ADDENDUM

TO THE 2002 FINAL EIR

for the proposed

Los Angeles Pierce College 2010 Master Plan Update of the 2002 Master Plan

Prepared for

Los Angeles Community College District

Prepared by

ICF International

JUNE 2010

Table of Contents

Appendices

Appendix A	Aesthetic Resources Photographic Documentation
Appendix B	Air Quality Data Sheets
Appendix C	Traffic Impact Study

List of Figures

List of Tables

Acronyms and Abbreviations

2002 EIR	2002 Los Angeles Pierce College Facilities Master Plan Environmental Impact Report
2002 FEIR	2002 Los Angeles Pierce College Facilities Master Plan Final Environmental Impact Report
2002 Master Plan	2002 Los Angeles Pierce College Facilities Master Plan
2006 CAT Report	Climate Action Team Report to Governor Schwarzenegger and the Legislature
2010 Master Plan Update	Los Angeles Pierce College 2010 Master Plan Update
ADA	Americans with Disabilities Act
AQMP	Air Quality Management Plan
ARB	Air Resources Board
Basin	South Coast Air Basin
BMP	best management practice
Caltrans	California Department of Transportation
carbon dioxide equivalent	CO_2e
CAT	Climate Action Team
CBC	California Building Code
CDMG	California Division of Mines and Geology
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	methane
CNEL	Community Noise Exposure Level
CO	carbon monoxide
CO_2	carbon dioxide
College	Los Angeles Pierce College
dBA	A-weighted decibels
DBH	diameter at breast height
FTE	full-time equivalent
GHG	greenhouse gas
HVAC	heating, ventilation and air-conditioning
LACCD	Los Angeles Community College District
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAUSD	Los Angeles Unified School District

LEED	Leadership in Energy and Environmental Design
LOS	level of service
LST	Localized Significance Threshold
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
mg/kg	milligrams per kilogram
MMT CO_2e	million metric tons of carbon dioxide equivalent
N_2O	nitrous oxide
NO_X	nitrogen oxides
O_3	ozone
OSHA	Occupational Safety and Health Administration
PM10	particulate matter
PM2.5	fine particulate matter
RCPG	Regional Comprehensive Plan and Guide
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SO_X	oxides of sulfur
SUSMP	Standard Urban Stormwater Mitigation Plan
TACs	toxic air contaminants
THP	total petroleum hydrocarbons
TIA	Transportation Impact Assessment
TIMP	Transportation Improvement Mitigation Program
UBC	Uniform Building Code
UST	underground storage tank
V/C	volume to capacity
VMT	vehicle miles travelled
WCSP	Warner Center Specific Plan
ZIMAS	Zoning Information and Map Access System

ADDENDUM AND
ENVIRONMENTAL CHECKLIST FORM

1. Project Title

Los Angeles Pierce College 2010 Master Plan Update

2. California Environmental Quality Act Lead Agency Name and Address

Los Angeles Community College District
770 Wilshire Boulevard
Los Angeles, CA 90017

3. Contact Person and Phone Number

Dr. Joy McCaslin, President, Los Angeles Pierce College
Phone: 818.719.6408

4. Purpose of Addendum

This addendum to the 2002 Los Angeles Pierce College Facilities Master Plan Final Environmental Impact Report (2002 FEIR) analyzes potential environmental impacts that would result from implementation of the Los Angeles Pierce College 2010 Master Plan Update. The 2002 FEIR evaluated the impacts of implementation of the 2002 Master Plan.

The proposed 2010 Master Plan Update, as described in this addendum, does not create any of the conditions described in Section 15162 of the State CEQA Guidelines that call for the preparation of a subsequent EIR. No new significant impacts would occur, and no previously examined significant effects would be substantially more severe than shown in the 2002 FEIR. Thus, an addendum to the certified 2002 FEIR is the appropriate environmental documentation for the proposed 2010 Master Plan Update.

5. Project Location

Los Angeles Pierce College (College) is located in the western portion of the San Fernando Valley in the City and County of Los Angeles. Regional access to the College is provided by two freeways, the Ventura Freeway (U.S. 101) and the San Diego Freeway (Interstate 405). The Ventura Freeway is located approximately 0.5 mile south of the College, and the San Diego Freeway is located approximately 6 miles to the east. Figure 1 provides a map of the Los Angeles region in which the College is located.

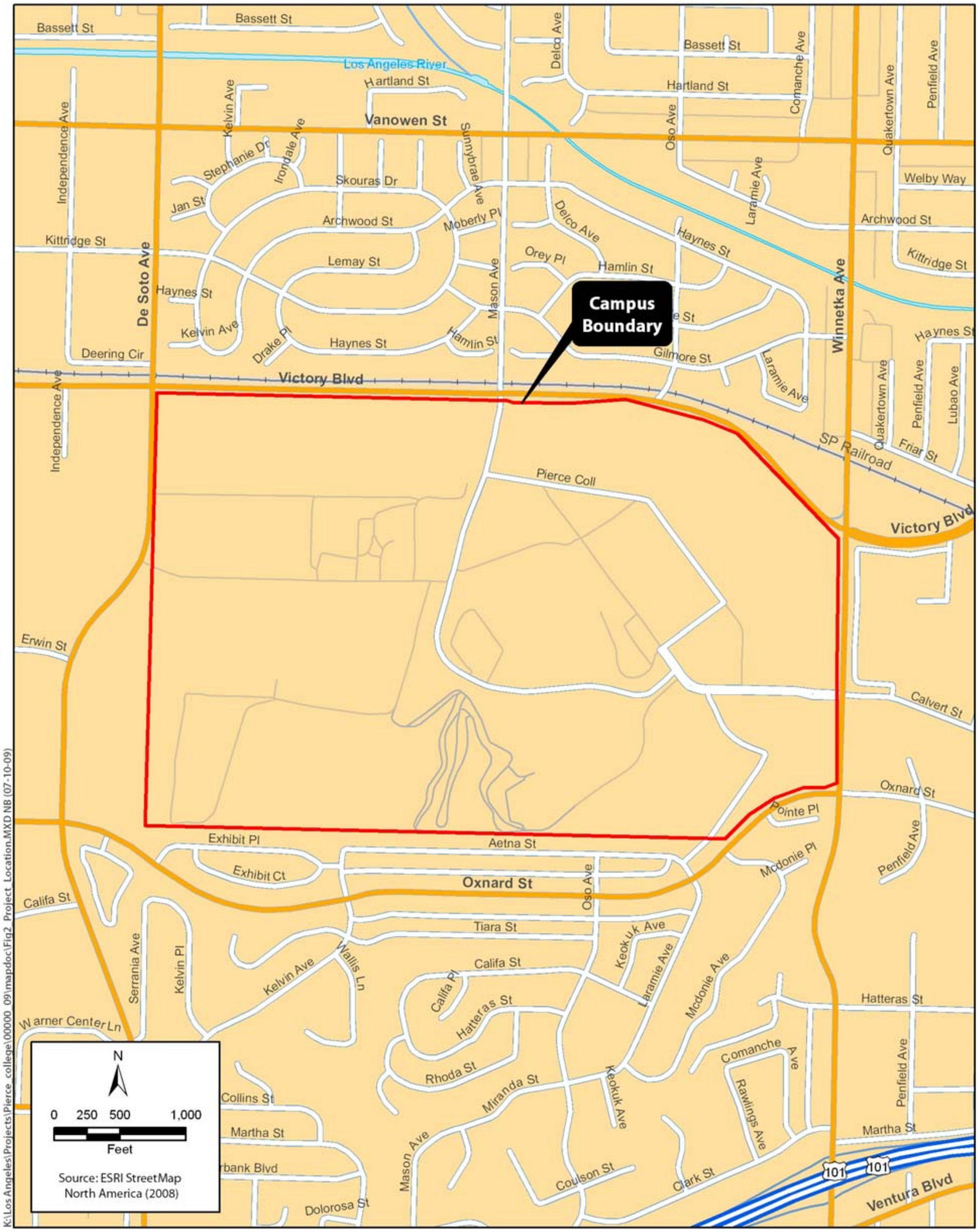
Pierce College is located at 6201 Winnetka Avenue in the community of Woodland Hills in the City of Los Angeles. The College is located in the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan Area, one of 35 community plan areas in the City of Los Angeles. The College is bounded by Victory Boulevard to the north, Oxnard Street to the south, Winnetka Avenue to the east, and De Soto Avenue to the west. The College, which is located east of the Warner Center Business District, encompasses a total land area of approximately 426 acres. Figure 2 shows the project site and the surrounding area.

