixed Flow Travel Lane
⇨	Auxiliary Lane
◇→	HOV Lane

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

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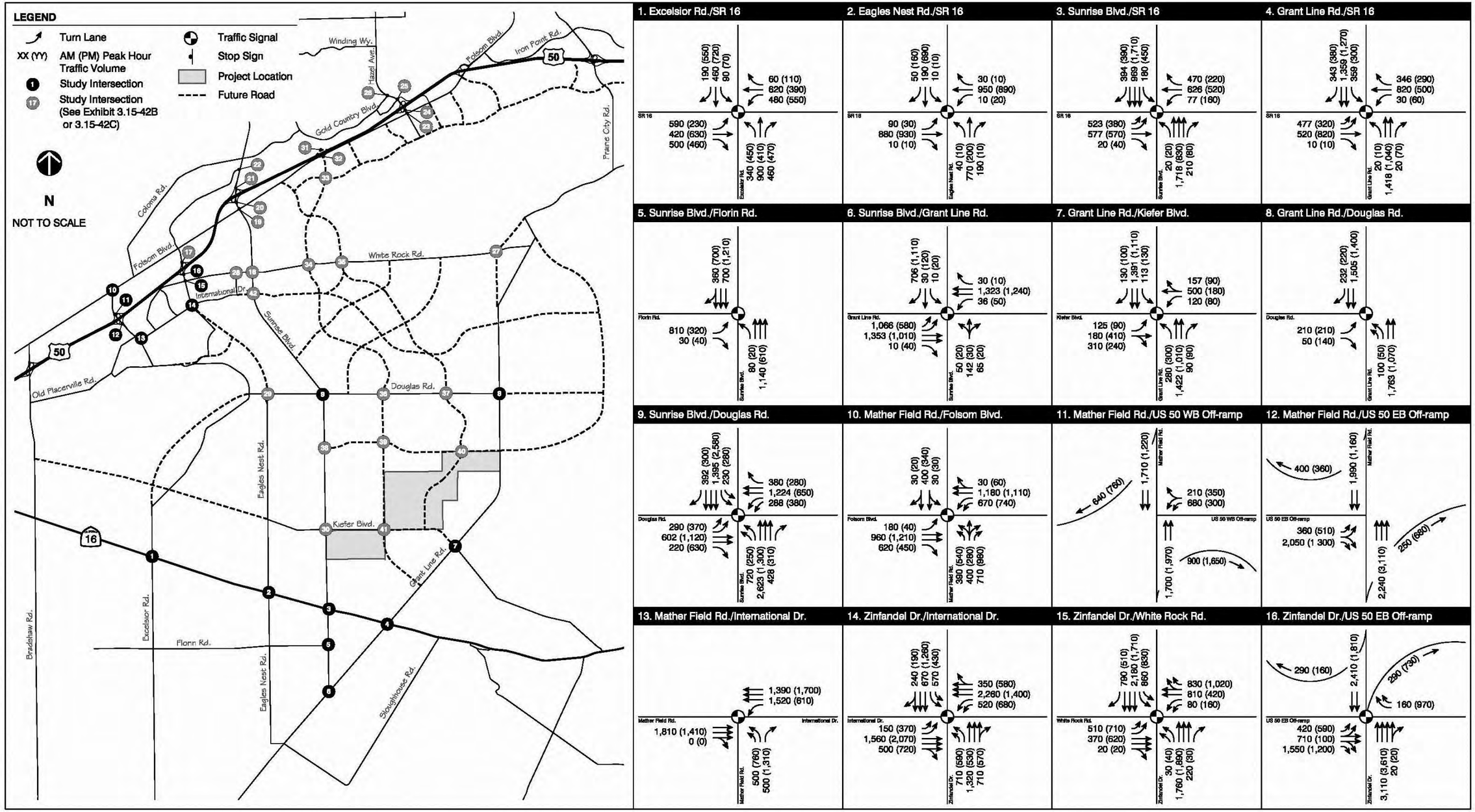
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE PLUS NO FEDERAL ACTION ALTERNATIVE

EXHIBIT 3.15-41B



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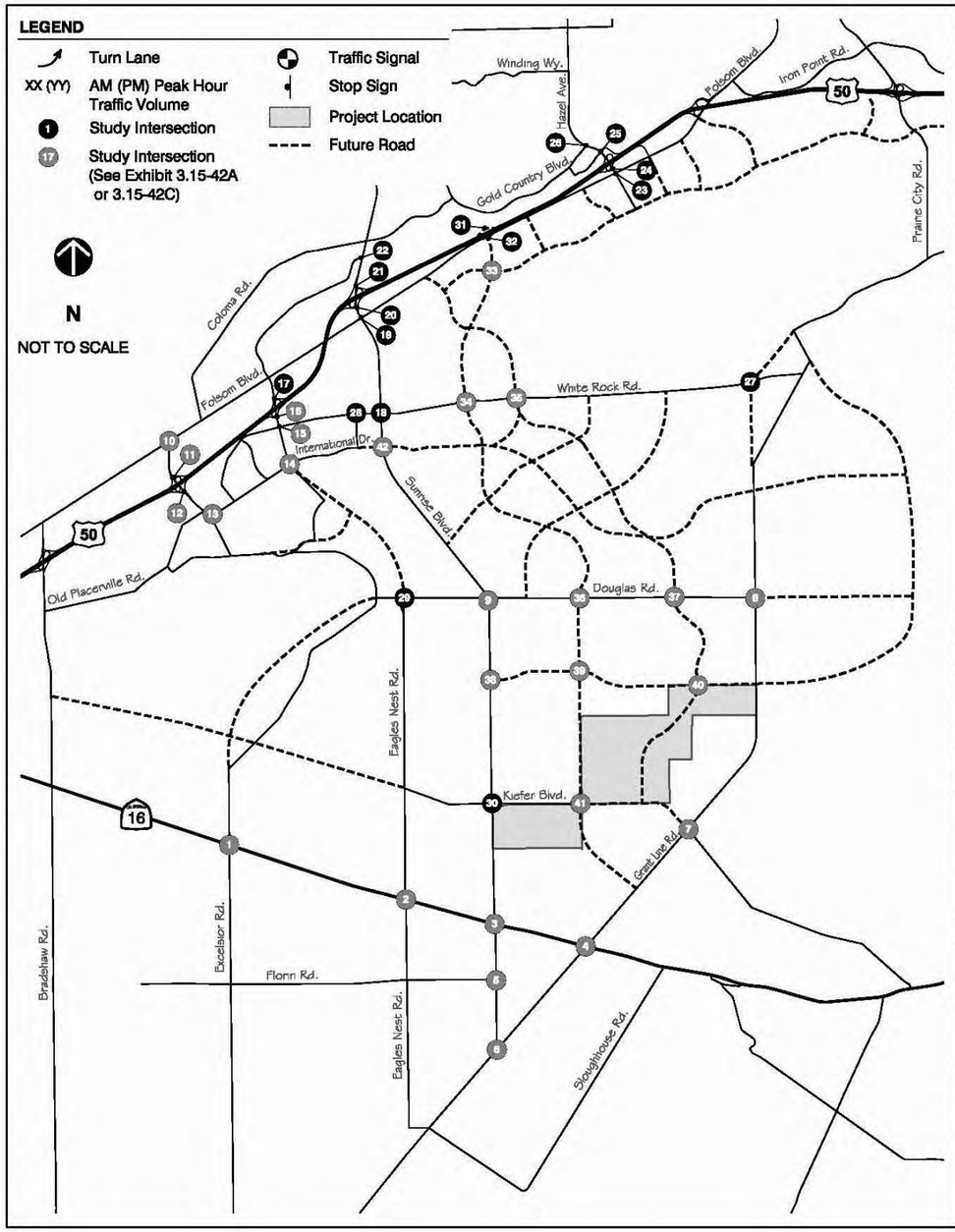
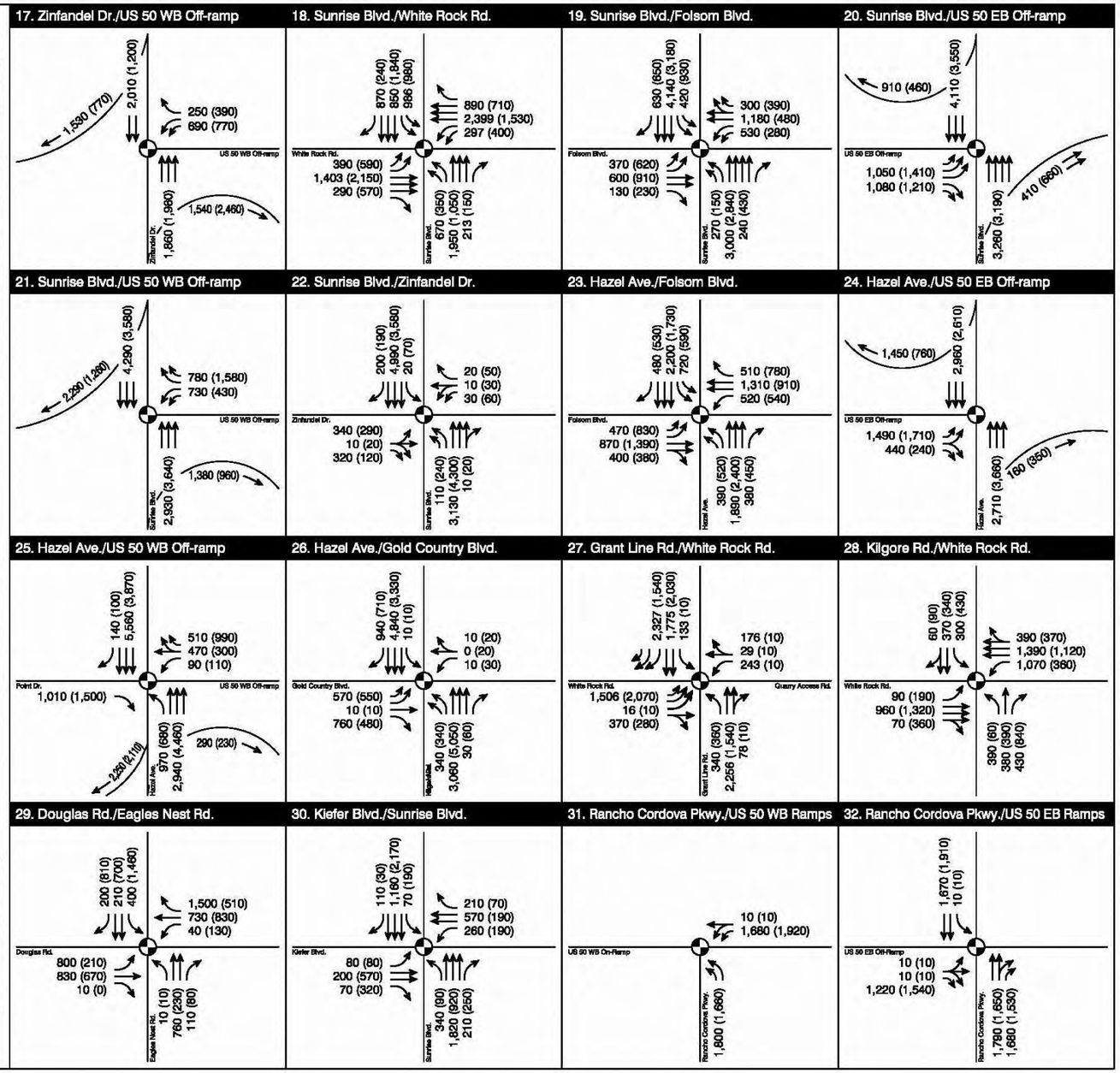
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS INCREASED DEVELOPMENT ALTERNATIVE

EXHIBIT 3.15-42A





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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS INCREASED DEVELOPMENT ALTERNATIVE

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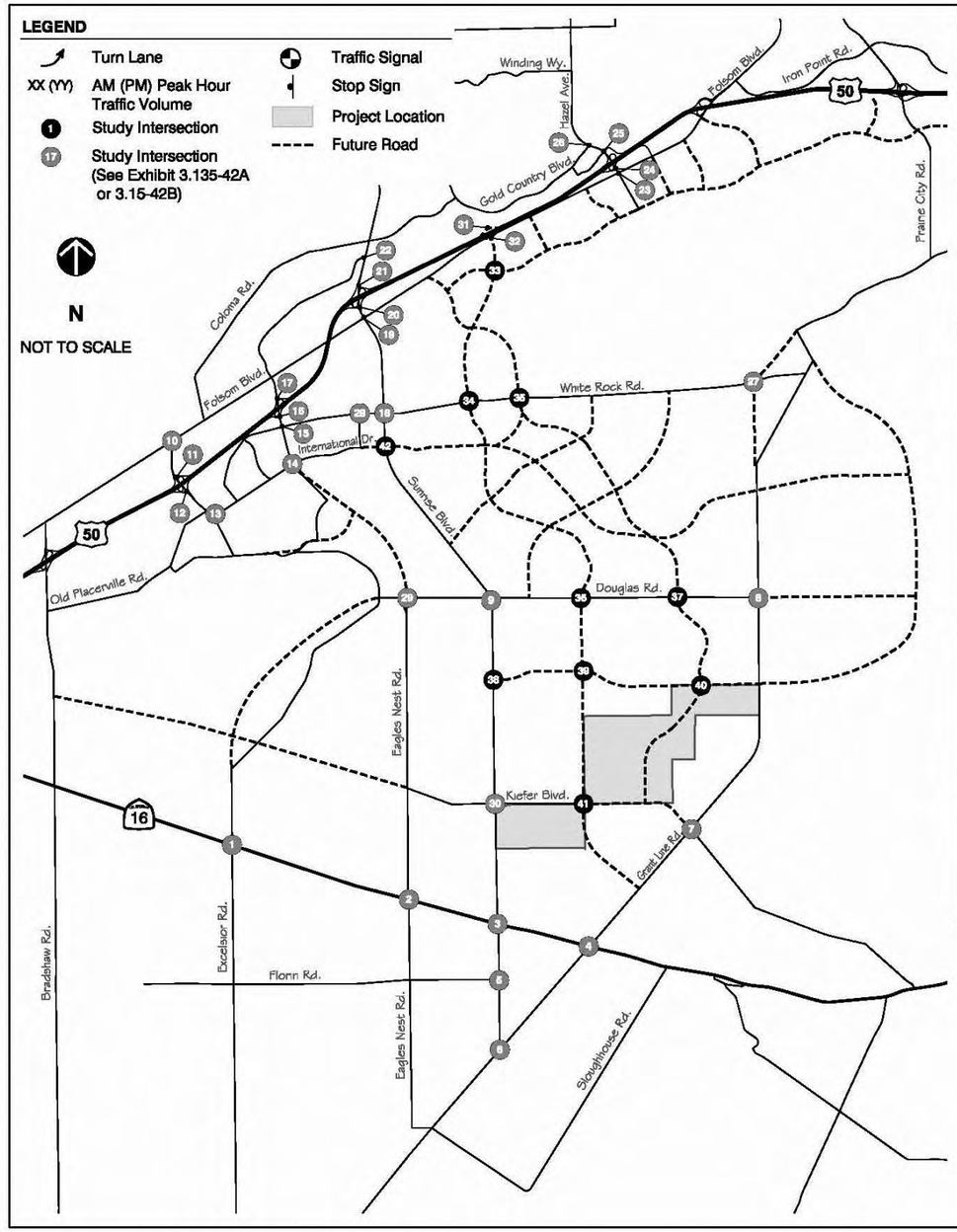

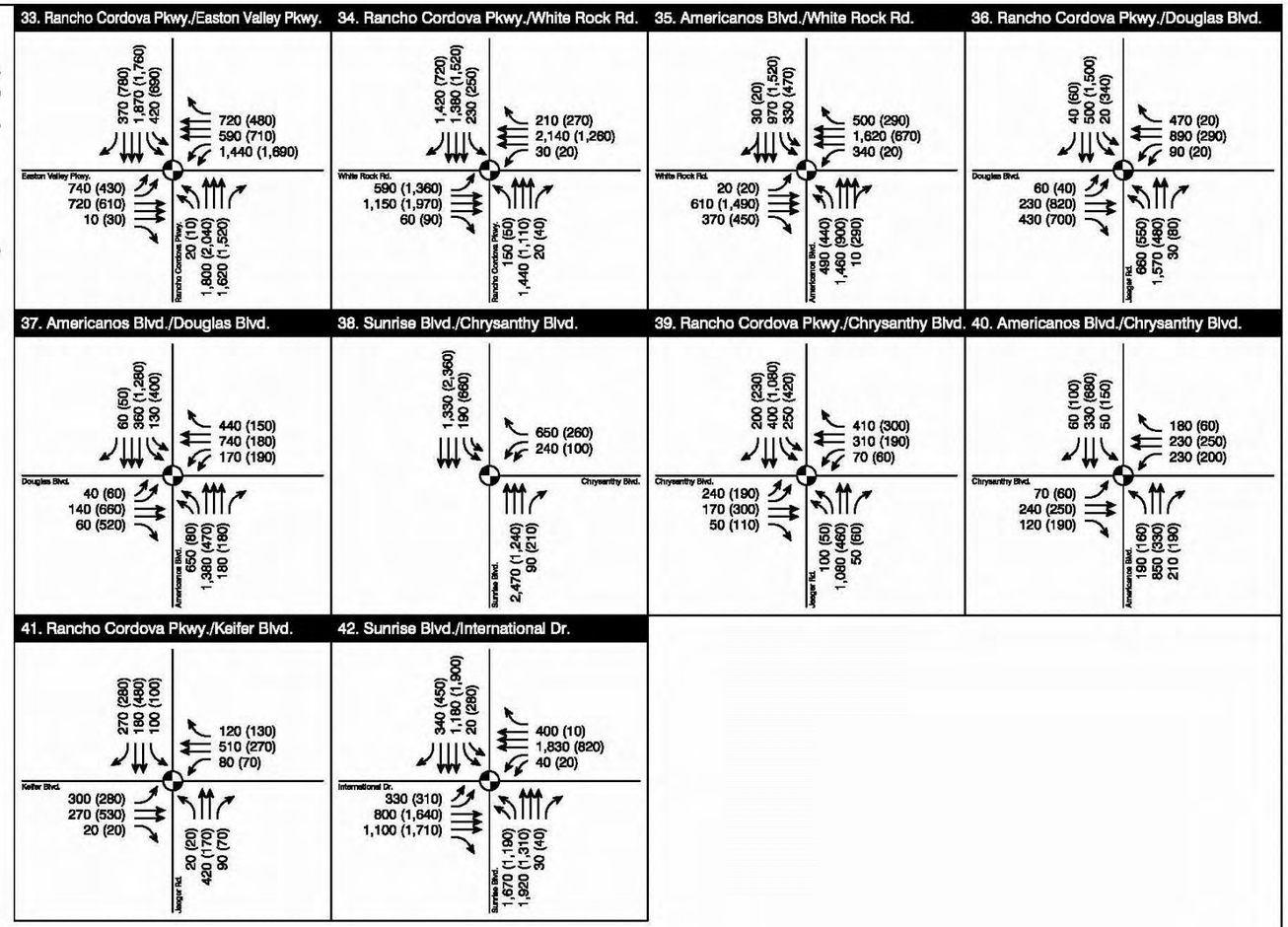

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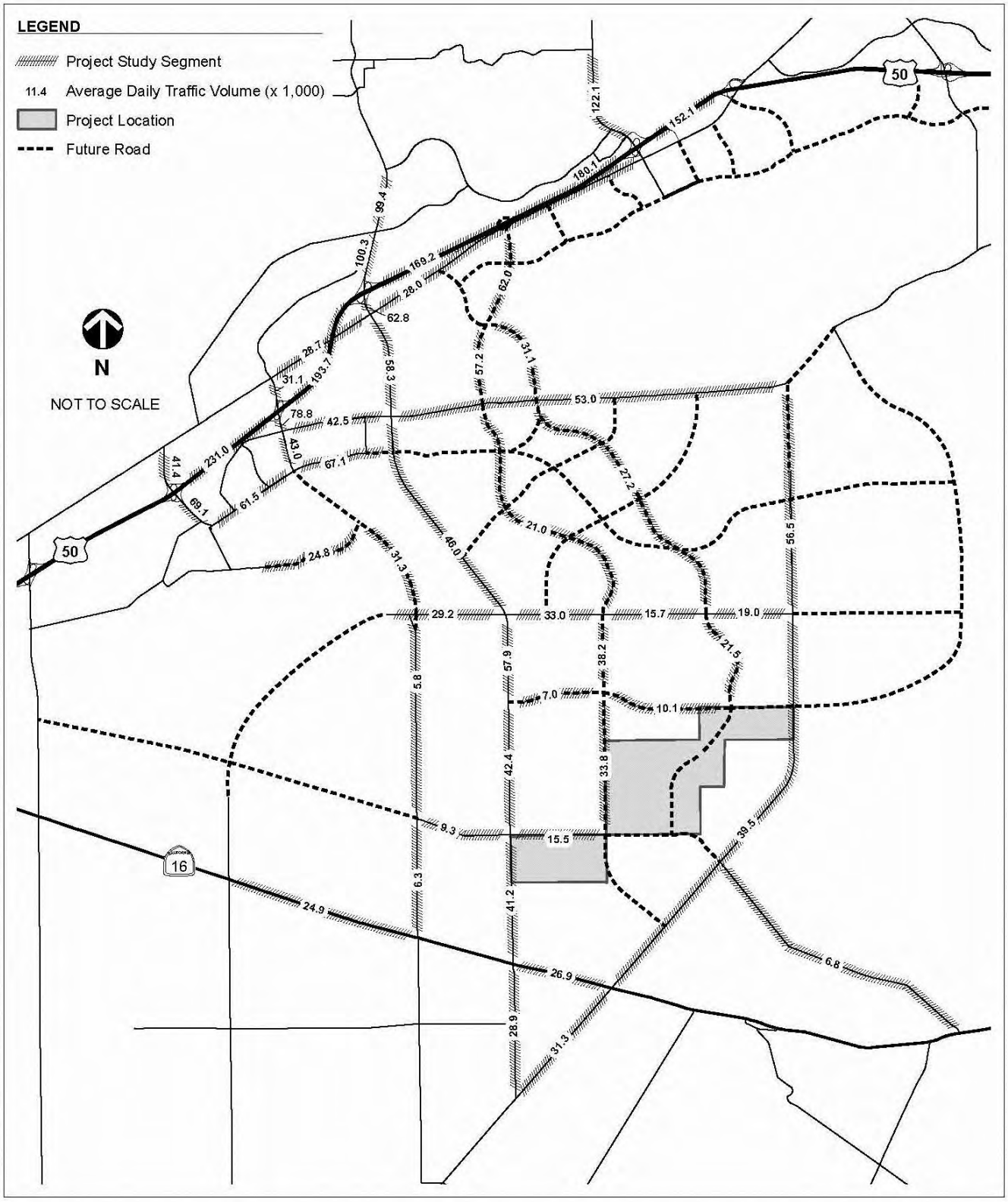

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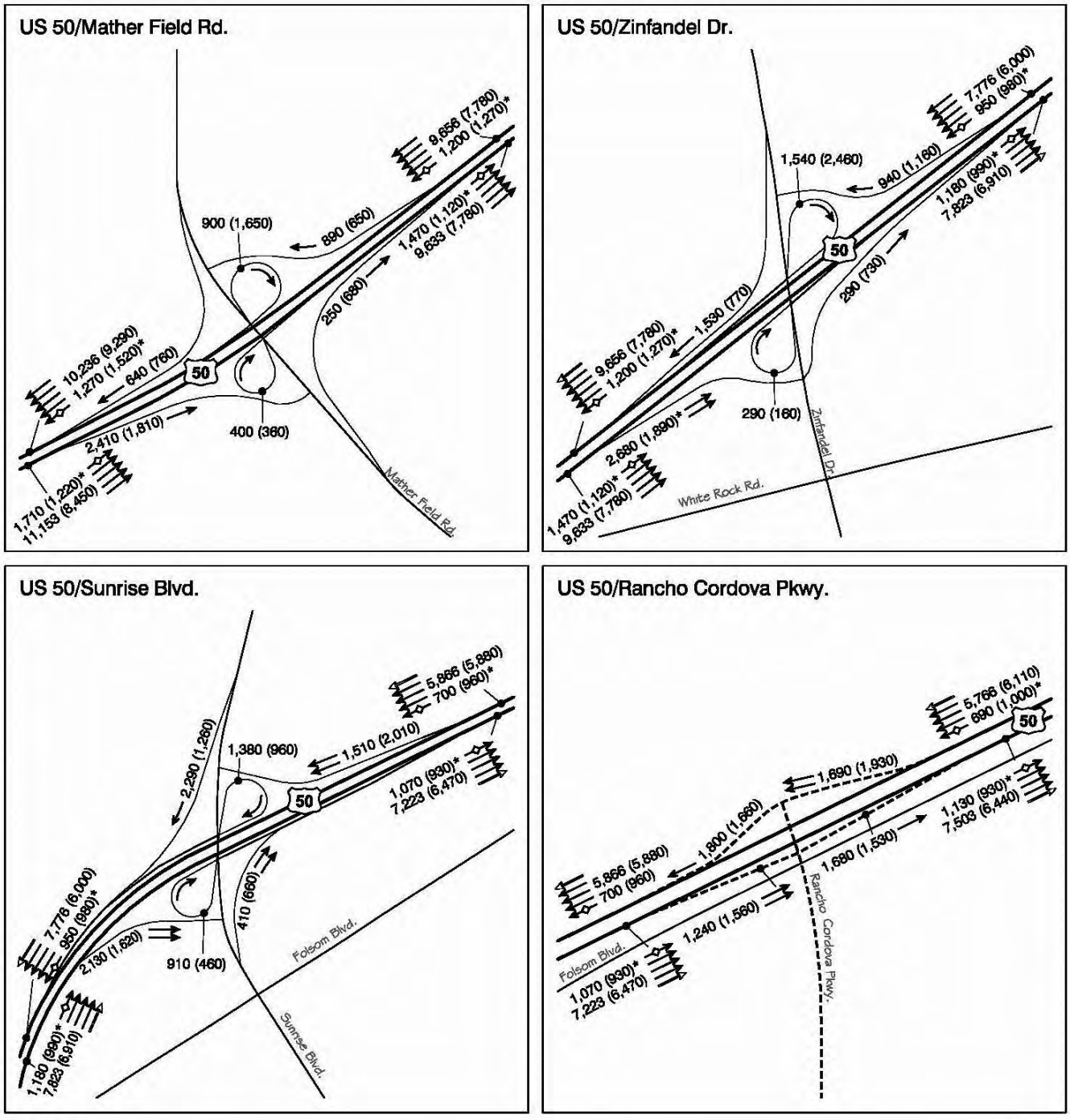
AVERAGE DAILY TRAFFIC VOLUME - CUMULATIVE INCREASED DEVELOPMENT ALTERNATIVE

EXHIBIT 3.15-43



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volume
(*HOV Peak Hour Traffic Volume Estimated)

Mixed Flow Travel Lane

Auxiliary Lane

HOV Lane

Future Road

N

NOT TO SCALE

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TRANSPORTATION CONSULTANTS

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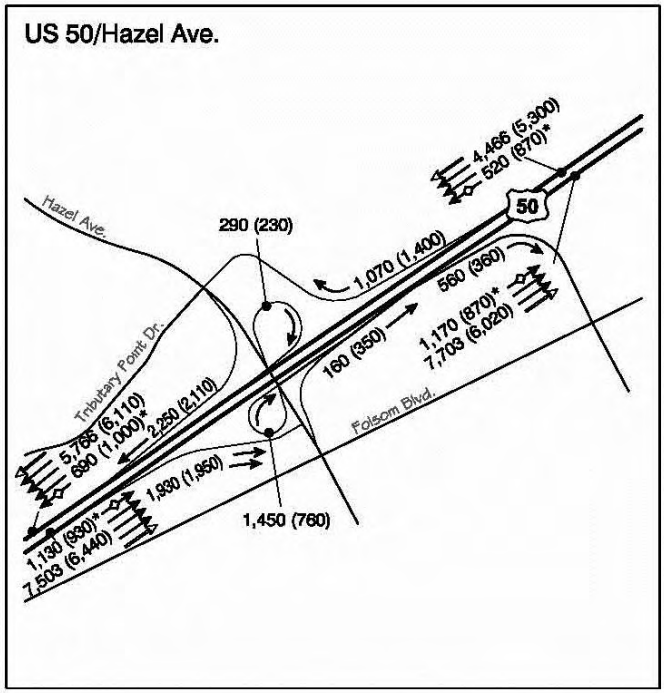
FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE PLUS INCREASED DEVELOPMENT ALTERNATIVE

EXHIBIT 3.15-44A



LEGEND

XX (YY)	AM (PM) Peak Hour Traffic Volume (*HOV Peak Hour Traffic Volume Estimated)
→	Mixed Flow Travel Lane
→	Auxiliary Lane
◇→	HOV Lane

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NOT TO SCALE

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FREEWAY RAMP JUNCTION LANE CONFIGURATIONS AND PEAK HOUR TRAFFIC VOLUMES - CUMULATIVE PLUS INCREASED DEVELOPMENT ALTERNATIVE

EXHIBIT 3.15-44B

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3.16 UTILITIES AND SERVICE SYSTEMS

3.16.1 AFFECTED ENVIRONMENT

WASTEWATER COLLECTION AND TREATMENT

The SPA is presently not served by any municipal wastewater collection and treatment systems. Sanitary-sewer service for the SPA would be provided by Sacramento Regional County Sanitation District (SRCSD). The following discussion provides an overview of the SRCSD wastewater collection, conveyance, and treatment facilities that would serve the SPA. Proposed facilities are shown on Exhibit 2-16 in Chapter 2, "Alternatives."

Wastewater Collection

SRCSD is responsible for collection by interceptors (sanitary sewers that are designed to carry flows in excess of 10 million gallons per day [mgd]) and for wastewater treatment in Sacramento County. This district owns, operates, and is responsible for the collection, trunk, and interceptor sewer systems throughout Sacramento County as well as the Sacramento Regional Wastewater Treatment Plant (SRWTP) located south of the community of Freeport.

Sacramento County evaluated the environmental impacts of constructing trunk and interceptor sewers that would serve most of the Sacramento region (including the SPA) at a program level in the *Sacramento Regional County Sanitation District Interceptor Master Plan 2000, Draft Program Environmental Impact Report* (State Clearinghouse [SCH] #2001112085). The EIR was certified by Sacramento County and the master plan was approved in March 2003.

The purpose of the *SRCSD Interceptor System Master Plan 2000* (SRCSD 2003a) (SRCSD Interceptor Master Plan 2000) is to identify near- and long-term improvements needed for the regional wastewater conveyance system. The master plan describes the regional interceptor projects, along with their timing and costs, so that existing and future deficiencies in the regional system can be more accurately identified and predicted and strategic approaches to remedying these deficiencies can be developed. The plan uses information regarding population growth, wastewater flow generation, and actual system responses to wet weather.

The wastewater flows generated by the Proposed Project Alternative have been planned for in the SRCSD Interceptor Master Plan 2000. The master plan determined that the SPA as well as the Anatolia III residential development, the southern portion of the Ranch at Sunridge, and the northern portion of the Arboretum Specific Plan area would generate an average dry-weather flow of 7.40 mgd and a peak wet-weather flow of 16.54 mgd (SRCSD 2003a:Table 3-1). The master plan assumes buildout of these areas would be beyond the plan's 2020 planning horizon; however, the wastewater flows generated by these areas at buildout were planned for and evaluated in the master plan.

Project-related wastewater flows would be conveyed from the SPA to the SRWTP via the Laguna Creek Interceptor (LCI) Sections 1–5. A proposed LCI alignment was identified in the SRCSD Interceptor Master Plan 2000, and the environmental impacts of the construction of the interceptor were analyzed at a program level in the SRCSD Interceptor Master Plan 2000 EIR. The master plan anticipated that Section 1 of the LCI would be in service by early 2012, and Sections 2–5 would follow with a new section coming online every 4 years. The date that this interceptor would be constructed and in service is currently unknown.

The SunCreek project would construct that portion of LCI Section 5 that is within the SPA, the environmental impacts of which are evaluated throughout this DEIR/DEIS. Until Sections 1–4 of the LCI are constructed, SunCreek-generated wastewater flows would be conveyed from Section 5 of the LCI through existing gravity sewer pipelines and sewer force mains to the Anatolia III and/or Chrysanthy Boulevard sewer pump stations and then to the Northwest, Mather, or Bradshaw Interceptors (see Chapter 2 "Alternatives," Section 2.3.4, "Sewer" for

a detailed description of sewer service options for the SPA). The Anatolia III sewer pump station is located near the intersection of Kiefer Boulevard and Country Garden Drive. An 8-inch sewer force main travels from the Anatolia III sewer pump station east along Kiefer Boulevard to the intersection of Kiefer Boulevard and Rancho Cordova Parkway. The force main then heads north along Rancho Cordova Parkway to the intersection of Rancho Cordova Parkway and Chrysanthy Boulevard. At this point, the force main connects to a 36-inch gravity sewer pipeline located in Chrysanthy Boulevard. The gravity sewer pipeline travels west along Chrysanthy Boulevard to the Chrysanthy Boulevard sewer pump station at the intersection of Chrysanthy Boulevard and Sunrise Boulevard. The pump station currently pumps sewer flows south along Sunrise Boulevard through an 18-inch force main to Kiefer Boulevard where it then heads west along Kiefer Boulevard and connects to the Northeast Interceptor (MacKay & Somps 2009:11 and 12).

Before the Aerojet Interceptor and LCI are constructed and in service, wastewater flows from the Chrysanthy Boulevard sewer pump station would be pumped through the Mather Interceptor to Section 7B of the Bradshaw Interceptor (Sacramento County 2007a:2-2). The Mather Interceptor would have a capacity of 49 mgd and would be sized to serve the Villages of Zinfandel located northeast area of the former Mather Air Force Base and would provide interim sewer service to the SPA and the upstream developments of Anatolia III; Cordova Hills; Arista Del Sol; Arboretum; portions of the Ranch at Sunridge; and the Aerojet area, including the Rio del Oro Specific Plan. It is estimated that the SPA and upstream developments of Anatolia III, Cordova Hills, Arista Del Sol, Arboretum, and portions of the Ranch at Sunridge would generate a total of 10 mgd of wastewater flows and the Aerojet area would generate 10 mgd of wastewater flows by 2015 (Sacramento County 2007a:2-22).

The Mather Interceptor would begin at the Chrysanthy Boulevard sewer pump station and would travel north along Sunrise Boulevard to the intersection of Sunrise Boulevard and Douglas Road. The interceptor would turn west along Douglas Road to Zinfandel Drive. The interceptor would then follow the Zinfandel Drive north and would connect to Section 7B of the Bradshaw Interceptor just south of the intersection of North Mather Boulevard and Zinfandel Drive (Sacramento County 2007a:2-9). After the Aerojet Interceptor and LCI are constructed and in service, wastewater flows from the SPA and the upstream developments of Anatolia III, Cordova Hills, Arista Del Sol, Arboretum, portions of the Ranch at Sunridge, and the Aerojet area would be pumped through these interceptors, while the Mather Interceptor would only serve the Villages of Zinfandel (Sacramento County 2007a:2-1).

The environmental impacts of the construction and operation of Mather Interceptor were analyzed in a Supplemental EIR (SCH #2007052135), which was certified by Sacramento County in November 2007. The supplemental EIR anticipated that the Mather Interceptor would be operational by 2015; however, SRCSD may accelerate construction of the Mather Interceptor to provide interim sewer service to the SPA (MacKay & Somps 2009:8, Sacramento County 2007a:2-1).

Wastewater Treatment

Wastewater flows collected from the SRCSD interceptors are ultimately transported into the SRWTP. Wastewater conveyed to the SRWTP is treated to a secondary level and is ultimately discharged into the Sacramento River. Currently, the SRWTP has a National Pollutant Discharge Elimination System (NPDES) permit issued by the Central Valley Regional Water Quality Control Board (RWQCB) for discharge of up to 181 mgd of treated effluent into the Sacramento River.

The environmental impacts of construction and operation of the SRWTP were evaluated in the *Sacramento Regional Wastewater Treatment Plant 2020 Master Plan Draft Environmental Impact Report* (SRCSD 2003b) (SCH #2002052004). Sacramento County certified the 2020 Master Plan EIR in June 2004. The adequacy of the EIR was challenged and the challenge was upheld at the trial court level. The case is pending review in the 3rd District Court of Appeal. The Court of Appeal could overturn or uphold the Superior Court's determination in whole or in part. The Court of Appeal has not yet issued its own ruling, and it would be speculative to predict the outcome. The date when the court decision is expected is presently unknown (*see Contra Costa Water District v.*

Sacramento County Regional Sanitation District, appellate case number C058460, available at http://appellatecases.courtinfo.ca.gov/search/case/mainCaseScreen.cfm?dist=3&doc_id=1202308&doc_no=C058460&search=number&start=1&query_caseNumber=C058460).

The *Sacramento Regional Wastewater Treatment Plant 2020 Master Plan* (SRCSD 2001) (2020 Master Plan) provides a phased program of recommended wastewater treatment facilities and management programs to accommodate planned growth and to meet existing and anticipated regulatory requirements through the year 2020. The master plan addresses both public health and environmental protection issues while providing reliable service at affordable rates for SRCSD customers. The key goals of the master plan are to provide sufficient capacity to meet growth projections and an orderly expansion of SRWTP facilities, comply with applicable water quality standards, and provide for the most cost-effective facilities and programs from a watershed perspective.