Although the College is located in the Los Angeles metropolitan area, the 426-acre campus setting includes 2,200 trees, numerous rose bushes, a nature preserve, a botanical garden, and a forest area that boasts giant redwoods. Most of the College’s educational buildings are located in the core area of the campus. Other important campus areas include the athletic/recreational and horticultural areas. Approximately 226 acres are devoted to an agricultural laboratory/farm that features an equestrian center and small herds of cattle, sheep, and goats.

Figure 1: Regional Location Map

Source: ESRI StreetMap North America (2008)

Figure 2: Project Vicinity Map



Source: ESRI StreetMap North America (2008)

K:\Los Angeles\Projects\Pierce_college\00000_09\mapdoc\Fig2_Project_Location.MXD NB (07-10-09)

The Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan Area covers approximately 29 square miles in the western portion of the City of Los Angeles. According to the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan (adopted), approximately 59% of the total land uses in this community plan area are residential uses.[1] Open space uses make up 12% of the total uses; commercial uses, 5%; and industrial uses, 4%.[2] Approximately 12% of the land uses are open space-related uses, while 19% are street uses.[3]

6. Project Sponsor's Name and Address

Los Angeles Pierce College
6201 Winnetka Avenue
Woodland Hills, CA 91371

7. Assessor's Parcel Number: 2149007902

8. General Plan Designation: Open Space and Public Facilities

9. Zoning: Open Space (OS-1XL), Public Facilities (PF-1XL)

10. Background

The 2002 Los Angeles Pierce College Facilities Master Plan (2002 Master Plan) was recently revised to accommodate changes pertaining to student enrollment projections and facility requirements. This addendum for the proposed Los Angeles Pierce College 2010 Master Plan Update (2010 Master Plan Update) has been prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines, Section 15063, to determine whether the proposed 2010 Master Plan Update would result in a new significant effect on the environment that was not previously identified in the 2002 Los Angeles Pierce College Facilities Master Plan Environmental Impact Report (2002 EIR). The Los Angeles Community College District (LACCD) is the lead agency for the proposed 2010 Master Plan Update.

Pierce College, a two-year community college that was founded in 1947, is located in the southwest corner of the San Fernando Valley in the City of Los Angeles. More specifically, the College is located within the community of Woodland Hills and occupies approximately 426 acres. Pierce College includes educational and administrative facilities, agricultural land and facilities, surface parking lots, athletic fields and sports facilities, and open space. Approximately 226 of the College's 426 acres provide space for a farm, which is used as part of the College's agricultural program.

Pierce College is one of nine colleges in the LACCD and is fully accredited by the Western Association of Schools and College. It offers courses in 100 disciplines and has a student population of approximately 23,000 each semester.[4]

In 2002, the LACCD approved the Los Angeles Pierce College Facilities Master Plan. The master plan established a physical framework for the College and supported the school's mission as it expands its facilities to meet future demand. Project objectives of the 2002 Master Plan included creating a more active and productive College, improving the image of the school, enhancing land resources, creating public/private partnerships, developing new educational programs, and providing facilities to meet projected enrollment by 2010.

---

[1] Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan. Available: <http://cityplanning.lacity.org/complan/pdf/cpksumlu.pdf>. Accessed: June 28, 2009.

[2] Ibid.

[3] Ibid.

[4] About Pierce College. Available: <http://www.piercecollege.edu/pierce_about.asp>. Accessed: June 25, 2009.

The 2002 Master Plan includes the following four types of projects:

- new construction,
- reconstruction and renovation,
- demolition, and
- public/private partnership projects.

A total of 33 projects were proposed under the 2002 Master Plan. However, subsequent to adoption of the 2002 Master Plan, six of the nine public/private partnership projects were cancelled. One of the new construction projects and one of the renovation projects were also cancelled. Additionally, four of the structures proposed for demolition under the 2002 Master Plan are no longer to be demolished. The remaining projects are either under construction or still scheduled for construction and/or renovation. Table 1 shows the status of the projects proposed under the 2002 Master Plan. Figure 3 shows the locations of the 2002 Master Plan projects.

Table 1: Status of Projects Proposed under the 2002 Los Angeles Pierce College Facilities Master Plan

No.	Project Name	Construction Schedule as of 2002	Current Status May 2010
	New Construction Projects		
1	Agriculture/Science/Nursing Building (renamed Center for the Sciences)	March 2004–Aug. 2005	Currently under construction
2	Technology Center (renamed the Green Technologies Building under the 2010 Master Plan Update)	May 2004–May 2005	Feb. 2012–Jan. 2014
3	Child Development Center	Feb. 2004–Jan. 2005	Currently under construction
4	Central Maintenance and Operations Facility (renamed the Maintenance and Operations Facility under the 2010 Master Plan Update)	Nov. 2005–Nov. 2007	Aug. 2010–Sept. 2011
5	New Gardner's Maintenance and Operations Facility (renamed the Maintenance and Operations Facility under the 2010 Master Plan Update)	May 2004–Dec. 2004	Aug. 2010–Sept. 2011
6	New Refrigeration Plant Maintenance and Operations Facility (renamed the Maintenance and Operations Facility under the 2010 Master Plan Update)	March 2005–Feb. 2006	Aug. 2010–Sept. 2011
7	Automotive Maintenance and Operations Facility, Student Food Services Facility (renamed the Automotive and New Technical Education Facilities under the 2010 Master Plan Update)	Sept. 2006–Sept. 2007	Feb. 2012–June 2013
8	Horticulture Classroom Building and Greenhouse (renamed the Horticulture/ Animal Science Lab under the 2010 Master Plan Update)	Dec. 2003–Dec. 2004	Jan. 2011–Jan. 2012
NA	Water Reclamation Facility	Aug. 2004–Dec. 2005	Cancelled
9	Campus Police Station	On hold	Completed
10	Equestrian Education Center	Feb. 2004–Aug. 2004	Completed
11	Admissions/Counseling/Student Services Building	Sept. 2004–Feb. 2006	Completed
	Reconstruction, Renovation, and Modernization Projects (Proposition A Bond Projects)		
12	Life Science/Chemistry/Physics Building	Sept. 2005–March 2006	To be completed Oct. 2012
13	Administration Building (lobby renovation, exterior renovation, interior renovation)	Aug. 2002–Aug. 2006	To be completed Oct. 2012
14	Campus Center	Sept. 2008–Sept. 2009	To be completed Oct. 2012

No.	Project Name	Construction Schedule as of 2002	Current Status May 2010
15	Computer Science/Computer Learning Center	May 2005–Jan. 2006	To be completed Oct. 2012
16	Library	Apr. 2004–Oct. 2006	Completed
17	Behavioral Science, Social Science, Math, Business Education, English	Feb. 2004–Oct. 2004	To be completed Oct. 2012
18	Facility Offices	Jan. 2004–Sept. 2004	Completed
19	Fine Arts and Music	March 2005–Nov. 2005	To be completed Aug. 2010
20	Theatre Building (proposed performing arts and Americans with Disabilities Act [ADA] improvements)	Sept. 2003–July 2006	March 2011–Sept. 2011
21	Animal Science Facilities		Completed
22	Life Science/Natural Resources Management	Aug. 2003–Jan. 2004	Cancelled
23	Physical Education Facilities	On hold	Completed
24	Roadway, Walkway, Grounds, Parking Lot, and Entrance Improvements	Sept. 2003–Jan. 2010	Ongoing (completion in June 2013)
NA	Restroom/ADA Renovations	Jan. 2003–Sept. 2009	Oct. 2012
Proposition A Bond Projects—Demolition Projects			
NA	Remaining Bungalows/Trailers	Jan. 2004–March 2004	Completed
NA	Child Development Center	Contingent on Los Angeles County Metropolitan Transportation Authority (Metro) agreement	Completed
NA	Business Office/Student Store	Prior to construction of new Technology Center	Completed
NA	Cafeteria/Associated Student Organization Trailer	Upon finding a partner for Student Dormitory Partnership	Cancelled
NA	Small Structures in Canyon de Lana	Aug. 2003–Jan. 2004	Cancelled
NA	Agricultural Sciences Building and Plant Facilities	Prior to construction for Phase II of Exhibition/ Events Center and Sciences Partnership Building	Cancelled
NA	Soils Lab/Horticulture Unit (proposed horticulture/animal science lab under the 2010 Master Plan Update)	Upon finding a suitable partner for the Sciences Building Partnership	Partial demolition has occurred
NA	Storage Structure in Horticulture Area	Dec. 2003–Dec. 2004	Cancelled
Public/Private Partnerships Projects			
25	Agriculture Education Experiences and Programs	Begin in Jan. 2003	In Progress
26	Produce Stand	Begin in Jan. 2003	In Progress
27	Agricultural Fields	Begin in Jan. 2003	In Progress
28	Sciences Partnership Building	Feb. 2007–July 2008	Cancelled
29	Horticulture Partnership	May 2003–Dec. 2004	Cancelled
30	Viticulture Partnership	Jan. 2004–Oct. 2004	Cancelled
31	East Student Dormitory	Sept. 2008–Aug. 2009	Cancelled
32	Student Housing Partnership	Sept. 2006–Aug. 2007	Cancelled
33	Life-Long Learning Residences Partnership	Aug. 2008–Aug. 2009	Cancelled

Source: Swinerton Consulting, 2009, 2010.

Figure 3: Locations of 2002 Master Plan Projects

11. Project Purpose and Need

The purpose of the proposed 2010 Master Plan Update is to allow the College the flexibility to account for changing conditions, including student enrollment projections. The 2010 Master Plan Update emphasizes efficient use of the College's resources to meet its educational mission and strategic plan. The 2010 Master Plan Update would build upon the 2002 Master Plan and establish a framework for the College's future, aligning its physical environment with its mission and academic plan. The 2002 Master Plan was developed to guide projects, many of which are nearly complete, initiated under Bond A/AA. With the passage of Measure J, this updated plan creates a flexible approach that ensures the efficient use of resources, sets priorities, and develops strategies for implementation.

12. Project Description and Background

Measure J, which passed in November 2008, authorized the LACCD to issue general obligation bonds to fund specific projects certified by the Board of Trustees of the district. Projects could include acquiring or leasing land and/or facilities, improving and repairing security and infrastructure, expanding education to meet the needs of the community, or acquiring furnishings and equipment for modernization, renovation, improvement, and new construction projects.

With the passage of Measure J, the College has updated its master plan to guide its future development. The proposed 2010 Master Plan Update modifies the master plan that was adopted in 2002. Since 2002, a number of individual projects have been cancelled or modified, as indicated in Table 1. Also, student enrollment has been on the decline the last few years; therefore, future enrollment projections have been revised. The recent state budget cuts, as well as increased opportunities for distance learning, have also affected enrollment.

The 2002 Los Angeles Pierce College Facilities Master Plan Final Environmental Impact Report (2002 FEIR) was prepared by ICF Jones & Stokes (then Myra L. Frank & Associates) to identify environmental impacts related to the 2002 Master Plan. The level of impact after mitigation was considered significant for the following issue areas: aesthetics, air quality, historic resources, and transportation (Myra L. Frank & Associates 2002). All other impacts were considered less than significant or less than significant with implementation of proposed mitigation measures.

Pierce College, like other agencies funded by the State of California, has experienced major budget cuts. The result has been a reversal of the enrollment growth trends that occurred over the past 5 years. The budget cuts have forced the College to reduce the section of classes it will offer for the 2009–2010 academic year by 17.5%. The College expects an average enrollment reduction of 8%–10%, pending final spring 2010 enrollment. The California community colleges have been encouraged to reduce their course offerings substantially, and the LACCD has responded by directing all nine colleges to meet significantly reduced enrollment targets. The College has complied with this directive for 2009–2010 and anticipates doing so again in 2010–2011."[5]

It was noted in the 2002 Master Plan that Pierce College had a full-time-equivalent (FTE) student enrollment of 13,591. Under the 2002 Master Plan, 2010 was used as the buildout year. Currently, the projected FTE student enrollment for 2010 is 14,500. (In the 2002 Master Plan, the estimated FTE enrollment for 2010 was 15,960.) The current 2008–2009 FTE student enrollment is 16,079. (In 2002, it was estimated at 15,100.)

The proposed 2010 Master Plan Update's buildout year is 2015. The estimated FTE student enrollment for 2014–2015 is 15,500. Projections show the College adding 1,909 FTE students between 2002 and 2015 (15,500 in 2015 less 13,591 in 2002).

Table 2 shows the FTE levels for 2002, the existing conditions (2008–2009), and project buildout (2015).

---

[5] Email communication with Pierce College staff member Nabil Abu-Ghazaleh, December 23, 2009.

Table 2: Existing and Projected Student Enrollment at Pierce College

Year	Student Enrollment (FTE)	Student Head Count
2002 Master Plan EIR		
2002 (baseline)	13,591	
2010 (buildout year)	15,960	22,880
2010 Master Plan Update		
2008–2009 (existing)	16,079	22,164
2010 (projected)	14,500	21,610
2015 (buildout year)	15,500	22,931
Source: Los Angeles Pierce College (November 16 and 30, 2009, email communication).		

Under the proposed 2010 Master Plan Update, six modified construction projects are proposed for the College, and four renovation projects are proposed. Table 3 describes the individual projects proposed under the Los Angeles Pierce College 2010 Master Plan Update. Figure 4 identifies the locations of the projects proposed under the Los Angeles Pierce College 2010 Master Plan Update.

Table 3: New/Added and Modified Projects Proposed under Los Angeles Pierce College 2010 Master Plan Update

No	Project Name	Approximate Size (sq ft)	Construction Schedule
New Construction			
1	Green Technologies Building*	70,000	May 2012–May 2014
2	Digital Arts and Media Building	70,000	Oct. 2012–Nov. 2014
3	Library Learning Crossroads Building	80,000	Feb. 2011–Oct. 2012
4	Expanded Automotive and New Technical Educational Facilities	20,000-square-foot addition to existing building	Feb. 2012–June 2013
5	Maintenance and Operations Facility**	30,000	Aug. 2010–Sept. 2011
6	Horticulture/Animal Science***	15,451	Jan. 2011–Jan 2012
Total Square Footage		285,451	
Renovations and Demolitions			
7	Demolish Existing Library	No new square footage	Existing library to be demolished. New construction of digital arts and media building
8	Performing Arts ADA Improvements and ADA Landscaping****	No new square footage	March 2011–Sept. 2011
9	Stadium Area Improvements	No new square footage	Feb. 2011–Aug. 2011
10	Infrastructure and Central Plant Extensions	No new square footage	July 2007–Jan. 2010

Source: Swinerton Consulting (August 2009 and May 2010 personal communication).

* Modification of 2002 Technology Center.
** Modification of 2002 maintenance and operations facility.
*** Modification of 2002 horticulture classroom building, greenhouse, and renovation.
**** Modification of 2002 theater.

Figure 4: Locations of Los Angeles Pierce College 2010 Master Plan Update Projects

Pierce College 2010 Master Plan Update Construction Projects

Under the proposed 2010 Master Plan Update, three of the projects that had been proposed under the 2002 Master Plan would be modified.