The 2020 Master Plan relies on the Sacramento Area Council of Governments'(SACOG's) population projections to determine SRWTP capacity requirements within the SRCSD service area, which includes the SPA, through 2020 (SRCSD 2003b:3-22). The 2020 Master Plan projected that the population in the SRCSD service area would be 1,549,502 persons by 2020 (SRCSD 2003b:5-5). The population projections used in the master plan do not represent a buildout population total for SRCSD; rather, they represents the amount of growth expected within SRCSD.

Table 3.16-1 summarizes the estimated population-based wastewater flow projections from 2000 to 2020. Flows within the SRCSD service areas were approximately 155 mgd in 2000 and were projected to increase and surpass its permitted average dry-weather flow capacity of 181 mgd by 2010 (Table 3.16-1). Therefore, as part of the 2005 permit renewal process, the SRCSD applied to the Central Valley RWQCB for a NPDES permit to increase its permitted capacity from a maximum average dry-weather flow of 181 mgd to a maximum average dry-weather flow of 218 mgd.

Table 3.16-1
SRCSD Estimated Average Dry-Weather Flow and Peak Wet-Weather Flow, 2000-2020

Year	Average Dry-Weather Flow (mgd)	Peak Wet-Weather Flow (mgd)[1]
2000	155	185
2005	174	208
2010	196	235
2015	210	252
2020	218	263

Notes: SRCSD = Sacramento Regional County Sanitation District; mgd = million gallons per day.
[1] Flows greater than the permitted average dry-weather flow capacity of 181 mgd are diverted into emergency storage basins or stored within interceptors.
Source: SRCSD 2003b:3-23

As of 2010, the SRWTP receives and treats an average of 150 mgd (SRCSD 2010). In June 2010, SRCSD removed its formal request to the Central Valley RWQCB for an increase in permitted wastewater discharge capacity. Flows to the SRWTP have decreased from water conservation efforts over the last 10 years and it is anticipated that State legislation passed in 2009, which mandates further water conservation efforts, could substantially reduce the amount of wastewater in the future. In addition, SRCSD has prioritized its goals to increase water recycling in the region as an element to support the comprehensive effort to promote water supply reliability and Sacramento-San Joaquin Delta (Delta) sustainability. Therefore, SRCSD has determined the SRWTP can provide capacity to future development beyond what was originally anticipated. If substantial population growth or new development occurs before 2020, SRCSD will reevaluate expansion needs and phase treatment plant expansion to provide for sufficient long-term capacity (SRCSD 2010).

SOLID WASTE

In 2008, Rancho Cordova disposed of approximately 61,638 tons of solid waste (California Integrated Waste Management Board [CIWMB] 2010a). Allied Waste Services provides solid waste and recycling collection services to the city. Solid waste is transported to the Kiefer Landfill, near the intersection of Grant Line Road and Kiefer Boulevard.

Sacramento County owns and operates the Kiefer Landfill, and the landfill is the primary solid waste disposal facility in the County. Kiefer Landfill is a total of 1,084 acres in size, with a permitted disposal area of 660 acres. Kiefer Landfill is classified as a Class III municipal solid waste landfill facility and is permitted to accept general residential, commercial, and industrial refuse for disposal, including municipal solid waste, construction and demolition debris, green materials, agricultural debris, and other nonhazardous designated debris. Kiefer Landfill produces enough renewable energy methane gas to power 9,000 homes (Sacramento County 2009:4-2).

The landfill is permitted to accept a maximum of 10,800 tons per day (tpd) of solid waste; however, the average intake is only approximately 6,000 tpd. The Kiefer Landfill receives over 700,000 tons of waste per year (Sacramento County 2009:4-2). The site currently has a permitted capacity of approximately 117 million cubic yards and a remaining capacity of 113 million cubic yards. Currently, the landfill is operating below permitted capacity, and the closure date of the Kiefer Landfill is anticipated to be approximately 2064 (CIWMB 2010b).

The CIWMB provides an average per-capita solid-waste disposal rate for residents and business. In Sacramento County, the CIWMB estimates a solid-waste disposal rate of 0.36 ton per resident per year (CIWMB 2009a). It is assumed by the CIWMB that businesses of a certain type dispose similar wastes at similar rates (per employee) regardless of the location or size of the business. Business waste disposal rates calculated by CIWMB range from 0.3 ton per employee per year for general-merchandise stores to 3.1 tons per employee per year for restaurants (CIWMB 2009b).

Recycling Facilities

The California Integrated Waste Management Act (CIWMA) of 1989, also commonly known as Assembly Bill (AB) 939, requires local agencies to implement source reduction, recycling, and composting (see discussion under "Regulatory Framework" below). The Sacramento County Integrated Waste Management Plan, adopted in March 1996, consists of a siting element, summary plan, source reduction and recycling, household hazardous wastes, and non-disposal facility elements (Sacramento County 2009:4-13). The Countywide Integrated Waste Management Plan requires recycling programs that are expected to result in a 50% diversion away from landfills, thereby extending the life of landfills. According the 2006 Regional Waste Management Authority Annual Report, Rancho Cordova showed 48% of the solid waste generated in the City was diverted from landfills through recycling, composting, and other waste diversion methods (CIWMB 2010a).

To comply with the CIWMA, the City adopted the Business and Multi-Family Recycling Ordinance (Title 6, Chapter 6.21) in October 2008. The ordinance requires businesses and multifamily residential properties with 5 or more units that generate four or more cubic yards per week of solid waste to implement an on-site recycling program. The program requires businesses and multifamily residential properties to keep recyclable materials separate from all other solid waste, to provide signs and labeled containers for the storage and collection of recyclable materials, and to either self-haul or enter into a written service agreement with a franchise hauler (i.e., Allied Waste Services, Atlas Disposal Industries, or Waste Management of Sacramento) for the collection and subsequent delivery of recyclable materials to an authorized recycling facility. Businesses and multifamily residential property owners and operators must prepare a recycling plan that provides information on the types of on-site recyclable materials and verifies that labeled containers, signs, and a disposal service are available to ensure compliance with the ordinance (City of Rancho Cordova 2010).

ELECTRICAL SERVICE

Sacramento Municipal Utility District (SMUD) generates, transmits, and distributes electric power to a 900-square-mile territory in Sacramento County, including Rancho Cordova. SMUD serves a population of 589,599 customers (522,228 residential and 67,361 commercial) with 2,113 employees, 473 miles of transmission lines (110 kilovolts [kV] or more), and 9,784 miles of distribution lines (typically 12 kV) (SMUD 2009a, 2008a). In 2009, SMUD generated approximately 10,595 gigawatt hours (GWh) of electricity within its service area (California Energy Commission [CEC] 2009a).

SMUD received approval from CEC to build the first phase of the 500-megawatt (MW) Cosumnes Power Plant (CPP), which provides the utility with 1,000 MW of power to assure SMUD's long-range plans to meet the growing power needs of Sacramento County. The gas-fired plant, which came on line in 2006, provides enough power to meet the annual needs of 450,000 single-family homes (SMUD 2006).

In addition to the CPP, SMUD has the Upper American River Project, which consists of 11 reservoirs and eight powerhouses that generate enough electricity to meet nearly 15% of SMUD's customer demand. The Upper American River Project can provide approximately 1.8 million MW of electricity during a normal water year, which is enough energy to power about 180,000 homes (SMUD 2009b).

SMUD has long-term contracts with other generators to provide an additional 1,189 MW of electricity for distribution per day. Throughout the year, SMUD buys and sells energy and capacity on a short-term basis to meet load requirements and reduce costs. In July 2006, SMUD experienced a record peak electricity daily demand of 3,299 MW (SMUD 2008b). Table 3.16-2 shows SMUD's historic electrical consumption and forecasts of future consumption.

Table 3.16-2
SMUD Service Area Electrical Consumption and Forecast

Year	Consumption (GWh)[1]
1990	8,358
2000	9,494
2005	10,523
2009	10,595
2013	11,504
2016	11,875

Note: GWh = gigawatt hours
[1] Gigawatt equals one billion watts.
Sources: CEC 2009a, CEC 2009b:155

In the vicinity of the SPA, an electrical transmission corridor begins south of Kiefer Boulevard and west of Sunrise Boulevard and southeast of the intersection of North Campus Drive and Rancho Cordova Parkway and runs from southwest to northeast to Douglas Road (see Exhibit 2-17, in Chapter 2 "Alternatives"). The corridor contains a 230-kV Pacific Gas and Electric Company (PG&E) transmission line, one 230-kV SMUD transmission line, and one 69-kV SMUD sub-transmission line. This transmission corridor transects the northwestern corner of the SPA near the intersection of Sunrise Boulevard and Kiefer Boulevard. In addition, SMUD has a 69-kV sub-transmission line located along the east side of Sunrise Boulevard and a 69-kV sub-transmission line that extends north along the east side of Grant Line Road from State Route 16 to Kiefer Boulevard (MacKay & Somps 2010:6).

Energy Conservation

SMUD has created two separate programs to grow renewable energy supplies for its customers: a green pricing program called Greenergy and a Renewables Portfolio Standard (RPS) program. Accounting for SMUD's renewable energy supply is prepared separately for these two programs and aggregated as SMUD's total, non-large hydro-renewable energy supply.

SMUD has had the green pricing program called "Greenergy" since 1997. Greenergy allows customer choice in selecting renewable energy supply for 100% or 50% of their electricity based on a simple monthly fee of $6.00 or $3.00, respectively. Commercial Greenergy customers pay $0.1 per kilowatt-hour (kWh) for 100% renewables and $0.5 per kWh for 50% renewable energy. In 2006, there were about 36,000 participating customers in the Greenergy program, of which approximately 34,000 were residential customers (SMUD 2008b).

SMUD's RPS program was approved by SMUD's elected board one year before the state RPS program was approved by the legislature and governor. To meet its annual renewables goals, SMUD both contracts for renewable electricity from independent power producers and builds and owns renewable energy power plants. SMUD has renewable energy supply goals of 23% for 2011 (20% RPS + 3% Greenergy in 2011). The final supply numbers compiled for 2006 show that SMUD provided about 13% of retail sales of eligible, non-large hydro-renewable electricity supply (SMUD 2007:2).

SMUD has supported several new renewable energy projects that have begun providing electricity to the grid since 2002. The SMUD-owned Solano wind project installed wind turbines generating 39 MW in 2002, and an additional 63 MW of wind turbines were installed in 2007. This wind project is expected to have turbines generating over 200 combined megawatts installed by 2011. SMUD also recently signed a Power Purchase Agreement (PPA) contract for the second phase of the Kiefer Landfill gas-to-electricity project, which is online now and providing an additional 5.7 MW. SMUD also signed a PPA several years ago for a California wind project that came online in phases from 2003 to 2007, and it now provides a total of 75 MW (SMUD 2007:3).

NATURAL GAS SERVICE

Natural gas service in Rancho Cordova is provided by PG&E through portions of PG&E's 46,000 miles of natural gas distribution pipelines. In 2009, PG&E delivered approximately 4,572 million therms (MM therms) of natural gas throughout its service area (CEC 2009c). Of this total, Sacramento County received 315 MM therms, which accounted for 0.07% of the natural gas deliveries within the PG&E service area. Table 3.16-3 shows PG&E's historic natural gas consumption and forecasts of future consumption. The CEC has determined that the decrease in natural gas consumption between 2005 and 2009 results from both greater energy conservation and the slowdown in construction of new homes and businesses (CEC 2009a:220).

Whenever possible, PG&E adds capacity in an existing easement either by replacing smaller mains with larger mains, by constructing additional mains parallel to the existing facilities, or by increasing the operating pressure of existing mains (Sacramento County 2007b:69). As shown on Exhibit 2-18 in Chapter 2, "Alternatives," the following natural gas transmission mains are located in the vicinity of the SPA (MacKay & Somps 2010b:3):

- an 8-inch transmission main that extends east along Kiefer Boulevard from Sunrise Boulevard to Rancho Cordova Boulevard,
- an 8-inch transmission main that extends north along Rancho Cordova Boulevard from Kiefer Boulevard for approximately 3,300 feet, and
- an 8-inch transmission main that extends east along Douglas Boulevard from Sunrise Boulevard for approximately 2.2 miles.

Table 3.16-3 PG&E Service Area Natural Gas Consumption and Forecast	
Year	**Consumption (MM Therms)**
1990	5,275
2000	5,291
2005	4,724
2009	4,572
2018	4,358
Note: PG&E = Pacific Gas and Electric; MM therms = million therms Sources: CEC 2009a:220, CEC 2009c	

COMMUNICATIONS

Currently, there is no existing communications service or infrastructure in the SPA. Frontier Communications and AT&T would provide communications service to the SPA and both service providers have infrastructure in the vicinity of the SPA (see Exhibit 2-19 in Chapter 2, "Alternatives"). Frontier Communications has existing aerial telephone lines on Sunrise Boulevard and existing underground telephone lines that extend east from Sunrise Boulevard along Kiefer Boulevard and north from the intersection of Kiefer Boulevard and Rancho Cordova Boulevard to County Garden Drive (MacKay & Somps 2010b:6).

Approximately 220 acres in the northeastern portion of the SPA is within the AT&T service area. AT&T has existing aerial telephone lines on Grant Line Road (MacKay & Somps 2010b:6).

3.16.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

There are no Federal plans, policies, regulations, or laws related to utilities and service systems that apply to the Proposed Project or other alternatives under consideration.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the California Legislature passed the CIWMA of 1989 (AB 939), effective January 1990. According to the CIWMA, all cities and counties were required to divert 25% of all solid waste from landfill facilities by January 1, 1995, and 50% by January 1, 2000. Each city is required to develop solid waste plans demonstrating integration of the CIWMA plan with the county plan. The plans must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal.

California Public Utilities Commission Decision 95-08-038

The California Public Utilities Commission (CPUC) Decision 95-08-038 contains the rules for the planning and construction of new transmission facilities, distribution facilities, and substations. The decision requires permits for the construction of certain power line facilities or substations if the voltages would exceed 50 kV or if the substation would require the acquisition of land or an increase in voltage rating above 50 kV. Distribution lines and substations with voltages less than 50 kV do not need to comply with this decision; however, the utility must

obtain any nondiscretionary local permits required for the construction and operation of these projects. CEQA compliance is required for construction of facilities constructed in accordance with the decision.

California Building Energy Efficiency Standards

The project would be required to comply with changes to Title 24 of the California Code of Regulations regarding energy efficiency that became effective on October 1, 2005. These new energy efficiency standards were developed in response to the state's energy crisis as well as AB 970 (Chapter 329, Statutes of 2000)—the California Energy and Reliability Act of 2000. The goals of the recent changes to Title 24 are to improve the energy efficiency of residential and nonresidential buildings, minimize impacts during peak energy-usage periods, and reduce impacts on overall state energy needs.

Implementation of these standards is expected to reduce the growth in electricity use by 478 gigawatt-hours per year (GWh/y) and reduce the growth in natural gas use by 8.8 MM therms per year. The savings attributable to new nonresidential buildings are 163.2 GWh/y of electricity savings and are expected to reduce the growth in electricity use by 478 GWh/y and reduce the growth in natural gas use by 8.8 MM therms per year. The savings attributable to new nonresidential buildings are 163.2 GWh/y of electricity savings and 0.5 MM therms. Additional savings result from the application of the standards on building alterations. In particular, requirements for cool roofs, lighting, and air distribution ducts are expected to save about 175 GWh/y of electricity.

In addition, the 2010 California Green Building Code (Part 11 of Title 24) standards were adopted on January 12, 2010 and will become effective on January 1, 2011. This code was developed to enhance the design and construction of buildings and sustainable construction practices through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental air quality. It is the intent of this code to encourage green buildings to achieve to achieve more than a 15% reduction in energy usage when compared to existing standards, to reduce indoor potable water demand by 20%, to reduce landscape water usage by 50%, and to reduce construction waste by 50%. It also requires separate water meters for indoor and outdoor water use at nonresidential buildings, with a requirement for moisture-sensing irrigation systems for larger landscape projects, and mandatory inspections of energy systems (e.g., heat furnace, air conditioner and mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity and according to their design efficiencies.

Regional and Local Plans, Policies, Regulations, and Ordinances

City of Rancho Cordova General Plan

Goals and policies from the *City of Rancho Cordova General Plan* (City General Plan 2006) and Housing Element (City of Rancho Cordova 2009) relating to utilities and service systems that are applicable to the Proposed Project and other alternatives under consideration are listed in Appendix K.

3.16.3 Environmental Consequences and Mitigation Measures

Thresholds of Significance

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G and based on Appendix F as related to energy, of the State CEQA Guidelines. These thresholds also encompass the factors taken into account under NEPA to determine the significance of an action in terms of its context and the intensity of its impacts. The Proposed Project or other alternatives under consideration were determined to result in a significant impact related to utilities and service systems if they would do any of the following:

- exceed wastewater treatment requirements of the applicable RWQCB;

- require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- generate solid waste beyond the capacity of existing landfills;
- violate Federal, state, or local statutes and regulations related to solid waste; or
- result in inefficient, wasteful, and unnecessary consumption of energy.

ANALYSIS METHODOLOGY

Impacts on utilities and service systems that would result from implementation of the Proposed Project and other alternatives under consideration were identified by comparing existing service capacity and facilities against future demand associated with project implementation. Evaluation of potential utility and service systems impacts was based on a review of the following documents pertaining to the SPA and surrounding area:

- *City of Rancho Cordova General Plan* (City of Rancho Cordova 2006),
- *Sacramento County General Plan Background to the 1993 General Plan and 2007 General Plan Update* (Sacramento County 2007b),
- *Sacramento County General Plan Update DEIR* (Sacramento County 2009),
- *Sacramento Regional County Sanitation District Interceptor System Master Plan 2000* (SRCSD 2003a),
- *Sacramento Regional County Sanitation District Mather Interceptor Supplemental Environmental Impact Report* (Sacramento County 2007a),
- *Sacramento Regional Wastewater Treatment Plant 2020 Master Plan Draft Environmental Impact Report* (SCH #2002052004) (SRCSD 2003b),
- *Sacramento Regional Wastewater Treatment Plant 2020 Master Plan* (SRCSD 2001),
- *Sanitary Sewer Study Level Two for SunCreek Specific Plan* (MacKay & Somps 2009, provided in Appendix I),
- *Updated Sewer Demands for the SunCreek Specific Plan* (MacKay & Somps 2010a, provided in Appendix T), and
- *Dry Utilities Plan Technical Memorandum* (MacKay & Somps 2010b, provided in Appendix J).

Additional information was obtained through consultation and coordination with appropriate agencies, including SRCSD, SMUD, PG&E, review of existing documents, and field review of the SPA and surroundings.

IMPACT ANALYSIS

Impacts that would occur under each alternative development scenario are identified as follows: NP (No Project), NCP (No USACE Permit), PP (Proposed Project), BIM (Biological Impact Minimization), CS (Conceptual

Strategy), and ID (Increased Development). The impacts for each alternative are compared relative to the PP at the end of each impact conclusion (i.e., similar, greater, lesser).

IMPACT 3.16-1 **Increased Demand for Wastewater Collection and Conveyance Facilities.** *Project implementation would result in increased generation of wastewater.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase the demand for wastewater conveyance facilities. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

The SPA is presently not served by municipal wastewater collection and treatment systems, and therefore the project would require construction of wastewater collection and conveyance facilities.

The sewer study prepared for the Proposed Project Alternative (MacKay & Somps 2009) addressed the viability of providing sewer service to the SPA, identified on- and off-site facility needs and design, and evaluated designs for consistency with existing interceptor sewer master plans. Additionally, on January 11, 2012, the Sacramento Area Sanitation District (SASD) adopted the *Sewer System Capacity Plan 2010 Update* that describes SASD's plan to provide service to the SPA and other land within the East County area (see "SASD's Sewer System Capacity Plan," below). The location of the sewer system facilities to serve the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would vary somewhat from the Proposed Project Alternative due to the difference in street alignments and the spatial distribution of the developable areas. In spite of these differences, the physical impacts of the on-site sewer system to serve the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would be substantially the same as those of the Proposed Project Alternative (MacKay & Somps 2010c).

The sewer study and the sewer system capacity plan present options for the ultimate sewer conveyance facilities. However, detailed, final sewer master plans have not been completed. It is anticipated that additional work would be performed to define force mains, trunk, and major collectors; identify phased construction of facilities; and design tentative small-lot maps, including collector and lateral systems, to serve each lot. The following discussion provides an overview of the future facilities identified by the conceptual sewer study (attached as Appendix I) and the sewer system capacity plan. The physical impacts of constructing these on-site facilities at a project level are addressed throughout this DEIR/DEIS in connection with discussions of the impacts of overall site development.

The sizing and design of the sewer pipelines are based on SASD design standards. The sanitary sewer system would consist of gravity pipelines and force mains ranging in size from 8 inches to 30 inches in diameter, and where possible, would be installed at a minimum depth of 8 feet (see Exhibit 2-16 in Chapter 2, "Alternatives"). The wastewater system would be incrementally expanded to meet the demands of the SPA.

Project-related wastewater flows would be conveyed from the SPA to the SRWTP via the LCI Sections 1–5. A proposed LCI alignment was identified in the SRCSD Interceptor Master Plan 2000, and the environmental impacts of the construction of the interceptor were analyzed at a program level in the SRCSD Interceptor Master Plan 2000 EIR (see "Sacramento Regional Sanitation District Interceptor Master Plan 2000 EIR," below). The date that this interceptor would be constructed and in service is currently unknown.

The project would construct SRCSD's Section 5 of the LCI that is within the SPA, the environmental impacts of which are evaluated throughout this EIR/EIS. Section 5 of the LCI within the SPA would begin at Grant Line

Road at the northeast boundary of the SPA and travel west along the northern boundary of the SPA. The interceptor would then turn and travel south and southwest through the SPA to the intersection of Rancho Cordova Parkway and Kiefer Boulevard. From this intersection, the interceptor would head west on Kiefer Boulevard to the intersection of Kiefer Boulevard and Sunrise Boulevard. The interceptor would then travel south along Sunrise Boulevard to the southwestern corner of the SPA. Initially, on-site wastewater flows would be conveyed through Section 5 of the LCI to either the SunCreek sewer pump station located at the southwestern corner of the SPA east of Sunrise Boulevard or the Arboretum sewer pump station located east of Sunrise Boulevard and south of the SPA on the Arboretum project site (see "SunCreek Specific Plan Sewer Service Options," below) (MacKay & Somps 2009:11).

Section 5 of the LCI would be sized to accommodate project-related wastewater flows as well as the proposed upstream developments of Anatolia III, Cordova Hills, Arista Del Sol, Arboretum, and portions of the Ranch at Sunridge (MacKay & Somps 2009:13). The total sewer flow from the SPA and these proposed upstream developments were determined to be 6.39 mgd peak wet-weather flow and 27.74 mgd peak wet-weather flow, respectively, for a total of 34.85 mgd peak wet-weather flow (MacKay & Somps 2009:8, and MacKay & Somps 2010a:4). Initially, the interceptor would be used on an interim basis by SASD as a sanitary sewer collector. Once upstream development occurs and wastewater flows exceed 10 mgd the pipeline would become an interceptor (MacKay & Somps 2009:8).

Until Sections 1–4 of the LCI are constructed, project-related wastewater flows would be conveyed through existing gravity sewer pipelines and sewer force mains to the Anatolia III and/or Chrysanthy Boulevard sewer pump stations and then to the Northwest Interceptor or the proposed Mather Interceptor. Section 3.16.1, "Affected Environment," above provides a description of these wastewater conveyance facilities.

If the Mather Interceptor is constructed and in service before Sections 1–4 of the LCI, project-related wastewater flows could be conveyed north from the Chrysanthy Boulevard sewer pump station through the Mather Interceptor to Section 7B of the Bradshaw Interceptor. The Mather Interceptor would have a capacity of 49 mgd and would be sized to serve the Villages of Zinfandel located northeast of the former Mather Air Force Base and could provide interim sewer service to the SPA, including the upstream developments of Anatolia III, Cordova Hills, Arista Del Sol, Arboretum, and portions of the Ranch at Sunridge and the Aerojet area, including the Rio del Oro Specific Plan area, until the LCI and Aerojet Interceptor are constructed and in service (Sacramento County 2007a:2-2). The Supplemental EIR estimated that the SPA and upstream developments would generate 10 mgd of wastewater flows and the Aerojet area would generate 10 mgd of wastewater flows by 2015 (Sacramento County 2007a:2-22). The environmental impacts of the construction and operation of Mather Interceptor were analyzed in a Supplemental EIR (see "Mather Interceptor Supplemental EIR," below). The Supplemental EIR evaluated the short-term impacts associated with the potential for the Mather Interceptor to serve the Villages of Zinfandel located northeast area of the former Mather Air Force Base, the SPA, and upstream developments. In the long term, the Supplemental EIR assumed that the Aerojet Interceptor and LCI would serve the SPA and upstream developments, while the Mather Interceptor would only serve the Villages of Zinfandel (Sacramento County 2007a:2-1). The Supplemental EIR anticipated that the Mather Interceptor would be operational by 2015; however, the SRCSD may accelerate construction of the Mather Interceptor to provide interim sewer service to the SPA (MacKay & Somps 2009:8, Sacramento County 2007a:2-1).

SunCreek Specific Plan Sewer Service Options

Both the SunCreek and Arboretum projects would be receiving sewer service through common sanitary sewer infrastructure. Since it is not known which project would be constructed first, the SunCreek sewer study includes two potential scenarios. Each scenario would consist of three phases of sewer service. Detailed sewer plans and descriptions for each scenario and each phase are described in Section 2.3.4, "Sewer" of Chapter 2, "Alternatives," and are contained in Appendix I. Common sewer facilities that would be constructed on the Arboretum project site would receive CEQA coverage under the Arboretum project's EIR/EIS. To the extent that the proposed scenarios and phases contain more than one option for sewer service in the future, this DEIR/DEIS does not provide CEQA or

NEPA coverage for any off-site facilities associated with those future options. If those options were to be implemented in the future, SRCSD and/or the City of Rancho Cordova would determine what type of CEQA or NEPA coverage, if any, were required prior to construction of the facilities associated with those options. A brief description of the scenarios and phases is provided below.

Scenario One: SunCreek Develops First Followed by Arboretum

Phase 1. The project would construct Section 5 of the LCI that is within the SPA as well as the on-site sewer collectors, sewer trunks, and the 2.26-mgd SunCreek sewer pump station.

Phase 2. The capacity of the SunCreek sewer pump station would be increased to 9.91 mgd and the capacity of the Arboretum sewer pump station would be increased to 4.3 mgd. The Mather Interceptor would be completed and operational.

Phase 3. Sections 1-4 of the LCI would be constructed from the SRWTP and connected to Section 5 of the LCI. The SunCreek and Arboretum projects' gravity sewer systems would be connected to the LCI and the SunCreek and Arboretum projects' sewer pump stations and associated force mains would be decommissioned.

Scenario Two: Arboretum Develops First Followed by SunCreek

Phase 1. The Arboretum project would construct gravity sewer collectors, sewer trunks, and a 1.5-mgd Arboretum sewer pump station. The capacity of the Anatolia III sewer pump station would be increased to 2.26 mgd.

Phase 2. The capacity of the Arboretum sewer pump station would be increased to 9.91 mgd and the Arboretum force main constructed in Phase 1 would be decommissioned. The Mather Interceptor would be completed and operational. Sewer flows from the Arboretum sewer pump station would be pumped through the proposed Sunrise Boulevard force main to the existing Sunrise Boulevard segment of the Chrysanthy Boulevard force main and then to the Mather Interceptor.

Phase 3. Sections 1-4 of the LCI would be constructed from the SRWTP and connected to Section 5 of the LCI. The SunCreek and Arboretum projects' gravity sewer systems would be connected to the LCI and the SunCreek and Arboretum projects' sewer pump stations and associated force mains would be decommissioned.

Sacramento Regional County Sanitation District Interceptor Master Plan 2000 EIR

As discussed above, the SPA would be served by the SRCSD regional wastewater conveyance facilities. The wastewater flows generated by the SPA have been planned for in the SRCSD Interceptor Master Plan 2000. The master plan determined that the SPA as well as the Anatolia III residential development, the southern portion of the Ranch at Sunridge, and the northern portion of the Arboretum Specific Plan project would generate an average dry-weather flow of 7.40 mgd and a peak wet-weather flow of 16.54 mgd (SRCSD 2003a:Table 3-1).

Sacramento County evaluated the environmental impacts of constructing trunk and interceptor sewers that would serve most of the Sacramento region (including the SPA) at a program level in the *Sacramento Regional County Sanitation District Interceptor Master Plan 2000, Final Program Environmental Impact Report* (SCH #2001112085). That EIR was certified and the master plan approved in March 2003. Environmental impacts identified in that EIR would occur with or without development of the project because the SRCSD wastewater conveyance system is required to serve regional development and therefore will be needed regardless of whether or not the project is implemented.

Mather Interceptor Supplemental EIR

If the Mather Interceptor is constructed and in service before Sections 1–4 of the LCI, project-related wastewater flows could be conveyed north from the Chrysanthy Boulevard sewer pump station through the Mather

Interceptor to Section 7B of the Bradshaw Interceptor. The *Mather Interceptor Supplemental Environmental Impact Report* (SCH #2007052135) was certified by Sacramento County in November 2007.

The environmental impacts identified in that EIR would occur with or without development of the project because the Mather Interceptor is required to provide sewer service to the Villages of Zinfandel located northeast of the former Mather Air Force Base and could provide interim sewer service to Anatolia III, Cordova Hills, Arista Del Sol, Arboretum, portions of the Ranch at Sunridge, and the Aerojet area. In the long-term, the Mather Interceptor would provide sewer service only to the Villages of Zinfandel and therefore would be needed regardless of whether or not the project is implemented.

SASD Sewer System Capacity Plan

On January 11, 2012, the SASD Board of Directors adopted the *Sewer System Capacity Plan 2010 Update* (SASD 2012), which outlines SASD's plan to provide sewer service to the SPA and other portions of the East County area. The SASD Board of Directors' action to approve the sewer system capacity plan was taken in reliance on a Notice of Exemption prepared by Sacramento County Department of Environmental Review and Assessment (DERA) dated November 23, 2011.

The sewer system capacity plan envisions an alternative way to provide service to the SPA that would utilize idle capacity in SASD's existing system in the East County area on an interim basis until SRCSD completes the White Rock, Aerojet-2, and Douglas Interceptors. The sewer system capacity plan envisions that SASD's East County system would convey sewer flows from the East County area to the existing Chrysanthy Boulevard sewer pump station, which would then convey the flows to a new series of interceptors being proposed by SRCSD (i.e., the White Rock, Aerojet-2, and Douglas Interceptors). SRCSD is in the process of completing an update to its sewer master plan to delete the LCI Sections 1–5 and the Mather Interceptor in favor of the White Rock, Aerojet-2, and Douglas Interceptors. SRCSD plans to evaluate the environmental impacts associated with its updated sewer master plan in a CEQA document prior to adopting the sewer master plan in late 2012.

The sewer system capacity plan envisions that LCI Sections 1–5 would be downsized to an SASD trunk sewer (pipes ranging in size from 12 inches to 27 inches in diameter) and the SunCreek pump station would continue to be a SASD facility (i.e., it would not be expanded over time to a SRCSD facility). Additionally, a new force main would be installed from the SunCreek pump station to the Chrysanthy Boulevard pump station in an alignment within the paved portion of the northbound lanes of Sunrise Boulevard. The Chrysanthy Boulevard pump station would eventually connect to the Aerojet-2 Interceptor that would extend northerly along Sunrise Boulevard to a point of connection with the White Rock Interceptor at the intersection of Sunrise Boulevard and White Rock Road. From this location, the White Rock Road Interceptor would extend westerly along White Rock Road to a point of connection with the existing Bradshaw Interceptor at or near its crossing of White Rock Road. SASD intends to construct the Aerojet-2 and White Rock Interceptors within the paved portions of Sunrise Boulevard and White Rock Road, respectively.

Impact Conclusion

The *Sanitary Sewer Study Level Two for the SunCreek Specific Plan* (MacKay & Somps 2009, provided in Appendix I), and the *Sewer System Capacity Plan 2010 Update* (SASD 2012), include plans to provide sewer service to the project under several different development scenarios depending on how construction proceeds in the project vicinity. However, sufficient on-site wastewater collection and conveyance infrastructure necessary to serve the SPA has not been constructed, nor have final design plans and specifications been submitted; therefore, this impact is considered **direct** and **potentially significant**. The **indirect** physical impacts of constructing the on-site facilities are addressed throughout this DEIR/DEIS in each respective topical section in connection with discussions of the impacts of overall site development. The physical environmental impacts from construction of the off-site sewer facilities are the responsibility of SRCSD and SASD. As stated previously, a Notice of Exemption for SASD's sewer system capacity plan was prepared by DERA in November 2011, and SRCSD plans

to evaluate the environmental impacts associated with its updated sewer master plan prior to its adoption in late 2012. ***[Similar]***

Mitigation Measure 3.16-1: Submit Proof of Adequate On- and Off-Site Wastewater Conveyance Facilities and Implement On- and Off-Site Infrastructure Service Systems or Submit Proof That Adequate Financing Is Secured.

Before the approval the final maps for all project phases, the project applicants shall submit written verification that SRCSD has adequate wastewater conveyance capacity for the amount of development identified in the tentative map has been constructed or is assured through the use of bonds or other sureties to the City's satisfaction. Both on- and off-site wastewater conveyance infrastructure sufficient to provide adequate service to the SPA shall be in place for the amount of development identified in the tentative map before approval of the final map and issuance of building permits by the City of Rancho Cordova Public Works Department and issuance of building permits by the City of Rancho Cordova Building and Safety Division for all project phases, or their financing shall be secured and proof of such financing be provided to the satisfaction of the City.

Implementation: The project applicants for any particular discretionary development application.

Timing: Before approval of final maps and issuance of building permits for any project phases.

Enforcement: City of Rancho Cordova Building and Safety Division and City of Rancho Cordova Public Works Department.

Implementation of Mitigation Measure 3.16-1 would reduce the direct, potentially significant impacts associated with increased demand for on- and off-site wastewater collection facilities under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a **less-than-significant** level because adequate wastewater conveyance facilities would be documented or adequate financing would be secured to the satisfaction of the City before approval final maps and issuance of building permits.

IMPACT 3.16-2 **Increased Demand for Sacramento Regional Wastewater Treatment Plant (SRWTP) Facilities.** *Project implementation would result in increased generation of wastewater, thereby increasing the demand for wastewater treatment facilities to support the project.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase the demand for wastewater treatment facilities. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

Table 3.16-4 shows the average dry-weather and peak wet-weather flows generated by the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. The SASD and SRCSD calculate wastewater flows for residential land uses using the density of dwelling units per gross acre and commercial, school, park, and open space land uses as well as roadways, storm drain channels, and detention basins are calculated using an equivalent of 6.0 dwelling units per gross acre. Therefore, slight variations in wastewater flows generated by the No USACE Permit, Proposed Project,

Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives are a result of differences in acreages of land uses for each alternative.

Table 3.16-4
SunCreek Specific Plan Wastewater Generation Rates

Alternative	Average Dry-Weather Flow (mgd)	Peak Wet-Weather Flow (mgd)
No USACE Permit	3.21	6.89
Proposed Project	2.88	6.39
Biological Impact Minimization	2.84	6.32
Conceptual Strategy	2.91	6.43
Increased Development	2.60	5.96

Notes: mgd = million gallons per day
Source: MacKay & Somps 2011

Collected wastewater flows from the SPA would ultimately be transported to the SRWTP for treatment and disposal. The SRWTP receives and treats an average of 150 mgd (as of 2010) and has a permitted dry-weather flow design capacity of 181 mgd (SRCSD 2010). The 2020 Master Plan, which was approved in 2004, provides for expansion of the SRWTP to 218 mgd based on growth rates expected to be achieved in the Sacramento County region by 2020.

The wastewater flows generated by the project have been planned for in the SRWTP 2020 Master Plan. The 2020 Master Plan relies on SACOG's population projections to determine SRWTP capacity requirements within the SRCSD service area through 2020 (SRCSD 2003b:3-22). Note that this total does not represent a buildout population total for SRCSD; rather, it represents the amount of growth expected within SRCSD based on population projections within its service area. Because the SPA is within the SRCSD service area, the projected SRWTP capacity specifically includes the wastewater flows generated on the SPA through 2020. The SRCSD has determined that growth within the district is less than what was projected in the 2020 master plan and the SRWTP can provide capacity to future development beyond what was originally anticipated (SRCSD 2010). In light of this reduced growth, the SCRSD has withdrawn its application to expand the treatment plant. If substantial population growth or new development occurs before 2020, the SRCSD will reevaluate expansion needs and phase treatment plant expansion to provide for sufficient long-term capacity.

Because the SRWTP is planned to accommodate growth in Sacramento regional area by 2020, development in the SPA that occurs by 2020 would be accommodated by planned SRWTP capacity. Over time, additional planning at the SRWTP would occur, and overall capacity would be assessed and additional capacity planned for and added as necessary to meet demand for wastewater treatment. The SRWTP site has sufficient land area to accommodate a substantially higher flow than 218 mgd; however, given the SRCSD withdrawal of its expansion application beyond 181 mgd, future SRCSD plans beyond the next 10 years are too speculative for meaningful consideration.

The SPA is within the SRCSD service area and the projected SRWTP capacity specifically includes the wastewater flows generated on the SPA through 2020. Therefore, there is expected to be sufficient SRWTP capacity to accommodate project flows under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives through 2020. There would be no assurances that the SRWTP would have adequate capacity for new wastewater flows for project development occurring after 2020. Therefore, the potential lack of treatment capacity past 2020 at full project buildout is a **direct, potentially significant** impact. ***[Similar]***

Mitigation Measure 3.16-2: Demonstrate Adequate SRWTP Wastewater Treatment Capacity.

The project applicants for any particular discretionary development application shall demonstrate adequate capacity at the SRWTP for new wastewater flows generated by the project. This shall involve preparing a report prior to construction of each phase of development that identifies the amount of wastewater flows generated by the increment of proposed development, the available SRWTP wastewater treatment plant capacity, and confirming payment of connection and capacity fees as identified by SRCSD. Approval of the final map or improvement plan and issuance of building permits for all project phases shall not be granted until the City verifies adequate SRWTP capacity is available for the amount of proposed development identified in the report.

Implementation: The project applicants for any particular discretionary development application.

Timing: Before approval of Final maps and issuance of building permits for any project phases.

Enforcement: City of Rancho Cordova Building and Safety Division and City of Rancho Cordova Public Works Department.

Implementation of Mitigation Measure 3.16-2 would reduce direct significant impacts associated with increased demand for wastewater treatment plant facilities under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a **less-than-significant** level because adequate wastewater treatment facilities sufficient to serve the project would be documented before approval final maps/improvement plans and issuance of building permits.

IMPACT 3.16-3 **Temporary and Short-Term Generation of Solid Waste during Project Construction.** *Project construction would generate temporary and short-term construction-related debris and waste.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no construction or demolition activities that would generate temporary and short-term construction-related solid waste. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

In 2008, construction activities in Rancho Cordova generated approximately 10,010 tons of solid waste (CIWMB 2010b). It is estimated that project-related construction would generate an average of 780 construction jobs at intervals over the 20-year buildout period (URBEMIS 2007 Version 9.2.4). CIWMB estimates that construction activities generate 3.0 tons per employee of solid waste; therefore, a total of 2,340 tons of waste (3.0 x 780) would be generated by construction (and demolition) activities over the 20-year buildout period, which result in an average of 117 tons per year (0.3 tpd) of solid waste. Solid waste generated by construction and demolition activities in the SPA would be disposed of at the Kiefer Landfill. The estimated range of solid waste generated by construction activities (0.3 tpd) would be less than 1% of the 10,800 maximum tpd that could be received at the landfill.

The landfill has a total capacity of 117 million cubic yards, and a remaining capacity of 113 million cubic yards. At project buildout (2032), the total amount of solid waste generated by construction of the project would be approximately 0.004 million cubic yards. Therefore, the total amount of solid waste generated by construction activities over the 20-year buildout period would also be less than 1% of the remaining and total capacity(113 and 117 million cubic yards, respectively) of the landfill. Currently, the landfill has a closure date of 2064.

Because the Kiefer Landfill has sufficient permitted capacity to accommodate construction-related (including demolition) disposal needs for the project within the timeframe for project buildout (i.e., through 2032), this **direct** impact is **less than significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure: No mitigation measures are required.

IMPACT 3.16-4 **Increased Long-Term Generation of Solid Waste.** *Project implementation would increase long-term solid-waste generation.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase the long-term solid waste generation. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, BIM, CS, ID

Based on the CIWMB's generation rates for Sacramento County and the estimated total project population at buildout, Table 3.16-5 shows the amount of solid waste in tons per day and per year that would be generated under the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives. All four of these alternatives would generate substantially less solid waste than would be generated under the Proposed Project Alternative. Much lower solid waste generation rates would occur at project initiation, with gradual increases in the rate as development progressed.

Table 3.16-5
SunCreek Specific Plan Solid Waste Generation Rates

Alternative	Residential Waste (tpd)[1]	Business Waste (tpd)[2]	Total (tpd)	Total (tons/year)
No USACE Permit	11.5	1.5	13.0	4,745
Proposed Project	12.4	14.1	26.5	9,670
Biological Impact Minimization	11.2	0.9	12.1	4,440
Conceptual Strategy	12.1	2.4	14.5	5,278
Increased Development	14.3	3.0	17.3	6,305

Notes: tpd = tons per day

[1] Based on CIWMB's average per-capita solid-waste disposal rate for Sacramento County of 0.36 ton per resident per year.

[2] The business waste–disposal rate calculated by CIWMB for project development was based on an average of 1.8 tons per year per employee.

Source: Data compiled by AECOM in 2010

Solid waste collected from the SPA would be hauled to the Kiefer Landfill, which is permitted to accept 10,800 maximum tpd of solid waste. The estimated 12.1 to 17.3 tpd of solid waste generated by the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would be less than 1% of the 10,800 maximum tpd that could be received at the landfill. In addition, compliance with all Federal, state, and local statutes and regulations, including the City's Business and Multi-Family Recycling Ordinance, related to solid-waste reduction and recycling would reduce the volume of solid waste entering Kiefer Landfill. Therefore, this landfill has sufficient permitted capacity to accommodate solid-waste disposal needs for the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives and this **direct** impact is considered **less than significant**. **No indirect** impacts would occur. ***[Lesser]***

Mitigation Measure: No mitigation measures are required.

PP

Based on CIWMB's generation rates for Sacramento County (0.36 ton per resident per year), the estimated total population for the Proposed Project Alternative (12,589 persons) would generate approximately 4,532 tons of solid waste per year (0.36 × 12,589), or 12.4 tpd.

It is assumed by the CIWMB that businesses of a certain type dispose similar wastes at similar rates (per employee) regardless of the location or size of the business. The Proposed Project Alternative would generate a maximum of approximately 2,854 jobs over the 20-year buildout period. The employees in the SPA would be working in jobs within designated waste categories such as commercial/retail stores (0.3 ton of waste per employee per year), other professional services (1.2 tons of waste per employee per year), business services (1.7 tons of waste per employee per year), and restaurants (3.1 tons of waste per employee per year). To estimate a single business waste–disposal rate for project development, the two anticipated extremes among the categories (0.3 ton and 3.1 tons per employee per year) were averaged, resulting in a generation rate of 1.8 tons per employee per year. An average business waste disposal rate of 1.8 tons per employee per year results in generation of 5,138 tons of waste per year (1.8 × 2,854) or 14.1 tpd in the SPA.

As shown on Table 3.16-5, combining residential and business solid-waste generation, total solid-waste generation for the Proposed Project Alternative would be approximately 9,670 tons per year (26.5 tpd). Much lower generation rates would occur at project initiation, with gradual increases in the rate as development progressed. As described above, solid waste collected from the SPA would be hauled to the Kiefer Landfill, which is permitted to accept 10,800 maximum tpd of solid waste. The estimated 26.5 tpd of solid waste generated by the Proposed Project Alternative would be less than 1% of the 10,800 maximum tpd that could be received at the landfill. In addition, compliance with all Federal, state, and local statutes, regulations, and ordinances, including the City's Business and Multi-Family Recycling Ordinance, related to solid-waste reduction and recycling would reduce the volume of solid waste entering Kiefer Landfill. Therefore, this landfill has sufficient permitted capacity to accommodate solid-waste disposal needs for the Proposed Project Alternative and this **direct** impact is considered **less than significant**. **No indirect** impacts would occur.

Mitigation Measure: No mitigation measures are required.

IMPACT 3.16-5 **Increased Demand for Electricity and Infrastructure.** *Project implementation would increase the demand for electricity and electrical infrastructure.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase the demand for electricity and infrastructure. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, BIM, CS

Implementation of the No USACE Permit, Biological Impact Minimization, and Conceptual Strategy Alternatives would increase electrical demand in the SPA. Electrical service in Rancho Cordova is provided by SMUD through 473 miles of transmission lines (110 kV or more) and 9,784 miles of distribution lines (typically 12 kV). In 2009, SMUD generated approximately 10,595 GWh of electricity within its service area (CEC 2009a). The increased electrical demand in the SMUD service area under buildout of all five action alternatives is shown in Table 3.16-6.

Table 3.16-6 SunCreek Specific Plan Electrical Demands	
Alternative	**Electrical Demand (GWh/yr)**
No USACE Permit	46.9
Proposed Project	65.3
Biological Impact Minimization	42.3
Conceptual Strategy	49.1
Increased Development	59.3
Notes: GWh/yr = gigawatt hours per year, MM therms = million therms. Source: CEC 2004	

The estimated increased electrical demand under the No USACE Permit, Biological Impact Minimization, and Conceptual Strategy Alternatives would range from 42.3 to 49.1 GHz/yr. This would be approximately 16.2 GWh per year less than the Proposed Project Alternative. The increase in electrical demand under these three alternatives would account for less than 1% of the total electrical demand in the SMUD service area (10,595 GWh). Therefore, the increase in demand for electricity would not be substantial in relation to existing electrical consumption in SMUD's service area.

In the vicinity of the SPA, SMUD has a 69-kV sub-transmission line located along the east side of Sunrise Boulevard and a 69-kV sub-transmission line that extends north along the east side of Grant Line Road from SR 16 to Kiefer Boulevard (MacKay & Somps 2010b:6). SMUD has determined that the following electrical facilities, shown on Exhibit 2-17, are required to serve the proposed development (see Section 2.3.4, "Electricity" and Exhibit 2-17 in Chapter 2, "Alternatives" for additional details):

- Use of a substation that SMUD already plans to build at the northwest intersection of Village Way and Rancho Cordova Parkway (within the Anatolia III Specific Plan).
- Construction of a new substation south of the SPA, but immediately adjacent to the southeast corner of the SPA. This substation site could range from 0.5 to 0.75 acre. SMUD has indicated that a typical substation is approximately 150 x 150 feet.
- Installation of a 69-kV electrical line along Grant Line Road from Kiefer Boulevard to Douglas Road.
- Installation of a 69-kV electrical line along Kiefer Boulevard that would connect the existing 69-kV electrical line at Grant Line Road to the substation that would be constructed at the southeast corner of the SPA.

Additional details regarding electrical service are contained in Appendix J (MacKay & Somps 2010b). SMUD would conduct a separate CEQA or NEPA analysis, if necessary, to analyze specific impacts and identify any required mitigation measures for construction and operation of its new off-site electrical facilities.

The on-site service lines would be sized to meet the project demands, and public utility easements would be dedicated for all underground facilities. Electrical facilities would be designed and constructed in accordance with SMUD's Standards and Rules and Regulations to serve the SPA concurrently with development phases, and the location of this infrastructure would be identified in the final project design. As part of the project approval process, the project applicants of all project phases would coordinate with and meet the requirements of SMUD regarding the extension and locations of on-site infrastructure (MacKay & Somps 2010b:7).

The proposed electrical-utility improvements would be required to comply with all existing City and SMUD SMUD's Standard and Rules and Regulations, and applicable requirements of the California Building Standards

Code. Because SMUD would meet the electrical demands of the No USACE Permit, Biological Impact Minimization, and Conceptual Strategy Alternatives and provide new electrical infrastructure to the SPA, this **direct** impact is **less than significant**. The **indirect** physical impacts of constructing these facilities are addressed throughout this EIR/EIS in connection with discussions of the impacts of overall site development. ***[Lesser]***

Mitigation Measure: No mitigation measures are required.

PP, ID

As shown on Table 3.16-6, buildout of the Proposed Project and Increased Development Alternatives would increase in electrical demand in the SMUD service area by 65.3 and 59.3 GWh per year, respectively, which would account for less than 1% of the total electrical demand in the SMUD service area. Therefore, the increase in demand for electricity would not be substantial in relation to existing electrical consumption in SMUD's service area.

The sizes and locations of facilities necessary to serve the project under the Proposed Project and Increased Development Alternatives would be the same as described above.

The proposed electrical-utility improvements would be required to comply with all existing City and SMUD SMUD's Standards and Rules and Regulations, and applicable requirements of the California Building Standard Code. Because SMUD would meet the electrical demands of the Proposed Project and Increased Development Alternatives and provide new electrical infrastructure to the SPA, this **direct** impact is **less than significant**. The **indirect** physical impacts of constructing these facilities are addressed throughout this EIR/EIS in connection with discussions of the impacts of overall site development.

Mitigation Measure: No mitigation measures are required.

IMPACT 3.16-6 **Increased Demand for Natural Gas and Infrastructure.** *Project implementation would increase the demand for natural gas and infrastructure and would include the extension of existing natural gas pipelines.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase the demand for natural gas and infrastructure. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

Implementation of the project would increase natural gas demand in the SPA. Natural gas service in Rancho Cordova is provided by PG&E through portions of PG&E's 46,000 miles of natural gas distribution pipelines. In 2009, Sacramento County received 315 MM therms of the natural gas from PG&E (CEC 2009c). The estimated increase in natural gas demands in the PG&E service area under each land use alternative are shown in Table 3.16-7. The increase in natural gas deliveries under all five action alternatives (1.7 - 2.2 MM therms) would account for less than 1% of the total natural gas deliveries in Sacramento County (315 MM therms). Therefore, the increase in demand for natural gas would not be substantial in relation to existing natural-gas consumption in PG&E's service area.

PG&E does not currently have gas service infrastructure on the SPA. Existing natural gas transmission mains in the vicinity of the SPA include: an 8-inch transmission main that extends east along Kiefer Boulevard from Sunrise Boulevard to Rancho Cordova Parkway, an 8-inch transmission main that extends north from Kiefer Boulevard along Rancho Cordova Parkway, and an 8-inch transmission main that extends north along Sunrise

Table 3.16-7 SunCreek Specific Plan Natural Gas Demands	
Alternative	**Natural Gas Demand (MM Therms)**
No USACE Permit	1.8
Proposed Project	1.9
Biological Impact Minimization	1.7
Conceptual Strategy	1.8
Increased Development	2.2
Notes: MM therms = million therms. Source: CEC 2004	

Boulevard from Kiefer Boulevard to Douglas Road (see Section 2.3.4, "Natural Gas" and Exhibit 2-18 in Chapter 2, "Alternatives" for additional details). Following consultation between the project applicants and PG&E, PG&E has provided the following information regarding future natural gas facilities in the vicinity of the SPA:

- PG&E has tentative plans to upgrade its existing 8-inch steel distribution line that runs along Sunrise Boulevard between Kiefer Boulevard and Douglas Road, to a larger transmission main that would operate at a higher pressure.

- PG&E plans to install a new distribution regulator station at the intersection of Kiefer Boulevard and Sunrise Boulevard.

The timing, size, and exact location of these future facilities has not been determined by PG&E at this time. PG&E has indicated that it may provide service to the SPA by extending service from one or more of its existing distribution lines along Kiefer Boulevard or Rancho Cordova Parkway. Service extensions from all three locations would occur within existing or planned roadways. PG&E would conduct a separate CEQA or NEPA analysis, if necessary, to analyze specific impacts and identify any required mitigation measures for construction and operation of its new off-site electrical facilities. Additional details regarding natural gas service are contained in Appendix J (MacKay & Somps 2010b).

It is anticipated that 8-inch transmission mains would be installed on-site in major roadways throughout the SPA. The on-site service lines would be sized to meet the project demands, and public utility easements would be dedicated for all underground facilities. PG&E would extend lines and construct facilities to serve the SPA concurrently with development phases, and the location of this infrastructure would be identified in the final project design. As part of the project approval process, the project applicants of all project phases would coordinate with and meet the requirements of PG&E regarding the extension and locations of on-site infrastructure (MacKay & Somps 2010b:7).

Because PG&E is able to provide natural gas and associated infrastructure to the SPA under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives, this impact would be considered **direct** and **less than significant**. The **indirect** physical impacts of constructing these facilities are addressed throughout this EIR/EIS in connection with discussions of the impacts of overall site development. ***[Similar]***

Mitigation Measure: No mitigation measures are required.

IMPACT 3.16-7 **Increased Demand for Communications Service and Infrastructure.** *Project implementation would increase the demand for communications service and infrastructure.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase demand for communications service and infrastructure. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

Currently, there is no existing communications infrastructure in the SPA. Frontier Communications and AT&T would provide communications service and associated infrastructure to the SPA and both service providers have infrastructure in the vicinity of the SPA. Frontier Communications has existing aerial telephone lines on Sunrise Boulevard and existing underground telephone lines that extend east from Sunrise Boulevard along Kiefer Boulevard and north from the intersection of Kiefer Boulevard and Rancho Cordova Boulevard to County Garden Drive. AT&T maintains overhead lines along Grant Line Road. To provide service to the SPA, it is anticipated that Frontier Communications would extend existing underground infrastructure within Kiefer Boulevard (MacKay & Somps 2010b:7).

Approximately 220 acres in the northeastern portion of the SPA is within the AT&T service area. AT&T has existing aerial telephone lines on Grant Line Road and it is anticipated these lines would be extended to serve the SPA (MacKay & Somps 2010b:7).

On the SPA, new infrastructure would generally be placed within the rights-of-way of on-site streets (see Section 2.3.4, "Communications" and Exhibit 2-19 in Chapter 2, "Alternatives" for additional details). Extension of infrastructure to serve the SPA would occur concurrently with development phases, and the location of this infrastructure would be identified in the final project design. As part of the project approval process, the project applicants of all project phases would coordinate with Frontier Communications and AT&T regarding the extension and locations of on-site infrastructure (MacKay & Somps 2010b:7).

Because Frontier Communications and AT&T would provide the necessary communications and associated infrastructure, this **direct** impact is **less than significant**. The **indirect** physical impacts of constructing these facilities are addressed throughout this EIR/EIS in connection with discussions of the impacts of overall site development. ***[Similar]***

Mitigation Measure: No mitigation measures are required.

IMPACT 3.16-8 **Increased Energy Demand.** *Project implementation would increase energy consumption during construction and operation.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase in energy consumption. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

Project implementation would increase the consumption of energy for the duration of the project's construction and operation in the form of electricity, natural gas, and petroleum products. The primary energy demands during construction would be associated with construction vehicle fueling over the 20-year construction period. Energy in the form of fuel and electricity would be consumed during this period by construction vehicles and equipment operating on the site, trucks delivering equipment and supplies to the site, and construction workers driving to and from the site. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the Sacramento region. Therefore, it is expected that construction fuel consumption associated with the project would not be inefficient, wasteful, or unnecessary. Furthermore, other features of project construction, such as erosion and noise control through limitations on equipment use as described elsewhere in this EIR/EIS may further reduce energy use.

Energy would also be used for project operation related to heating and cooling systems, lighting, appliances, and other miscellaneous energy requirements. The project would comply with Building Energy Efficiency Standards included in Title 24 of the California Code of Regulations, including the 2010 California Green Building Code (Part 11 of Title 24). This code was developed to enhance the design and construction of buildings and sustainable construction practices through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental air quality. It is the intent of this code to encourage green buildings to achieve to achieve more than a 15% reduction in energy usage when compared to existing standards.

Development in the SPA would include energy conserving design and materials where feasible. The following design guidelines incorporated into the project identify energy conservation measures that would minimize inefficient energy usage and promote conservation of energy resources:

- incorporating design measures such as natural heating and/or cooling, sun and wind exposure and orientation, and other solar energy opportunities that improve energy efficiency; and

- using energy-efficient outdoor lighting fixtures and lamps, such as high-pressure sodium, metal halide, low-pressure sodium, hard-wired compact fluorescent, or other lighting technology that is of equal or greater efficiency.

Energy consumption would also be associated with vehicle trips resulting from residents and workers commuting on and off the SPA to jobs and commercial services. The project would provide a compact mixed-use development that facilitates walking or cycling to work, stores, restaurants, and parks, reducing the need to travel outside the SPA, especially for day-to-day needs and services. An Air Quality Mitigation Plan has been prepared that identifies measures that are intended to minimize air quality impacts associated with the project's vehicle trip generation (see Section 3.2, "Air Quality" and Appendix M). In addition to reducing the project's air quality impacts, these measures would also reduce the project's overall energy consumption.

Because the project would incorporate the design measures described above, comply with Building Energy Efficiency Standards (Title 24 of the California Code of Regulations), and implement an Air Quality Mitigation Plan, the project would not be expected to cause the inefficient, wasteful, or unnecessary consumption of energy, and this **direct** impact is considered **less than significant**. The **indirect** impacts associated with consumption of energy (e.g., construction of additional power generation plants and impacts associated therewith such as increased consumption of water at the plants, loss of biological habitat or cultural resources as result of power plant construction) are **uncertain and too speculative for meaningful consideration** and are too far removed in place and time from the project to allow for a meaningful evaluation of impacts. Therefore, it would be too speculative to reach an impact conclusion regarding these indirect impacts. ***[Similar]***

Mitigation Measure: No mitigation measures are required.

3.16.4 RESIDUAL SIGNIFICANT IMPACTS

Impacts associated with increased temporary and short-term and long-term generation of solid waste and increased demands for electrical, natural gas, and communications service and infrastructure are considered less than significant. Therefore, there would be no residually significant impacts with respect to these issue areas.

Implementation of Mitigation Measures 3.16-1 and 3.16-2 contained in this section would reduce direct impacts associated with increased demand for on-site wastewater collection and conveyance facilities to a less-than-significant level. However, because there is a relationship between the project and the need for expansion of the SRCSD regional wastewater conveyance system and the SRWTP, implementation of the project would contribute indirectly and incrementally to significant and unavoidable impacts related to air quality, agricultural resources, biological resources, cultural resources, land use, and noise that were identified in the Interceptor Master Plan 2000 EIR and significant and unavoidable impacts related to air quality that were identified in the SRCSD 2020 Master Plan EIR. In addition, interim sewer service to the SPA could be provided by the Mather Interceptor and project implementation could contribute indirectly and incrementally to significant and unavoidable impacts on noise and hazards that were identified in the Mather Interceptor Supplemental EIR.

3.16.5 CUMULATIVE IMPACTS

Future development in Sacramento County would increase the demand for utilities in the region. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public utilities within their jurisdictional boundaries. The necessary public utilities would be provided to the SPA by SRCSD, SMUD, PG&E, Frontier Communications, and AT&T. The related projects within Rancho Cordova would rely on similar service providers. Related projects outside Rancho Cordova would rely on a variety of service providers, within Sacramento County, some of which could include SRCSD, PG&E, Frontier Communications, and AT&T.

WASTEWATER CONVEYANCE FACILITIES

The SPA is presently not served by municipal wastewater collection and treatment systems. The sewer study prepared for the project (MacKay & Somps 2009) addressed the viability of providing sewer service to the SPA, identified on- and off-site facility needs and design, and evaluated designs for consistency with existing interceptor sewer master plans.

The project would construct SRCSD's Section 5 of LCI that is within the SPA. Section 5 of the LCI would be sized to accommodate project-related wastewater flows as well as the upstream developments of the related projects, including Anatolia III, Cordova Hills, Arista Del Sol, Arboretum, and portions of the Ranch at Sunridge (MacKay & Somps 2009:13). The total sewer flow from the SPA and these upstream developments was determined to be 6.39 mgd peak wet-weather flow and 27.74 mgd peak wet-weather flow, respectively, for a total of 34.85 mgd peak wet-weather flow (MacKay & Somps 2009:8, and MacKay & Somps 2010a:4).

Impacts resulting from construction of the SRCSD regional wastewater conveyance system were addressed in the EIR for the SRCSD Interceptor Master Plan 2000. Construction of the SRCSD regional wastewater conveyance system would result in several significant environmental impacts, most of which would be reduced to a less-than-significant level through implementation of mitigation identified in the EIR for the Interceptor Master Plan 2000. Impacts related to air quality, agricultural resources, biological resources, cultural resources, land use, and noise would remain significant and unavoidable after implementation of all feasible mitigation measures, because there are no feasible mitigation measures to fully reduce the impacts to a less-than-significant level. These impacts would also occur without development of the project and the related projects because the SRCSD wastewater conveyance system is required to serve regional development and would be needed whether or not the project is implemented.

Because the Mather Interceptor could provide interim sewer service to the SPA, including the related projects (upstream developments) of Anatolia III, Cordova Hills, Arista Del Sol, Arboretum, and portions of the Ranch at Sunridge, as well as providing interim sewer service to the Aerojet area, including the Rio del Oro Specific Plan area, and long-term sewer service to the Villages at Zinfandel located northeast of the former Mather Air Force Base, development of the SPA could contribute to the environmental impacts of the construction and operation of the Mather Interceptor. Construction of the SRCSD Mather Interceptor would result in several environmental impacts, most of which would be reduced to a less-than-significant level through implementation of mitigation identified in the Supplemental EIR for the Mather Interceptor. Impacts related to noise and hazards would remain significant and unavoidable after implementation of all feasible mitigation measures, because there are no feasible mitigation measures to fully reduce the impacts to a less-than-significant level. These impacts would also occur without development of the project because the Mather Interceptor is required to provide sewer service to the Aerojet and Mather Air Force Base areas and would be needed whether or not the project is implemented. Therefore, the project and related projects would contribute to the direct and indirect significant impacts identified by SRCSD in its Interceptor Master Plan 2000 EIR that would be associated with the future construction of the regional wastewater conveyance system to serve the project and other regional development. The project would result in a cumulatively considerable incremental contribution to the cumulatively significant impact associated with increased demand for the SRCSD regional wastewater conveyance system.

In addition, the project and the related projects that would rely on the Mather Interceptor for sewer service would contribute to the indirect significant impacts identified by SRCSD in its Mather Interceptor Supplemental EIR that would be associated with the Mather Interceptor. Therefore, the project could result in a cumulatively considerable incremental contribution to the cumulatively significant impact associated with the construction of the Mather Interceptor.

WASTEWATER TREATMENT FACILITIES

Depending on the project alternative chosen for development, approximately 2.84 to 3.21 mgd of average dry-weather flow and 5.96 to 6.89 mgd peak wet-weather flow would be generated within the SRCSD service area (MacKay & Somps 2011). The wastewater flows generated by the project have been planned for in the SRCSD Master Plan 2000. The master plan determined that the SPA as wells as several of the related projects (the Anatolia III subdivision, the southern portion of the Ranch at Sunridge, and the northern portion of the Arboretum Specific Plan) would generate an average dry-weather flow of 7.40 mgd and a peak wet-weather flow of 16.54 mgd (SRCSD 2003a:Table 3-1).

Impacts resulting from expansion of the SRWTP were addressed in the EIR for the SRCSD 2020 Master Plan. Expansion of the SRWTP would result in several significant environmental impacts, most of which would be reduced to a less-than-significant level through implementation of mitigation identified in the EIR for the SRCSD 2020 Master Plan. The only significant and unavoidable impact related to the treatment plant that was identified would be from short-term increases in NO_X during construction of SRWTP facilities. This impact would also occur without development of the project because the expansion of the SRWTP is required to serve regional development and would be needed whether or not the project is implemented. The adequacy of the EIR for the 2020 Master Plan is being litigated (see Section 3.16.1, "Affected Environment," above for additional information) and there is a potential that new significant impacts to water quality or other resources could be identified if the EIR for the SRWTP is found inadequate and impacts are re-analyzed. However, it is too speculative for meaningful consideration to draw any such conclusion at this point.

Therefore, the project and related projects would contribute to the direct and indirect significant impacts identified by SRCSD in its 2020 Master Plan that would be associated with the future expansion of the SRWTP to serve the project and other regional development. The project would result in a cumulatively considerable incremental contribution to the cumulatively significant impact associated with increased demand for SRWTP wastewater treatment facilities.

SOLID WASTE

Operation of the project would incrementally increase generation of solid waste throughout buildout in the year 2032. Depending on the project alternative chosen for development, approximately 13.0 to 26.5 tpd of solid waste would be generated for disposal at Kiefer Landfill. The landfill is permitted to accept 10,800 maximum tpd of solid waste and the project would contribute less than 1% of the maximum tpd that could be received at the landfill. The related projects vary in size and have different amounts of residential and commercial development (which have different solid waste generation rates), and therefore also would be expected to increase the generation of solid waste within the Kiefer Landfill service area. The total increase is unknown, but is anticipated to be several hundred tons per day. Currently, the landfill is operating below permitted capacity, and the closure date of the Kiefer Landfill is anticipated to be approximately 2064 (CIWMB 2010b). Because the Kiefer Landfill has adequate capacity to serve the project and the related projects in its service area, the project-related impact from increased generation of solid waste is less than significant and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to solid waste.

ELECTRICITY

The project and cumulative development of the related projects would increase the demand for electricity and infrastructure. Electrical service in Rancho Cordova is provided by SMUD and would provide electrical service for the project and related projects within its service area. In 2009, SMUD generated approximately 10,595 GWh of electricity within its service area (CEC 2009a). Depending on the land use alternative chosen for development, the project-specific electrical demand in the SMUD service area would increase by 42.3 to 65.3 GWh per year, which is less than 1% of the total electrical demand in the SMUD service area (10,595 GWh). The related projects vary in size and have different amounts of residential and commercial development, and therefore also would be expected to increase the demand for electricity and infrastructure within SMUD's service area. The total increase is unknown; however, SMUD has stated that is has capacity to serve the project. Based on the percentage of total regional demand, it is anticipated that SMUD would have the capacity to provide service to the related projects as well. Therefore, the project-related impact from increased demand for electrical service is less than significant and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to increased demand for electrical service.

NATURAL GAS

The project and cumulative development of the related projects would increase the demand for natural gas and infrastructure. PG&E is the natural gas supplier for Rancho Cordova and would provide natural gas service for the project and related projects within its service area. In 2009, PG&E delivered approximately 4,572 MM therms of natural gas throughout its service area (CEC 2009c). Of this total, Sacramento County received 315 MM therms, which accounted for 0.07% of the natural gas deliveries within the PG&E service area. CEC predicts that natural gas consumption between 2009 and 2018 will decrease with the continued implementation of energy conservation measures (Table 3.16-3).

Depending on the land use alternative chosen, the project-specific natural gas demand would increase by 1.7 to 2.2 MM therms within the PG&E service area, which would account for less than 1% of the total natural gas deliveries in Sacramento County (315 MM therms) and PG&E's service area (4,572 MM therms) as a whole. The related projects vary in size and have different amounts of residential and commercial development, and therefore also would be expected to increase the demand for natural gas and infrastructure within PG&Es service area. The total increase is unknown; however, PG&E has stated that is has capacity to serve the project. Based on the percentage of total regional demand, it is anticipated that PG&E would have the capacity to provide service to the related projects as well. Therefore, the project-related impact from increased demand for natural gas is less than significant and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to increased demand for natural gas.

COMMUNICATIONS

Frontier Communications and AT&T would provide communications service and associated infrastructure (i.e., pole-mounted telephone lines or underground telephone lines) to the SPA and the related projects and both service providers have existing infrastructure in the vicinity of the SPA and the related projects (MacKay & Somps 2010b:6). Frontier Communications and AT&T would extend this infrastructure to the SPA and the related projects to provide the necessary communications services without affecting service to its existing customers. The project-related impact from increased demand for communications and cable television services is less than significant, and it is anticipated that impacts from the related projects would also be less than significant, because both companies have the capacity to install lines that would carry their communication signals. Therefore, related projects and other development in the region are not considered to result in a cumulatively considerable impact related to communications, and the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact.

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3.17 WATER SUPPLY

3.17.1 AFFECTED ENVIRONMENT

Presently, there are no public water supply facilities on the SPA. The Sacramento County Water Agency (SCWA) would provide water supplies to the SPA through its Zone 40 conjunctive-use water supply system. The SPA is identified as a subarea within Zone 40 known as the North Service Area (NSA). The water supplies necessary to serve the NSA area, including the SPA, were considered and evaluated as part of the *2002 Zone 40 Water Supply Master Plan EIR* (Zone 40 WSMP EIR) (SCWA 2004) and specifically in the *Revised Sunrise Douglas Community Plan/Sunridge Specific Plan Long-Term Water Supply Plan Draft EIR* (AECOM 2011). These documents are hereby incorporated by reference into this DEIR/DEIS and relevant portions of these documents are summarized in this section as they relate to the SunCreek Specific Plan project.

SCWA would provide water service to the SPA in three phases. Phase 1 water service would involve using available groundwater supplies from the North Vineyard Well Field (NVWF) and the Mather Housing groundwater system until NSA water demands approach the capacity of these groundwater wells. Phase 2 water service would entail using available SCWA groundwater supplies and surface water delivered by the North Service Area Pipeline (NSAP). Phase 3 water service would not occur until the water demands of the NSA begin to approach the capacity of the NSAP. At that time, SCWA anticipates that the Vineyard Surface Water Treatment Plant (WTP), NVWF, and Anatolia WTP would be expanded to their full capacity to meet water demands of the NSA, including the SPA. (MacKay & Somps 2011a:6) Furthermore, three groundwater wells and a water treatment plant on the SunCreek SPA are proposed as part of this project in order to provide an additional source of water supply (see Exhibit 2-8 in Chapter 2, "Alternatives").

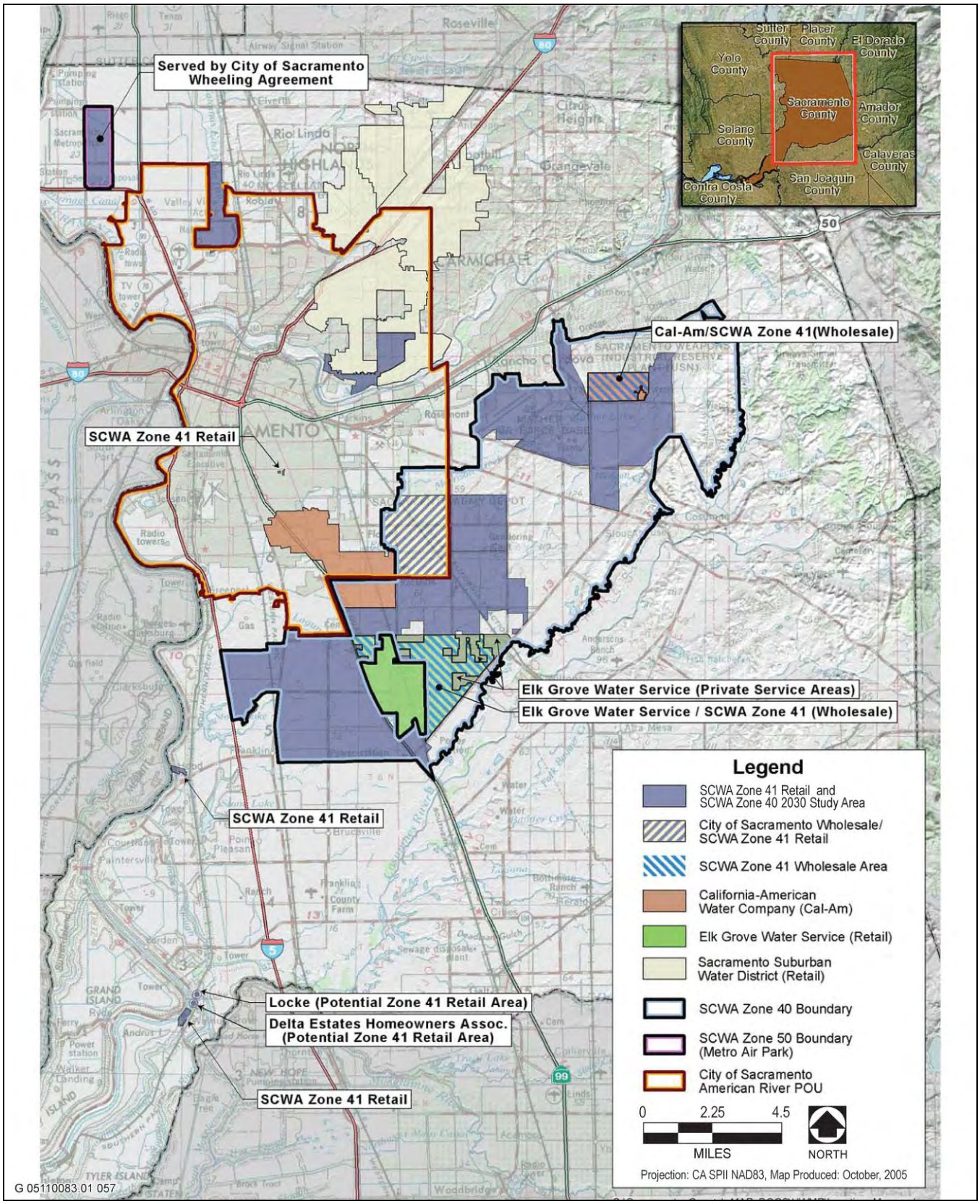
The following section identifies the existing and projected water demands for SCWA Zone 40, including the NSA; identifies available SCWA Zone 40 surface and groundwater supplies to meet those demands; and discusses the reasonable likelihood of water supplies to meet project demands. Impacts are evaluated in relation to the increased demand for potable and nonpotable water associated with the project and actions needed to provide the service that could potentially lead to physical environmental effects.

SACRAMENTO COUNTY WATER AGENCY

SCWA was created in 1952 for the purpose of controlling and conserving storm, flood, and other surface waters for any beneficial use for lands and inhabitants and producing, storing, transmitting, and distributing groundwater (SCWA 2005:1-2). The SCWA Board of Directors created zones within the agency to finance, construct, acquire, reconstruct, maintain, operate, extend, repair, or otherwise improve any work for common benefit to each zone. There are currently eight zones within the SCWA: 11A, 11B, 11C, 12, 13, 40, 41, and 50.

The City of Rancho Cordova and a portion of the City's planning area are located within SCWA's Zone 40. Zone 40 was created in 1985 as a special benefit zone to supplement available groundwater supplies to support new and projected development within the zone and to establish the framework for a conjunctive use program would utilize both surface water and underlying groundwater (SCWA 2005:1-2). Zone 40 consists of approximately 86,000 acres of agricultural, residential, and industrial land in central Sacramento County (Exhibit 3.17-1). Zone 40 is bordered by the County's Urban Services Boundary on the northeast, east, and southeast. The northern edge of the 100-year floodplain of Deer Creek is also located to the east and southeast. Interstate 5 forms the western boundary and the Douglas Road and Grant Line Road areas form the southern boundary (SCWA 2004:3-1).