- The 2002 Technology Center would be modified to consist of a 70,000-square-foot Green Technologies Building. The proposed Green Technologies Building would house the College's new Green Technologies Program, with classroom and applied learning spaces that employ new technologies. The building would be certified under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program, as would all new construction.
- The 2002 Maintenance and Operations facility would also be modified under the proposed 2010 Master Plan Update. Under the 2002 Master Plan, a new 20,000-square-foot Central Plant Facilities Building, a 15,000-square-foot warehouse, secured/sheltered (carport) parking for 40 vehicles, an 11,710-square-foot warehouse, and 6,670 square feet of garage space were proposed. These 2002-proposed facilities totaled 53,380 square feet. Under the 2010 Master Plan Update, these facilities would be consolidated into one structure totaling approximately 30,000 square feet.
- In addition, the 2002 horticulture classroom building, greenhouse, and renovation has become the Horticulture/Animal Science Building, and the 2002 theater is now limited to performing arts/Americans with Disabilities Act (ADA) improvements.

New proposed 2010 Master Plan Update construction is as follows:

- A 70,000-square-foot Digital Arts and Media Building would be developed. The building, which would be LEED certified, would serve as a bridge between the existing applied technologies, liberal arts, and fine arts programs.
- A Library "Learning Crossroads" Building would be developed as a hybrid building under the proposed 2010 Master Plan Update. The 80,000-square-foot structure would be the center of campus activity and would include a library, student union space, learning center, resource center, technology resources, food services, and an art gallery. As a hybrid building, the proposed structure would reduce the amount of square footage required for individual stand-alone facilities.
- An Expanded Automotive Facility and New Technical Educational Facilities; approximately 20,000 square feet of additional space is proposed under the 2010 Master Plan Update.

Renovations

Renovation work would include the following:

- ADA improvements for the performing arts building,
- stadium area improvements,
- infrastructure and central plant extensions, and
- renovation of the horticulture/animal science and student learning environments.

Table 4 compares the environmental impacts of the 2002 Master Plan with those of the proposed 2010 Master Plan Update. As shown in the table, both the 2002 Master Plan and the 2010 Master Plan Update would result in either no impacts or less-than-significant impacts related to agricultural resources, land use, mineral resources, population and housing, and recreation. With mitigation incorporated, both the 2002 and 2010 plans would result in less-than-significant

Table 4: Comparison of Environmental Impacts – 2002 Pierce College Master Plan and 2010 Master Plan Update

Environmental Resource Area	2002 Pierce College Master Plan	2010 Master Plan Update
Aesthetics	Significant after Mitigation.	Less than Significant. No new significant impacts identified.
Agricultural Resources	No Impact.	Less than Significant. No new significant impacts identified.
Air Quality	Significant after Mitigation.	Significant after Mitigation. Significant impacts are less severe.
Biological Resources	Less than Significant with Mitigation.	Less than Significant with Mitigation. No new significant impacts identified.
Cultural Resources	Significant after Mitigation.*	Significant after Mitigation.* Significant impacts are less severe.
Geology and Soils	Less than Significant with Mitigation.	Less than Significant with Mitigation. No new significant impacts identified.
Hazards and Hazardous Materials	Less than Significant with Mitigation.	Less than Significant with Mitigation.
Hydrology and Water Quality	Less than Significant with Mitigation.	Less than Significant with Mitigation. No new significant impacts identified.
Land Use and Planning	Less than Significant.	Less than Significant. No new significant impacts identified.
Mineral Resources	No Impact.	No Impact. No new significant impacts identified.
Noise	Less than Significant with Mitigation.	Less than Significant with Mitigation. No new significant impacts identified.
Population and Housing	Less than Significant.	Less than Significant. No new significant impacts identified.
Public Services	Less than Significant with Mitigation.	Less than Significant with Mitigation. No new significant impacts identified.
Recreation	Less than Significant.	Less than Significant. No new significant impacts identified.
Transportation	Significant after Mitigation.	Less than Significant with Mitigation. No new significant impacts identified.
Utilities and Service Systems	Less than Significant with Mitigation.	Less than Significant with Mitigation. No new significant impacts identified.

* Significant and unmitigable if retention of the business office/student store and Quonset hut (Exposition Hall) building is not feasible and those buildings are demolished.

Source: ICF Jones & Stokes, 2009.

impacts related to biological resources, geology, hazards, hydrology, noise, public services, and transportation and utilities. Under the 2002 plan, significant unavoidable impacts on aesthetics were identified; less-than-significant aesthetics impacts are anticipated under the 2010 Master Plan Update. Under the 2002 Master Plan, significant unavoidable impacts on air quality and cultural resources were identified. With mitigation, less severe significant air quality and cultural impacts would occur under the proposed 2010 Master Plan Update.

13. Construction Phasing

With the required approvals and permits in place, construction activities would be expected to begin in 2010 and end in 2014. The infrastructure and central plant extensions began in 2007 and would continue under the proposed 2010 Master Plan Update.

Table 3, included above, shows the construction schedule for all projects proposed under the Los Angeles Pierce College 2010 Master Plan Update.

14. Surrounding Land Uses and Setting

As stated above, the College is located in a developed area of the City of Los Angeles. The area immediately surrounding the College is developed with mostly residential uses. Residential uses are located to the north, south, southeast, and southwest, while Warner Center is located immediately west of the College. The Metro Orange Line includes a station at the College along Winnetka Avenue and a second station at De Soto Avenue and Victory Boulevard.

15. Other Public Agencies Whose Approval May Be Required (e.g., permits, financing approval, or participation agreement)

- State of California
    - Division of the State Architect
    - Department of Food and Agriculture
    - Department of General Services
    - Department of Toxic Substances Control
    - State Fire Marshal

- Regional Water Quality Control Board (National Pollutant Discharge Elimination System Permit)
- South Coast Air Quality Management District (stationary-source permits)
- Los Angeles County Metropolitan Transportation Authority
- County of Los Angeles
    - Department of Health Services
    - Department of Public Works

- City of Los Angeles
    - Department of Water and Power
    - Fire Department
    - Public Works Department (grading permit)
    - Bureau of Engineering
    - Bureau of Sanitation
    - Department of Transportation

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (☒) could be affected by this project, involving at least one impact that is a “potentially significant impact,” as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Hazards and Hazardous Materials	☐	Public Services
☐	Agriculture Resources	☐	Hydrology/Water Quality	☐	Recreation
☒	Air Quality	☐	Land Use/Planning	☐	Transportation/Traffic
☐	Biological Resources	☐	Mineral Resources	☐	Utilities/Service Systems
☒	Cultural Resources	☐	Noise	☐	Mandatory Findings of Significance
☐	Geology/Soils	☐	Population/Housing		

EVALUATION OF ENVIRONMENTAL IMPACTS

Issues	Potentially Significant	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
1. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

No Impact (designated scenic vistas). A review of the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan indicates that no officially designated scenic vistas or views have been identified in the immediate vicinity of Pierce College. The nearest designated scenic vistas are along the Mulholland Scenic Parkway and the Ventura/Cahuenga Boulevard corridor; however, the proposed 2010 Master Plan Update would not affect views from these referenced scenic vantage point locations because of the moderate nature of the design changes that would occur, the separating distance, the elevated configuration of the Ventura Freeway, and intervening development and topography. Hence, no impact on such officially designated scenic views would occur as a result of the revised project.