There are three primary planning documents that work together to form the planning basis for the Zone 40 service area: the *2005 Zone 40 Water Supply Master Plan* (Zone 40 WSMP) (SCWA 2005), the *2010 Zone 41 Urban Water Management Plan* (Zone 41 UWMP) (SCWA 2011a), and the *Zone 40 Water System Infrastructure Plan* (Zone 40 WSIP) (November 2006). These documents are briefly summarized below.



Source: SCWA 2005; Adapted by AECOM 2010

Zone 40 and 41 Service Areas, and 2030 Study Area **Exhibit 3.17-1**

SCWA Water Supply Master Plan

SCWA is a signatory to the Water Forum Agreement (WFA), which is a plan that provides for the effective long-term management of the Sacramento region's water resources. The WFA was formulated based on the two coequal objectives of the Water Forum: (1) provide a reliable and safe water supply for the region's economic health and planned development through the year 2030; and (2) preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River (Sacramento City-County Office of Metropolitan Water Planning 1999, Water Forum 2000).

As a signatory to the WFA, SCWA undertook a comprehensive update of its water supply planning process in response to the requirements of the WFA through the Zone 40 WSMP, which was adopted in February 2005. SCWA has agreed to ensure that a series of actions and commitments related to surface-water diversions, dry-year supply, water conservation, and groundwater management—necessary steps to achieve WFA objectives—are integrated into future growth and water planning activities in its service area. The Zone 40 WSMP provides a flexible plan of water management options that can be implemented and modified if conditions that affect the availability and feasibility of water supply sources change in the future. The goal of the Zone 40 WSMP is to carry out a conjunctive-use program, which is defined as the coordinated management of surface water and groundwater supplies to maximize the yield of available water resources. The conjunctive-use program for Zone 40 includes the use of groundwater, surface water, remediated water, and recycled water supplies. It also includes a financing program for the construction of a new surface-water diversion structure; a surface-water treatment plant; water conveyance pipelines; and groundwater extraction, treatment, and distribution facilities.

The Zone 40 WSMP evaluates several options for facilities to deliver surface water and groundwater to development to a subarea within Zone 40 known as the 2030 Study Area, as well as the financing mechanisms to provide water to the 2030 Study Area. (City of Rancho Cordova 2006a:18). The 2030 Study Area encompasses approximately 46,600 acres (including portions of the cities of Elk Grove and Rancho Cordova, and the SPA) where development of industrial, commercial, office, and residential land uses is expected to occur and where demand for water is expected to be concentrated during the planning horizon of the WSMP (i.e., 2030) (see Exhibit 3.17-1). (City of Rancho Cordova 2006a:17).

2010 Zone 41 Urban Water Management Plan

The Zone 41 UWMP was prepared by SCWA and adopted by the SCWA Board of Directors on December 6, 2005. The plan addresses water supply and demand issues, water supply reliability, water conservation, water shortage contingencies, and recycled-water usage for the areas within Sacramento County where Zone 41 provides retail water services, including the Zone 40 service area and other areas outside of Zone 40 where Zone 41 has contracts to provide water (e.g., Zone 50, Sacramento Suburban Water District). Zone 41 is responsible for the operations and maintenance of all the water supply facilities within the defined service area and retails and wholesales water to its defined service area and to agencies where agreements are in place to purchase water from SCWA. The water demands for the Sunrise Douglas Community Plan/Sunridge Specific Plan (SDCP/SRSP) project (which include the SPA), which were identified in the Zone 40 WSMP, are included in the Zone 41 UWMP.

Because SCWA's conjunctive-use groundwater program would be implemented only within Zone 40, the Zone 41 UWMP presents information about projected water supply and demand separately for areas within Zone 40 and areas outside of Zone 40. However, the Zone 41 UWMP does not specifically describe how projected future water supplies would be allocated within the Zone 40 region (e.g., how water would be allocated to the City of Rancho Cordova).

SCWA is currently preparing its 2010 Zone 41 UWMP, which will include new requirements for water conservation as set forth in the Water Conservation Act of 2009 (Senate Billx7-7). It is anticipated that the 2010 Zone 41 UWMP will be an updated and enhanced version of SCWA's 2005 Zone 41 UWMP.

SCWA anticipates the 2010 Zone 41 UWMP will be submitted to the California Department of Water Resources (DWR) by July 2011.

Zone 40 Water System Infrastructure Plan

As a follow up to the 2005 Zone 40 WSMP, SCWA prepared the Zone 40 WSIP, which addresses how identified 2030 water supplies addressed in both the Zone 41 UWMP and the Zone 40 WSMP would be allocated among users within its service area. The purposes of this WSIP are to describe and quantify the facilities necessary to extract, treat, and convey groundwater to the Zone 40 service area; to provide water purchased from the City of Sacramento to the portion of Zone 40 within the City of Sacramento American River Place of Use (POU); to convey surface water for treatment at the Vineyard Surface WTP; and to deliver wholesale treated groundwater and surface water to retail water purveyors outside of the Zone 40 service area (SCWA 2006:1-3).

The WSIP provides the most up-to-date information on Zone 40's water supplies, demands, and infrastructure; provides project-level detail that is necessary for implementation of the preferred pipeline alignment alternatives that were identified in the 2005 Zone 40 WSMP; and it fills in the gaps of associated smaller infrastructure requirements, including a description of facility construction and phasing as well as operational requirements from existing conditions through ultimate buildout of the water system.

Existing and Projected Water Demands for SCWA Zone 40

As part of the Zone 40 WSMP, water demand was calculated for various land uses within the 2030 Study Area. As discussed above, the 2030 Study Area includes areas where development of industrial, commercial, office, and residential land uses is expected to occur and where demand for water is expected to be concentrated during the planning horizon of the Zone 40 WSMP (i.e., 2030). (City of Rancho Cordova 2006a:17).

Land use information for the Zone 40 2030 Study Area included tentative maps, specific plans, community plans, and general plans. The unit water demand factors are derived from the unit water demands developed for the 1995 Zone 40 Master Plan Update and the build-out water demands used in the Water Forum (SCWA 2006:3-2). The year 2000 land use demand factors assume a 12% level of water conservation and the 2030 land use demand factors reflect the Water Forum's 25.6% conservation demand reduction goal (SCWA 2005:2-2). Table 3.17-1 identifies existing and projected land uses and water demands for the years 2000 and 2030 within SCWA's Zone 40 2030 Study Area.

The Zone 40 WSIP was prepared in 2006 to provide the most up-to-date information on Zone 40's water supplies, demands, and infrastructure. The Zone 40 WSIP divides the Zone 40 2030 Study Area into three major subareas for planning purposes. From east to west, these areas are identified as: the North Service Area (NSA), the Central Service Area (CSA), and the South Service Area (SSA), respectively. The discussion that follows summarizes information contained within the WSIP.

The NSA is located in the northern portion of Zone 40 and consists of a portion of the City of Rancho Cordova's planning area and the areas identified as Mather Field, Sunrise Corridor, Sunrise Douglas Community Plan (which includes the SPA), and Rio del Oro (including the California-American Water Company [Cal-Am] portion of the planning area where wholesale Zone 40 water supplies would be delivered) (SCWA 2006:2-5).

The CSA is located in the central portion of Zone 40 and consists of the areas identified as North Vineyard Station, Florin Vineyard, Vineyard Springs, East Elk Grove, and the Elk Grove Triangle. The CSA also includes the Vineyard Surface WTP (SCWA 2006:2-12).

The SSA is located in the southern portion of Zone 40 and consists of the areas identified as Laguna, Laguna West, Lakeside, Laguna Stonelake, East Franklin, Laguna Ridge, the Elk Grove Promenade, Sterling Meadows, and the Southeast Study Area (SCWA 2006:2-15).

Table 3.17-1
Current and Projected Water Demands for SCWA Zone 40

Land Use Category	Year 2000 Land Use and Water Demand			Year 2030 Land Use and Water Demand		
	Unit Water Demand Factors (af/ac/yr)	Land Use (acres)[2]	Water Demand (afy)	Unit Water Demand Factors (af/ac/yr)	Land Use (acres)[2]	Water Demand (afy)
Rural Estates	1.57	304	477	1.33	718	955
Single-Family	3.40	3,387	11,516	2.89	14,867	42,966
Multifamily—Low Density	4.36	285	1,243	3.70	1,173	4,340
Multifamily—High Density	4.85	0	0	4.12	0	0
Commercial	3.24	254	823	2.75	1,042	2,866
Industrial	3.19	1,257	4,010	2.71	2,395	6,490
Industrial—Unutilized	0.00	0	0	0.00	1,463	0
Public	1.22	692	844	1.04	4,349	4,523
Public Recreation	4.08	400	1,632	3.46	2,865	9,913
Mixed Land Use	2.95	840	2,478	2.51	12,985	32,592
Developed Land Use		**7,419**	**23,023**		**41,857**	**104,645**
Right-of-Way	0.25	726	182	0.21	2,526	530
Water Use Subtotal			**23,205**			**105,175**
Water System Losses (7.5%)			1,740			7,888
Zone 40 Water Production			**24,945**			**113,063**
Urban and rural areas not currently being served by Zone 40		5,127	NA		0	NA
Vacant		27,583	NA		2,225	NA
Agriculture[1]		5,766	NA		12	NA
Total Land and Water Use		**46,621**	**24,945**		**46,620**	**113,063**

Notes: af/ac/yr = acre-feet per acre per year; afy = acre-feet per year; NA = not applicable; SCWA = Sacramento County Water Agency.

[1] SCWA Zone 40 does not supply water to meet agricultural demand within its Zone 40 service area. Agricultural water demand within Zone 40 would be in addition to urban water demand.

[2] Minor discrepancies in acreage totals are a result of rounding in land use data.

Source: SCWA 2005:2-5

As shown in Table 3.17-2, the 2030 water demands are estimated in the Zone 40 WSIP to be 103,710 acre-feet per year (afy) within SCWA's Zone 40 2030 Study Area. This decrease in water demands from the previously prepared Zone 40 WSMP can be attributed to refined land use information for each service area (SCWA 2006:3-5).

North Service Area

The NSA includes areas identified as the Sunrise Corridor, Sunrise Douglas Community Plan, Mather Field, Rio del Oro within Zone 40, and Rio del Oro within Cal-Am where wholesale of Zone 40 water supplies would be delivered (City of Rancho Cordova 2006a:32; SCWA 2006:2-5). As shown on Table 3.17-3, the current estimated water demand in the NSA is 2,404 afy and the total estimated water demand at full build-out of the NSA (year 2030) is anticipated to be 33,382 afy. The SPA is located within the Sunrise Douglas Community Plan area and SCWA estimated that the water supply demand for the SPA would be 3,176 acre-feet per year (afy) by 2030 (SCWA 2011b:8). However, the water supply assessment (WSA) prepared by SCWA for the SunCreek Specific Plan Project (attached as Appendix V) estimated that water supply demand for the Proposed Project Alternative would be 3,058 afy (see Impact 3.15-1).

Table 3.17-2
Current and Projected Water Demand by Zone 40 2030 Study Area Service Area[1]

Demand Region	Existing Demand		Build-Out Demand	
	Annual Average Demand (afy)	Maximum Day Demand (mgd)	Annual Average Demand (afy)	Maximum Day Demand (mgd)
North Service Area	2,404	4	32,982	59
South Service Area	8,115	14	39,095	70
Central Service Area	14,288	26	31,633	56
Total Demand	**24,807**	**44**	**103,710**	**185**

Note: afy = acre-feet per year; mgd = million gallons per day

[1] The total current and projected water demands exclude 4,400 afy of recycled water demand.

Source: SCWA 2006:3-3

Table 3.17-3
Existing and Projected Future Water Supply and Demand in the North Service Area

Demand Region	Existing Demand		Build-Out Demand	
	Annual Average Demand (afy)	Maximum Day Demand (mgd)	Annual Average Demand (afy)	Maximum Day Demand (mgd)
Mather Field	1,327	2.37	7,624	13.61
Rio del Oro – Cal-Am[1]	-	-	3,917	6.99
Rio del Oro – Zone 40[1]	-	-	4,920	8.79
Sunrise Corridor	1,077	1.92	1,077	1.92
Sunrise Douglas Community Plan[2]	-	-	15,844	27.66
Total Demand	**2,404**	**4.29**	**33,382**	**58.97**

Note: afy = acre-feet per year; mgd = million gallons per day

[1] Water supplies for Rio del Oro would be met with 8,900 afy of groundwater extraction and treatment (GET)–Remediated Water.

[2] The SPA is located within the Sunrise Douglas Community Plan area. The water supply demand for the SPA was estimated to be 3,176 afy by 2030; however, the WSA determined the actual water supply demand for the project site would be 3,058 afy.

Sources: City of Rancho Cordova 2006a: 35; SCWA 2011b:8

Groundwater supplies for the NSA are currently provided by the NVWF and Mather Housing groundwater system. The NVWF is located along both sides of Excelsior Road, between Florin Road and Elder Creek Road. This well field would provide for the extraction of up to 10,000 afy of groundwater at buildout to serve existing or proposed development within Zone 40 service area, including the NSA, on a first come, first served basis. These first three NVWF wells are operational and are capable of producing approximately 3,600 afy. SCWA has designated one of the three wells as an emergency backup well to increase water supply availability and reliability.

The Mather Housing groundwater system is located west of Eagles Nest Road and southwest of Douglas Road and currently serves development in and around Mather Field as well as development along the Sunrise Boulevard corridor. The Mather Housing groundwater system consists of two groundwater wells, a 6.0-million gallon per day (mgd) groundwater treatment plant, and one 0.5-mgd storage tank. The Mather Housing groundwater system is capable of producing 6,722 afy (SCWA 2006:4-7).

To meet water demands of the NSA, including the SPA, SCWA intends to construct three groundwater wells, the 4.0-mdg SunCreek WTP, a 1.5-mgd storage tank, and booster pump stations in the southern portion of the SPA east of Sunrise Boulevard and south of Kiefer Boulevard (see Exhibit 2-8 in Chapter 2, "Alternatives"). The three groundwater wells, one of which would serve as a back-up, could extract up to 4,484 afy of groundwater. The SunCreek groundwater wells and water treatment plant may be used only in the summer months as a peaking and backup facility once sufficient surface water is available to serve the NSA. (SCWA 2006:4-9 and 6-11).

As shown in Table 3.17-4, the estimated long-term average annual and maximum annual groundwater supply for the NSA are 10,601 afy (9.5 mgd) and 21,202 afy (19.0 mgd), respectively.

Table 3.17-4
Existing and Proposed Groundwater Supplies for NSA

Component of Water Supply	Average Annual Supply (afy)	Maximum Annual Supply (afy)	Average-Day Supply (mdg)	Maximum-Day Supply (mgd)
North Vineyard Well Field	5,000	10,000	4.5	9.0
Mather Housing Well Field	3,361	6,722	3.0	6.0
SunCreek Well Field	2,240	4,480	2.0	4.0
Total Supplies	**10,601**	**21,202**	**9.5**	**19.0**

Notes: NSA = North Service Area; afy = acre-feet per year; mgd = million gallons per day
Sources: SCWA 2006:7-2, MacKay and Somps 2011a

Surface water would be diverted to the NSA from the Sacramento River via the Freeport Regional Water Project (FRWP) facilities and conveyed to the Vineyard Surface WTP for treatment. Treated water would then be conveyed to the NSA through the NSAP (see "Water Conveyance and Treatment Facilities," below). In the long term, SCWA anticipates the majority of water demands in the NSA would be met with surface water. However, the year-to-year mix of surface and groundwater varies depending on a large number of variables and SCWA would adjust the amount of groundwater and surface water as necessary to meet the demands of the NSA as part of its conjunctive use program (described further below) (MacKay & Somps 2011a:8, SCWA 2006:4-31).

Water Supply Sources for SCWA Zone 40

The Water Forum has defined conjunctive use as "the planned joint use of surface and groundwater to improve overall water supply reliability." Since its formation, Zone 40 has had as its goal the development of a conjunctive-use water supply system. As such, the areas inside Zone 40 are served conjunctively with groundwater (pumped from the Central Basin), surface water, and recycled water. Available surface-water supplies would be maximized in wet years; groundwater supplies would be maximized in dry years through increased pumping at SCWA's groundwater facilities. In all consecutive dry years, water-demand management programs would be implemented to a higher degree (e.g., greater conservation, reduced outdoor use) to reduce the potential impacts from increased extraction of groundwater.

Table 3.17-5 summarizes SCWA's Zone 40 current and planned water supplies for normal water years (i.e., years when rainfall and water supply represent the long-term average). The following discussion identifies and characterizes the water supply sources that will be used to meet projected demands within Zone 40.

Surface-Water Supplies for SCWA Zone 40

SCWA surface-water supplies come from the American River. The components of the surface-water supply in Zone 40 are shown in Table 3.17-6 and described below. SCWA's total estimated long-term average annual supply of surface water (existing entitlements and proposed future entitlements) is 75,751 afy.

Table 3.17-5 Water Supplies for SCWA Zone 40[1]	
Component of Water Supply	**Average Annual Supply (afy)**
Surface Water[2]	75,751
Groundwater	40,900
Recycled Water	4,400
Total Supplies	**121,051**

Notes: afy = acre-feet per year; SCWA = Sacramento County Water Agency

[1] This table presents Zone 40 water supply sources only. It does not account for any available GET–Remediated Water supply that would be specifically provided to the Rio del Oro Specific Plan area.

[2] The total estimated average annual supply of surface water is the sum of existing entitlements and proposed future entitlements.

Sources: SCWA 2005: 5-6, 2005b

Table 3.17-6 Existing and Proposed Supplies of Surface Water for SCWA Zone 40				
Component	**Water Source**	**Existing or Proposed Future Supply**	**Entitlement Amount (afy)**	**Estimated Long-Term Average Supply (afy)[1]**
SMUD Assignment	American River	Existing	30,000	26,000
"Fazio" Water (PL 101-514)	American River	Existing	15,000	13,551
Appropriative Water Supplies (Permit 21209)	American River	Existing	44,800	21,700
Other Transfer-Water Supplies	American River	Planned[2]	Undetermined	5,200
City of Sacramento Wholesale Water Agreement to Supply that Portion of Zone 40 within the City's American River POU	American River	Existing	9,300	9,300
Total Surface Water				**75,751**

Notes: SCWA = Sacramento County Water Agency; SMUD = Sacramento Municipal Utility District; afy = acre-feet per year; PL = Public Law; POU = Place of Use.

[1] The estimated average long-term supply is the projected water supply available based on an average of wet, normal, and dry water years.

[2] Per SCWA, these agreements are currently being negotiated.

Sources: SCWA 2005:5-3, 5-6

SMUD Assignment

Under the terms of a three-party agreement (SCWA, Sacramento Municipal Utility District [SMUD], and the City of Sacramento), the City of Sacramento provides surface water to SMUD for use at two of SMUD's cogeneration facilities. SMUD, in turn, provides 15,000 afy of its CVP contract water to SCWA for municipal and industrial use.

Based on SMUD's purveyor-specific agreements under the WFA, a second 15,000 afy of surface water is provided to SCWA for municipal and industrial uses, and to enable SCWA to construct groundwater facilities to provide water needed to meet SMUD's demand of up to 10,000 afy at its Rancho Seco cogeneration facility during water shortages in dry years. The amount of water required by SMUD is based on hydrologic year type and the amount of cut back SMUD may experience on their remaining CVP contract. Delivery of this water occurs through the Folsom South Canal (SCWA 2006:3-7).

SMUD's dry year demands are determined based on the frequency of dry years when additional water supplies are required to meet demands. Modeling studies conducted for the FRWP indicated that the frequency of SMUD demand is low, occurring in only 20% of years, with the need for the full 10,000 afy occurring in only 3% of years. SCWA expects that SMUD's dry year demands can be met through the unused portions of the SMUD CVP assignment (through 2030) (SCWA 2006:3-7, 3-8).

Central Valley Project Water (Public Law 101-514 ["Fazio Water"])

SCWA executed a CVP water-service contract pursuant to Public Law 101-514 (referred to as "Fazio water") that provides a permanent water supply of 22,000 afy, with 15,000 afy allocated to SCWA and 7,000 afy allocated to the City of Folsom. SCWA began taking delivery of the Fazio water in 1999 at the City of Sacramento's Franklin connection through a long-term wheeling agreement with the City of Sacramento. This contract remains in effect until it expires in 2024.

Appropriative Water Supplies

The State Water Resources Control Board (SWRCB) appropriates water from the American River to SCWA under Permit 21029 (This water is considered "intermittent water" that typically would be available during normal years or wet years (i.e., years when rainfall, and hence water supply, are greater than average). This water is used to meet system demand, and it could possibly be used for future groundwater recharge through recharge-percolating groundwater basins or direct injection of surface water into the aquifer. The maximum, minimum, and average annual use of appropriative water are 44,800 acre-feet (af), 0 af, and 21,700 af, respectively. In close to 30% of the years, 12,000 af or less of appropriative water is used. The FRWP and Vineyard Surface WTP would be used to deliver this surface water.

City of Sacramento's American River Place of Use Agreement

The City of Sacramento provides wholesale American River water to SCWA for use in a portion of the SCWA 2030 Study Area that lies within the City of Sacramento's American River POU. The estimated long-term average volume of water that would be used by SCWA within this POU would be approximately 9,300 afy.

Other Transfer Supplies

SCWA is pursuing purchase and transfer agreements with other entities north of its service area in the Sacramento River basin. SCWA's estimated long-term average use of these water supplies would be approximately 5,200 afy. This water would be purchased only in dry and critically dry years. None of these water transfer agreements have been executed at this time, as none are needed for the foreseeable future; they are therefore still in the preliminary negotiation stage.

Recycled-Water Component

"Recycled water" refers to wastewater treated to a tertiary level—filtration and disinfection (Title 22, unrestricted use)—and is used in areas where nonpotable water is allowed, such as landscape irrigation at parks, schools, and rights-of-way. Approximately 4,400 afy of recycled water is currently provided to SCWA by the Sacramento Regional County Sanitation District (SRCSD). This water is used within the Zone 40 service area to offset demand by parks and for other nonpotable uses.

Groundwater Supplies within SCWA Zone 40

In Sacramento County, three groundwater subbasins have been identified: the North Area (the area north of the American River), Central Area (roughly the area between the American and Cosumnes Rivers), and South Area (generally the area south of the Cosumnes River). Zone 40 lies entirely within the Central Area (i.e., the Central Basin). Technical studies conducted in support of the WFA provided a basis for defining the negotiated

sustainable yield for each of the three Sacramento County groundwater subbasins. Based on negotiated levels of acceptable impacts associated with operating the basins at specified extraction volumes, the WFA negotiated a sustainable long-term average annual yield for the Central Area of 273,000 afy, including groundwater pumping in the Central Basin.

SCWA currently exercises, and will continue to exercise, its rights as a groundwater appropriator and will extract water from the Central Basin for the beneficial use of its customers. As a signatory to the WFA, SCWA is committed to adhering to the long-term average sustainable yield of the Central Basin (i.e., 273,000 afy) recommended in the WFA. In 2005, the total groundwater pumping (i.e., urban and agricultural pumping) within the Central Basin was approximately 248,500 afy, of which approximately 59,700 afy is pumped within Zone 40 (21,900 afy to meet agricultural demand; 37,800 afy to meet urban demand) (SCWA 2005). The remaining groundwater is pumped by the City of Sacramento, Elk Grove Water Service, Cal-Am, Golden State Water Company, and private and agricultural pumpers. Groundwater pumping volumes from the Central Basin in 2030 are projected to range from 235,000 afy to 253,000 afy for urban and agricultural demands (SCWA 2005). Of that amount, it is projected that SCWA Zone 40 would pump an average of 40,900 afy to meet urban water demand within Zone 40 through the year 2030 (Table 3.17-7).

Table 3.17-7
Existing and Projected Average Groundwater Supply in Zone 40

Water Source	Estimated Maximum Use (afy)	Estimated Long-Term Average Use (afy)	Reliability
Groundwater extracted from the Central Basin pursuant to the Zone 40 WSMP	69,900	40,900	High[1]

Notes: afy = acre-feet per year; Central Basin = Central Area groundwater subbasin; WSMP = *Water Supply Master Plan*.

[1] The reliability of this water source is considered "high" because Sacramento County Water Agency (SCWA) is a groundwater appropriator and existing and projected future pumping scenarios would not exceed the sustainable yield of the Central Basin.

Source: SCWA 2005:5-3

SCWA ZONE 40 WATER SUPPLIES AND DEMANDS

The Zone 41 UWMP addresses water supply and demand issues, water supply reliability, water conservation, water shortage contingencies, and recycled-water usage for the areas within Sacramento County where Zone 41 provides retail water services, including Zone 40. In accordance with SBx7-7, the Zone 41 UWMP estimated water demands are based on an estimated gallons per capita per day target chosen by SCWA (SCWA 2011b:5). Water supplies and demands within SCWA Zone 40 would be the same during normal, single-dry, and multiple-dry years; however, the year-to-year mix of surface and groundwater would be adjusted as necessary to meet the demands as part of SCWA's conjunctive use water supply program. Table 3.17-8 identifies surface water and groundwater supply and demand within SCWA Zone 40 from 2010 to 2035 in normal, single dry, and multiple dry years.

Groundwater use is projected to decrease from the current level once the Vineyard Surface WTP comes online in 2011; but it will increase over time as water demand continues to grow in Zone 40. In wet and normal years, groundwater pumping will be minimized because surface water becomes the major water supply source. In dry years, groundwater pumping will increase substantially as surface water availability is considerably reduced. Reduction in projected pumping in wet/normal years between 2010 and 2035 reflects the phasing and availability of surface water facilities and supplies from the Vineyard Surface WTP. Over time, groundwater production will stabilize as SCWA's conjunctive use program is fully implemented (SCWA 2011a:4-16; SCWA 2011b:5 and 17).

Table 3.17-8
Comparison of Water Supply and Demand in Zone 40 (2010-2035)[1]

Water Year	Source	Projected Demands (afy)					
		2010	2015	2020	2025	2030	2035
Normal Year	**Supply[2]**						
	Groundwater	35,000	20,000	15,000	20,000	25,000	15,000
	Surface water	12,320	35,000	42,500	50,000	66,800	81,200
	Recycled water	1,000	3,000	4,400	4,400	4,400	4,400
	Total Supply	**48,320**	**58,000**	**61,900**	**74,400**	**96,200**	**100,600**
	Total Demand[3]	**34,511**	**44,425**	**48,162**	**52,583**	**60,065**	**68,812**
	Difference (Supply minus Demand)	13,806	13,576	13,738	21,817	36,135	31,788
Single-Dry Year	**Supply[2]**						
	Groundwater	39,930	46,300	48,800	61,300	64,500	68,600
	Surface water	7,390	8,700	8,700	8,700	18,000	27,600
	Recycled water	1,000	3,000	4,400	4,400	4,400	4,400
	Total Supply	**48,320**	**58,000**	**61,900**	**74,400**	**86,900**	**100,600**
	Total Demand[3]	**34,511**	**44,425**	**48,162**	**52,583**	**60,065**	**68,812**
	Difference (Supply minus Demand)	13,806	13,576	13,738	21,817	26,832	31,788
Multiple-Dry Year 1	**Supply[2]**						
	Groundwater	36,232	32,500	30,500	38,500	37,200	36,800
	Surface water	11,088	22,500	27,000	31,500	45,300	59,400
	Recycled water	1,000	3,000	4,400	4,400	4,400	4,400
	Total Supply	**48,320**	**58,000**	**61,900**	**74,400**	**86,900**	**100,600**
	Total Demand[3]	**34,511**	**44,425**	**48,162**	**52,583**	**60,065**	**68,812**
	Difference (Supply minus Demand)	13,806	13,576	13,738	21,817	26,832	31,788
Multiple-Dry Year 2	**Supply[2]**						
	Groundwater	37,464	35,000	33,500	42,000	41,200	41,300
	Surface water	9,856	20,000	24,000	28,000	41,300	54,900
	Recycled water	1,000	3,000	4,400	4,400	4,400	4,400
	Total Supply	**48,320**	**58,000**	**61,900**	**74,400**	**86,900**	**100,600**
	Total Demand[3]	**34,511**	**44,425**	**48,162**	**52,583**	**60,065**	**68,812**
	Difference (Supply minus Demand)	13,806	13,576	13,738	21,817	26,832	31,788

Table 3.17-8
Comparison of Water Supply and Demand in Zone 40 (2010-2035)[1]

Water Year	Source	Projected Demands (afy)					
		2010	2015	2020	2025	2030	2035
Multiple-Dry Year 3	**Supply[2]**						
	Groundwater	38,080	36,250	35,000	43,750	43,200	43,550
	Surface water	9,240	18,750	22,500	26,250	39,300	52,650
	Recycled water	1,000	3,000	4,400	4,400	4,400	4,400
	Total Supply	**48,320**	**58,000**	**61,900**	**74,400**	**86,900**	**100,600**
	Total Demand[3]	**34,511**	**44,425**	**48,162**	**52,583**	**60,065**	**68,812**
	Difference (Supply minus Demand)	13,806	13,576	13,738	21,817	26,832	31,788

Notes: afy = acre-feet per year

[1] Water supplies and demands within SCWA Zone 40 would be the same during normal, single-dry, and multiple-dry years; however, the year-to-year mix of surface and groundwater would be adjusted as necessary to meet the demands as part of its conjunctive use water supply program.

[2] This table presents Zone 40 conjunctive use water supply sources identified in the *2011 Zone 41 Urban Water Management Plan*. It does not account for any available GET–Remediated Water supply that would be specifically provided to the Rio del Oro Specific Plan area.

[3] This table presents water demand for areas within Zone 40 that would implement the Zone 40 conjunctive use surface water and groundwater supply program. It does not account for the Rio del Oro Specific Plan area where water demands that would be met with GET–Remediated Water.

Source: SCWA 2011a; data compiled by AECOM 2011

Reasonable Likelihood of Zone 40 Supplies

In wet and normal water years, SCWA would divert surface water from the American and Sacramento Rivers consistent with the entitlement contracts described above. The underlying groundwater basin would be replenished in wet years as a result of this reliance on surface water. In dry water years, SCWA's surface water could be reduced based on recommended dry-year cutback volumes outlined in the WFA—those volumes that purveyors have agreed not to divert from the American River during dry years. During dry years, SCWA would increase groundwater pumping so that it could continue to meet the water demand of its customers (SCWA 2005).

The sufficiency of the "firm" Zone 40 WSMP groundwater supplies to supply all users in the Zone 40 area is illustrated by the hydrologic modeling in the 2005 Zone 40 WSMP. The hydrologic effects of implementing the 2005 Zone 40 WSMP were analyzed using the Sacramento County Integrated Groundwater Surface Water Model (IGSM). The IGSM was originally developed in the early 1990s to analyze the impacts of different water supply planning scenarios on the groundwater resources of Sacramento County. Based on its theoretical foundation, past applications, and sensitivity testing, the IGSM model was determined by SCWA to be the appropriate tool for assessing the impacts of the Zone 40 WSMP. IGSM model runs were performed to analyze the effects of the Zone 40 WSMP, including an evaluation of the 2030 Study Area as well as surrounding areas. The model runs were performed to assess the overall impacts on the groundwater basin under existing conditions as well as 2030 conditions for different combinations of surface water and groundwater use. The IGSM model evaluated two basic scenarios: the 2000 Baseline Condition and the 2030 Condition.

The 2000 Baseline Condition represents the long-term effect of water demand and supply conditions at the year 2000 level of development, held constant over a 74-year period of historical hydrology. The 2030 Condition represents the long-term effects of the year 2030 level of development over the 74-year period of historical

hydrology. The 2030 Condition assumes development of approved specific plans and associated reductions in agricultural acreage and water demand in Zone 40, along with increases in surface-water supplies, in order to satisfy the increased urban demand. Groundwater pumping would still be used to supplement water supplies for urban areas and to meet agricultural demand.

The model runs for the 2030 Condition were conducted to illustrate potential effects related to all of the following:

- groundwater pumping locations (pumping within the subarea of use, pumping concentrated in the northern portion of Zone 40, pumping concentrated in the southern portion of Zone 30, and a uniform pumping scenario),
- variable volumes of reuse of remediated groundwater,
- increases in surface water from availability of appropriative water, and
- enhancement of Cosumnes River flows.

The modeling evaluated projected pumping within the groundwater basin by SCWA as well as all other water users, including those for agriculture. The results of the groundwater model indicate that in 2030, approximately 74,000 afy of groundwater is expected to be pumped by SCWA and private urban and agricultural water users for use in the Zone 40 2030 Study Area.

This volume, combined with other pumping in the Central Basin (including pumping for groundwater remediation), would be less than the WFA sustainable-yield recommendation of 273,000 afy for all modeled scenarios that assume some level of reuse of remediated groundwater. Assuming such reuse, average groundwater levels in the northern Zone 40 area would increase by about 4 feet, while those in the southern Zone 40 area would decrease by about 1 foot (WSMP Appendix F, p. 6-21). Stabilized groundwater elevations at the Central Basin's cone of depression under the modeled scenarios would range from approximately 50 feet below mean sea level (msl) to 84 feet below msl, which are all substantially higher than the level projected by the WFA of 116 feet below msl to 130 feet below msl. This data indicates that the negative effects from groundwater pumping on the cone of depression would be less than were projected by the WFA.

Groundwater pumping associated with the Zone 40 WSMP would not cause sustainable-yield recommendations to be exceeded. Therefore, groundwater levels at the Central Basin cone of depression are projected to be higher than the minimum levels that were determined to be acceptable to the Water Forum, and this impact was considered less than significant in the Zone 40 WSMP EIR.

SCWA's conjunctive use program is a coordinated approach to manage surface water and groundwater supplies to maximize the yield of available water resources. In wet and normal water years, SCWA would divert surface water from the American and Sacramento Rivers consistent with the entitlement contracts described above. The underlying groundwater basin would be replenished in wet years as a result of this reliance on surface water. In dry water years, SCWA's surface water could be reduced based on recommended dry-year cutback volumes outlined in the WFA—those volumes that purveyors have agreed not to divert from the American River during dry years. During dry years, SCWA would increase groundwater pumping so that it could continue to meet the water demand of its customers (SCWA 2011b:17).

With implementation of the Zone 40 WSMP, Zone 41 UWMP, and Zone 40 WSIP, SCWA Zone 40 would be served with reliable, long-term groundwater supplies. SCWA has secured (and is in the process of securing additional) surface water entitlements that would allow SCWA to meet its projected 2035 water demands. Based on SBx7-7 requirements and a slower than previously anticipated growth rate, it is projected that the ultimate water demand described in the Zone 40 WSMP will probably not occur until 2050 (SCWA 2011b:5). SCWA intends to continue to extract groundwater to meet its customer demands within the limits of the negotiated

sustainable yield of the Central Basin. Therefore, SCWA's groundwater supplies are considered reliable, as are those surface water supplies for which SCWA has existing CVP contracts (the SMUD and Fazio supplies), appropriative water rights, and POU water and there is reasonable likelihood that these water supplies will continue to be available.

Water Conveyance and Treatment Facilities

Existing and proposed surface water and groundwater conveyance and treatment facilities would be required to provide water supplies to the SPA. Surface water would be diverted from the Sacramento River via the FRWP facilities and conveyed to the Vineyard Surface WTP for treatment. After the water is treated at the Vineyard Surface WTP, it would be delivered to the SPA through the proposed NSAP and proposed Florin Road/Sunrise Boulevard pipeline. In addition, surface water could be provided in the interim through the temporary conversion of the Anatolia raw groundwater transmission pipeline to a treated surface water transmission pipeline after the Vineyard Surface WTP becomes operational. The FRWP, Vineyard Surface WTP, and NSAPP are summarized below. The Florin Road/Sunrise Boulevard pipeline and Anatolia surface water transmission pipeline are proposed as part of the project; a detailed description of these water conveyance facilities is provided in Chapter 2, "Alternatives" and shown on Exhibits 2-9 and 2-10, respectively, and they are described and evaluated below in Impacts 3.17-3 and 3.17-4, respectively.

Groundwater would be provided by the NVWF, the Mather Housing groundwater system, and the SunCreek groundwater wells. The NVWF and Mather Housing groundwater system are summarized below. The SunCreek groundwater wells and SunCreek WTP are proposed as part of the project; therefore, a description of these wells is provided in Chapter 2, "Alternatives" and shown on Exhibit 2-8, and they are described and evaluated below in Impact 3.17-5.

The preferred rate of water supply for the project cannot be delivered until the Vineyard Surface WTP, which is currently under construction; the proposed NSAPP; and proposed NVWF Wells 4 through 6 are online. Where appropriate, the environmental documents evaluating these facilities are hereby incorporated by reference and summarized in this section below. However, as discussed in Chapter 2, "Alternatives," and in Impact 3.17-1, alternatives to the preferred rate of water supply, which would allow phased development, have been developed and are analyzed herein.

Freeport Regional Water Project

The FRWP involves construction of a 185-mgd intake facility and pumping plant located on the Sacramento River, a reservoir and water treatment plant, a terminal facility located at the point of delivery to the Folsom South Canal, a canal pumping plant located at the terminus of the Folsom South Canal, an aqueduct pumping plant and pretreatment facility near the Mokelumne Aqueducts/Camanche Reservoir area, and pipelines to deliver water from the intake facility to the Zone 40 Vineyard Surface WTP and to the Mokelumne Aqueduct (Freeport Regional Water Authority 2003).

Installation of the conveyance pipeline was completed in July 2009 and the intake facility was completed and became operational in April 2010. SCWA plans to begin using FRWP water in 2011 after completion of the Vineyard Surface WTP. The FRWP will provide SCWA with up to 85 mgd of surface water from the Sacramento River that would be conveyed by FRWP to SCWA's Vineyard Surface WTP. The remaining 100 mgd of the 185 mgd diverted from the Sacramento River would be conveyed past the Vineyard Surface WTP by the East Bay Municipal Utility District (EBMUD) to the Folsom South Canal, which would convey the water to the Mokelumne Aqueduct for use within EBMUD's service area during dry years. Pursuant to SWRCB Permit No. 21209, SCWA's total diversions at Freeport intake facility are permitted for up to 132 cubic feet per second, but not to exceed 71,000 afy. On average, however, SCWA's diversions are initially estimated to be 21,700 afy in 2010 (Freeport Regional Water Authority 2009).

Vineyard Surface Water Treatment Plant

SCWA is constructing the Vineyard Surface WTP (previously referred to as the Central Surface WTP) and associated water supply facilities to provide potable water to existing and approved future development within the SCWA Zone 40 area. The Vineyard Surface WTP is located west of the intersection of Florin and Excelsior Roads, at the northeast corner of Florin and Knox Roads in Sacramento County.

The objective of constructing the Vineyard Surface WTP is to provide capacity for treating 100 mgd of raw surface water and remediated groundwater, and to serve approved land uses in the Zone 40 service area. The Vineyard Surface WTP would be constructed in three phases and expanded incrementally to meet water treatment demands in the Zone 40 service area (Sacramento County 2004). Construction of the Vineyard Surface WTP began in March 2008 and will provide 50 mgd of surface water treatment capacity. The plant is anticipated to be operational in November 2011, with full buildout by 2029 (SCWA 2009).

The environmental impacts of the construction and operation of the Vineyard Surface WTP were analyzed at a programmatic level in the Zone 40 WSMP EIR, and at a project-level in an IS/MND (SCH #20047092050), which was circulated for public review in September 2004 (Sacramento County 2004). The Zone 40 WSMP EIR and the Vineyard Surface WTP IS/MND are hereby incorporated by reference into this DEIR/DEIS.

North Service Area Pipeline Project

The NSAPP would include construction of a transmission main and booster tank station to serve the Mather Specific Plan area and SCWA's NSA, which includes the SPA. The NSAP would begin at the Vineyard Surface WTP and convey surface water through one of four alternative alignments to an existing 42-inch transmission main at the intersection of Douglas Road and Sunrise Boulevard. The NSAP would begin at the Vineyard Surface WTP and would travel east to the intersection of Florin Road and Eagles Nest Road and then turn north to the intersection of Kiefer Boulevard. From this point, the following four alternative alignments are proposed (Sacramento County 2010:IS-7 and IS-8):

- **Alternative 1:** The transmission main would continue north along the proposed Eagles Nest Road alignment then turn east along Douglas Road to the Douglas Road booster tank station. The transmission main would then continue east to the existing 42-inch transmission main at the intersection of Douglas Road and Sunrise Boulevard.

- **Alternative 2:** The transmission main would continue north along the proposed Eagles Nest Road alignment then travel east for 3,900 feet to the Mather Field booster tank station. The transmission main would turn north and continue parallel to the Folsom South Canal and then cross over the canal and connect with the Douglas Road booster tank station. The transmission main would then continue east to the existing 42-inch transmission main at the intersection of Douglas Road and Sunrise Boulevard.

- **Alternative 3:** The transmission main would continue east along Kiefer Boulevard then travel north parallel to the Folsom South Canal to the Mather Field booster tank station. The transmission main would turn north and continue parallel to the Folsom South Canal and then cross over the canal and connect with the Douglas Road booster tank station. The transmission main would then continue east to the existing 42-inch transmission main at the intersection of Douglas Road and Sunrise Boulevard.

- **Alternative 3A:** This alternative would be a deviation in alignment between the two tank sites that could be used with any of the previous three alternatives. The transmission main would cross the Folsom South Canal then would either continue to the Douglas Road tank site or Mather Field Tank. The transmission main would then continue to the existing 42-inch transmission main at the intersection of Douglas Road and Sunrise Boulevard.

The following two alternative booster tank station sites are proposed:

- The Douglas Road booster tank station site is proposed to serve the SDCP/SRSP area with up to two 3.5-mgd storage tanks, booster pumps, generators, and a control building on Douglas Road near the southwest corner of Douglas Road and Sunrise Boulevard.

- The Mather Field booster tank station site would serve the Mather Field Specific Plan area with two 1.5-mgd storage tanks, booster pumps, generators, and a control building on the Mather property located near the west bank of the Folsom South Canal and approximately one mile north of Kiefer Boulevard.

The environmental impacts of the construction and operation of the NSAP were analyzed at a programmatic level in the Zone 40 WSMP EIR, and at a project-level in an IS/MND (SCH #2010082044), which was circulated for public review in August 2010 (Sacramento County 2010). The IS/MND was adopted by the County on October 17, 2010. The NSAPP IS/MND is hereby incorporated by reference into this DEIR/DEIS.

North Vineyard Well Field

The NVWF would consist of up to seven wells and would provide for the extraction of up to 10,000 afy of groundwater at buildout. SCWA has constructed the first phase of the NVWF, consisting of three wells (Wells 1-3) and three filters. NVWF Wells 1-3 are operational and are capable of producing approximately 3,600 afy. SCWA has designated one of the three wells as an emergency backup well to increase water supply availability and reliability. Wells 4 through 7 will be constructed as new water supplies are required.

The environmental impacts of the construction and operation of the NVWF were analyzed at a programmatic level in the SDCP/SRSP EIR (specifically the Revised SDCP/SRSP Long-Term Water Supply Plan Draft EIR, which is incorporated by referenced into this DEIR/DEIS). Because the NVWF was identified as a facility necessary to supply groundwater to Zone 40, the well field was also analyzed at a programmatic level in the Zone 40 WSMP EIR.

Project-level IS/MNDs for Well 4 (SCH #2005042042), Well 5 (SCH #2005062109), and Well 6 (SCH #2005072003) analyzed the environmental impacts of the construction and operation of these wells (Sacramento County 2005a, Sacramento County 2005b, and Sacramento County 2005c). The IS/MNDs were circulated for public review and adopted by Sacramento County in 2005. All three of these IS/MNDs are hereby incorporated by referenced into this DEIR/DEIS. Although the project-level CEQA review is complete, there is currently no time frame for construction of wells 4 through 6. Well 7 has not undergone project-level CEQA review and there is currently no time frame for construction of Well 7.

Anatolia Water Treatment Plant

The Anatolia WTP is located east of Sunrise Boulevard, west of Anatolia Drive, and south of Chrysanthy Boulevard in the Anatolia II subdivision. The Anatolia WTP became operational in July 2005 and currently treats raw water from the NVWF. The current design capacity of this facility is approximately 6.5 mgd (4,500 gallons per minute). As of 2009, the average day demand was approximately 2.1 mgd and the maximum day demand was 4.3 mgd. Expansion of the Anatolia WTP to its ultimate capacity of 13.0 mgd is required to provide water treatment for build-out of the NSA. SCWA currently has no set timeframe to upgrade the Anatolia WTP.

The Anatolia WTP utilizes two, 2-mgd storage tanks, which have adequate capacity to provide operational, emergency, and fire requirements. The Anatolia storage tank capacity varies between 40% during peak hours to 100% at off-peak hours. This variability could be modified in the future by enabling the tanks to receive some surface water during the off-peak hours.

Mather Housing Groundwater System

The Mather Housing groundwater system consists of two groundwater wells, a 6.0-mgd groundwater treatment plant, and one 0.5-mgd storage tank. The Mather Housing water transmission pipeline connects to the Sunrise Douglas Community Plan Area at the intersection of Douglas Road and Sunrise Boulevard. However, treated water from the Mather Housing groundwater system is prevented from reaching this area due to differences in pressure, which prevents SCWA from utilizing the full 6.0-mgd capacity of the Mather Housing groundwater system for the SDCP/SRSP area.

3.17.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

There are no Federal plans, policies, regulations, or laws related to water supply that are applicable to the Proposed Project or other alternatives under consideration.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Senate Bills 610 and 221

The State of California has enacted legislation that is applicable to the consideration of larger projects under CEQA. Senate Bill (SB) 610 (Chapter 643, Statutes of 2001; Section 21151.9 of the Public Resources Code and Section 10910 et seq. of the Water Code) requires the preparation of "water supply assessments" for large developments (i.e., more than 500 dwelling units or nonresidential equivalent), such as the SunCreek Specific Plan. These assessments, prepared by "public water systems" responsible for serving project areas (in this case, SCWA), address whether existing and projected water supplies are adequate to serve the project while also meeting existing urban and agricultural demands and the needs of other anticipated development in the service area in which the project is located. If the most recently adopted UWMP accounted for the projected water demand associated with the project, the public water system may incorporate the requested information from the UWMP. If the UWMP did not account for the project's water demand, or if the public water system has no UWMP, the project's WSA must discuss whether the system's total projected water supplies (available during normal, single-dry, and multiple-dry water years during a 20-year projection) would meet the project's water demand in addition to the system's existing and planned future uses, including agricultural and manufacturing uses. A WSA has been prepared for the project (SCWA 2011b, on behalf of the City) and is included as Appendix V to this EIR/EIS.

Where a WSA concludes that insufficient supplies are available, the public water system must provide to the city or county considering the development project (here, the City of Rancho Cordova) its plans for acquiring and developing additional water supplies. Based on all the information in the record relating to the project, including all applicable WSAs and all other information provided by the relevant public water systems, the city or county must determine whether sufficient water supplies are available to meet the demands of the project, in addition to existing and planned future uses. Where a WSA concludes that insufficient supplies are available, the WSA must lay out the steps that would be required to obtain the necessary supply. The WSA is required to include (but is not limited to) identification of the existing and future water supplies over a 20-year projection period. This information must be provided for average normal, single-dry, and multiple-dry years. The absence of an adequate current water supply does not preclude project approval, but it does require a lead agency to address a water supply shortfall in its project findings.

If the project is approved, additional complementary statutory requirements, created by 2001 legislation known as SB 221 (Government Code Section 66473.7), would apply to the approval of tentative subdivision maps for more than 500 residential dwelling units. This statute requires cities and counties to include, as a condition of approval of such tentative maps, the preparation of a "water supply verification." The verification, which must be

completed by no later than the time of approval of final maps, is intended to demonstrate that there is a sufficient water supply for the newly created residential lots. The statute defines sufficient water supply as follows:

> ...the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection period that would meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses.

A number of factors must be considered in determining the sufficiency of projected supplies:

- the availability of water supplies over a historical record of at least 20 years;
- the applicability of an urban-water-shortage contingency analysis that includes action to be undertaken by the public water system in response to water supply shortages;
- the reduction in water supply allocated to a specific water-use sector under a resolution or ordinance adopted or a contract entered into by the public water system, as long as that resolution, ordinance, or contract does not conflict with statutory provisions giving priority to water needed for domestic use, sanitation, and fire protection; and
- the amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under Federal, state, and local water initiatives.

California Water Conservation Act

SBx7-7 was enacted in November 2009 and requires each urban water supplier to select one of four water conservation targets contained in California Water Code Section 10608.20 with the statewide goal of achieving a 20% reduction in urban per capita water use by 2020. Under SBx7-7, urban retail water suppliers (in this case, SCWA) are required to develop water use targets and submit a water management plan to DWR by July 2011. The plan must include the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use. In addition, the State will make incremental progress towards this goal by reducing per capita water use by at least 10% by December 31, 2015.

The 2010 Zone 41 UWMP was completed in June 2011 and includes new requirements for water conservation as set forth in the SBx7-7.

Regional and Local Plans, Policies, Regulations, and Ordinances

Rancho Cordova Landscaping Ordinance (Municipal Code Title 23, Chapter 23.716)

The City of Rancho Cordova's Landscaping Ordinance (Municipal Code Title 23, Chapter 23.716) establishes minimum landscape standards to enhance the appearance of developments, reduce heat and glare, control soil erosion, conserve water, ensure the ongoing maintenance of landscape areas, and ensure that landscape installations do not create hazards for motorists or pedestrians. All new nonresidential, mixed-use, and single-family residential and multifamily residential subdivisions are required to comply with the landscaping requirements.

The Landscaping Ordinance requires all multifamily, nonresidential, and mixed-use development to install a low-pressure irrigation system in 30% of all landscaped areas; to install automatic programmable controllers with check valves in sloping areas with elevation differences of more than 5 feet as defined from the toe to the top of slope; to group landscape materials with the same watering needs together; to design irrigation systems to avoid runoff, excessive low head drainage, overspray, or other similar conditions where water flows or drifts onto

adjacent property, non-irrigated areas, walks, roadways, or structures; and to post an annual maintenance program with the seasonal watering schedule in or near the control box.

Rancho Cordova General Plan

Goals and policies from the *City of Rancho Cordova General Plan* (City General Plan 2006b) relating to water supply that are applicable to the Proposed Project and the other alternatives under consideration are listed in Appendix K.

3.17.3 Environmental Consequences and Mitigation Measures

Thresholds of Significance

The water supply analysis in a CEQA document is governed by California case law that requires the lead agency to consider both the relative certainty of new water supplies that a project would require and the impacts that could result from the use of those new water supplies. The following discussion introduces the principles governing water supply analyses in CEQA documents and distinguishes between the analysis of the certainty of supplies and the impact of providing those supplies. These principles are as follows:

1. An environmental impact report (EIR) may not assume a solution to problem of water supply, but must instead present sufficient facts to evaluate the pros and cons of supplying the required water (*Santiago County Water District v. Orange* [1981] 118 Cal.App.3d 818, 829).

2. The water supply analysis for large, multiphase projects may not be limited to the first few years or phases. Furthermore, the first or programmatic document for such a project may not defer analysis to future phases, but must analyze reasonably foreseeable impacts of supplying required water. The tiering principle does not allow deferral to future studies or documents (*Santa Clarita Organization for Planning the Environment v. County of Los Angeles* [2003] 106 Cal. App. 4th 715, 723).

3. An EIR evaluating a planned land use project must assume that all phases of the project will eventually be built and will need water. The EIR for such a project must analyze the impacts of supplying water to the entire project (*Stanislaus Natural Heritage Project v. County of Stanislaus* [1996] 48 Cal.App.4th 182, 206).

4. Future water supplies for a project must bear a reasonable likelihood of proving to be available. While absolute certainty is not required, water supplies must be identified with more specificity as projects progress from general to specific phases (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* [2007] 40 Cal. 4th, 412, 434). "Where, despite a full discussion, it is impossible to confidently determine that anticipated water sources will be available, CEQA requires some discussion of possible replacement sources or alternative to use of the anticipated water, and of the environmental consequences of those contingencies." (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* [2007] 40 Cal. 4th 412, 432.)

5. Although much of the case law focuses on the issue of certainty, the ultimate issue under CEQA is not whether an EIR establishes a likely source of water, but whether the document adequately analyzes the reasonably foreseeable impacts of supplying water to the project (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* [2007] 40 Cal. 4th, 412, 434).

The discussion of water supply in this section follows these principles. Accordingly, this analysis looks at both the reasonable likelihood of selected water supplies being available and the impacts that would result from those supplies. An impact is considered significant if the project or a phase of the project would result in a water shortage or another significant adverse physical impact on the environment.

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines. These thresholds also encompass the factors taken into account under NEPA to determine the significance of an action in terms of its context and the intensity of its impacts. The Proposed Project or other alternatives under consideration were determined to result in a significant impact related to water supply if they would do any of the following:

- require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction or operation of which could cause significant environmental effects; or
- have insufficient water supplies available to serve the project from existing or permitted entitlements and resources, or require new or expanded entitlements.

ANALYSIS METHODOLOGY

Impacts of project implementation on potable and nonpotable water supplies and conveyance facilities were identified by comparing existing service capacity and facilities with future demand associated with project implementation. Where possible, a quantitative comparison was used to determine impacts of the project on future demands. Potential demands for water and impacts on infrastructure were evaluated based on a review of the following documents pertaining to the SPA and surrounding area. In accordance with Section 15150 of the State CEQA Guidelines, the following documents are incorporated by reference in this EIR/EIS, and relevant portions of these documents are summarized herein where their analysis has been relied on:

- *Sacramento County Water Agency 2005 Zone 40 Water Supply Master Plan* (SCWA 2005),
- *Sacramento County Water Agency 2010 Zone 41 Urban Water Management Plan* (SCWA 2011a),
- *Sacramento County Water Agency Zone 40 Water System Infrastructure Plan* (SCWA 2006),
- *City of Rancho Cordova Water Supply Evaluation for the City of Rancho Cordova General Plan* (City of Rancho Cordova 2006a),
- *City of Rancho Cordova General Plan* (City of Rancho Cordova 2006b),
- *Environmental Impact Report, City of Rancho Cordova General Plan*. (SCH #2005022137) (City of Rancho Cordova 2006c),
- *Revised Sunrise Douglas Community Plan/Sunridge Specific Plan Long-Term Water Supply Plan Draft Environmental Impact Report* (AECOM 2011),
- *Zone 40 Central Service Water Treatment Plant and Corporation Yard Project Initial Study/Negative Declaration*. (SCH #2004092050) (Sacramento County 2004),
- *Excelsior Road Well Field, Well No. 4 Initial Study/Mitigated Negative Declaration*. (State Clearinghouse Number 2005042042) (Sacramento County 2005a),
- *Anatolia Off-Site Well Field No. 5 Initial Study/Negative Declaration*. (State Clearinghouse Number 2005062109) (Sacramento County 2005b),
- *Anatolia Off-Site Well Field No. 6 Initial Study/Negative Declaration*. (State Clearinghouse Number 2005072003) (Sacramento County 2005c),
- *North Service Area Pipeline, Tank, and Booster Pump Project* (SCH #2010082044) (Sacramento County 2010),

- *Master Water Study for the SunCreek Specific Plan* (MWH 2008, attached as Appendix U),
- *Water Supply Assessment for the SunCreek Specific Plan* (SCWA 2011b),
- *Technical Memorandum No. 2. Groundwater Demands for the SunCreek Specific Plan* (MacKay & Somps 2011a, attached as Appendix W),
- *Technical Memorandum No.8. Regional Water Facilities for the SunCreek Specific Plan* (MacKay & Somps 2011b, attached as Appendix H), and
- *Non-Potable Water Master Plan for the Sunrise Douglas Community Plan Area* (Wood Rogers 2007).

These documents are available for review at the City of Rancho Cordova Planning Department, located at 2729 Prospect Park Drive, Rancho Cordova, CA 95670.

IMPACT ANALYSIS

Impacts that would occur under each alternative development scenario are identified as follows: NP (No Project), NCP (No USACE Permit), PP (Proposed Project), BIM (Biological Impact Minimization), CS (Conceptual Strategy), and ID (Increased Development). The impacts for each alternative are compared relative to the PP at the end of each impact conclusion (i.e., similar, greater, lesser).

IMPACT 3.17-1 **Increased Demand for Water Supplies.** *Project implementation would result in increased demand for surface water and groundwater supplies.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase the demand for water supplies. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS

Presently, there are no public water supply facilities on the SPA. SCWA would provide water supplies to the SPA through its Zone 40 conjunctive-use water supply system in three phases. Phase 1 water service would involve using available groundwater supplies from the NVWF and the Mather Housing groundwater system until NSA water demands approach the capacity of these groundwater wells. Phase 2 water service would entail conjunctive use of available SCWA groundwater supplies and surface water delivered by the NSAP. Phase 3 water service would not occur until the water demands of the NSA begin to approach the capacity of the NSAP. At that time, SCWA anticipates that the Vineyard Surface WTP, NVWF, and Anatolia WTP would be expanded to their full capacity to meet water demands of the NSA, including the SPA. Furthermore, three groundwater wells on the SunCreek SPA are proposed as part of this project in order to provide an additional source of water supply (MacKay & Somps 2011a:6).

The following analysis provides the water demands of the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives, identifies available surface water and groundwater supplies, identifies conjunctive-use water supply scenarios to meet water demands, and discusses the reasonable likelihood of water supplies to meet water demands of the SPA.

SunCreek Specific Plan Water Demand

In compliance with SB 610, a WSA has been prepared based on water supplies identified in the Zone 41 UWMP to determine whether the projected available water supplies would meet the water demand of the Proposed Project Alternative, in addition to the existing and planned future uses in the Zone 40 2030 Study Area (SCWA 2001b, see Appendix V). The SCWA Board of Directors adopted the SunCreek Specific Plan WSA on May 3, 2011.

The water demand for the SPA was estimated in SCWA's Zone 40 WSMP to be 3,176 afy by 2030, and this total is reflected in the Zone 41 UWMP (SCWA 2011b:8). To estimate total future water demands for buildout of the No USACE Permit, Proposed Project, Biological Minimization, Conceptual Strategy, and Increased Development Alternatives, SCWA's Zone 40 water-demand factors were applied to the acreage for each land use designation that generates water use within the SPA. The total projected water demands are 2,033 afy for the No USACE Permit Alternative, 3,058 afy for the Proposed Project Alternative, 2,672 afy for the Biological Impact Minimization Alternative, 2,952 afy for the Conceptual Strategy Alternative, and 3,478 afy for Increased Development Alternative. Table 3.17-9 summarizes the water demands under each action alternative by 5-year increments over a 20-year planning horizon. Because the water supply demand under the No USACE Permit, Proposed Project, Biological Minimization, and Conceptual Strategy Alternatives is less than the water demand estimated by SCWA for the SPA (3,176 afy), the WSA concluded that sufficient water supplies would be available to meet water demands for these alternatives (SCWA 2011b:27). However, the water demand for the Increased Development Alternative (3,478 afy) is greater than the water demand estimated by SCWA for the SPA (3,176 afy) and the WSA concluded that sufficient water supplies may not be available to meet water demands of this alternative (SCWA 2011b:27). The reasonable likelihood of water supplies to meet demands of the Increased Development Alternative is discussed under the heading, "ID," below.

Table 3.17-9
SunCreek Specific Plan Water Demands (2010-2030)

Alternative	Projected Demands (afy)				
	2010	2015	2020	2025	2030
No USACE Permit	0	202	1,019	1,832	2,033
Proposed Project	0	308	1,529	2,750	3,058
Biological Impact Minimization	0	269	1,333	2,403	2,672
Conceptual Strategy	0	297	1,473	2,655	2,952
Increased Development	0	347	1,736	3,131	3,478

Notes: afy = acre-feet per year
Source: MacKay & Somps 2011a:21

SunCreek Specific Plan Water Supply Program

Surface water would be diverted from the Sacramento River via the FRWP facilities and conveyed to the Vineyard Surface WTP for treatment. Treated water would then be conveyed to the NSA through the NSAP and Florin Road/Sunrise Boulevard pipeline (see Impacts 3.17-2 and 3.17-3, below). In addition, surface water could be provided in the interim through the temporary conversion of the Anatolia raw groundwater transmission pipeline to a treated surface water transmission pipeline after the Vineyard Surface WTP becomes operational (see Impact 3.17-4, below). Conversion of the Anatolia surface water transmission pipeline would be capable of conveying 7,853 afy of surface water to the SPA (MacKay & Somps 2011b:16).

Groundwater would be provided by the NVWF, Mather Housing groundwater system, and SunCreek groundwater wells (see Impacts 3.17-2 and 3.17-5, below). It is assumed for this analysis that the NVWF would provide 2,409

afy of groundwater and expansion of the well field would provide 4,996 afy, the Mather Housing groundwater system would provide 3,361 afy, and the SunCreek groundwater wells would produce 2,240 afy of groundwater (MacKay & Somps 2011a:5).

Four water supply scenarios have been developed as options for providing water to the SPA based on the surface water and groundwater supplies identified above:

- Accelerated Construction of the NSAP
- Delayed Construction of the NSAP
- Conversion of the Anatolia Raw Groundwater Transmission Pipeline
- Groundwater Intensive Development with the SunCreek Groundwater Wells

In the long term, SCWA anticipates the majority of water demands in the NSA (including the SPA) would be met with surface water. However, the year-to-year mix of surface and groundwater varies depending on a large number of variables and surface water and groundwater supplies would be adjusted as necessary to meet the demands of the NSA as part of its conjunctive use program. Because the surface and groundwater mix that SCWA may use in the future is unknown, the following analysis assumes SCWA would continue to operate groundwater facilities at maximum capacity after surface water deliveries begin. This represents the worst case scenario that could occur for the SunCreek project with regard to SCWA's operation of its conjunctive-use water supply system (MacKay & Somps 2011b:9). A comparison of water supplies available to meet projected water demands for all five action alternatives under each of the four water supply scenarios is summarized in Tables 3.17-10 through 3.17-13 below.

Table 3.17-10
Comparison of Water Supply and Demand –
Accelerated Construction of the North Service Area Pipeline Scenario (afy)

Alternative	Source	2010	2015	2020	2025	2030
No USACE Permit	**Supply**					
	Groundwater	5,769	5,769	5,769	5,769	5,769
	Surface water	0	5,332	11,734	18,136	24,830
	Total Supply	**5,769**	**11,101**	**17,503**	**23,905**	**30,599**
	Demand					
	NSA (SunCreek project not included)	5,769	10,899	16,484	22,073	28,566
	SunCreek project	0	202	1,019	1,832	2,033
	Total Demand	**5,769**	**11,101**	**17,503**	**23,905**	**30,599**
	Difference (Supply minus Demand)	0	0	0	0	0
Proposed Project	**Supply**					
	Groundwater	5,769	5,769	5,769	5,769	5,769
	Surface water	0	5,444	12,250	19,055	25,860
	Total Supply	**5,769**	**11,213**	**18,018**	**24,824**	**31,629**
	Demand					
	NSA (SunCreek project not included)	5,769	10,905	16,490	22,074	28,571
	SunCreek project	0	308	1,529	2,750	3,058
	Total Demand	**5,769**	**11,213**	**18,019**	**24,824**	**31,629**
	Difference (Supply minus Demand)	0	0	0	0	0

Table 3.17-10
Comparison of Water Supply and Demand –
Accelerated Construction of the North Service Area Pipeline Scenario (afy)

Alternative	Source	2010	2015	2020	2025	2030
Biological Impact Minimization	**Supply**					
	Groundwater	5,769	5,769	5,769	5,769	5,769
	Surface water	0	5,400	12,048	18,708	25,468
	Total Supply	**5,769**	**11,169**	**17,817**	**24,477**	**31,237**
	Demand					
	NSA (SunCreek project not included)	5769	10,900	16,484	22,074	28,565
	SunCreek project	0	269	1,333	2,403	2,672
	Total Demand	**5769**	**11,169**	**17,817**	**24,477**	**31,237**
	Difference (Supply minus Demand)	0	0	0	0	0
Conceptual Strategy	**Supply**					
	Groundwater	5,769	5,769	5,769	5,769	5,769
	Surface water	0	5,433	12,194	18,954	25,748
	Total Supply	**5,769**	**11,202**	**17,693**	**24,723**	**31,517**
	Demand					
	NSA (SunCreek project not included)	5,769	10,905	16,220	22,068	28,565
	SunCreek project	0	297	1,473	2,655	2,952
	Total Demand	**5,769**	**11,202**	**17,693**	**24,723**	**31,517**
	Difference (Supply minus Demand)					
Increased Development Alternative	**Supply**					
	Groundwater	5,769	5,769	5,769	5,769	5,769
	Surface water	0	5,489	12,463	19,436	26,286
	Total Supply	**5,769**	**11,258**	**18,232**	**25,205**	**32,055**
	Demand					
	NSA (SunCreek project not included)	5,769	10,911	16,496	22,074	28,577
	SunCreek project	0	347	1,736	3,131	3,478
	Total Demand	**5,769**	**11,258**	**18,232**	**25,205**	**32,055**
	Difference (Supply minus Demand)	0	0	0	0	0

Notes: afy = acre-feet per year; NSA = North Service Area
Source: MacKay & Somps 2011a:15

Table 3.17-11
Comparison of Water Supply and Demand –
Delayed Construction of the North Service Area Pipeline Scenario (afy)

Alternative	Source	2010	2015	2020	2025	2030
No USACE Permit	**Supply**					
	Groundwater	5,769	8,357	8,357	8,357	8,357
	Surface water	0	2744	9146	15,548	22,242
	Total Supply	**5,769**	**11,101**	**17,503**	**23,905**	**30,599**
	Demand					
	NSA (SunCreek project not included)	5,769	10,899	16,484	22,073	28,566
	SunCreek project	0	202	1,019	1,832	2,033
	Total Demand	**5,769**	**11,101**	**17,503**	**23,905**	**30,599**
	Difference (Supply minus Demand)	0	0	0	0	0
Proposed Project	**Supply**					
	Groundwater	5,769	8,357	8,357	8,357	8,357
	Surface water	0	2,856	9,661	16,467	23,272
	Total Supply	**5,769**	**11,213**	**18,018**	**24,824**	**31,629**
	Demand					
	NSA (SunCreek project not included)	5,769	10,905	16,490	22,074	28,571
	SunCreek project	0	308	1,529	2,750	3,058
	Total Demand	**5,769**	**11,213**	**18,019**	**24,824**	**31,629**
	Difference (Supply minus Demand)	0	0	0	0	0
Biological Impact Minimization	**Supply**					
	Groundwater	5,769	8,357	8,357	8,357	8,357
	Surface water	0	2,812	9,460	16,120	22,880
	Total Supply	**5,769**	**11,169**	**17,817**	**24,477**	**31,237**
	Demand					
	NSA (SunCreek project not included)	5,769	10,900	16,484	22,074	28,565
	SunCreek project	0	269	1,333	2,403	2,672
	Total Demand	**5,769**	**11,169**	**17,817**	**24,477**	**31,237**
	Difference (Supply minus Demand)	0	0	0	0	0
Conceptual Strategy	**Supply**					
	Groundwater	5,769	8,357	8,357	8,357	8,357
	Surface water	0	2,845	9,606	16,366	23,160
	Total Supply	**5,769**	**11,202**	**17,963**	**24,723**	**31,517**
	Demand					
	NSA (SunCreek project not included)	5,769	10,905	16,220	22,068	28,565
	SunCreek project	0	297	1,473	2,655	2,952
	Total Demand	**5,769**	**11,202**	**17,693**	**24,723**	**31,517**
	Difference (Supply minus Demand)	0	0	0	0	0

Table 3.17-11
Comparison of Water Supply and Demand –
Delayed Construction of the North Service Area Pipeline Scenario (afy)

Alternative	Source	2010	2015	2020	2025	2030
Increased Development Alternative	**Supply**					
	Groundwater	5,769	8,357	8,357	8,357	8,357
	Surface water	0	2,901	9,875	16,848	23,698
	Total Supply	**5,769**	**11,258**	**18,232**	**25,205**	**32,055**
	Demand					
	NSA (SunCreek project not included)	5,769	10,911	16,496	22,074	28,577
	SunCreek project	0	347	1,736	3,131	3,478
	Total Demand	**5,769**	**11,258**	**18,232**	**25,205**	**32,055**
	Difference (Supply minus Demand)	0	0	0	0	0

Notes: afy = acre-feet per year; NSA: North Service Area
Source: MacKay & Somps 2011a:16

Table 3.17-12
Comparison of Water Supply and Demand –
Conversion of the Anatolia Raw Groundwater Transmission Pipeline Scenario (afy)

Alternative	Source	2010	2015	2020	2025	2030
No USACE Permit	**Supply**					
	Groundwater	5,769	3,361	5,769	5,769	5,769
	Surface water	0	7,741	11,740	18,136	24,835
	Total Supply	**5,769**	**11,101**	**17,503**	**23,905**	**30,599**
	Demand					
	NSA (SunCreek project not included)	5,769	10,899	16,484	22,073	28,566
	SunCreek project	0	202	1,019	1,832	2,033
	Total Demand	**5,769**	**11,101**	**17,503**	**23,905**	**30,599**
	Difference (Supply minus Demand)	0	0	0	0	0
Proposed Project	**Supply**					
	Groundwater	5,769	3,361	5,769	5,769	5,769
	Surface water	0	7,852	12,255	19,055	25,866
	Total Supply	**5,769**	**11,213**	**18,019**	**24,824**	**31,629**
	Demand					
	NSA (SunCreek project not included)	5,769	10,905	16,490	22,074	28,571
	SunCreek project	0	308	1,529	2,750	3,058
	Total Demand	**5,769**	**11,213**	**18,019**	**24,824**	**31,629**
	Difference (Supply minus Demand)	0	0	0	0	0

Table 3.17-12
Comparison of Water Supply and Demand –
Conversion of the Anatolia Raw Groundwater Transmission Pipeline Scenario (afy)

Alternative	Source	2010	2015	2020	2025	2030
Biological Impact Minimization	**Supply**					
	Groundwater	5,769	3,361	5,769	5,769	5,769
	Surface water	0	7,808	12,054	18,708	25,474
	Total Supply	**5,769**	**11,169**	**17,823**	**24,477**	**31,243**
	Demand					
	NSA (SunCreek project not included)	5,769	10,900	16,484	22,074	28,565
	SunCreek project	0	269	1,333	2,403	2,672
	Total Demand	**5,769**	**11,169**	**17,823**	**24,477**	**31,243**
	Difference (Supply minus Demand)	0	0	0	0	0
Conceptual Strategy	**Supply**					
	Groundwater	5,769	3,361	5,769	5,769	5,769
	Surface water	0	7,841	12,199	18,954	25,754
	Total Supply	**5,769**	**11,202**	**17,962**	**24,723**	**31,517**
	Demand					
	NSA (SunCreek project not included)	5,769	10,905	16,220	22,068	28,565
	SunCreek project	0	297	1,473	2,655	2,952
	Total Demand	**5,769**	**11,202**	**17,962**	**24,723**	**31,517**
	Difference (Supply minus Demand)	0	0	0	0	0
Increased Development Alternative	**Supply**					
	Groundwater	5,769	3,361	5,769	5,769	5,769
	Surface water	0	7,897	12,468	19,436	26,292
	Total Supply	**5,769**	**11,258**	**18,232**	**25,205**	**32,055**
	Demand					
	NSA (SunCreek project not included)	5,769	10,911	16,496	22,074	28,577
	SunCreek project	0	347	1,736	3,131	3,478
	Total Demand	**5,769**	**11,258**	**18,232**	**25,205**	**32,055**
	Difference (Supply minus Demand)	0	0	0	0	0

Notes: afy = acre-feet per year; NSA: North Service Area
Source: MacKay & Somps 2011a:17

Table 3.17-13
Comparison of Water Supply and Demand –
Groundwater Intensive Development Scenario with the SunCreek Groundwater Wells (afy)

Alternative	Source	2010	2015	2020	2025	2030
No USACE Permit	**Supply**					
	Groundwater (NVWF)	5,769	8,357	8,357	8,357	8,357
	Groundwater (SunCreek well field)	0	2,240	2,240	2,240	2,240
	Surface water	0	605	7,136	13,661	20,483
	Total Supply	**5,769**	**11,202**	**17,773**	**24,258**	**31,080**
	Demand					
	NSA (SunCreek project not included)	5,769	11,000	16,754	22,426	29,047
	SunCreek project	0	202	1,019	1,832	2,033
	Total Demand	**5,769**	**11,202**	**17,773**	**24,258**	**31,080**
	Difference (Supply minus Demand)	0	0	0	0	0
Proposed Project	**Supply**					
	Groundwater (NVWF)	5,769	8,357	8,357	8,357	8,357
	Groundwater (SunCreek well field)	0	2,240	2,240	2,240	2,240
	Surface water	0	717	7,651	14,578	21,514
	Total Supply	**5,769**	**11,314**	**18,248**	**25,175**	**32,111**
	Demand					
	NSA (SunCreek project not included)	5,769	11,006	16,719	22,425	29,053
	SunCreek project	0	308	1,529	2,750	3,058
	Total Demand	**5,769**	**11,314**	**18,248**	**25,175**	**32,111**
	Difference (Supply minus Demand)	0	0	0	0	0
Biological Impact Minimization	**Supply**					
	Groundwater (NVWF)	5,769	8,357	8,357	8,357	8,357
	Groundwater (SunCreek well field)	0	2,240	2,240	2,240	2,240
	Surface water	0	672	7,449	14,232	21,122
	Total Supply	**5,769**	**11,269**	**18,046**	**24,829**	**31,719**
	Demand					
	NSA (SunCreek project not included)	5,769	11,000	16,713	22,426	29,047
	SunCreek project	0	269	1,333	2,403	2,672
	Total Demand	**5,769**	**11,269**	**18,046**	**24,829**	**31,719**
	Difference (Supply minus Demand)	0	0	0	0	0

Table 3.17-13
Comparison of Water Supply and Demand –
Groundwater Intensive Development Scenario with the SunCreek Groundwater Wells (afy)

Alternative	Source	2010	2015	2020	2025	2030
Conceptual Strategy	**Supply**					
	Groundwater (NVWF)	5,769	8,357	8,357	8,357	8,357
	Groundwater (SunCreek well field)	0	2,240	2,240	2,240	2,240
	Surface water	0	706	7,595	14,479	21,402
	Total Supply	**5,769**	**11,303**	**18,192**	**25,076**	**31,999**
	Demand					
	NSA (SunCreek project not included)	5,769	11,006	16,719	22,421	29,047
	SunCreek project	0	297	1,473	2,655	2,952
	Total Demand	**5,769**	**11,303**	**18,192**	**25,076**	**31,999**
	Difference (Supply minus Demand)	0	0	0	0	0
Increased Development Alternative	**Supply**					
	Groundwater (NVWF)	5,769	8,357	8,357	8,357	8,357
	Groundwater (SunCreek well field)	0	2,240	2,240	2,240	2,240
	Surface water	0	762	7,864	14,960	21,939
	Total Supply	**5,769**	**11,359**	**18,461**	**25,557**	**32,536**
	Demand					
	NSA (SunCreek project not included)	5,769	11,012	16,725	22,426	29,058
	SunCreek project	0	347	1,736	3,131	3,478
	Total Demand	**5,769**	**11,359**	**18,461**	**25,557**	**32,536**
	Difference (Supply minus Demand)	0	0	0	0	0

Notes: afy = acre-feet per year; NSA = North Service Area; NVWF = North Vineyard Well Field
Source: MacKay & Somps 2011a:19

Accelerated Construction of the North Service Area Pipeline

The Accelerated Construction of the NSAP scenario assumes the existing capacity of the NVWF and Mather Housing groundwater system would meet water demands of the SPA until 2012. This scenario further assumes that the NSAP would be constructed and online by 2012 and would provide surface water to meet the remaining water demands of the SPA at that time. A comparison of water supply and demand under this scenario is shown in Table 3.17-10.