Less-than-Significant Impact (unofficial on-campus scenic vistas). Detailed visual analysis of the Pierce College campus and its visual setting was provided in the 2002 FEIR. That analysis identified several unofficial scenic views at the Pierce College campus that are considered scenic resources of the neighboring communities but concluded that impacts on such views, occurring as a result of 2002 Master Plan project components, would be less than significant. Scenic resources include the undeveloped rolling hills in the southern portion of the campus and the agricultural fields in the northwest corner of the campus adjacent to De Soto Avenue and Victory Boulevard. The southwest portion of the campus offers panoramic views of other areas of the campus, the San Fernando Valley, and the Santa Susana Mountains to the north. In contrast to the 2002 Master Plan (e.g., previously proposed Viticulture Partnership), the proposed 2010 Master Plan Update would locate only one facility on the undeveloped open space in the southern portion of the campus. The one-story approximately 30,000-square-foot Maintenance and Operations (M&O) facility is currently proposed where the Lifelong Learning Center Residential facility parking lot—comparable in size to the M&O facility—was previously proposed in 2002. This area is characterized by nearly flat-to-rolling terrain that transitions to a steep grade along the southern border of the campus. The existing dense vegetation, consisting of trees and tall shrubbery, serves to largely (but not completely) block views across this portion of the campus, as well as views south and southeast to off-campus locations, and views north into the campus. For purposes of comparison, the site for the proposed M&O facility is a lowered area and is much less visible to sensitive south-of-campus viewers than is the hilly area in the south central area of campus to the west, adjoining the theater building (an area that is highly visible to south-of-campus residents). Design of the M&O facility would include building it into the higher terrain found on the south and southeast edges of the building site to keep its elevation low and diminish its visual prominence as well as installing replacement landscaping of sufficient density and height to screen north-facing views onto the campus by sensitive viewers. Views from Oxnard Street, south of the campus, would not be significantly affected because the roofline of the M&O facility would not protrude above the horizon; only the roof would be partially visible.

The 2010 Master Plan projects would not significantly modify the agricultural fields in the northwest corner of the campus. The extensive agricultural fields to the north and south of El Rancho Drive would, therefore, remain intact, and the open space character of the setting would not be significantly changed because of the relatively small scale and massing of the proposed features in contrast to the expansive character of most informal views across the campus. Therefore, these views of campus open space would continue to be available to the general public, students, and faculty who use the adjacent pedestrian trails. In addition, informal views of key off-campus visual resources, such as the Chalk Hills to the south or to the more distant Santa Susana Mountains and Simi Hills (approximately 5 to 6 miles to the north and northwest, respectively), would not be adversely affected by the projects proposed as part of the 2010 Master Plan Update (see Photos 1–6 in Appendix A). Therefore, the visual impact would remain less than significant.

b) Substantially damage scenic resources, including trees, rock outcroppings, and historic buildings, within a state scenic highway?	☐	☐	☐	☒

No Impact. As described above in response 1(a), the nearest scenic highways are Mulholland Scenic Parkway and the Ventura/Cahuenga Boulevard corridor, which are located approximately 2.5 miles and 0.6 mile, respectively, south of the College. Given the distance from Pierce College, topographic differences, mature vegetation, and intervening development, including the elevated configuration of the Ventura Freeway through Woodland Hills, the possibility of unencumbered sightlines of development under the proposed 2010 Master Plan Update occurring from scenic highways would be precluded. No impacts would occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐

Less-than-Significant Impact. The proposed 2010 Master Plan Update would include the retention and renovation of existing classroom buildings. It would not introduce new buildings, student activity spaces, or parking facilities in the undeveloped open space in the southern portion of the campus. As described in response 1(a), above, the southern portion of the College is considered a scenic resource for the neighboring communities. In addition, the 2010 Master Plan Update would not significantly modify the agricultural fields in the northwest corner of the campus. The approximately 480-acre expanse of agricultural land to the north along Victory Boulevard would remain intact, as would the agricultural fields/open space to the south across El Rancho Drive. New construction is proposed primarily within the campus core, an area where there is no uniformity in scale or architectural design among the extant buildings. As with existing development, any proposed development in the campus core would be oriented along the campus' existing northwest-to-southeast spine and sited to improve circulation and integrate exterior and interior campus spaces. Such development would take full advantage of the varied surrounding landscape and topographic features. Although core development would not be uniform in terms of height or massing, all new development would be sympathetically integrated and compatible with existing campus development in terms of scale, architectural style, color, materials, and landscape design. The proposed 2010 Master Plan Update would not substantially degrade the existing visual character or quality of the site or its surroundings. This would remain a less-than-significant impact.

d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

Less-than-Significant Impact. The 2002 EIR identified less-than-significant impacts related to light and glare resulting from construction and operation of projects identified in the 2002 Master Plan. In addition to the renovation of existing buildings, the proposed 2010 Master Plan Update would include the construction of new buildings, parking lots, and way-finding features, as well as the installation of new landscape elements, in a manner that would be compatible with the existing campus environment. New sources of nighttime lighting would be added and, in limited instances, would be visible from outside the campus; however, the revised project's lighting design features (i.e., LEED-based efficient designs and cut-off shielded fixtures angled to be at least 45 degrees below horizontal) and the sizeable intervening distances that separate sensitive viewers from light sources would preclude significant impacts and/or render such lighting only negligibly noticeable. New signage and lighting along walkways and in parking areas would incorporate LEED-certified, energy-efficient units with filtering devices. In addition, fixtures would be positioned and directed to the ground to avoid spillover and sky-glow lighting effects. Most of the new lighting would be for the central part of the College and located far away from nearby residential uses. As such, the potential for spillover and glare impacts on adjacent residential properties would be low. New buildings and structures would be designed with appropriate colors and textures, as well as non-reflective materials. These would be integrated into the adjoining landscape so as not to produce significant glare, spillover light, or sky-glow effects. This would be considered a less-than-significant impact.

2. AGRICULTURE RESOURCES: In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐

Less-than-Significant Impact. The 2002 FEIR found that approximately 12 to 13 acres of land designated as Prime or Unique Farmland would be converted for the development of projects such as the equestrian education center, the child development center, and the new maintenance and operations facility. This development would affect less than 5% of the designated Prime and Unique Farmland on campus. It was concluded that, given the relatively small amount of farmland that would be developed and the fact that the proposed facilities would fulfill the master plan goal of enhancing land resources and would be consistent with the College's agricultural educational mission, the overall impact would not be significant.

A number of the projects identified in the 2002 FEIR would be carried forward under the proposed 2010 Master Plan Update. However, the water reclamation facility, which, previously, could have been placed on Prime or Unique Farmland, would not be carried forward under the proposed 2010 Master Plan Update, thereby reducing the level of significance of previously estimated impacts. Therefore, because no new projects would be placed on Prime or Unique Farmland, impacts would remain as previously estimated in the 2002 EIR, less than significant.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒

No Impact. There is no Land Conservation Act (i.e., Williamson Act) contract for the site. The College is zoned as Open Space and Public Facilities. Therefore, the proposed 2010 Master Plan Update would not conflict with any Williamson Act contract or agricultural zoning. No impact would occur.

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

No Impact. The proposed 2010 Master Plan Update would enhance the land resources of Pierce College. Many of the projects are geared toward the agricultural character of the school and would benefit the agricultural uses on campus. As was the case with the 2002 Master Plan, the proposed 2010 Master Plan Update would also fulfill the College's goal of enhancing land resources and would be consistent with the College's agricultural educational mission. Therefore, no impacts would occur.

3. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒

No Impact. The project site is located within the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the Basin is in nonattainment (i.e., ozone [O_3], particulate matter [PM10], and fine particulate matter [PM2.5]). As such, the project would be subject to the SCAQMD's Air Quality Management Plan (AQMP). The AQMP contains a comprehensive list of pollution control strategies to reduce emissions and achieve ambient air quality standards. These strategies are developed, in part, according to regional population, housing, and employment projections prepared by the Southern California Association of Governments (SCAG).

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties. It addresses regional issues related to transportation, the economy, community development, and the environment. With respect to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG), including the Growth Management and Regional Mobility chapters, which form the basis for the land use and transportation control portions of the AQMP. These documents are used in the preparation of the air quality forecasts and consistency analyses included in the AQMP. Both the RCPG and AQMP are based, in part, on projections that originated from county and city general plans.

The proposed 2010 Master Plan Update would involve the renovation and expansion of an existing development. The revised project is consistent with both the general plan designation and local zoning.