Because water supply would be adjusted by SCWA to meet demand, neither a deficit nor a surplus of water would occur.

Delayed Construction of the North Service Area Pipeline

The Delayed Construction of the NSAP scenario assumes the existing capacity of the NVWF and Mather Housing groundwater system would meet water demands of the SPA until 2012. At this point, the NVWF would require

expansion to its full capacity. Under this scenario, the NSAP is anticipated to be constructed and online by 2013 and would provide surface water to meet the remaining water demands of the SPA at that time. A comparison of water supply and demand under this scenario is shown in Table 3.17-11.

As shown in Table 3.17-10, SCWA has adequate water supplies available to meet projected water demands under the No USACE Permit, Proposed Project, Biological Impact Minimization, and Conceptual Strategy Alternatives.

As shown in Table 3.17-11, SCWA has adequate water supplies available to meet projected water demands under the No USACE Permit, Proposed Project, Biological Impact Minimization, and Conceptual Strategy Alternatives. Because water supply would be adjusted by SCWA to meet demand, neither a deficit nor a surplus of water would occur.

Conversion of the Anatolia Raw Groundwater Transmission Pipeline

The Conversion of the Anatolia Raw Groundwater Transmission Pipeline scenario assumes the existing capacity of the NVWF and Mather Housing groundwater system would meet water demands of the SPA until 2012. At this point, the Vineyard Surface WTP would be operational and the Anatolia raw groundwater transmission pipeline would be converted to a treated surface water transmission pipeline and the NVWF and Anatolia WTP would be temporarily shut down (see Impact 3.17-4, below). Under this scenario, the NSAP is anticipated to be constructed and online by 2019 and would provide surface water to meet the remaining water demands of the SPA at that time. The NVWF and Anatolia WTP would then be reactivated to provide groundwater extraction and treatment to the SPA. A comparison of water supply and demand under this scenario is shown in Table 3.17-12.

As shown in Table 3.17-12, SCWA has adequate water supplies available to meet projected water demands under the No USACE Permit, Proposed Project, Biological Impact Minimization, and Conceptual Strategy Alternatives. Because water supply would be adjusted by SCWA to meet demand, neither a deficit nor a surplus of water would occur.

Groundwater Intensive Development with the SunCreek Groundwater Wells

The Groundwater Intensive Development with the SunCreek Groundwater Wells scenario assumes the existing capacity of the NVWF and Mather Housing groundwater system would meet water demands of the SPA until 2012. At that point, this scenario assumes that the NVWF would require expansion to its full capacity and the SunCreek groundwater wells and treatment plant would be constructed and operational by 2013 (see Impact 3.17-5 below). This scenario further assumes that the NSAP would be operational in 2015 and would provide surface water to meet the remaining water demands of the SPA at that time. A comparison of water supply and demand under this scenario is shown in Table 3.17-13.

As shown in Table 3.17-13, SCWA has adequate water supplies available to meet projected water demands under the No USACE Permit, Proposed Project, Biological Impact Minimization, and Conceptual Strategy Alternatives. Because water supply would be adjusted by SCWA to meet demand, neither a deficit nor a surplus of water would occur.

Impact Conclusion

As shown by the analysis in this EIR/EIS, which is consistent with the Zone 40 WSMP, Zone 41 UWMP, and the WSA prepared by SCWA for the project, reliable, long-term water supplies would be available to serve projected demand from Zone 40 users through 2030, including demand from SPA. As shown in Tables 3.17-10 through 3.17-13, SCWA has adequate water supplies available to meet projected water demands under the No USACE Permit, Proposed Project, Biological Minimization, and Conceptual Strategy Alternatives regardless of the water delivery scenario. In the long term, SCWA anticipates the majority of water demands in the NSA (including the SPA) would be met with surface water. However, the year-to-year mix of surface and groundwater varies depending on a large number of variables and surface water and groundwater supplies would be adjusted as necessary to meet the demands of the NSA as part of its conjunctive use program (MacKay & Somps 2011a:8, SCWA

2006:4-31). Therefore, there is reasonable likelihood that SCWA's long-term water supplies would be available to serve the No USACE Permit, Proposed Project, Biological Impact Minimization, and Conceptual Strategy Alternatives and this impact is considered **direct** and **less than significant**. **No indirect** impacts would occur. ***[Similar]***

In addition, the City would implement General Plan Actions ISF 2.4.1 and 2.4.2 (City of Rancho Cordova 2006b:13 and 14). These actions would require the project applicants for any particular discretionary development application to identify proposed water supplies and delivery systems prior to project approval to the satisfaction of the City. The project applicants any particular discretionary development application would identify that SCWA has legal entitlement to the water source and that the water source is available or reasonably foreseeable under normal, dry, and multiple dry years over a 20-year planning horizon for the amount of development proposed by the project. Therefore, General Plan Actions ISF 2.4.1 and 2.4.2 would ensure that a long-term, reliable water supply for individual projects is available or that needed improvements would be in place before approval of project-specific discretionary land-use entitlements and approvals, including all final small-lot maps; or for nonresidential projects, before issuance of use permits, building permits, or other entitlements.

Although there is a high degree of certainty that SCWA would be able to supply the project in the long term, the preferred rate of water supply for the project cannot be delivered until the Vineyard Surface WTP, the proposed NSAPP, the proposed Florin Road/Sunrise Boulevard pipeline, proposed NVWF Wells 4 through 6, and potentially the Anatolia surface water transmission pipeline are constructed and online. The Vineyard Surface WTP, the proposed NSAPP, and the proposed NVWF Wells 4 through 6 were identified and analyzed programmatically in the Zone 40 WSMP EIR and at the project level in IS/MNDs prepared for these facilities. Potentially significant environmental impacts identified in these project-level CEQA documents for these facilities would be reduced to a less-than-significant level with implementation of the mitigation measures incorporated as part of those projects. The physical impacts of constructing the Florin Road/Sunrise Boulevard pipeline and Anatolia surface water transmission pipeline facilities are addressed below in Impacts 3.17-3 and 3.17-4, respectively, and impacts associated with the construction of these facilities would be reduced to a less-than-significant level with implementation of the mitigation measures identified herein. Therefore, there are no known significant regulatory and environmental obstacles for construction and operation these facilities.

It is assumed that once these facilities are developed, the water supplies would continue to flow to SCWA without interruption, consistent with its existing water supply contracts, barring a major shift in climate or policy, or unless the California water law principles described earlier are applied in a significantly more restrictive manner. Therefore, SCWA would be able to supply the project water in the long term.

Mitigation Measure: No mitigation measures are required.

ID

As discussed above, SCWA would provide water supplies to the SPA through its Zone 40 conjunctive-use water supply system. Surface water would be diverted from the Sacramento River via the FRWP facilities and conveyed to the Vineyard Surface WTP for treatment. Treated water would then be conveyed to the NSA through the NSAP and Florin Road/Sunrise Boulevard pipeline (see Impacts 3.17-2 and 3.17-3, below). Alternatively, during the early phase of SunCreek development, surface water could be provided in the interim through the temporary conversion of the Anatolia raw groundwater transmission pipeline to a treated surface water transmission pipeline after the Vineyard Surface WTP becomes operational (see Impact 3.17-4, below). Groundwater would be provided by the NVWF, Mather Housing groundwater system, and SunCreek groundwater wells (see Impacts 3.17-2 and 3.17-5, below).

Table 3.17-9 summarizes the water demands under the Increased Development Alternative by 5-year increments over a 20-year planning horizon and the total projected water demand for the Increased Development Alternative is 3,478 afy. A comparison of water supplies available to meet projected water demands for the Increase Development Alternative under each of the four water supply scenarios is summarized in Tables 3.17-10 through

3.17-13, above. In the long term, SCWA anticipates the majority of water demands in the NSA (including the SPA) would be met with surface water. The year-to-year mix of surface and groundwater varies depending on a large number of variables and surface water and groundwater supplies would be adjusted as necessary to meet the demands of the NSA as part of its conjunctive use program and neither a deficit nor a surplus of water would occur (MacKay & Somps 2011a:8, SCWA 2006:4-31). As shown in Tables 3.17-10 through 3.17-13, SCWA would have adequate water supplies available to meet projected water demands under the Increased Development Alternative.

However, the WSA prepared for the project concluded that because the water demand under the Increased Development Alternative (3,478 afy) is more than the water demand estimated by SCWA for the SPA (3,176 afy), sufficient water supplies may not be available to meet water demands (SCWA 2011b:27).

City General Plan Actions ISF 2.4.1 and 2.4.2 (City of Rancho Cordova 2006b:13 and 14) require that the project applicants for any particular discretionary development application must identify proposed water supplies and delivery systems prior to project approval to the satisfaction of the City. The project applicants for any particular discretionary development application would be required to identify that SCWA has legal entitlement to the water source and that the water source is available or reasonably foreseeable under normal, dry, and multiple dry years over a 20-year planning horizon for the amount of development proposed by the project. Therefore, General Plan Actions ISF 2.4.1 and 2.4.2 would ensure that a long-term, reliable water supply for individual projects is available or that needed improvements would be in place before approval of project-specific discretionary land-use entitlements and approvals, including all final small-lot maps; or for nonresidential projects, before issuance of use permits, building permits, or other entitlements. Therefore, this **direct** impact is considered **less than significant. No indirect** impacts would occur. ***[Greater]***

It is assumed that once the water facilities are developed, the water supplies would continue to flow to SCWA without interruption, consistent with its existing water supply contracts, barring a major shift in climate or policy, or unless the California water law principles described earlier are applied in a significantly more restrictive manner. Therefore, SCWA would be able to supply the project water in the long term.

Mitigation Measure: No mitigation measures are required.

IMPACT 3.17-2 **Need for Off-Site Water Conveyance, Storage, and Treatment Facilities.** *Project implementation would result in increased demand for water supply. Off-site water conveyance, storage, and treatment facilities would be required to deliver water to customers on the SPA.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase the demand for off-site water conveyance, storage, or treatment facilities. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

As described in Impact 3.17-1 above, four water supply scenarios have been identified as options for providing water to the SPA. Under all four water supply scenarios, surface water would be diverted from the Sacramento River via the FRWP facilities and conveyed to the Vineyard Surface WTP for treatment. The FRWP was completed and became operational in April 2010. SCWA will begin using FRWP after completion of the Vineyard Surface WTP, which is currently under construction and is anticipated to be operational in November 2011. After the water is treated at the Vineyard Surface WTP, it would be delivered to the SPA through the proposed NSAP and proposed Florin Road/Sunrise Boulevard pipeline (see Impact 3.17-3 below). In addition, surface water could be provided in the interim through the temporary conversion of the Anatolia raw groundwater

transmission pipeline to a treated surface water transmission pipeline after the Vineyard Surface WTP becomes operational (see Impact 3.17-4 below).

Groundwater would be provided by the NVWF, the Mather Housing groundwater system, and the SunCreek groundwater wells. Because the SunCreek wells would be located on the SPA, the impacts from construction and operation of these wells are discussed under Impact 3.17-5, "Need for On-Site Water Conveyance Facilities," below.

SCWA has constructed the first phase of the NVWF, consisting of three wells (Wells 1-3) and three filters. Ultimately the well field would consist of up to seven wells, and Wells 4 through 7 will be constructed as new water supplies are required. Groundwater from the NVWF is conveyed and treated at the Anatolia WTP. Currently, the Anatolia WTP has a design capacity of approximately 6.5 mgd (4,500 gallons per minute). As of 2009, the average day demand was approximately 2.1 mgd and the maximum day demand was 4.3 mgd. Expansion of the Anatolia WTP to its ultimate capacity of 13.0 mgd is required to provide water treatment for build-out of the NVWF. SCWA would upgrade the Anatolia WTP when additional water treatment capacity is required.

The Mather Housing groundwater system currently serves development in and around Mather Field as well as development along the Sunrise Boulevard corridor. The Mather Housing water transmission pipeline connects to the Sunrise Douglas Community Plan Area at the intersection of Douglas Road and Sunrise Boulevard. However, treated water from the Mather Housing groundwater system is prevented from reaching this area due to differences in pressure and prevents SCWA from utilizing the full 6.0-mgd capacity of the Mather Housing groundwater system. Modifications to existing pumping facilities by SCWA would allow water currently not being used in Mather Field and the Sunrise Corridor to be conveyed to the SDCP/SRSP, including the SPA, to meet water demands, and no new facilities would be required (MacKay & Somps 2011a:5).

The preferred rate of water supply for the project cannot be delivered until the Vineyard Surface WTP, which is currently under construction; the proposed NSAPP; and proposed NVWF Wells 4 through 6 are online. Because there is a relationship between the project and the need for the Vineyard Surface WTP, the proposed NSAPP, and proposed NVWF Wells 4 through 6, approval of the project would contribute indirectly to impacts identified in the IS/MNDs prepared for these facilities. These IS/MNDs are hereby incorporated by reference and summarized below.

North Vineyard Well Field

The environmental impacts of the construction and operation of the NVWF were analyzed at a programmatic level in the original 2001-2002 SDCP/SRSP EIR (and in the Revised SDCP/SRSP Long-Term Water Supply Plan DEIR [AECOM 2011]). Because the NVWF was identified as a facility necessary to supply groundwater to Zone 40, the well field was also analyzed at a programmatic level in the Zone 40 WSMP EIR. SCWA has constructed the first phase of the NVWF, consisting of three wells (Wells 1-3) and three filters.

Project-level IS/MNDs for Well 4 (SCH #2005042042), Well 5 (SCH #2005062109), and Well 6 (SCH #2005072003) were prepared to analyze the environmental impacts of the construction and operation of these wells. The IS/MNDs were circulated for public review and adopted by Sacramento County in 2005. All potentially significant environmental impacts identified in these project-level CEQA documents for Wells 4, 5, and 6 were identified as being reduced to a less-than-significant level with implementation of mitigation measures included in the MNDs. Although the project-level CEQA review is complete, there is currently no time frame for construction of wells 4 through 6. Well 7 has not undergone project-level CEQA review and there is currently no time frame for construction of well 7.

Vineyard Surface Water Treatment Plant

The Vineyard Surface WTP is required to treat surface water conveyed from the Sacramento River via the FRWP. The environmental impacts of the construction and operation of the Vineyard Surface WTP were analyzed at a

programmatic level in the Zone 40 WSMP EIR, and at a project-level in an IS/MND (SCH #20047092050), which was adopted by the County on October 2004. Mitigation measures were identified in the IS/MND that would reduce potentially significant impacts to a less-than-significant level. Construction of the Vineyard Surface WTP began in March 2008 and the plant is anticipated to be operational in November 2011.

North Service Area Pipeline Project

The NSAPP would be required to convey water treated at the Vineyard Surface WTP to the vicinity of the SPA. The NSAP would begin at the Vineyard Surface WTP and convey surface water through one of four alternative alignments to an existing 42-inch transmission main at the intersection of Douglas Road and Sunrise Boulevard. In addition, the NSAPP would construct a booster tank station at one of two proposed sites. The NSAP alternative alignments and booster tank station sites are described in Section 3.17.1, "Affected Environment," under "North Service Area Pipeline Project." (The pipeline necessary to connect the NSAP with the SPA is evaluated below in Impact 3.17-3.)

The environmental impacts of the construction and operation of the NSAP were analyzed at a programmatic level in the Zone 40 WSMP EIR, and at a project-level in an IS/MND (SCH #2010082044), which was circulated for public review in August 2010 (Sacramento County 2010). The IS/MND was adopted by the County in October 2010.

Implementation of mitigation measures identified in the IS/MND would reduce potentially significant impacts to a less-than-significant level. There is currently no time frame for construction of NSAP; however, it is expected that the NSAP would be constructed as demand for treated water begins to exceed the available groundwater supply (MacKay & Somps 2011a:6).

Impact Conclusion

Because the off-site infrastructure required for water conveyance facilities necessary to serve the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives has not been constructed, this impact is considered **direct** and **potentially significant**. ***[Similar]***

In addition, the project would contribute to impacts associated with the construction and operation of the Vineyard Surface WTP; the NSAPP; and NVWF Wells 4, 5, and 6 that would be needed to serve the SPA, among other areas planned for development. Potentially significant environmental impacts identified in these project-level CEQA documents for these facilities would be reduced to a less-than-significant level with implementation of the mitigation measures incorporated as part of those projects. Therefore, the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would **not indirectly** contribute to any significant and unavoidable impacts associated with the construction and operation of the Vineyard Surface WTP; the NSAPP; and NVWF Wells 4, 5, and 6. ***[Similar]***

> **Mitigation Measure 3.17-2: Submit Proof of an On- and Off-Site Infrastructure Delivery System or Assure that Adequate Financing is Secured.**
>
> The following shall be required for all legislative-level development projects, including community plans, general plan amendments, specific plans, rezonings, and other plan-level discretionary entitlements, but excluding tentative subdivisions maps, parcel maps, use permits, and other project-specific discretionary land-use entitlements or approvals:
>
> - All required water treatment and delivery infrastructure for the project shall be in place at the time of subsequent, project-specific discretionary land-use entitlements or approvals, or shall be assured prior to occupancy through the use of bonds or other sureties to the City's satisfaction. Water infrastructure may be phased to coincide with the phased development of large-scale projects.

The following shall be required for project-specific discretionary land-use entitlements and approvals including, but not limited to, all tentative subdivision maps, parcel maps, or use permits:

- Off-site and on-site water infrastructure sufficient to provide adequate water to the subdivision shall be in place prior to the issuance of building permits or their financing shall be assured to the satisfaction of the City prior to the approval of the Final Map, consistent with the requirements of the Subdivision Map Act, or prior to the issuance of a similar, project-level entitlement for nonresidential land uses.

- Off-site and on-site water distribution systems required to serve the subdivision shall be in place and contain water at sufficient quantity and pressure prior to the issuance of any building permits. Model homes may be exempted from this policy, as determined appropriate by the City, and subject to approval by the City.

Implementation: Project applicants of any particular discretionary development application.

Timing: Before the approval of project-specific, discretionary land-use entitlements and approvals, including all final small-lot maps, or for nonresidential projects, before the issuance of use permits, building permits, or other entitlements.

Enforcement: City of Rancho Cordova Planning Department.

Implementation of Mitigation Measure 3.17-2 would reduce direct, potentially significant impacts under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development, Alternatives to a **less-than-significant** level because off-site water conveyance facilities sufficient to convey water supplies to subdivisions or nonresidential uses would be in place before recordation of any final small-lot subdivision map, or before City approval of any similar project-specific, discretionary approval or entitlement required for nonresidential uses.

IMPACT 3.17-3 **Need for Off-Site Water Conveyance Facilities—Florin Road/Sunrise Boulevard Pipeline.** *The project is required to construct a new off-site pipeline in order to convey water from the North Service Area Pipeline (NSAP) to the project site.*

NP

Because no new project-related construction would occur under the No Project Alternative, **no direct** or **indirect** impacts from construction of new off-site water conveyance facilities would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

The Florin Road/Sunrise Boulevard pipeline would be an extension of the proposed NSAP and would be required to convey surface water from the NSAP to the SPA (see Impact 3.17-2 above). The Florin Road/Sunrise Boulevard pipeline described below that is necessary to serve the SPA has not been constructed, nor have final design plans and specifications been submitted or approved. This pipeline not been subject to CEQA or NEPA compliance; therefore, the following discussion analyzes environmental impacts associated with the construction of the Florin Road/Sunrise Boulevard pipeline.

The Florin Road/Sunrise Boulevard pipeline would be 30 inches in diameter and would connect to the NSAP at the intersection of Florin Road and Eagles Nest Road (see Exhibit 2-9 in Chapter 2, "Alternatives"). The pipeline would extend east within Florin Road for approximately 5,300 feet to the intersection of Florin Road with Sunrise Boulevard and cross the Folsom South Canal. The pipeline would then turn north and travel 10,500 feet within Sunrise Boulevard to the intersection of Kiefer Boulevard where it would connect to the SPA's proposed on-site

water system. The new pipeline would be placed underground within the existing Florin Road and Sunrise Boulevard road rights-of-way and would be suspended underneath the existing bridge crossing over the Folsom South Canal (MacKay & Somps 2011b:11).

The Florin Road/Sunrise Boulevard pipeline would be installed in open trenches using conventional trenching techniques. The trenching techniques include surface grading, trench excavation, pipeline installation, and backfilling and surface repaving or re-grading. A backhoe or excavator would be used to dig trenches for pipe installation. In general, trenches would be 5 to 6 feet wide and 6 to 10 feet deep. Trenches deeper than 5 feet would require shoring to prevent trench failure. The trenches would have vertical sidewalls to minimize construction easement width and amount of soil excavated. It is anticipated that less than 5 acres per day would be disturbed during construction activities (MacKay & Somps 2011b:13).

Jack-and-bore construction techniques would potentially be used at major intersections, including State Route 16 and Sunrise Boulevard. Construction staging areas may be up to 10 acres in size; the location of proposed construction areas is currently unknown (MacKay & Somps 2011b:13).

SCWA anticipates two crews of 16 to 18 construction workers would install the pipeline and would possibly work at opposite ends of the alignment. (MacKay & Somps 2011b:13). This analysis assumes that all construction activities would occur during the daytime hours.

It is anticipated that of the Florin Road/Sunrise Boulevard pipeline installation would occur after construction of the initial two phases of the NSAP. Installation of the Florin Road/Sunrise Boulevard pipeline would require approximately 8 months. Potential environmental impacts associated with construction of the Florin Road/Sunrise Boulevard are evaluated below.

Aesthetics

Installation of the majority of the water-supply pipeline would occur within an existing urban area that is developed with residential, commercial, and industrial land uses; therefore, installation of the underground pipeline would not degrade the surrounding visual character. Although the alignment along Florin Road and the southern end of Sunrise Boulevard are relatively undeveloped and rural in nature, the pipeline would be installed underground, and therefore would not degrade the surrounding visual character. There are no state-designated scenic highway segments adjacent to the water-supply pipeline. The areas where the pipeline would be installed are not visible from any state- or County-designated scenic highways or roadways. Roadway disturbance during construction would be short-term, temporary, and of relatively short duration. Therefore, the proposed underground water-supply pipeline would result in **direct**, **less-than-significant** impacts on visual resources. **No indirect** impacts would occur.

Air Quality

Temporary and short-term construction-related emissions of criteria air pollutants, ozone precursors, toxic air contaminants (TACs), and odors would be generated during pipeline construction. Pipeline construction emissions were modeled over an 8-month period. Construction was presumed to involve a 15,800-foot (3-mile) stretch of paved roadway that would be excavated to a width of 5 feet and a depth of 5 feet (to accommodate a 30-inch pipe). Digging up the existing road was presumed to take about 1 month, as was repaving after the pipeline. Trenching and excavation, as well as backfilling and grading, was assumed to occur over an approximately 6-monthy period. Lastly, it was assumed that a borer would operate for approximately 1 month over a distance of approximately 50 feet at the Sunrise Boulevard/SR 16 intersection. It was assumed that no additional cut and fill material (and associated hauling trips from borrow or landfill sites) would be needed. Emissions were estimated using the Sacramento Metropolitan Air Quality Management District (SMAQMD's) Roadway Construction Emissions Model (SMAQMD 2009), and are summarized in Table 3.7-14. Particulate matter (PM) emissions were modeled assuming that water trucks would be operating during construction activities.

Table 3.17-14
SunCreek Maximum Daily Construction Emissions, 2012
Florin Road/Sunrise Boulevard Pipeline

	ROG lb/day	CO lb/day	NOx lb/day	Total PM_{10} lb/day	Exhaust PM_{10} lb/day	Fugitive Dust PM_{10} lb/day	Total $PM_{2.5}$ lb/day	Exhaust $PM_{2.5}$ lb/day	Fugitive Dust $PM_{2.5}$ lb/day
Maximum Daily Emissions (lbs/day)	6.6	27.4	40.9	3.2	2.2	1.0	2.2	2.0	0.2
Total Emissions (tons/total pipeline)	0.47	1.80	2.24	0.23	0.17	0.07	0.17	0.15	0.01
SMAQMD Construction-Related Thresholds of Significance	-	-	**85**	-	-	-	-	-	-

Notes: ROG = reactive organic gases; lb/day = pounds per day; CO = carbon monoxide; NO_x = oxides of nitrogen; PM_{10} = respirable particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = respirable particulate matter with a diameter of 2.5 microns or less; SMAQMD = Sacramento Metropolitan Air Quality Management District.
See Appendices L and N for modeling data.
Source: Data modeled by AECOM in 2011

As shown in Table 3.17-14, construction-related NOx emissions would not exceed the SMAQMD threshold of significance, and emissions of other criteria pollutants are extremely low. Therefore, the **direct** impacts on local air quality (carbon monoxide [CO] and PM hotspots) and regional air quality (i.e. ozone and PM) would be **less-than-significant**. **No indirect** impacts would occur.

There are currently only a few rural residences in the immediate vicinity of the proposed pipeline route (i.e., approximately 500 feet), the closest of which located approximately 150 feet south of Florin Road. However, because construction would progress in a linear fashion along Florin Road and Sunrise Boulevard, diesel equipment would only be operating for a few days in the immediate vicinity of these sensitive receptors during the month of construction. Additionally, the predominant wind direction is from the south-southwest; therefore, the sensitive receptors are located upwind of the proposed pipeline. Both carcinogenic and non-carcinogenic TAC exposures at distances 100 feet or more downwind of pipeline construction are unlikely to result in health hazards for a project of this size, which involves a total disturbed area of about 1.8 acres (Bay Area Air Quality Management District [BAAQMD] 2010:9). Because no development that would entail the placement of new sensitive receptors in the immediate vicinity of the pipeline route is planned along the pipeline route in 2012, the **direct** impact of exposures of sensitive receptors to TAC or odor emissions associated with construction of the proposed pipeline is anticipated to be a **less-than-significant**. **No indirect** impacts would occur.

Biological Resources

Construction of the pipeline would not result in adverse effects on biological resources, because the construction would occur in previously disturbed, existing roadways. However, the location of the construction staging area is presently unknown. If the staging area were located in an area where sensitive biological resources such as special-status plants, animals, or sensitive habitats, including wetlands were located, then **direct significant** impacts related to biological resources could occur. **Indirect** impacts to biological resources are discussed below under "Drainage, Hydrology, and Water Quality."

Mitigation Measure 3.17-3a: Perform Biological Surveys at the Construction Staging Area and Avoid Damage or Destruction to Sensitive Resources by Relocating the Staging Area, if Sensitive Biological Resources are Found.

If a previously disturbed area is not available, prior to the establishment of any construction staging area, the project applicant(s) shall retain the services of a qualified professional biologist to perform surveys at the proposed staging area for special-status plants and wildlife and any sensitive habitats such as wetlands or other waters of the U.S., and special-status species that may not be located within the staging area but could be disturbed by construction activities (e.g., raptors). If sensitive biological resources are found at a proposed staging area, another potential staging area shall be identified and evaluated until a suitable site found to be devoid of sensitive resources is identified. The final construction staging area selected shall not be located in any area that would damage or destroy any special-status plant population or habitat for any state or Federally listed special-status wildlife species (e.g., vernal pools, elderberry shrubs, Swainson's hawk nest site), require fill or result in any indirect impacts to any wetland or other waters of the U.S. or waters of the state, or require take of any special-status wildlife species (as determined by the qualified professional biologist). The project applicant(s) shall first seek a previously disturbed area for staging.

To avoid disturbance to nesting wildlife species (e.g., raptors) the following measures shall be applied:

- Conduct preconstruction surveys for active nests of Swainson's hawks, white-tailed kite, burrowing owls, and other raptors, at the proposed staging area and within 0.5 mile.

- If active nests are found, impacts on nesting Swainson's hawks and other raptors shall be avoided by establishing appropriate buffers around the nests. No project activity shall commence within the buffer area until the young have fledged, the nest is no longer active, or until a qualified biologist has determined in coordination with DFG that reducing the buffer would not result in nest abandonment. DFG guidelines recommend establishing buffers of 0.25- to 0.5-mile, but the size of the buffer may be adjusted if a qualified biologist and the City, in consultation with DFG, determine that such an adjustment would not be likely to adversely affect the nest.

- Monitoring of the nest by a qualified biologist during and after construction activities shall occur (to be funded by the project applicant[s]) if the activity has potential to adversely affect the nest.

Implementation: Before the approval of grading plans and before/during any ground-disturbing activities for the Florin Road/Sunrise Boulevard Pipeline.

Timing: Project applicants of all project phases where construction of the Florin Road/ Sunrise Boulevard Pipeline is required.

Enforcement: City of Rancho Cordova Planning Department.

Cultural Resources

Because the new water-supply pipeline would be placed within the existing roadway, the potential to disturb or destroy any known cultural resources is low (because roadway grading operations would have already affected any resources that previously existed). However, there is always a possibility of encountering intact, unknown buried cultural resources or human remains, and this could result in **direct, potentially significant** impacts on cultural resources. **No indirect** impacts would occur.

Mitigation Measure: Implement Mitigation Measure 3.5-3 (Provide Preconstruction Worker Education and Stop Potentially Damaging Work if Human Remains are Uncovered During Construction).

Mitigation Measure 3.17-3b: Perform Cultural Surveys at the Construction Staging Area and Avoid Damage or Destruction to Archaeological Resources by Relocating the Staging Area if Cultural Resources are Found.

If a previously disturbed area is not available, prior to the establishment of any construction staging area, the project applicants shall retain the services of a qualified professional archaeologist to perform surveys at the proposed staging area for cultural resources. If cultural resources are found at a proposed staging area, another potential staging area shall be identified and evaluated until a suitable site found to be devoid of sensitive resources is identified. The final construction staging area selected shall not be located in any area that would damage or destroy cultural resources. The project applicants shall first seek a previously disturbed area for staging.

To avoid damage or destruction of cultural resources, the project applicants of all project phases where construction of the pipeline is required shall hire a qualified archaeologist to perform a cultural records search and survey, if appropriate. If any cultural resources are discovered along the pipeline route or within the selected construction staging area as a result of the records search, the staging area shall be moved to a different location without any known cultural resources, and Mitigation Measure 3.5-3 shall be implemented in the vicinity of the known resources along the pipeline route.

Implementation: Before the approval of grading plans and before/during any ground-disturbing activities for the Florin Road/Sunrise Boulevard Pipeline.

Timing: Project applicants of all project phases where construction of the Florin Road/Sunrise Boulevard Pipeline is required.

Enforcement: City of Rancho Cordova Planning Department.

Drainage, Hydrology, and Water Quality

The proposed water-supply pipeline would be placed in the rights-of-way of existing roads, and would result in temporary, short-term construction-related impacts. Such activities could result in soil erosion, stormwater discharges of suspended solids, and increased turbidity and potential mobilization of other pollutants from project construction sites to flow as contaminated runoff to drainage channels on-site and ultimately off-site. Many construction-related wastes have the potential to degrade existing water quality by altering the dissolved-oxygen content, temperature, pH, suspended-sediment and turbidity levels, or nutrient content, or by causing toxic effects on the aquatic environment. Project construction activities that are implemented without mitigation could violate water quality standards or cause indirect harm to aquatic organisms. Therefore, construction-related activities could result in **direct** and **indirect, potentially significant** impacts on hydrology, drainage, and water quality.

Mitigation Measure: Implement Mitigation Measure 3.9-1 (Acquire Appropriate Regulatory Permits and Prepare and Implement an Erosion and Sediment Control Plan, SWPPP, and BMPs).

Mitigation Measure: Implement Mitigation Measure 3.17-3a.

Environmental Justice

The proposed water-supply pipeline would provide water supplies to new housing and other land uses identified for the project. The proposed water-supply pipeline itself would not cause a disproportionately high and adverse impact on low-income populations or create a disproportionate placement of adverse environmental impacts on minority communities. Therefore, the water-supply pipeline would result in **no direct** or **indirect** impacts on environmental justice.

Geology, Soils, and Mineral Resources

The proposed pipeline route has relatively flat topography and is not located in or near a landslide hazard area, and known active seismic sources are located more than 30 miles from the pipeline. Therefore, potential damage to the pipeline from seismic activity and related geologic hazards would be a **direct**, **less-than-significant** impact. **No indirect** impacts would occur.

The pipeline would not be located in an area of known mineral resources as designated by the California Division of Mines and Geology, or as designated by the City of Rancho Cordova General Plan. Therefore, there would be **no direct** or **indirect** impact from potential loss of mineral resources.

Construction activities would result in the temporary, short-term disturbance of soil and would expose disturbed areas to winter storm events, which could result in soil runoff and localized erosion. A **direct**, **potentially significant** impact from soil erosion could result from construction activities. **No indirect** impacts would occur.

The pipeline would be placed in soils identified by the Natural Resources Conservation Service [NRCS] (2011) as: Redding gravelly loam, Red Bluff-Redding complex, San Joaquin silt loam, Fiddyment fine sandy loam, and Hicksville loam. There is potential for the sides of trench excavations to cave for all of these soils, and most are moderate to highly expansive (which could render the material unsuitable for backfill). These soils have a moderate to high potential for corrosion of steel and concrete. Therefore, potential damage to the pipeline from soil hazards would be a **potentially significant, direct** impact. **No indirect** impacts would occur.

> **Mitigation Measure: Implement Mitigation Measures 3.7-1a: (Prepare Site-Specific Geotechnical Report per CBC Requirements and Implement Appropriate Recommendations) and 3.9-1 (Acquire Appropriate Regulatory Permits and Prepare and Implement an Erosion and Sediment Control Plan, SWPPP, and BMPs).**

Greenhouse Gases

Greenhouse gas emissions are cumulative by nature. Construction of the proposed Florin Road/Sunrise Boulevard water supply pipeline would result in the generation of temporary and short-term emissions of greenhouse gases (GHGs) (e.g., CO_2) from the use of on-site heavy-duty construction equipment and worker commute and material transport trips. Total project construction emissions of carbon dioxide (CO_2) were estimated to be 239 metric tons (MT) and 3,929 pounds/day for the year 2012. Only CO_2 emissions were estimated for construction, as nitrogen oxide (N_2O) and methane (CH_4) emissions are about 20 to 40 times lower than CO_2 emissions for off-road vehicles (California Resources Board [ARB] 2010:215,218). Because the emissions would be finite in nature (i.e., only occurring during construction, not during operation), would be lower than the lowest operational air quality management district threshold of significance of 1,100 MT CO_2e/year (the BAAQMD "brightline" threshold), construction-related GHGs would not result in a cumulatively considerable increase in GHGs. In addition, the pipeline would not result in any operational GHG emissions. Thus, the proposed Florin Road/Sunrise Boulevard water supply pipeline would result in a **direct, less-than-significant** impact with respect to the generation of greenhouse gases. **No indirect** impact would occur.

Hazards and Hazardous Materials

Project construction would involve the temporary, short-term storage, use, and transport of hazardous materials (e.g., asphalt, fuel, lubricants, and solvents) on local roadways. Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol and the California Department of Transportation, and use of these materials is regulated by California Department of Toxic Substances Control (DTSC), as outlined in Title 22 of the California Code of Regulations. The project's builders, contractors, and suppliers would be required to use, store, and transport hazardous materials in compliance with Federal, state, and local regulations during project construction; therefore, the project would not create a significant hazard to the public or the environment. There are no schools serving kindergarten through 12th grade students within one-half mile of the project site. The pipeline route is not located on the Cortese List of hazardous materials sites. Construction of the underground

pipeline would have no effect on safety related to Mather Airport. Impacts related to implementation of emergency plans are addressed below under "Public Services." Most of the pipeline route and vicinity are in an urban area that is already developed; the rural areas along Florin Road and the southern end of Sunrise Boulevard consist of agricultural land and are not located in a high wildfire hazard zone. Thus, there would be no impact related to wildfire hazards. Therefore, there would be **no direct** or **indirect** impacts related to hazards and hazardous materials.

Land Use and Planning

Because the proposed water-supply pipeline would be placed in the rights-of-way of existing roads, it would not divide an established community, and it would be consistent with the City General Plan, zoning designations, and other adopted land use plans, policies, and regulations. Therefore, the proposed water-supply pipeline would have **no direct** or **indirect** impacts related to land use.

Noise

Noise levels from project construction activities would be short term and the locations would change as construction proceeds along the pipeline route. There are currently only a few rural residences in the immediate vicinity of the proposed pipeline route, the closest of which is located approximately 150 feet south of Florin Road. The predominant wind direction is from the south-southwest and therefore the sensitive receptors along Florin Road are located upwind of the noise from construction of the proposed pipeline. However, construction noise levels could temporarily exceed applicable standards at these noise-sensitive receptors. Typical noise levels attributable to heavy-construction equipment are listed in Table 3.11-8 of Section 3.11, "Noise." Construction noise levels could exceed the City's standards for exterior and interior noise levels of 60 dBA L_{dn} and 45 dBA L_{dn}, respectively. However, the City's noise ordinance provides that any construction occurring between the hours of 7 a.m. and 6 p.m. is exempt from the noise standards. Since pipeline installation would only occur during the daylight hours, construction-generated noise would result in a **direct**, **less-than-significant**, temporary, short-term noise impact on nearby noise-sensitive land uses. **No indirect** impacts would occur.

Paleontological Resources

According to the geologic map prepared by Wagner et al. (1987), the proposed water-supply pipeline would be constructed within the Laguna Formation. In keeping with the significance criteria of the Society of Vertebrate Paleontology (1995), all vertebrate fossils are generally categorized as being of potentially significant scientific value. Sediments referable to the Laguna Formation are generally devoid of vertebrate fossils, and no previously recorded fossil sites from this formation are known from either the project site or the surrounding area. Thus, sediments that underlie the proposed water-supply pipeline are considered to be of low paleontological sensitivity. Furthermore, the pipeline would be placed within the existing roadway where any paleontological resources that may have been present would already have been destroyed by previous road construction activities. Therefore, the potential for project-related construction activities to affect unique paleontological resources would result in a **direct**, **less-than-significant** impact. **No indirect** impacts would occur.

Parks and Recreation

The proposed water-supply pipeline would provide water supplies to new housing and other land uses identified for the project. The proposed water-supply pipeline itself would not increase demand for parks and recreational facilities. Therefore, the water-supply pipeline would result in **no direct** impacts on parks and recreation. The construction of the proposed water-supply pipeline would result in **indirect**, **less-than-significant** impacts on parks and recreation facilities, and these impacts are addressed in Section 3.12, "Parks and Recreation," of this DEIR/DEIS.

Population, Employment, and Housing

The proposed water-supply pipeline would provide water supplies to new housing and other land uses identified for the project. The proposed water-supply pipeline itself would not increase population. Therefore, the water-supply pipeline would result in **no direct** impacts on these population, employment, and housing. The construction of the proposed water-supply pipeline would result in **indirect**, **less-than-significant** impacts on these public services, and these impacts are addressed in Section 3.13, "Population, Employment, and Housing," of this DEIR/DEIS.

Public Services

The proposed water-supply pipeline would provide water supplies to new housing and other land uses identified for the project. The proposed water-supply pipeline itself would not increase demand for fire protection facilities, services, and equipment or police protection facilities, services, and equipment because existing facilities are adequate to serve construction of the pipeline. Construction of the underground pipeline would have no effect on school facilities and services because the pipeline would supply water on to the SPA.

However, with regards to emergency plans, construction activities could result in temporary lane closures, increased truck traffic, and other roadway effects that could slow or stop emergency vehicles, temporarily increasing response times and impeding existing service. Therefore, the proposed water-supply pipeline and pump station would result in **direct**, **potentially significant** impacts related to the temporary obstruction of roadways during construction. **No indirect** impacts would occur.

> **Mitigation Measure: Implement Mitigation Measure 3.14-1 (Prepare and Implement a Construction Traffic Control Plan).**

Traffic and Transportation

Short-term, temporary impacts of construction on traffic are addressed above under "Public Services." Water supply pipeline installation would not result in permanent increases to roadway or intersection level of service standards or increases in peak hour traffic volumes, nor would it affect alternative modes of transportation, because the pipeline would be installed underground. Therefore, the proposed water supply pipeline would result in **no direct** or **indirect** impacts related to traffic and transportation.

Utilities and Service Systems

The proposed water-supply pipeline would provide water supplies to new housing and other land uses identified for the SPA. The proposed water-supply pipeline itself would not increase demand for water; wastewater service; solid-waste disposal, or electricity, natural gas, and communications services and systems.

However, because the new infrastructure required for water conveyance facilities necessary to serve the project (Florin Road/Sunrise Boulevard pipeline) has not been constructed, nor have final design plans and specifications been submitted, this impact is considered **direct** and **potentially significant**. In addition, as described above, environmental impacts associated with the construction of these facilities could result in **potentially significant** impacts on biological resources; cultural resources; drainage, hydrology, and water quality; and public services. Mitigation measures for these indirect impacts are listed above.

> **Mitigation Measure: Implement Mitigation Measure 3.17-2.**

Impact Conclusion

Implementation of Mitigation Measure 3.17-2 would reduce direct, potentially significant impacts under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased

Development Alternatives related to the provision of required off-site water conveyance facilities to a **less-than-significant** level, because off-site water conveyance facilities sufficient to convey water supplies to subdivisions or nonresidential uses would be in place before recordation of any final small-lot subdivision map, or before the City approves any similar project-specific, discretionary approval or entitlement required for nonresidential uses.

Implementation of Mitigation Measures 3.17-3a and 3.9-1 would reduce direct and indirect impacts at the construction staging area to biological resources under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a **less-than-significant** level because project-related construction staging activities would be sited to avoid special-status species or sensitive habitats.

Implementation of Mitigation Measures 3.5-3, 3.7-1a, 3.9-1, 3.14-1, and 3.17-3b would reduce indirect significant impacts under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives related to off-site water conveyance facilities to a **less-than-significant** level, because adverse impacts on cultural resources would be avoided, appropriate recommendations of a geotechnical engineer would be incorporated into the project design, appropriate BMPs would be implemented to control erosion, and a traffic plan would be developed and implemented during construction activities.

IMPACT 3.17-4 **Need for Off-Site Water Conveyance Facilities—Potential Conversion of the Anatolia Raw Groundwater Transmission Pipeline.** *In the event that construction of the NSAP were to be delayed, the Anatolia raw groundwater transmission pipeline could be converted to a treated surface water transmission pipeline by constructing a surface water transmission pipeline from the Vineyard Surface WTP to the existing Anatolia groundwater transmission pipeline.*

NP

Because no new project-related construction would occur under the No Project Alternative, **no direct** or **indirect** impacts from construction of off-site water conveyance facilities would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

An option for delivery of surface water to the NSA, including the SPA, in the event that construction of the NSAP was delayed, would be to convert the Anatolia raw groundwater transmission pipeline to a treated surface water transmission pipeline once the Vineyard Surface WTP becomes operational in 2011 (see "Conversion of the Anatolia Groundwater Transmission Pipeline" under Impact 3.17-1 and Exhibit 2-10 in Chapter 2, "Alternatives"). The conversion of the Anatolia transmission pipeline described below has not been constructed, nor have final design plans and specifications been submitted or approved. This transmission pipeline not previously been subject to CEQA or NEPA compliance; therefore, the following discussion analyzes environmental impacts associated with the conversion of the Anatolia raw groundwater transmission pipeline to a treated surface water transmission pipeline.

Before the conversion of the existing Anatolia groundwater transmission pipeline to a surface water transmission pipeline could occur, the project would construct a portion of the NSAP beginning at the Vineyard Surface WTP. A new 66-inch pipeline would travel 4,600 feet east along Florin Road to its intersection with Excelsior Road. From this point, a new section of 30-inch pipeline would extend north along Excelsior Road for approximately 2,500 feet where it would then connect to the existing 30-inch raw groundwater transmission pipeline in Sunrise Boulevard that currently conveys raw groundwater from the NVWF to the Anatolia WTP. Once connected, the NVWF and Anatolia WTP would be temporarily shutdown. The existing NVWF wells would be retrofitted for periodic exercising during the interim shutdown period, which could include minor piping changes to allow for the recirculation of pumped groundwater during exercise periods. Minor piping modifications in and around the

vicinity of the Anatolia WTP would be required to connect the converted transmission pipeline to the existing treated water transmission pipelines and on-site storage tanks (MacKay & Somps 2011b:16).

The Anatolia surface water transmission pipeline would be installed in open trenches using conventional trenching techniques. The trenching techniques include surface grading, trench excavation, pipeline installation, and backfilling and surface repaving or re-grading. A backhoe or excavator would be used to dig trenches for pipe installation. In general, trenches would be 5 to 6 feet wide and 6 to 10 feet deep. Trenches deeper than 5 feet would require shoring to prevent trench failure. The trenches would have vertical sidewalls to minimize construction easement width and amount of soil excavated.

SCWA anticipates two crews of 16 to 18 construction workers would install the pipeline and would possibly work at opposite ends of the alignment. Construction work would occur during the daytime hours. This analysis assumes that all construction activities would take place during the daytime. The potential environmental impacts associated with the Anatolia pipeline conversion are evaluated below.

Aesthetics

Installation of the water-supply pipeline would occur within an existing urban area that is developed with residential, commercial, and industrial land uses; therefore, installation of the underground pipeline would not degrade the surrounding visual character. Minor modifications to above-ground structures to provide pipeline connections and pumping connections would not change the existing visual character at the Anatolia WTP. There are no state-designated scenic highway segments adjacent to the water-supply pipeline or the Anatolia WTP. The areas where the improvements would be installed are not visible from any state- or County-designated scenic highways or roadways. Roadway disturbance and modifications at the Anatolia WTP during construction would be short-term, temporary, and of relatively short duration. Therefore, the proposed Anatolia pipeline conversion would result in **direct**, **less-than-significant** impacts on visual resources. **No indirect** impacts would occur.

Air Quality

Temporary and short-term construction-related emissions of criteria air pollutants, ozone precursors, TACs, and odors would be generated during pipeline construction. For purposes of air quality modeling, construction of the new pipeline associated with the Anatolia raw groundwater conversion was assumed to occur for one month in 2012. Construction was presumed to involve a 7,100-foot (1.3-mile) stretch of paved roadway that would be excavated to a width of 5 feet and a depth of 5 feet (to accommodate a 66-inch pipe for 4,600 feet and a 30-inch pipe for 2,500 feet), conservatively. Digging up the existing road was presumed to take about a week, as was repaving after the pipeline. Trenching and excavation, as well as backfilling and grading, was assumed to require approximately two weeks. It was assumed that no additional cut and fill material (and associated hauling trips from borrow or landfill sites) would be needed. Emissions were estimated using SMAQMD's Roadway Construction Emissions Model (SMAQMD 2009), and are summarized in Table 3.7-15. Particulate matter (PM) emissions were modeled assuming that water trucks would be operating during construction activities.

As shown in Table 3.17-15, construction-related NO_x emissions would not exceed the SMAQMD threshold of significance, and emissions of other criteria pollutants are extremely low. Therefore, the **direct** impacts on local air quality (CO and PM hotspots) and regional air quality (i.e. ozone and PM) would be **less-than-significant**. **No indirect** impacts would occur.

There are currently several rural residences in the immediate vicinity (i.e., approximately 500 feet) of the proposed Anatolia pipeline conversion, located within approximately 100 feet of Florin Road, both to the north and to the south. However, construction would progress in a linear fashion along Florin Road, and diesel equipment would only be operating for a few days in the immediate vicinity of each existing sensitive receptor during the month of construction. Additionally, the predominant wind direction is from the south-southwest, and the majority of the sensitive receptors are located upwind of the proposed pipeline. Because no development that would result in the placement of new sensitive receptors in the immediate vicinity of the pipeline route is planned

Table 3.17-15
SunCreek Maximum Daily Construction Emissions, 2012
Conversion of Anatolia Raw Groundwater Transmission Pipeline

	ROG lb/day	CO lb/day	NOx lb/day	Total PM_{10} lb/day	Exhaust PM_{10} lb/day	Fugitive Dust PM_{10} lb/day	Total $PM_{2.5}$ lb/day	Exhaust $PM_{2.5}$ lb/day	Fugitive Dust $PM_{2.5}$ lb/day
Maximum Daily Emissions (lb/day)	4.4	18.0	28.8	3.9	1.9	2.0	2.1	1.7	0.4
Total Project Emissions (tons/project)	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
SMAQMD Construction-Related Thresholds of Significance	-	-	**85**	-	-	-	-	-	-

Notes: ROG = reactive organic gases; lb/day = pounds per day; CO = carbon monoxide; NO_x = oxides of nitrogen; PM_{10} = respirable particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = respirable particulate matter with a diameter of 2.5 microns or less; SMAQMD = Sacramento Metropolitan Air Quality Management District.
See Appendices L and N for modeling data.
Source: Data modeled by AECOM in 2011

in 2012, the **direct** impact of exposure of sensitive receptors to TAC or odor emissions associated with the proposed pipeline is anticipated to be a **less-than-significant** during the 2012 construction year. **No indirect** impacts would occur.

Biological Resources

Construction of the pipeline would not result in adverse effects on biological resources, because the construction would occur in previously disturbed, existing roadways. Minor modifications and pipeline connections at the Anatolia WTP would not result in adverse effects on biological resources because the construction would occur in within the previously disturbed area within the perimeter fence at the WTP, which does not contain sensitive biological resources or habitats. However, the location of the construction staging area is presently unknown. If the staging area were located in an area where sensitive biological resources such as special-status plants, animals, or sensitive habitats including wetlands were located, then **direct significant** impacts related to biological resources could occur. **Indirect** impacts to biological resources are discussed below under "Drainage, Hydrology, and Water Quality."

Mitigation Measure: Implement Mitigation Measure 3.17-3a.

Cultural Resources

Because the new water-supply pipeline would be placed within the existing roadway and within the existing perimeter fence at the Anatolia WTP, the potential to disturb or destroy any known cultural resources is low (because grading operations would have already affected any resources that previously existed). However, there is always a possibility of encountering intact, unknown buried cultural resources or human remains, and this could result in **direct, potentially significant** impacts on cultural resources. **No indirect** impacts would occur.

Mitigation Measure: Implement Mitigation Measure 3.5-3 (Provide Preconstruction Worker Education and Stop Potentially Damaging Work if Human Remains are Uncovered During Construction).

Mitigation Measure: Implement Mitigation Measure 3.17-3b.

Drainage, Hydrology, and Water Quality

The proposed water-supply pipeline and minor modifications at the Anatolia WTP would result in temporary, short-term construction-related impacts. Such activities could result in soil erosion, stormwater discharges of suspended solids, and increased turbidity and potential mobilization of other pollutants from project construction sites to flow as contaminated runoff to drainage channels on-site and ultimately off-site. Many construction-related wastes have the potential to degrade existing water quality by altering the dissolved-oxygen content, temperature, pH, suspended-sediment and turbidity levels, or nutrient content, or by causing toxic effects on the aquatic environment. Project construction activities that are implemented without mitigation could violate water quality standards or cause indirect harm to aquatic organisms. Therefore, construction-related activities could result in **direct** and **indirect, potentially significant** impacts on hydrology, drainage, and water quality.

Mitigation Measure: Implement Mitigation Measure 3.9-1 (Acquire Appropriate Regulatory Permits and Prepare and Implement an Erosion and Sediment Control Plan, SWPPP, and BMPs).

Mitigation Measure: Implement Mitigation Measure 3.17-3a.

Environmental Justice

The Anatolia pipeline conversion would provide water supplies to new housing and other land uses identified for the project. The Anatolia pipeline conversion itself would not cause a disproportionately high and adverse impact on low-income populations or create a disproportionate placement of adverse environmental impacts on minority communities. Therefore, the Anatolia pipeline conversion would result in **no direct** or **indirect** impacts on environmental justice.

Geology, Soils, and Mineral Resources

The pipeline route and Anatolia WTP have relatively flat topography and are not located in or near a landslide hazard area, and known active seismic sources are located more than 30 miles from the pipeline. Therefore, potential damage to structures from seismic activity and related geologic hazards would be a **direct**, **less-than-significant** impact. **No indirect** impacts would occur.

The pipeline route and the Anatolia WTP modifications would not be located in an area of known mineral resources as designated by the California Division of Mines and Geology, or as designated by the City of Rancho Cordova General Plan. Therefore, there would be **no direct** or **indirect** impact from potential loss of mineral resources.

Construction activities would result in the temporary, short-term disturbance of soil and would expose disturbed areas to winter storm events, which could result in soil runoff and localized erosion. A **direct**, **potentially significant** impact from soil erosion could result from construction activities. **No indirect** impacts would occur.

The pipeline alignment would pass through soils identified by the NRCS (2011) as: San Joaquin-Xerarents, Red Bluff loam, Red Bluff-Redding complex, Redding gravelly loam, and San Joaquin silt loam. There is potential for the sides of trench excavations to cave for all of these soils, and most are moderate to highly expansive (which could render the material unsuitable for backfill). These soils have a moderate to high potential for corrosion of steel and concrete. Therefore, potential damage to the pipeline from soil hazards would be a **potentially significant, direct** impact. **No indirect** impacts would occur.

Mitigation Measure: Implement Mitigation Measure 3.7-1a: (Prepare Site-Specific Geotechnical Report per CBC Requirements and Implement Appropriate Recommendations)

Mitigation Measure: Implement Mitigation Measure 3.9-1 (Acquire Appropriate Regulatory Permits and Prepare and Implement an Erosion and Sediment Control Plan, SWPPP, and BMPs).

Greenhouse Gases

Greenhouse gas emissions are cumulative by nature. Construction of the water supply pipeline associated with the Anatolia raw groundwater conversion would result in the generation of temporary and short-term emissions of GHGs (e.g., CO_2) from the use of on-site heavy-duty construction equipment and worker commute and material transport trips. Total project construction emissions of CO_2 were estimated to be 25 MT and 3,360 pounds/day for the year 2012. Only CO_2 emissions were estimated for construction, because N_2O and CH_4 emissions are about 20 to 40 times lower than CO_2 emissions for off-road vehicles (ARB 2010:215,218). Because the emissions would be finite in nature (i.e., only occurring during construction, not during operation), would be lower than the lowest operational AQMD threshold of significance of 1,100 MT CO_2e/year (the BAAQMD "brightline" threshold), construction-related GHGs would not result in a cumulatively considerable increase in GHGs. In addition, the pipeline would not result in any operational GHG emissions over and above those that are already occurring in association with operation of the Anatolia WTP. Thus, the proposed water supply pipeline associated with the Anatolia raw groundwater conversion would result in a **direct, less-than-significant** impact with respect to the generation of greenhouse gases. **No indirect** impact would occur.

Hazards and Hazardous Materials

Project construction would involve the temporary, short-term storage, use, and transport of hazardous materials (e.g., asphalt, fuel, lubricants, and solvents) on local roadways. Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol and the California Department of Transportation, and use of these materials is regulated by DTSC, as outlined in Title 22 of the California Code of Regulations. The project's builders, contractors, and suppliers would be required to use, store, and transport hazardous materials in compliance with Federal, state, and local regulations during project construction; therefore, the Anatolia pipeline conversion would not create a significant hazard to the public or the environment. There is one school, the Sunrise Elementary School, that is located within one-half mile of the Anatolia WTP; however, the WTP is an existing facility that is already permitted to use and store hazardous materials. The Anatolia pipeline conversion would not change the amounts or types of hazardous materials used at the facility. Neither pipeline route nor the Anatolia WTP are located on the Cortese List of hazardous materials sites. Construction of the underground pipeline would have no effect on safety related to Mather Airport. Impacts related to implementation of emergency plans are addressed below under "Public Services." Because the project site and vicinity are in an urban area that is already developed, there would be no impact related to wildfire hazards. Therefore, there would be **no direct** or **indirect** impacts related to hazards and hazardous materials.

Land Use and Planning

Because the proposed water-supply pipeline would be placed in the rights-of-way of existing roads, and because the minor modifications at the Anatolia WTP would occur at an existing facility, they would not divide an established community, and they would be consistent with the City General Plan, zoning designations, and other adopted land use plans, policies, and regulations. Therefore, the Anatolia pipeline conversion would have **no direct** or **indirect** impacts related to land use.

Noise

Noise levels from project construction activities would be short-term in nature and the locations would change as construction proceeds along the pipeline route and at the Anatolia WTP. There are currently several rural residences in the immediate vicinity (i.e., approximately 500 feet) of the proposed Anatolia pipeline conversion, located within approximately 100 feet of Florin Road, both to the north and to the south. Typical noise levels attributable to heavy-construction equipment are listed in Table 3.11-8 of Section 3.11, "Noise." Construction noise levels could exceed the City's standards for exterior and interior noise levels of 60 dBA L_{dn} and 45 dBA L_{dn}, respectively where sensitive receptors are located in close proximity to the Anatolia WTP or the new pipeline installation. However, the City's noise ordinance provides that any construction occurring between the hours of

7 a.m. and 6 p.m. is exempt from the noise standards. Therefore, project-related construction-generated noise would result in a **direct**, **less-than-significant**, temporary, short-term noise impact on nearby noise-sensitive land uses. **No indirect** impacts would occur.

Paleontological Resources

According to the geologic map prepared by Wagner et al. (1987), the proposed water-supply pipeline and minor modifications to the Anatolia WTP would be constructed within the Laguna Formation. In keeping with the significance criteria of the Society of Vertebrate Paleontology (1995), all vertebrate fossils are generally categorized as being of potentially significant scientific value. Sediments referable to the Laguna Formation are generally devoid of vertebrate fossils, and no previously recorded fossil sites from this formation are known from either the project site or the surrounding area. Thus, sediments that underlie the proposed water-supply pipeline and the Anatolia WTP are considered to be of low paleontological sensitivity. Furthermore, the pipeline would be placed within the existing roadway and existing WTP where any paleontological resources that may have been present would already have been destroyed by previous road construction and grading activities. Therefore, the potential for project-related construction activities to affect unique paleontological resources would result in a **direct**, **less-than-significant** impact. **No indirect** impacts would occur.

Parks and Recreation

The Anatolia pipeline conversion would provide water supplies to new housing and other land uses identified for the SPA. The Anatolia pipeline conversion itself would not increase demand for parks and recreational facilities. Therefore, the Anatolia pipeline conversion would result in **no direct** or **indirect** impacts on parks and recreation.

Population, Employment, and Housing

The Anatolia pipeline conversion would provide water supplies to new housing and other land uses identified for the SPA. The Anatolia pipeline conversion itself would not increase population because it would supply water only for the SPA and adequate construction workers are available from the region. Therefore, the Anatolia pipeline conversion would result in **no direct** or **indirect** impacts on these population, employment, and housing.

Public Services

The Anatolia pipeline conversion would provide water supplies to new housing and other land uses identified for the SPA. The Anatolia pipeline conversion itself would not increase demand for fire protection facilities, services, and equipment or police protection facilities, services, and equipment because existing facilities are adequate to serve construction of the pipeline. Construction of the pipeline would have no effect on school facilities and services.

However, with regard to emergency plans, construction activities could result in temporary lane closures, increased truck traffic, and other roadway effects that could slow or stop emergency vehicles, temporarily increasing response times and impeding existing service. Therefore, the Anatolia pipeline conversion would result in **direct**, **potentially significant** impacts related to the temporary obstruction of roadways during construction. **No indirect** impacts would occur.

> **Mitigation Measure: Implement Mitigation Measure 3.14-1 (Prepare and Implement a Construction Traffic Control Plan).**

Traffic and Transportation

Short-term, temporary impacts of construction on traffic are addressed above under "Public Services." Water supply pipeline installation and minor modifications at the Anatolia WTP would not result in permanent increases to roadway or intersection level of service standards or increases in peak hour traffic volumes, nor would it affect

alternative modes of transportation, because the pipeline would be installed underground. Therefore, the Anatolia pipeline conversion would result in **no direct** or **indirect** impacts related to traffic and transportation.

Utilities and Service Systems

The Anatolia pipeline conversion would provide water supplies to new housing and other land uses identified for the SPA. The Anatolia pipeline conversion itself would not increase demand for water; wastewater service; solid-waste disposal, or electricity, natural gas, and communications services and systems.

However, because new infrastructure required for Anatolia pipeline conversion has not been constructed, nor have final design plans and specifications been submitted, this impact is considered **direct** and **potentially significant**. In addition, as described above, environmental impacts associated with the construction of these facilities could result in **indirect** and **potentially significant** impacts on biological resources; cultural resources; drainage, hydrology, and water quality; and public services. Mitigation measures for these indirect impacts are listed above.

Mitigation Measure: Implement Mitigation Measure 3.17-2.

Impact Conclusion

Because the infrastructure required for water conveyance facilities necessary to serve the project (Anatolia pipeline conversion) has not been constructed, nor have final design plans and specifications been submitted, this impact is considered **direct** and **potentially significant**. In addition, as described above, environmental impacts associated with the construction of these facilities could result in **indirect** and **potentially significant** impacts on biological resources; cultural resources; drainage, hydrology, and water quality; and public services. Mitigation measures for these impacts are listed above.

Implementation of Mitigation Measure 3.17-2 would reduce direct, potentially significant impacts under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives related to the provision of required off-site water conveyance facilities to a **less-than-significant** level, because off-site water conveyance facilities sufficient to convey water supplies to subdivisions or nonresidential uses would be in place before recordation of any final small-lot subdivision map, or before the City approves any similar project-specific, discretionary approval or entitlement required for nonresidential uses.

Implementation of Mitigation Measures 3.17-3a and 3.9-1 would reduce direct and indirect impacts at the construction staging area to biological resources under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a **less-than-significant** level because no special-status species or sensitive habitats would be adversely affected by project-related construction staging activities.

Implementation of Mitigation Measures 3.5-3, 3.7-1a, 3.9-1, 3.14-1, and 3.17-3b would reduce indirect significant impacts under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives related to off-site water conveyance facilities to a **less-than-significant** level, because adverse impacts on cultural resources would be avoided, appropriate design recommendations of a geotechnical engineer would be incorporated into project design, appropriate BMPs would be implemented to control erosion, and a traffic plan would be developed and implemented during construction activities.

IMPACT 3.17-5 **Need for Off-Site Water Conveyance Facilities—Americanos Boulevard Pipelines.** *The project is required to construct new off-site pipelines to convey Zone 6 water from the North Douglas storage tanks to the project site.*

NP

Because no new project-related construction would occur under the No Project Alternative, **no direct** or **indirect** impacts from construction of off-site water conveyance facilities would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

Pipelines within the future right-of-way of Americanos Boulevard are required to bring Zone 6 water service to the project site (see Exhibit 2-10 in Chapter 2, "Alternatives" and Appendices H and U). The Americanos Boulevard pipelines described below that are necessary to serve the SPA have not been constructed, nor have final design plans and specifications been submitted or approved. This pipeline has not been subject to CEQA or NEPA compliance; therefore, the following discussion analyzes environmental impacts associated with the construction of the Americanos Boulevard pipelines that would be expected to occur.

The Americanos Boulevard pipelines would convey water from existing North Douglas storage tanks to the SPA through two new 24-inch-diameter parallel pipelines. The North Douglas storage tanks are located north of Douglas Road and east of Americanos Boulevard along Edington Drive. An existing 30-inch-diameter pipeline currently conveys water from the North Douglas storage tanks south along Edington Drive to its intersection with Americanos Boulevard. From this point, the existing pipeline travels south to a check valve on Douglas Road. The new Americanos Boulevard pipelines would begin at this check valve and travel approximately 6,800 feet south along the future Americanos Boulevard road right-of-way then connect with the SPA's proposed on-site water system at the future intersection of Americano Boulevard and Chrysanthy Boulevard (MacKay & Somps 2011b:19).

The Americanos Boulevard pipelines would be installed in open trenches using conventional trenching techniques. The trenching techniques include surface grading, trench excavation, pipeline installation, and backfilling and surface grading. A backhoe or excavator would be used to dig trenches for pipe installation. In general, trenches would be 4 to 5 feet wide and 5 to 10 feet deep. Trenches deeper than 5 feet would require shoring to prevent trench failure. The trenches would have vertical sidewalls to minimize construction easement width and amount of soil excavated. Excavated roadways would be repaved. For unpaved areas, restoration would generally involve re-grading and planting with annual grasses (MacKay & Somps 2011b:19). Where the pipelines would cross the tributary of Morrison Creek within the Douglas 103 property, jack-and-bore techniques would be employed to avoid work in the bed or bank of this tributary. Boring would likely occur to a depth of approximately 10 feet.

Staging areas may be up to 5 acres in size and their potential locations are presently unknown. It is anticipated that less than 5 acres per day would be disturbed during construction activities. SCWA anticipates two crews of 16 to 18 construction workers would install the pipeline and would possibly work at opposite ends of the alignment. Construction activities would only occur during the daytime hours. Jack-and-bore activities underneath the Morrison Creek tributary are assumed to require approximately three weeks.

Aesthetics

The proposed Americanos Boulevard pipeline route is currently undeveloped and sporadically used for grazing. There are no existing urban land uses (e.g., residential or commercial land uses) immediately adjacent to the proposed pipeline route; the closest residences are within the Anatolia subdivision approximately 1,600 feet to the west. Installation of the pipeline would only be visible in the background (as opposed to the near- or middle-ground), and since the pipeline would be installed underground, the pipeline would not degrade the surrounding

visual character. There are no state-designated scenic highway segments adjacent to the water-supply pipeline route. The areas where the pipelines would be installed are not visible from any state- or County-designated scenic highways or roadways. Construction would be short-term, temporary, and of relatively short duration. Therefore, the proposed underground Americanos Boulevard pipelines would result in **direct**, **less-than-significant** impacts on visual resources. **No indirect** impacts would occur.

Air Quality

Temporary and short-term construction-related emissions of criteria air pollutants, ozone precursors, TACs, and odors would be generated during pipeline construction. For purposes of air quality modeling, the Americanos Boulevard pipeline construction was assumed to occur for 1.25 months in 2012. Construction was presumed to involve a 5,000-foot (0.95-mile) stretch of unpaved earth that would be excavated to a width of 8 feet and a depth of 10 feet (to accommodate two, 24-inch pipes). Since the pipelines would entail jack and bore methods underneath the tributary to Morrison Creek on the Douglas 103 property, a borer was presumed to operate for three weeks. Trenching and excavation, as well as backfilling and grading, was assumed to occur over a four-week period, and it was also assumed that no additional cut and fill material (and associated hauling trips from borrow or landfill sites) would be needed. Emissions were estimated using SMAQMD's Roadway Construction Emissions Model (SMAQMD 2009), and are summarized in Table 3.7-16. Particulate matter (PM) emissions were modeled assuming that water trucks would be operating during construction activities.

Table 3.17-16
SunCreek Maximum Daily Construction Emissions, 2012
Americanos Boulevard Parallel Pipelines

	ROG lb/day	CO lb/day	NO_x lb/day	Total PM_{10} lb/day	Exhaust PM_{10} lb/day	Fugitive Dust PM_{10} lb/day	Total $PM_{2.5}$ lb/day	Exhaust $PM_{2.5}$ lb/day	Fugitive Dust $PM_{2.5}$ lb/day
Maximum Daily Emissions (lb/day)	4.2	18.4	27.8	3.0	1.7	1.3	1.8	1.5	0.3
Total Project Emissions (tons/project)	0.1	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
SMAQMD Construction-Related Thresholds of Significance	-	-	**85**	-	-	-	-	-	-

Notes: ROG = reactive organic gases; lb/day = pounds per day; CO = carbon monoxide; NO_x = oxides of nitrogen; PM_{10} = respirable particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = respirable particulate matter with a diameter of 2.5 microns or less; SMAQMD = Sacramento Metropolitan Air Quality Management District.
See Appendices L and N for modeling data.
Source: Data modeled by AECOM in 2011

As shown in Table 3.17-16, construction-related NO_x emissions do not exceed the SMAQMD threshold of significance, and emissions of other criteria pollutants are extremely low. Therefore, the **direct** impacts on local air quality (CO and PM hotspots) and regional air quality (i.e. ozone and PM) would be **less-than-significant** during the 2012 construction year. **No indirect** impacts would occur.

There are currently no sensitive receptors in the immediate vicinity (i.e., approximately 500 feet) of the proposed Americanos Boulevard pipeline construction. The Sunridge development is currently located approximately 1,600 feet to the west of the proposed pipeline route, and one rural residence is currently located approximately 2,500 feet to the east of the proposed pipeline route. Because no development that would entail the placement of new sensitive receptors within the immediate vicinity of the pipeline is planned in 2012, the **direct** impact of exposure

of sensitive receptors to TAC or odor emissions associated with the proposed pipeline would be a **less-than-significant** during the 2012 construction year. **No indirect** impacts would occur.

Biological Resources

Biological resources in the vicinity of the proposed Americanos Boulevard pipelines are similar to those found within the SPA. The pipeline route follows the proposed alignment of Americanos Boulevard, which is characterized by mima mound topography with an underlying hardpan soil that supports a mosaic of vernal pools and seasonal wetland swales interspersed within a matrix of annual grassland vegetation. The proposed pipeline route would intersect an intermittent headwater tributary to Morrison Creek. This vernal pool grassland habitat has the potential to support a number of special-status plant and animal species, including species protected under the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA).

A 1993 special-status species determination conducted for the Sunrise-Douglas Property Owners Association identified vernal pool fairy shrimp, vernal pool tadpole shrimp, and western spadefoot on the properties traversed by the proposed Americanos Boulevard pipeline route (Sugnet & Associates 1993) and there are numerous accounts of these species recorded in the California Natural Diversity Database (CNDDB) within a 5-mile radius of the proposed pipeline. Additional special-status wildlife species documented in the vicinity that could be present in habitats found in the pipeline route or vicinity are western pond turtle, grasshopper sparrow, burrowing owl, Swainson's hawk, northern harrier, and American badger. Additionally, there are several special-status plant species associated with vernal pool habitats, as identified in Table 3.3-1 (see Section 3.3, "Biological Resources"), that have been documented in the vicinity, and could occur in wetlands along the pipeline route, including the following state and Federally listed species: Bogg's Lake hedge hyssop, slender Orcutt grass, and Sacramento Orcutt grass.

Potential impacts on grasshopper sparrow and American badger would be less than significant because temporary disturbance of grassland habitat would not likely result in a substantial decline in local population numbers.

The parallel pipeline would be installed underneath the intermittent tributary using jack-and-bore techniques to avoid impacts on this water of the U.S.; however, the pipeline route would cross properties supporting an extremely high density of vernal pools making it infeasible to avoid impacts to all wetlands. Creating a trench 5 feet wide and 5 feet deep from Douglas Road to the northern SPA boundary (approximately 1 mile) would result in destruction of vernal pools within high quality vernal pool grassland habitat. Therefore, constructing the proposed Americanos Boulevard pipeline would result in **direct** and **indirect significant** impacts to wetlands. Construction activities affecting vernal pools and other seasonal wetlands could also affect special-status species that occur in wetlands through the loss and degradation of habitat, if they are present. There are a few clusters of large trees in the pipeline vicinity that may provide suitable nest sites for nesting raptors. If Swainson's hawks or other raptors are nesting in these trees during construction activities, construction disturbances could result in nest abandonment and mortality of chicks or eggs. Therefore, construction activities could result in **direct** and **indirect, potentially significant** impacts on special-status species.

> **Mitigation Measure: Implement Mitigation Measure 3.3-1a (Include in Drainage Plans All Wetlands that Remain On-site, Submit Plans to the City and USACE for Review and Approval, and Implement all Measures in Drainage Plans).**
>
> **Mitigation Measure: Implement Mitigation Measure 3.3-1b (Secure CWA Section 404 Permit and Implement All Permit Conditions, and Ensure No Net Loss of Wetlands and other Waters of the United States and Associated Functions).**
>
> **Mitigation Measure: Implement Mitigation Measure 3.3-3a (Conduct Preconstruction Surveys for Nesting Swainson's hawk, White-Tailed Kite, Burrowing Owls, and Other Raptors, and if Found, Establish Appropriate Buffers, and Implement Avoidance or Appropriate Mitigation).**

Mitigation Measure: Implement Mitigation Measure 3.3-3c (Secure Take Authorization of Federally Listed Vernal Pool Invertebrates and Implement Permit Conditions, Develop and Implement a Habitat Mitigation and Monitoring Plan).

Mitigation Measure: Implement Mitigation Measure 3.9-3d (Conduct Preconstruction Surveys to Avoid Western Pond Turtle).

Mitigation Measure: Implement Mitigation Measure 3.17-3a (Perform Biological Surveys at the Construction Staging Area and Avoid Damage or Destruction to Sensitive Resources by Relocating the Staging Area, if Sensitive Biological Resources are Found).

Mitigation Measure 3.17-5: Conduct Protocol-Level Preconstruction Surveys for Special-Status Plants.

The project applicants shall retain a qualified botanist to conduct protocol-level preconstruction special-status plant surveys for all potentially occurring plant species. If no special-status plants are found during focused surveys, the botanist shall document the findings in a letter report to U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (DFG), and the City of Rancho Cordova, and no further mitigation shall be required.

If special-status plant populations are found, the project applicants of affected project phases shall consult with the City, DFG, and USFWS, as appropriate depending on species status, to determine the appropriate mitigation measures for direct and indirect impacts on any special-status plant population that could result from project implementation. Mitigation measures may include preserving and enhancing existing populations, creation of off-site populations on project mitigation sites through seed collection or transplantation, and/or restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat or individuals.

If potential impacts on special-status plant species are likely as determined by the botanist, a mitigation and monitoring plan shall be developed before the approval of grading plans or any ground-breaking activity within 250 feet of a special-status plant population. The mitigation plan shall be submitted to the City of Rancho Cordova for review and approval. It shall be submitted concurrently to DFG or USFWS, as appropriate depending on species status, for review and comment. The plan shall require the following:

- Viable plant populations shall be maintained on site and avoidance measures shall be identified for any existing population(s) to be retained and compensatory measures for any populations directly affected. Possible avoidance measures include fencing populations before construction and exclusion of project activities from the fenced-off areas, and construction monitoring by a qualified botanist to keep construction crews away from the population. The mitigation plan shall also include monitoring and reporting requirements for populations to be preserved on site or protected or enhanced off-site.

- If relocation efforts are part of the mitigation plan, the plan shall include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements.

- If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, and other details, as appropriate to target the preservation of long term viable populations.

Implementation: Before the approval of grading plans and before/during any ground-disturbing activities for the Americanos Boulevard pipeline.

Timing: Project applicants of all project phases where construction of the Americanos Boulevard pipeline is required.

Enforcement: City of Rancho Cordova Planning Department.