Because the project is consistent with the local general plan and the RCPG (SCAG 1996), pursuant to SCAQMD guidelines, the proposed 2010 Master Plan Update is considered consistent with the region's AQMP. As such, proposed 2010 Master Plan Update-related emissions are accounted for in the AQMP, which is crafted to bring the Basin into attainment for all criteria pollutants. No impacts would occur, and no mitigation measures are necessary.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐

Potentially Significant (as in the 2002 FEIR but less severe). As discussed in response 3(a), the project site is located within the Basin. State and federal air quality standards are often exceeded in many parts of the Basin. A discussion of the project's potential short-term construction-period and long-term operational-period air quality impacts is provided below.

Regional Construction Impacts

Construction of the proposed 2010 Master Plan Update has the potential to generate air quality impacts due to the use of heavy-duty construction equipment on the project site, construction workers traveling to and from the project site, and deliveries of building materials to the project site. Combustion emissions, primarily nitrogen oxides (NO_X), would emanate from the use of on-site construction equipment, such as graders, wheeled loaders, and cranes. During the finishing phase of construction, the application of architectural coatings (i.e., paints) and other materials could release emissions from reactive organic compounds (ROCs).

The proposed 2010 Master Plan Update would result in the construction of approximately 301,451 square feet of new academic space. A more detailed discussion pertaining to proposed new facilities and the renovation/modernization of existing facilities can be found in the Project Description and Background section of this addendum.

Construction is anticipated to start in June 2010 and conclude by February 2014. To provide a conservative estimate of potential worst-case impacts, the impact analysis assumes that up to six projects will be completed within the first two years after approval of this addendum. This assumption is conservative in that it concentrates a high level of construction activity at the earliest feasible date of the proposed 2010 Master Plan Update’s overall development period. This point is particularly noteworthy since construction emissions are directly related to the amount and intensity of construction activities (i.e., emissions increase as the amount of construction increases), and emissions factors for certain components of project construction (i.e., construction workers’ trips and delivery vehicle trips) decrease over time in response to the introduction of greater numbers of vehicles that emit lower relative levels of pollutant emissions.

The quantity, duration, and intensity of construction activity would have a substantial effect on the amount of construction emissions, as well as related pollutant concentrations, occurring at any one time. As such, the emissions forecasts provided herein reflect a specific set of conservative assumptions that are based on an expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecast. If construction is delayed or occurs over a longer time period, emissions could be reduced because of (1) a more modern and cleaner burning construction equipment fleet mix and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval). The construction equipment mix and the duration for each construction stage are detailed in the URBEMIS 2007 printout sheets, which are provided in the air quality appendix.

A conservative estimate of the revised project’s worst-case construction emissions is provided in the table below. As shown therein, short-term emissions during construction are expected to exceed SCAQMD regional significance thresholds for NO_X. As such, impacts would be significant without incorporation of mitigation measures.

Table 5. Forecast of Regional Construction Emissions

Construction Phase	Criteria Pollutant Emissions (pounds per day)					
	ROC	NO_X	CO	SO_X	PM10	PM2.5
Single Project						
Demolition[a]	3	28	14	<1	22	6
Site Grading	3	25	14	<1	11	3
Structure Erection/Finishing	12	9	8	<1	1	1
Six Concurrent Projects						
Demolition[a]	3	28	14	<1	22	6
Site Grading	18	150	81	<1	66	19
Structure Erection/Finishing	70	55	47	<1	4	3
Maximum Regional Project Emissions	**70**	**150**	**81**	<1	**66**	**19**
SCAQMD Regional Emissions Threshold (lbs/day)	75	100	550	150	150	55
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**

[a] Demolition occurs only for one project and is therefore not factored in the “concurrent” emissions estimates.

CO = carbon monoxide; SO_x = oxides of sulfur.

URBEMIS 2007 outputs are provided in the air quality appendix.

Source: ICF Jones & Stokes, 2009.

Mitigation Measures

The following measure shall be implemented to reduce emissions from equipment. As described in the 2002 EIR, this measure would reduce emissions by approximately 10 percent. (However, as described in the 2002 EIR, construction-period air quality impacts were considered significant and unavoidable because of the larger building program than that proposed in this update.)

2002 EIR Mitigation Measures

AQ-1 Turn off equipment when not in use for longer than 5 minutes.

In addition to the mitigation above, which was included in the 2002 EIR, the following measure shall be employed to reduce emissions of NOX, ROC, PM10, and PM2.5 further in all off-road equipment:

AQ-2 Use EPA Tier 2 emissions-compliant equipment or newer.

Residual Impacts

Implementation of mitigation measure AQ-1 would result in a reduction of all criteria pollutant emissions by approximately 10 percent. Implementation of mitigation measure AQ-2 would, on average, reduce NO_X emissions from construction equipment operating on site by 55 percent, ROC emissions by 77 percent, and combustion-source particulate emissions (PM10 and PM2.5) by 55 percent.

As shown in the following table, with implementation of mitigation measures AQ-1 and AQ-2, regional NO_X emissions would be reduced to a level below the respective SCAQMD threshold. In addition, mass regional ROC, PM10, and PM2.5 emissions would be reduced to levels below their previous less-than-significant levels.

Table 6. Forecast of Mitigated Regional Construction Emissions

Construction Phase	Criteria Pollutant Emissions (pounds per day)					
	ROC	NO_X	CO	SO_X	PM10	PM2.5
Single Project						
Demolition[a]	2	25	14	<1	21	5
Site Grading	1	11	14	<1	10	3
Structure Erection/Finishing	11	4	8	<1	<1	<1
Six Concurrent Projects						
Demolition[a]	2	25	14	<1	21	5
Site Grading	4	68	81	<1	62	15
Structure Erection/Finishing	65	27	47	<1	2	2
Maximum Regional Project Emissions	**65**	**68**	**81**	<1	**62**	**15**
SCAQMD Regional Emissions Threshold (lbs/day)	75	100	550	150	150	55
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] Demolition occurs only for one project and is therefore not factored in the "concurrent" emissions estimates.

URBEMIS 2007 outputs are provided in the air quality appendix.

Source: ICF Jones & Stokes, 2009.

Localized Construction Impacts

When quantifying mass emissions for localized analysis, only emissions that occur on site are considered. Consistent with SCAQMD Localized Significance Threshold (LST) methodology guidelines, emissions related to off-site delivery/haul truck activity and employee trips are not considered in the evaluation of localized impacts (SCAQMD 2003). As shown in the following table, localized emissions for all criteria pollutants would remain below their respective SCAQMD LST. As such, localized impacts that may result from construction-period air pollutant emissions would be less than significant. No additional mitigation measures are necessary.

Table 7. Forecast of Localized Construction Emissions

Construction Phase	Criteria Pollutant Emissions (pounds per day)					
	ROC	NO_X	CO	SO_X	PM10	PM2.5
Pierce College						
Demolition	<1	3	5	<1	20	4
Site Grading	1	11	13	<1	10	3
Structure Erection/Finishing	11	4	5	<1	<1	<1
Worst Case On-site Total[a]	**11**	**11**	**13**	<1	**20**	**4**
SCAQMD Localized Significance Threshold (lbs/day)[b]	—	212	1,510	—	35	8
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] Maximum concurrent localized project emissions for ROC, NO_X, and CO occur during the 1-month period when construction, architectural coating, and paving overlap. Maximum PM10 emissions occur during the 1-month demolition phase. All other maximums occur during grading/excavation.

[b] These localized thresholds were taken from tables provided in the SCAQMD LST methodology guidance document, which are based on the following: 1) The project site is located in SCAQMD Source Receptor Area No. 6, 2) sensitive receptors are located within 50 meters of construction activity, and 3) the maximum site area to be disturbed is 5 acres.

URBEMIS 2007 outputs are provided in the air quality appendix.

Source: ICF Jones & Stokes, 2009.

Regional Operational Impacts

SCAQMD has also established significance thresholds to evaluate potential impacts associated with long-term project operations. Regional air pollutant emissions associated with project operations would be generated from the consumption of electricity and natural gas and the operation of on-road vehicles. Pollutant emissions associated with energy demand (i.e., electricity generation and natural gas consumption) are classified by SCAQMD as regional stationary-source emissions. Electricity is considered an area source because it is produced at various locations inside and outside of the Basin. Because it is not possible to isolate where electricity is produced, these emissions are conservatively considered to occur within the Basin and be regional in nature. Criteria pollutant emissions associated with the production and consumption of energy were calculated using emission factors from SCAQMD's *CEQA Air Quality Handbook* (appendix to Chapter 9) (SCAQMD 1993).

Mobile-source emissions were calculated using the URBEMIS 2007 emissions inventory model, which multiplies the estimate of daily vehicle miles travelled (VMT) by applicable EMFAC2007 emissions factors. The URBEMIS 2007 model output and worksheets for calculating regional operational daily emissions are provided in the air quality appendix. As shown in the following table, while the revised project's regional emissions would exceed most regional SCAQMD thresholds, emissions are expected to remain below emission levels previously calculated for the 2002 Master Facilities Plan. Therefore, regional operational emissions would not result in more severe significant long-term regional air quality impacts.

Table 8. Forecast of Regional Operational Emissions

	Criteria Pollutant Emissions (pounds per day)					
	ROC	**NO_X**	**CO**	**SO_X**	**PM10**	**PM2.5**
Pierce College						
2010 Master Plan	117	99	1,379	1	83	76
2002 Master Plan	170	108	1,506	1	90	83
SCAQMD Regional Emissions Threshold (lbs/day)	55	55	550	150	150	55
Exceed Threshold?	**Yes**	**Yes**	**Yes**	**No**	**No**	**Yes**
More Severe Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**

[a] Mobile emissions calculated using the URBEMIS 2007 emissions model. Model output sheets are provided in the air quality appendix.

[b] Emissions due to project-related electricity generation based on guidance provided in SCAQMD's *CEQA Air Quality Handbook*. Worksheets are provided in the air quality appendix.

URBEMIS 2007 outputs are provided in the air quality appendix.

Source: ICF Jones & Stokes, 2009.

Local Operational Impacts

Within an urban setting, vehicle exhaust is the primary source of CO. Consequently, the highest CO concentrations are generally found close to congested intersections. Under typical meteorological conditions, CO concentrations tend to decrease as the distance from the emissions source (i.e., congested intersection) increases. For purposes of providing a conservative worst-case impact analysis, CO concentrations are typically analyzed at congested intersections, because if impacts are less than significant close to the congested intersections, impacts will also be less than significant at more distant locations.

Project traffic during the operational phase would have the potential to create local CO impacts. SCAQMD recommends a hot-spot evaluation of potential local CO impacts when volume-to-capacity ratios are increased by 2 percent at intersections with a level of service (LOS) of C or worse. Given these criteria and information provided in the traffic impact study prepared by Fehr and Peers (2010), two intersections were selected for analysis.

Local area CO concentrations were projected using the CALINE 4 traffic pollutant dispersion model. The analysis of CO impacts followed the protocol recommended by the California Department of Transportation (Caltrans), published as the *Transportation Project-level Carbon Monoxide Protocol* (Caltrans 1997). It is also consistent with SCAQMD's CO modeling protocol procedures, with all four corners of each intersection analyzed to determine whether project development would result in a CO concentration that exceeds federal or state CO standards.

The project's AM and PM 1- and 8-hour CO levels for project year 2015 CO concentrations are presented in the table below. As shown therein, the proposed 2010 Master Plan Update would not have a significant impact related to 1- or 8-hour local CO concentrations from mobile-source emissions.

Because significant impacts would not occur at those intersections with the highest traffic volumes, which are located adjacent to sensitive receptors, no significant impacts are anticipated to occur at any other location in the study area. This is because the conditions that yield CO hot spots would not be any worse than those that would occur at the analyzed intersections. Consequently, sensitive receptors included in this analysis would not be significantly affected by the CO emissions from the net increase in traffic that would occur under the project. Because the project would not cause an exceedance or exacerbate an existing exceedance of an ambient air quality standard, the project's localized operational air quality impacts would be less than significant. No mitigation measures are necessary.

Table 9. Local Area Carbon Monoxide Dispersion Analysis

Intersection	Peak Period[a]	Maximum 1-hour 2015 Base Concentration (ppm)[b]	Maximum 1-hour 2015 with-Project Concentration (ppm)[c]	Significant 1-hour Concentration Impact?[d]	Maximum 8-hour 2015 Base Concentration (ppm)[e]	Maximum 8-hour 2015 with-Project Concentration (ppm)[f]	Significant 8-hour Concentration Impact?[d]
De Soto at Victory	AM	8.0	8.0	No	6.5	6.5	No
	PM	8.3	8.3	No	6.7	6.7	No
Winnetka at U.S. 101 Eastbound Ramp	AM	7.5	7.6	No	6.1	6.2	No
	PM	7.5	7.5	No	6.1	6.1	No

Notes:

CALINE4 dispersion model output sheets and EMFAC2007 emissions factors are provided in the air quality appendix.

ppm = parts per million

[a] Peak-hour traffic volumes are based on the traffic impact analysis prepared for the project by Fehr and Peers (2010).

[b] SCAQMD 2015 1-hour ambient background concentration (6.6 ppm) + 2015 base traffic CO 1-hour contribution.

[c] SCAQMD 2015 1-hour ambient background concentration (6.6 ppm) + 2015 with-project traffic CO 1-hour contribution.

[d] The state standard for the 1-hour average CO concentration is 20 ppm, and the 8-hour average concentration is 9.0 ppm.

[e] SCAQMD 2015 8-hour ambient background concentration (5.5 ppm) + 2015 base traffic CO 8-hour contribution.

[f] SCAQMD 2015 8-hour ambient background concentration (5.5 ppm) + 2015 with-project traffic CO 8-hour contribution.

Source: ICF Jones & Stokes, 2009.

With respect to the revised project's on-site mass emissions, the following table shows that on-site operational-period emissions would be below SCAQMD's LSTs. Impacts from emissions of these criteria pollutants would be less than significant.

Table 10. Forecast of Localized Operational Emissions

	Criteria Pollutant Emissions (pounds per day)					
	ROC	NO_X	CO	SO_X	PM10	PM2.5
On-site Area-Source Emissions	2	3	4	<1	<1	<1
SCAQMD Localized Significance Threshold (lbs/day)[a]	—	212	1,510	—	9	2
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] These localized thresholds were taken from tables provided in the SCAQMD LST methodology guidance document, which is based on the following: 1) The project site is located in SCAQMD Source Receptor Area No. 6, 2) sensitive receptors are located within 50 meters of the project, and 3) the maximum site to be disturbed is 5 acres.

URBEMIS 2007 outputs are provided in the air quality appendix.

Source: ICF Jones & Stokes, 2009.

Issues	Potentially Significant	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐

Less-than-Significant Impact. SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards, in accordance with the requirements of the federal and state Clean Air Acts. As discussed earlier in response 3(a), the proposed 2010 Master Plan Update would be consistent with the AQMP, which is intended to bring the Basin into attainment for all criteria pollutants. In addition, the mass regional emissions calculated for the proposed 2010 Master Plan Update in response 3(b) show no new impacts. As such, the revised project would not result in a new cumulative impact. No additional mitigation measures are required.

d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. As described in response 3(b), above, mitigated construction and operation of the proposed 2010 Master Plan Update would not result in any substantial localized air pollution impacts and therefore would not expose any nearby sensitive receptors to substantial pollutant concentrations.

e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Less-than-Significant Impact. According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting sites, refineries, landfills, dairies, and fiberglass molding facilities (SCAQMD 1993). The proposed 2010 Master Plan Update does not include any uses identified by the SCAQMD as being associated with odors. Therefore, it would not be expected to produce objectionable odors.