Cultural Resources

The proposed water-supply pipeline route is currently undeveloped and sporadically used for grazing. The future Americanos Boulevard right-of-way is within the Sunridge Specific Plan area and the North Central Information Center reported that several cultural resources inventories have been conducted for this area (see Table 3.5-1 in Section 3.5, "Cultural Resources"). There are no known cultural resources located within the proposed water-supply pipeline route. However, there is always a possibility of encountering intact, unknown buried cultural resources or human remains, and this could result in **direct, potentially significant** impacts on cultural resources. **No indirect** impacts would occur.

Mitigation Measure: Implement Mitigation Measure 3.5-2 (Reduce Potential Impacts on Cultural Resources through Preconstruction Worker Education and Consultation if Resources are Encountered).

Mitigation Measure: Implement Mitigation Measure 3.5-3 (Provide Preconstruction Worker Education and Stop Potentially Damaging Work if Human Remains are Uncovered During Construction).

Mitigation Measure: Implement Mitigation Measure 3.17-3b.

Drainage, Hydrology, and Water Quality

The proposed water-supply pipeline route is undeveloped, and installation of the Americanos Boulevard pipelines would result in temporary, short-term construction-related impacts. Such activities could result in soil erosion, stormwater discharges of suspended solids, and increased turbidity and potential mobilization of other pollutants from project construction sites to flow as contaminated runoff to drainage channels on-site and ultimately off-site. Many construction-related wastes have the potential to degrade existing water quality by altering the dissolved-oxygen content, temperature, pH, suspended-sediment and turbidity levels, or nutrient content, or by causing toxic effects on the aquatic environment. Project construction activities that are implemented without mitigation could violate water quality standards or cause indirect harm to aquatic organisms. Therefore, construction-related activities could result in **direct** and **indirect, potentially significant** impacts on hydrology, drainage, and water quality.

Mitigation Measure: Implement Mitigation Measure 3.9-1 (Acquire Appropriate Regulatory Permits and Prepare and Implement an Erosion and Sediment Control Plan, SWPPP, and BMPs).

Mitigation Measure: Implement Mitigation Measure 3.17-3a.

Environmental Justice

The proposed Americanos Boulevard pipelines would provide water supplies to new housing and other land uses identified for the SPA. The proposed Americanos Boulevard pipelines in and of themselves would not cause a disproportionately high and adverse impact on low-income populations or create a disproportionate placement of adverse environmental impacts on minority communities, because there is no development present along the pipeline route, and the pipelines would be installed underground. Therefore, the Americanos Boulevard pipelines would result in **no direct** or **indirect** impacts on environmental justice.

Geology, Soils, and Mineral Resources

The Americanos Boulevard pipeline route has a relatively flat topography and is not located in or near a landslide hazard area, and known active seismic sources are located more than 30 miles from the pipeline. Therefore, potential damage to structures from seismic activity and related geologic hazards would be a **direct**, **less-than-significant** impact. **No indirect** impacts would occur.

The Americanos Boulevard pipeline route would not be located in an area of known mineral resources as designated by the California Division of Mines and Geology, or as designated by the City of Rancho Cordova General Plan. Therefore, there would be **no direct** or **indirect** impact from potential loss of mineral resources.

Construction activities would result in the temporary, short-term disturbance of soil and would expose disturbed areas to winter storm events, which could result in soil runoff and localized erosion. A **direct**, **potentially significant** impact from soil erosion could result from construction activities. **No indirect** impacts would occur.

The Americanos Boulevard pipeline alignment would pass through soils identified by the NRCS (2011) as: Corning complex, Hicksville gravelly loam, Fiddyment fine sandy loam, Red Bluff loam, Red Bluff-Redding complex, Redding loam, and Redding gravelly loam. There is potential for the sides of trench excavations to cave for all of these soils, and most are moderate to highly expansive (which could render the material unsuitable for backfill). These soils have a moderate to high potential for corrosion of steel and concrete. Therefore, potential damage to the pipeline from soil hazards would be a **potentially significant, direct** impact. **No indirect** impacts would occur.

> **Mitigation Measure: Implement Mitigation Measure 3.7-1a: (Prepare Site-Specific Geotechnical Report per CBC Requirements and Implement Appropriate Recommendations)**
>
> **Mitigation Measure: Implement Mitigation Measure 3.9-1 (Acquire Appropriate Regulatory Permits and Prepare and Implement an Erosion and Sediment Control Plan, SWPPP, and BMPs).**

Greenhouse Gas Emissions

Greenhouse gas emissions are cumulative by nature. Construction of the Americanos Boulevard parallel water supply pipelines would result in the generation of temporary and short-term emissions of GHGs (e.g., CO_2) from the use of on-site heavy-duty construction equipment and worker commute and material transport trips. Total project construction emissions of CO_2 were estimated to be 45 MT and 3,929 pounds/day for the year 2012. Only CO_2 emissions were estimated for construction, because N_2O and CH_4 emissions are about 20 to 40 times lower than CO_2 emissions for off-road vehicles (ARB 2010:215,218). Because the emissions would be finite in nature (i.e., only occurring during construction, not during operation), would be lower than the lowest operational air quality management district threshold of significance of 1,100 MT CO_2e/year (the BAAQMD "brightline" threshold), construction-related GHGs would not result in a cumulatively considerable increase in GHGs. In addition, the pipeline would not result in any operational GHG emissions. Thus, the proposed Americanos Boulevard parallel water supply pipelines would result in a **direct, less-than-significant** impact with respect to the generation of greenhouse gases. **No indirect** impact would occur.

Hazards and Hazardous Materials

Project construction would involve the temporary, short-term storage, use, and transport of hazardous materials (e.g., asphalt, fuel, lubricants, and solvents) on local roadways. Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol and the California Department of Transportation, and use of these materials is regulated by DTSC, as outlined in Title 22 of the California Code of Regulations. The project's builders, contractors, and suppliers would be required to use, store, and transport hazardous materials in compliance with Federal, state, and local regulations during project construction; therefore, installation of the proposed Americanos Boulevard pipelines would not create a significant hazard to the public or the environment.

There are no schools serving kindergarten through 12th grade students within ½ mile of the proposed water-supply pipeline route. The pipeline route is not located on the Cortese List of hazardous materials sites. Construction of the underground Americanos Boulevard pipelines would have no effect on safety related to Mather Airport. Impacts related to implementation of emergency plans are addressed below under "Public Services." Because the proposed water-supply pipeline route is not located in a wildland fire hazard zone, there would be no impact related to wildfire hazards. Therefore, there would be **no direct** or **indirect** impacts related to hazards and hazardous materials.

Land Use and Planning

The proposed Americanos Boulevard pipeline route is undeveloped and sporadically used for grazing. The proposed pipeline route is within the Sunridge Specific Plan and would transect the proposed Arista del Sol, Grantline 208, and Douglas 103 project sites. Because there are no existing residences located within the proposed water-supply pipeline route, the proposed pipelines would not divide an established community. The proposed pipeline route is identified in the City General Plan as the future Americanos Boulevard right-of-way. Therefore, the proposed Americanos Boulevard pipelines would be consistent with the City General Plan, zoning designations, and other adopted land use plans, policies, and regulations and the proposed Americanos Boulevard pipelines would have **no direct** or **indirect** impacts related to land use and planning.

The Sacramento County Important Farmland map, published by the California Department of Conservation's (DOC's) Division of Land Resource Protection, designates the proposed water-supply pipeline route as Grazing Land (DOC 2012). This farmland designation is not considered Important Farmland under CEQA (California Public Resources Code Sections 21060.1 and 21095 and State CEQA Guidelines Appendix G). Therefore, the proposed Americanos Boulevard pipelines would not **directly** or **indirectly** convert Important Farmland to nonagricultural uses or result in changes that could convert Important Farmland to nonagricultural uses.

None of the proposed water-supply pipeline route is held under Williamson Act contracts (DOC 2009); therefore, the proposed Americanos Boulevard pipelines would **not directly** or **indirectly** conflict with existing Williamson Act contracts or result in the cancellation of Williamson Act contracts.

Based on review of aerial photographs of the proposed water-supply pipeline route, the pipeline route does not contain 10% native tree cover that would be classified as forestland under PRC Section 12220(g). Therefore, there would be **no direct** or **indirect** impact related to conversion of forest land to non-forest use.

Noise

Noise levels from project construction activities would be temporary and short term and the locations would change as construction proceeds along the pipeline route. There are currently no sensitive receptors in the immediate vicinity (i.e., approximately 500 feet) of the proposed Americanos Boulevard pipeline construction. The Sunridge development is currently located approximately 1,600 feet to the west of the proposed pipeline route, and one rural residence is currently located approximately 2,500 feet to the east of the proposed pipeline route. Typical noise levels attributable to heavy-construction equipment are listed in Table 3.11-8 of Section 3.11, "Noise." The City's noise ordinance provides that any construction occurring between the hours of 7 a.m. and 6 p.m. is exempt from the noise standards, and sensitive receptors are located far enough away such that exceedance of the City's noise standards would not occur. Therefore, project-related construction-generated noise would result in a **direct**, **less-than-significant**, temporary, short-term noise impact on nearby noise-sensitive land uses. **No indirect** impacts would occur.

Paleontological Resources

According to the geologic map prepared by Wagner et al. (1987), the proposed Americanos Boulevard pipelines would be constructed within the Laguna Formation. In keeping with the significance criteria of the Society of Vertebrate Paleontology (1995), all vertebrate fossils are generally categorized as being of potentially significant

scientific value. Sediments referable to the Laguna Formation are generally devoid of vertebrate fossils, and no previously recorded fossil sites from this formation are known from either the project site or the surrounding area. Thus, sediments that underlie the proposed Americanos Boulevard pipelines are considered to be of low paleontological sensitivity. Furthermore, the pipeline would be placed within the existing roadway where any paleontological resources that may have been present would already have been destroyed by previous road construction activities. Therefore, the potential for project-related construction activities to affect unique paleontological resources would result in a **direct**, **less-than-significant** impact. **No indirect** impacts would occur.

Parks and Recreation

The proposed Americanos Boulevard pipelines would provide water supplies to new housing and other land uses identified for the SPA. The proposed Americanos Boulevard pipelines in and of themselves would not increase demand for parks and recreational facilities, nor would they indirectly increase demand because the water would only be used to supply the SPA. Therefore, the proposed Americanos Boulevard pipelines would result in **no direct** or **indirect** impacts on parks and recreation.

Population, Employment, and Housing

There are no existing residences located within the proposed water-supply pipeline route and the proposed Americanos Boulevard pipelines would not displace substantial numbers of existing housing or people because it would be installed in an undeveloped area. The proposed Americanos Boulevard pipelines would provide water supplies to new housing and other land uses identified for the SPA. The proposed Americanos Boulevard pipelines in and of themselves would not increase population, because sufficient construction workers are available in the region, and water supply carried by the pipeline is intended only for the SPA. Therefore, the proposed Americanos Boulevard pipelines would result in **no direct** or **indirect** impacts on population, employment, and housing.

Public Services

The proposed Americanos Boulevard pipelines would provide water supplies to new housing and other land uses identified for the SPA. The proposed Americanos Boulevard pipelines in and of themselves would not increase demand for fire protection facilities, services, and equipment or police protection facilities, services, and equipment because construction would be temporary in nature and of short duration, and adequate fire and police services are already available within the City. Installation of underground water-supply pipelines that are only intended to serve the SPA would have no effect on school facilities and services.

However, with regard to emergency services, construction activities could result in temporary lane closures, increased truck traffic, and other roadway effects that could slow or stop emergency vehicles, temporarily increasing response times and impeding existing service. Therefore, the Americanos Boulevard pipeline could result in **direct**, **potentially significant** impacts related to the temporary obstruction of roadways during construction. **No indirect** impacts would occur.

> **Mitigation Measure: Implement Mitigation Measure 3.14-1 (Prepare and Implement a Construction Traffic Control Plan).**

Traffic and Transportation

The Americanos Boulevard pipeline installation would not result in permanent increases to roadway or intersection level of service standards or increases in peak-hour traffic volumes, nor would it affect alternative means of transportation, because the pipeline would be installed underground in an undeveloped area. Therefore, the Americanos Boulevard pipeline would result in **no direct** or **indirect** impacts related to traffic and transportation.

Utilities and Service Systems

The proposed Americanos Boulevard pipelines would provide water supplies to new housing and other land uses identified for the SPA. The proposed Americanos Boulevard pipelines in and of themselves would not increase demand for water; wastewater service; solid-waste disposal, or electricity, natural gas, and communications services and systems.

However, because final design plans and specifications have not been submitted, this impact is considered **direct** and **potentially significant**. In addition, as described above, environmental impacts associated with the construction of these parallel pipelines could result in **potentially significant** impacts on biological resources; cultural resources; drainage, hydrology, and water quality; and public services. Mitigation measures for these **indirect** impacts are listed above.

Mitigation Measure: Implement Mitigation Measure 3.17-2.

Impact Conclusion

Because the infrastructure required for water conveyance facilities necessary to serve the project (Americanos Boulevard pipelines) has not been constructed, nor have final design plans and specifications been submitted, this impact is considered **direct** and **potentially significant**. In addition, as described above, environmental impacts associated with the construction of these facilities could result in **potentially significant** impacts on biological resources; cultural resources; drainage, hydrology, and water quality; and public services.

Implementation of Mitigation Measure 3.17-2 would reduce direct, potentially significant impacts under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives related to the provision of required off-site water conveyance facilities to a **less-than-significant** level, because off-site water conveyance facilities sufficient to convey water supplies to subdivisions or nonresidential uses would be in place before recordation of any final small-lot subdivision map, or before the City approves any similar project-specific, discretionary approval or entitlement required for nonresidential uses.

Implementation of Mitigation Measures 3.3-1a. 3.3-1b, 3.3-3a, 3.3-3c, 3.3-3d, 3.17-3a, and 3.17-5 would reduce direct and indirect significant impacts under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives on Swainson's hawks, white-tailed kites, burrowing owls, and other raptors; western spadefoot; western pond turtle; and special-status plants resulting from the Americanos Boulevard pipeline installation to a **less-than-significant** level because they would: ensure that wetland habitat removed from the pipeline route would be replaced on a no net loss basis; require measures to minimize adverse effects on water quality and wetland hydrology that could indirectly affect wetland habitat and species; ensure that nesting raptors are identified prior to construction and requires avoidance measures or buffers to ensure nesting raptors are not disturbed; require surveys to identify and avoid western pond turtles; and require plant surveys to identify and avoid or compensate for special-status plants.

Implementing Mitigation Measures 3.3-1a, 3.3-1b, and 3.3-3c would reduce direct significant impacts on jurisdictional wetlands and other waters of the U.S. and on vernal pool fairy shrimp and vernal pool tadpole shrimp resulting from pipeline construction, but not necessarily to a less-than-significant level for the same reasons indicated in Section 3.3, "Biological Resources." Therefore direct and indirect impacts on wetlands and other waters of the U.S. and on vernal pool fairy shrimp and vernal pool tadpole shrimp would remain **significant and unavoidable**.

Implementation of Mitigation Measures 3.5-2, 3.5-3, 3.7-1a, 3.9-1, 3.14-1, and 3.17-3b would reduce indirect significant impacts under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives related to off-site water conveyance facilities to a **less-than-significant** level, because adverse impacts on cultural resources would be avoided, appropriate design recommendations of a geotechnical engineer would be incorporated into project design, appropriate BMPs would

be implemented to control erosion, and a traffic plan would be developed and implemented during construction activities.

IMPACT 3.17-6 **Need for On-Site Water Conveyance and Storage Facilities.** *Project implementation would require construction of on-site water conveyance facilities to deliver water from SCWA's off-site conveyance facilities to the SPA.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that would increase the demand for on-site water conveyance and storage facilities. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

There are no public water supply facilities within the SPA, and therefore the project would require construction of a new water system.

The master water study prepared for the Proposed Project Alternative (MWH 2008) addressed the viability of providing water conveyance facilities to the SPA, identified on-site facility needs and design, and evaluated designs for consistency with the Zone 40 WSMP and WSIP. The location of the water distribution facilities to serve the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would vary somewhat from the Proposed Project Alternative due to the difference in street alignments and the spatial distribution of the developable areas. In spite of these differences, the physical impacts of the on-site water system to serve the No USACE Permit, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives would be substantially the same as those of the Proposed Project Alternative.

The on-site water conveyance facilities would provide adequate flow deliveries to maintain acceptable service pressures to all customers within the SPA. A preliminary on-site water system has been designed as a looping system following the major street alignments (see Exhibit 2-5 in Chapter 2, "Alternatives"). The transmission system would incorporate mainline pipe sizes from 16 inches to 24 inches in diameter. The on-site distribution system would consist of 8- to 12-inch diameter pipes, with the 12-inch lines looping near sites that require higher fire flow requirements, such as commercial, industrial, and school sites. Transmission facilities would meet SCWA's standards for water system improvements identified in the WSIP and distribution facilities would meet Sacramento County Improvement Standards (MWH 2008:2-4). In addition, fire flow requirements would meet the Sacramento Metropolitan Fire District standards. The internal water transmission system would be developed in phases, and incrementally expanded to meet the demands of the SPA.

Four water supply scenarios have been identified as options for providing water to the SPA (see Impact 3.17-1 above). Regardless of which water supply scenario is ultimately selected, the on-site water conveyance facilities would connect to the existing and proposed off-site water conveyance facilities at the same points. The on-site water transmission system would connect to the existing off-site conveyance facilities in the vicinity of the SPA, including the 24-inch treated water transmission main in Kiefer Boulevard, the 16-inch treated water transmission main in Rancho Cordova Parkway south of Kiefer Road, the 24-inch treated water transmission main in Rancho Cordova Parkway north of Kiefer Road, and the 16-inch treated water transmission main in Sunrise Boulevard at its intersection with Kiefer Road, and the on-site water conveyance facilities would connect to the proposed 30-inch Florin Road/Sunrise Boulevard pipeline at the intersection of Sunrise Boulevard and Kiefer Road (see Impact 3.17-3 above).

Two 2.0-mgd storage tanks, known as the Sunrise Douglas 2 tanks, would be located on the SPA approximately 3,500 feet east of Rancho Cordova Boulevard. Two 30-inch treated water transmission mains would be constructed

from the tanks. One transmission main would travel east and connect to the existing 24-inch main in Rancho Cordova Boulevard and the other transmission main would travel west to connect with the proposed 24-inch transmission main in the future Americanos Boulevard within the SPA.

To meet water demands of the NSA, including the SPA, three groundwater wells, the SunCreek WTP, a storage tank, and booster pump stations could potentially be constructed east of Sunrise Boulevard and south of Kiefer Boulevard in the southern portion of the SPA (see Impact 3.17-1 above). Treated groundwater would be conveyed from the SunCreek WTP to the SPA through a proposed 24-inch transmission main that would travel north to Rancho Cordova Boulevard where it would then connect to the existing 24-inch transmission main. In addition, the SunCreek WTP would have capacity to treat raw groundwater that could be conveyed from the NVWF to the SunCreek WTP through the existing 30-inch raw groundwater transmission main at Sunrise Boulevard and Kiefer Boulevard and this groundwater would then be delivered to the SPA through the proposed on-site water conveyance system (MWH 2008:5-14). Although the physical impacts of constructing these on-site facilities are addressed throughout this DEIR/DEIS in connection with discussions of the impacts of overall site development, this DEIR/DEIS does not provide CEQA or NEPA coverage for operation of the SunCreek WTP, because that facility has not been designed. SCWA and/or the City of Rancho Cordova would conduct a separate CEQA or NEPA analysis, if necessary, to analyze specific operational impacts associated with the SunCreek WTP and identify any required mitigation measures for operation of that facility.

Because the on-site infrastructure required for water conveyance facilities necessary to serve the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives has not been constructed, nor have final design plans and specifications been submitted, this impact is considered **direct** and **potentially significant**. The **indirect** physical impacts of constructing these on-site facilities are addressed throughout this DEIR/DEIS in connection with discussions of the impacts of overall site development.

Mitigation Measure: Implement Mitigation Measure 3.17-2.

Implementation of Mitigation Measure 3.17-2 would reduce direct, potentially significant impacts under the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increased Development Alternatives to a **less-than-significant** level because on-site water conveyance facilities sufficient to convey water supplies to subdivisions or nonresidential uses would be in place before recordation of any final small-lot subdivision map, or before City approval of any similar project-specific, discretionary approval or entitlement required for nonresidential uses.

IMPACT 3.17-7 **Use of Nonpotable Water Supplies and Infrastructure.** *Project implementation could result in the use of nonpotable-water supplies and infrastructure to provide landscaping irrigation of parks, streetscapes, schools, and commercial land uses. Initially, the nonpotable water supply demands would be met by the potable water supplies. In the long term, it is assumed that future nonpotable water supply would be provided by SRCSD, when a sufficient supply of nonpotable water is available to meet project demands.*

NP

Under the No Project Alternative, no project-related development would occur and there would be no new urban uses (e.g., residential or commercial land uses) that result in the use of nonpotable-water supplies and infrastructure. Therefore, **no direct** or **indirect** impacts would occur. ***[Lesser]***

NCP, PP, BIM, CS, ID

The City adopted a Citywide Recycled Water Distribution Ordinance (Resolution No. 11-2006) stating that new development should install a "purple pipe" recycled-water distribution system. Therefore, while it may not occur for

many years, the project includes a component to implement a recycled-water-use program. All areas identified as parks, streetscapes, schools, and commercial land uses within the SPA would be irrigated via a recycled water system that could be easily converted from a potable to nonpotable water supply at some future date.

The draft *Sunrise Douglas Community Plan Area Non-Potable Water Master Plan* (Wood Rodgers 2007) defined nonpotable water service areas and demands, addressed the viability of providing nonpotable water supplies to the SPA, and identified infrastructure needs that would meet the SCWA operating goals (Wood Rodgers 2007:1). The proposed nonpotable water system is shown in Exhibits 2-11 and 2-12 in Chapter 2, "Alternatives." Nonpotable water demands were calculated based on land uses designated for parks, streetscapes, schools, and commercial land uses consistent with the City's Recycled Water Distribution Ordinance (Resolution No. 11-2006). The project's demands for nonpotable water at buildout were determined by applying an irrigated-surface-area factor to each proposed land use.

Initially, the demands for nonpotable water would be met by the project's supplies of potable water, which were identified and evaluated in Impact 3.17-1 above. Therefore, impacts associated with nonpotable-water supplies would be the same as those identified for the potable-water supplies (see Impact 3.17-1). In the long term, it is assumed that future supplies of nonpotable water would be provided by SRCSD, when a sufficient supply of nonpotable water is available to meet project demands. As shown in Tables 3.17-17 through 3.17-21 below, the total projected demands for nonpotable water are 204.9 afy for the No USACE Permit Alternative, 797.5 afy for the Proposed Project Alternative, 443.1 afy for the Biological Impact Minimization Alternative, 612.5 afy for the Conceptual Strategy Alternative, and 584.3 afy for the Increased Development Alternative.

The on-site recycled-water conveyance facilities would follow the same alignment as, and would be installed at the same time as, the potable-water conveyance facilities. Several potential connections between the recycled-water system and the potable-water system have been proposed, but these connections are subject to change in the future after a source of nonpotable water has been identified and off-site infrastructure has been installed. After a supply of nonpotable water is available to serve the project site, the connections to the potable-water system would be closed (Exhibit 3.17-2).

Table 3.17-17
Summary of Land Uses and Demands for Nonpotable Water—Proposed Project Alternative

Land Use	Area (acres)[1]	Irrigated-Surface-Area Factor[2]	Site Area Irrigated (acres)	Water Demand (afy)[3]
Commercial	91.3	0.5	45.7	165.4
Schools	110.9	0.7	77.6	280.9
Parks	91.4	0.9	82.3	297.9
Public/quasi-public	13.0	0.5	6.5	23.5
Pedestrian/landscape corridor and parkways	9.1	0.9	8.2	29.6
Total	**315.7**		**220.3**	**797.5**

Notes: afy = acre-feet per year

[1] Total area includes the total surface area of each land use, including those areas that do not require nonpotable water for irrigation (i.e., structures, parking lots, sidewalks).

[2] Site area irrigated is the amount of irrigated surface area assumed to require nonpotable water, as a percentage of the total area.

[3] Annual water demand (afy) = total site area irrigated (acres) x 3.62 acre-feet per acre per year (annual irrigation demand for Sacramento County).

Source: Wood Rodgers 2007, data compiled by AECOM in 2010

Table 3.17-18
Summary of Land Uses and Demands for Nonpotable Water—No USACE Permit Alternative

Land Use	Area (acres)[1]	Irrigated-Surface-Area Factor[2]	Site Area Irrigated (acres)	Water Demand (afy)[3]
Commercial	6.7	0.5	3.4	12.3
Schools	29.2	0.7	20.4	73.9
Parks	33.2	0.9	29.9	108.2
Public/quasi-public	4.8	0.5	2.4	8.7
Pedestrian/landscape corridor and parkways	0.6	0.9	0.5	1.8
Total	**74.5**		**56.6**	**204.9**

Notes: afy = acre-feet per year

[1] Total area includes the total surface area of each land use, including those areas that do not require nonpotable water for irrigation (i.e., structures, parking lots, sidewalks).

[2] Site area irrigated is the amount of irrigated surface area assumed to require nonpotable water, as a percentage of the total area.

[3] Annual water demand (afy) = total site area irrigated (acres) x 3.62 acre-feet per acre per year (annual irrigation demand for Sacramento County).

Source: Wood Rodgers 2007, data compiled by AECOM in 2010

Table 3.17-19
Summary of Land Uses and Demands for Nonpotable Water—Biological Impact Minimization Alternative

Land Use	Area (acres)[1]	Irrigated-Surface-Area Factor[2]	Site Area Irrigated (acres)	Water Demand (afy)[3]
Schools	52.0	0.7	36.4	131.8
Parks	86.6	0.9	77.9	282.0
Public/quasi-public	4.1	0.5	2.1	7.6
Pedestrian/landscape corridor and parkways	6.7	0.9	6.0	21.7
Total	**149.4**		**122.4**	**443.1**

Notes: afy = acre-feet per year

[1] Total area includes the total surface area of each land use, including those areas that do not require nonpotable water for irrigation (i.e., structures, parking lots, sidewalks).

[2] Site area irrigated is the amount of irrigated surface area assumed to require nonpotable water, as a percentage of the total area.

[3] Annual water demand (afy) = total site area irrigated (acres) x 3.62 acre-feet per acre per year (annual irrigation demand for Sacramento County).

Source: Wood Rodgers 2007, data compiled by AECOM in 2010

Table 3.17-20
Summary of Land Uses and Demands for Nonpotable Water—Conceptual Strategy Alternative

Land Use	Area (acres)[1]	Irrigated-Surface-Area Factor[2]	Site Area Irrigated (acres)	Water Demand (afy)[3]
Commercial	10.9	0.5	5.5	19.9
Schools	108.4	0.7	75.9	274.8
Parks	82.0	0.9	73.8	267.2
Public/quasi-public	7.2	0.5	3.6	13.0
Pedestrian/landscape corridor and parkways	11.6	0.9	10.4	37.6
Total	**220.1**		**169.2**	**612.5**

Notes: afy = acre-feet per year

[1] Total area includes the total surface area of each land use, including those areas that do not require nonpotable water for irrigation (i.e., structures, parking lots, sidewalks).

[2] Site area irrigated is the amount of irrigated surface area assumed to require nonpotable water, as a percentage of the total area.

[3] Annual water demand (afy) = total site area irrigated (acres) x 3.62 acre-feet per acre per year (annual irrigation demand for Sacramento County).

Source: Wood Rodgers 2007, data compiled by AECOM in 2010

Table 3.17-21
Summary of Land Uses and Demands for Nonpotable Water—Increased Development Alternative

Land Use	Area (acres)[1]	Irrigated-Surface-Area Factor[2]	Site Area Irrigated (acres)	Water Demand (afy)[3]
Commercial	17.7	0.5	8.9	32.2
Schools	94.4	0.7	66.1	239.3
Parks	96.0	0.9	86.4	312.8
Total	**208.1**		**161.4**	**584.3**

Notes: afy = acre-feet per year

[1] Total area includes the total surface area of each land use, including those areas that do not require nonpotable water for irrigation (i.e., structures, parking lots, sidewalks).

[2] Site area irrigated is the amount of irrigated surface area assumed to require nonpotable water, as a percentage of the total area.

[3] Annual water demand (afy) = total site area irrigated (acres) x 3.62 acre-feet per acre per year (annual irrigation demand for Sacramento County).

Source: Wood Rodgers 2007, data compiled by AECOM in 2010

A planned expansion of the SRCSD water recycling facility plant could serve new areas of planned and expected growth and areas of public open space, including Zone 40 and the city of Rancho Cordova. The expanded water-recycling facility and new water-recycling service areas will be called Phase II of the SRCSD Water Recycling Program. Phase II construction will be timed with the need for the higher capacity and is currently expected to be in service within 5 to 10 years. Off-site facilities (i.e., infrastructure, storage tanks, and booster pumps), including those that would serve the project, would be constructed by SRCSD through Phase II of the SRCSD Water Recycling Program.

Because the No USACE Permit, Proposed Project, Biological Impact Minimization, Conceptual Strategy, and Increase Development Alternatives would install a nonpotable-water system at the same time as the potable water system that would supply recycled water to the SPA in the future when such water becomes available, all five

action alternatives would comply with the City's recycled-water ordinance and all other regulatory requirements; therefore, the impacts related to the use of nonpotable-water supplies and infrastructure would be **direct** and **less-than-significant**. The **indirect** impacts of constructing these facilities are addressed throughout this EIR/EIS in connection with discussions of the impacts of overall site development. ***[Similar]***

Mitigation Measure: No mitigation measures are required.

3.17.4 RESIDUAL SIGNIFICANT IMPACTS

Impacts associated with increased demand for potable nonpotable water supplies and infrastructure are considered less than significant. Implementation of mitigation measures referenced in Impacts 3.17-3 and 3.17-4 would reduce direct and indirect impacts associated with increased demands for on-site and off-site water conveyance facilities to a less-than-significant level. Implementation of Mitigation Measures 3.3-1a, 3.3-1b, and 3.3-3c would reduce direct significant impacts on jurisdictional wetlands and other waters of the U.S. and on vernal pool fairy shrimp and vernal pool tadpole shrimp resulting from construction of the Americanos Boulevard parallel pipelines, but not necessarily to a less-than-significant level because the project would contribute substantially to the regional loss of these resources and habitat fragmentation and permanent loss/displacement of these special-status wildlife species would result and there are no feasible mitigation measures to fully reduce this impact to a less-than-significant level. Regarding the construction and operation of the Vineyard Surface WTP; the proposed NSAPP; and proposed NVWF Wells 4 through 6, all potentially significant environmental impacts identified in project-level CEQA documents for these facilities would be reduced to a less-than-significant level with implementation of mitigation measures contained in those CEQA documents; therefore, the project would not contribute to any significant and unavoidable impacts associated with that infrastructure. Therefore, there would be no direct or indirect residual significant impacts related to increased demands for water supplies and on-site and off-site water conveyance facilities.

3.17.5 CUMULATIVE IMPACTS

SCWA would provide water supplies to the SPA through its Zone 40 conjunctive-use water supply system. The SPA is identified as a subarea within Zone 40 known as the NSA and includes areas identified as the Sunrise Corridor, Sunrise Douglas Community Plan, Mather Field, Rio del Oro within Zone 40, and Rio del Oro within Cal-Am where wholesale of Zone 40 water supplies would be delivered. The SPA is located within the Sunrise Douglas Community Plan area.

Future development in Zone 40, and in the NSA in particular, would increase demand for potable and nonpotable water supplies and on-site and off-site conveyance facilities in the NSA.

WATER SUPPLY

Four water supply scenarios have been developed as options for providing water to the SPA based on the surface water and groundwater supplies identified above:

- Accelerated Construction of the North Service Area Pipeline
- Delayed Construction of the North Service Area Pipeline
- Conversion of the Anatolia Raw Groundwater Transmission Pipeline
- Groundwater Intensive Development with the SunCreek Groundwater Wells

The total projected water demands are 2,033 afy for the No USACE Permit Alternative, 3,058 afy for the Proposed Project Alternative, 2,672 afy for the Biological Impact Minimization Alternative, 2,952 afy for the Conceptual Strategy Alternative, and 3,478 afy for Increased Development Alternative. As shown in Tables 3.17-10 through 3.17-13 above, SCWA has adequate water supplies available to meet projected water demands under all five action alternatives regardless of the water delivery scenario (see Impact 3.17-1). In the long term,

SCWA anticipates the majority of water demands in the NSA (including the SPA) would be met with surface water. However, the year-to-year mix of surface and groundwater varies depending on a large number of variables and surface water and groundwater supplies would be adjusted as necessary to meet the demands of the NSA as part of its conjunctive use program (MacKay & Somps 2011a:8, SCWA 2006:4-31).

In compliance with SB 610, a WSA has been prepared based on water supplies identified in the Zone 41 UWMP to evaluate the adequacy of existing and future water supplies to meet the water demand created by the project in conjunction with existing and future development in the Zone 40 2030 Study Area (SCWA 2011a). Based on implementation of SBx7-7 requirements and a slower than previously anticipated growth rate, it is projected that the ultimate water demand for the 2030 Study Area as described in the Zone 41 UWMP will probably not occur until 2050. The WSA concluded that SCWA would have sufficient surface water supplies to serve the No USACE Permit, Proposed Project, Biological Impact Minimization, Agency and Conceptual Strategy Alternatives while meeting the projected demands of existing customers and other anticipated future water demands within its service area. Because the WSA considers cumulative development and the cumulative need for water supplies throughout Zone 40's service area (including the 2030 Study Area), and because SCWA has determined that there is adequate water supply to serve this cumulative development (including the project), the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to increased demands for water supplies.

The WSA prepared for the project concluded that because the water supply demand under the Increased Development Alternative (3,478 afy) is more than the water demand estimated by SCWA for the SPA (3,176 afy), sufficient water supplies may not be available to meet water demands (SCWA 2011b:27). However, because the City's general plan requires written certification verifying the availability of a long-term, reliable water supply for the project or that needed improvements will be in place prior to occupancy, the Increased Development Alternative would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to increased demands for water supplies.

WATER CONVEYANCE FACILITIES

There are no public water supply facilities within the SPA, and therefore the project would require construction of a new on-site water system (see Impact 3.17-2). Implementation of Mitigation Measure 3.17-2 would reduce potentially significant project-related impacts related to on-site water conveyance facilities to a less-than-significant level by ensuring water conveyance facilities sufficient to convey water supplies to subdivisions or nonresidential uses would be in place or adequate financing would be secured. The related projects would also need to construct their own on-site water supply systems. These individual on-site systems are site-specific, and would not combine together to result in direct cumulative water supply infrastructure impacts. Therefore, the project would not result in a cumulatively considerable incremental contribution to a significant direct cumulative impact related to on-site water conveyance facilities. However, the needs of the related projects for on-site water infrastructure could result in indirect significant impacts as a result of construction activities. These indirect construction-related impacts, and the project's potential cumulative contribution, are evaluated in the cumulative analysis portions of Sections 3.1 through 3.16 of this DEIR/DEIS.

The preferred rate of water supply for the project cannot be delivered until the Vineyard Surface WTP, the proposed NSAPP, the proposed Florin Road/Sunrise Boulevard pipeline, proposed NVWF Wells 4 through 6, and potentially the Anatolia surface water transmission pipeline are constructed and online.

The physical impacts of constructing the Florin Road/Sunrise Boulevard pipeline and Anatolia surface water transmission pipeline facilities are addressed above in Impacts 3.17-3 and 3.17-4, respectively, and impacts associated with the construction of these facilities would be reduced to a less-than-significant level with implementation of the mitigation measures identified above. In addition, implementation of Mitigation Measure 3.17-2 would reduce potentially significant project-related impacts related to on-site and off-site water conveyance facilities to a less-than-significant level by ensuring water conveyance facilities sufficient to convey

water supplies to subdivisions or nonresidential uses would be in place or adequate financing would be secured. Therefore, the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to these two off-site water conveyance facilities.

The Vineyard Surface WTP, the proposed NSAPP, and the proposed NVWF Wells 4 through 6 were identified and analyzed programmatically in the Zone 40 WSMP EIR and at the project level in IS/MNDs prepared for these facilities. Because there is a relationship between the project and the need for the Vineyard Surface WTP, the proposed NSAPP, and proposed NVWF Wells 4 through 6, approval of the project would contribute indirectly to impacts identified in the IS/MNDs prepared for these facilities. All potentially significant environmental impacts identified in project-level CEQA documents for the Vineyard Surface WTP, the NSAPP, and NVWF Wells 4 through 6 would be reduced to a less-than-significant level with implementation of the mitigation measures incorporated as part of those projects. Therefore, the project would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to the construction and operation of the Vineyard Surface WTP, the NSAPP, and NVWF Wells 4 through 6.

NONPOTABLE-WATER SUPPLIES AND INFRASTRUCTURE

The City adopted a Citywide Recycled Water Distribution Ordinance (Resolution No. 11-2006) stating that new development should install a "purple pipe" recycled-water distribution system. Therefore, while it may not occur for many years, the project includes a component to implement a recycled-water-use program. Construction of the necessary "purple pipe" at the project site would occur concurrently with installation of the potable water piping. It is expected that related projects would install a purple-pipe system as required by the Citywide Recycled Water Distribution Ordinance, and it is assumed that future supplies of nonpotable water would be provided to these related projects by the SRCSD, when sufficient supplies are available to meet each project's demands. Therefore, implementation of the project and the related projects would not result in a cumulatively considerable incremental contribution to a significant cumulative impact related to the use of nonpotable-water supplies and infrastructure.