Potential odor sources during construction include asphalt paving material and architectural coatings and solvents. SCAQMD Rules 1108 and 1113 limit the amount of volatile organic compounds from cutback asphalt and architectural coatings and solvents, respectively. In compliance with SCAQMD rules, no construction activities or materials would be proposed that would create a significant level of objectionable odor. As such, potential impacts during short-term construction would be less than significant.

4. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. Biological surveys of Pierce College were conducted in 2002 during the preparation of the 2002 FEIR. In addition, an updated survey was conducted by an ICF Jones & Stokes biologist on August 3, 2009. While not observed during the 2009 survey, large numbers of Canada geese are known to feed and roost (rest) in the agricultural fields in the western portion of the campus during the winter months (generally November to March). Also, while not included on any list of sensitive species, Canada geese are considered to be a locally sensitive species because of the lack of feeding and resting habitat for this species in coastal southern California.

None of the projects included in the 2002 Master Plan that were proposed for the agricultural fields in the western portion of the campus were constructed (see Table 1 for status of 2002 projects). The 2010 Master Plan Update does not propose any substantial projects in the agricultural fields; therefore, the potential to affect Canada geese is limited. However, should any construction activities occur in the agricultural fields, the mitigation measure proposed in the 2002 EIR, and included below, would be implemented. Implementation of mitigation measure BR-1 would mitigate significant impacts (through habitat modifications) to the same level of less than significant.

2002 EIR Mitigation Measures

BR-1 To avoid significant impacts on Canada geese, a locally sensitive species, Pierce College shall attempt to avoid construction activities in the agricultural portions of the campus during the winter months when geese are present. If construction activities in agricultural areas during winter cannot be avoided, then several months prior to the scheduled initiation of construction activities, Pierce College shall plant low-growing herbaceous crops (alfalfa, grains) or wild grass favored by Canada geese in portions of the agricultural fields that would not be affected by construction activities to provide alternative feeding habitat for the geese. Human disturbance in the enhanced area shall be prohibited until the geese migrate from the area or until construction activities in the agricultural fields are complete. In addition, because the project includes permanent removal of some feeding and roosting habitat for geese, a mitigation plan shall be developed to minimize permanent impacts on the Canada geese population at the campus. The plan shall be developed by campus biology instructors who are familiar with the areas on campus used by Canada geese in conjunction with experts who are familiar with successful management of the wintering geese populations at Sepulveda Basin, the Salton Sea, and/or Central Valley. The plan shall include the following measures:

- An evaluation of the extent of use by geese of agricultural areas that are to be removed from agricultural use as part of the master plan. The number of acres to be enhanced for geese shall be directly proportional on a 1:1 basis to the number of acres to be removed from agricultural production. Such acreage will have been used by geese during one or more of the past 5 years.
- An evaluation of the remaining agricultural areas on campus that would be appropriate to enhance for roosting (resting) and foraging for geese. The enhancement areas shall be appropriate for maintaining limited human disturbance, for planting crops known to be used in other areas of California for geese foraging (rye grass, corn, sorghum, millet), and for providing a sufficient take-off area for geese so they don’t feel boxed in.
- A planting plan that specifies the timing of planting, pre-planting, and post-planting methods (e.g., harvesting crops to prepare them for geese foraging) to maximize use by geese; methods for limiting human disturbance; and methods for limiting encroachment by geese into areas outside the enhancement site where they may suffer mortality because of campus traffic or other campus uses.
- Monitoring and reporting methods so that the success of the enhancement can be measured for a minimum of 5 years following the first planting. Monitoring shall be conducted a minimum of once monthly during each winter, and a monitoring report shall be prepared once annually. Population monitoring shall take into account the wide fluctuations in the geese population on campus that has occurred over the last several decades.

As with the 2002 Master Plan, the facilities proposed as part of the proposed 2010 Master Plan Update would result in the removal of trees and other vegetation that could support nesting birds and raptors protected by the federal Migratory Bird Treaty Act (MBTA) and/or California Fish and Game Code. Direct impacts on active nests would be considered a significant impact on special-status species. Implementation of mitigation measure BR-2, identified in the EIR prepared for the 2002 Master Plan (and provided below), would mitigate this impact to the same level of less than significant.

> **BR-2** To avoid violations of the MBTA or California Fish and Game Code Section 3503, Pierce College shall attempt to limit grubbing and the removal of trees and buildings during the bird breeding season (approximately March 1 to September 1 [as early as February 1 for raptors]). If the bird breeding season cannot be avoided, Pierce College shall retain a qualified ornithologist to initiate surveys of the construction zone 30 days prior to the initiation of construction and weekly thereafter, with the last survey not more than 3 days prior to the initiation of construction, to minimize the potential for nesting following the survey and prior to construction. If the ornithologist detects any occupied nest or nests of native birds within the construction zone, Pierce College will conspicuously flag off the area(s) supporting bird nests, providing a minimum buffer of 300 feet between the nests and limits of construction (500 feet for raptors). The construction crew will be instructed to avoid any activities in this zone until the bird nests are no longer occupied, per a subsequent survey by the ornithologist.

No new impacts or mitigation measures are proposed under the 2010 Master Plan Update. The findings of the 2002 EIR remain valid.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒

No Impact. ICF Jones & Stokes conducted a field inspection on August 3, 2009, to identify any changes in the existing environmental setting compared with that of the 2002 FEIR. No changes to the environmental setting were observed. The proposed 2010 Master Plan Update does not include any improvements or development within Canyon de Lana, which is the only area on the project site that was found during the 2009 survey to support riparian habitat or other sensitive natural communities. Components of the proposed 2010 Master Plan Update would remove only agricultural uses, including trees and shrubs. Therefore, no impacts on riparian habitat or sensitive natural communities would occur as a result on the proposed 2010 Master Plan Update.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐

Less-than-Significant Impact. The 2002 EIR stated that the pond renovation work in the Canyon de Lana area may result in a significant impact if proposed renovation required the discharge of fill material into the streambed of Canyon de Lana. Pierce College will obtain an individual permit under Section 404 of the Clean Water Act if needed. A Streambed Alteration Agreement will be obtained by Pierce College if activities associated with pond renovation result in a violation of Section 1600 of the Fish and Game Code or significant impacts on protected wetlands. The 2002 EIR included mitigation measure BR-4 to avoid violations of wetland laws. The mitigation required Pierce College to retain a qualified wetland specialist to conduct wetland delineations as necessary.

The proposed 2010 Master Plan Update does not include any improvements or development within Canyon de Lana, which is the only area on the subject property that was found during the 2009 survey to support areas that have the potential to be regulated under the Clean Water Act. The nearest construction project would be approximately 1,000 feet northwest of the Canyon de Lana area. Therefore, the potential for indirect impacts (including from dust, noise, or runoff) would be low. Components of the proposed 2010 Master Plan Update would not result in significant impacts on federally protected wetlands, as defined by Section 404 of the Clean Water Act.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors or impede the use of native wildlife nursery sites?	☐	☐	☒	☐

Less-than-Significant Impact. The eastern portion of the Pierce College campus is primarily developed with educational and recreational facilities and does not serve as a wildlife corridor. The western portion of the campus is currently sparsely developed and supports open agricultural fields, grasslands, and Canyon de Lana. This area would provide a local corridor for wildlife on the campus; however, the campus is surrounded by development and therefore does not provide a connected corridor for wildlife to undeveloped areas off site. Furthermore, the limited amount of proposed development within the western portion of the campus would not interfere substantially with the movement of wildlife within or through the campus. Native wildlife nursery sites do not occur within or immediately adjacent to the subject property; therefore, their use would not be impeded as a result of the proposed 2010 Master Plan Update. This would be considered a less-than-significant impact.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

Less-than-Significant Impact. The project site is located in the City of Los Angeles. The city's Protected Tree Ordinance (Los Angeles Municipal Code Section 46.00, Ordinance No. 153,478) regulates the relocation or removal of all native oak trees (excluding scrub oak), California black walnut trees, California sycamore trees, and California bay trees of at least 4 inches in diameter at breast height (DBH). These tree species are defined as "protected" by the City of Los Angeles. The ordinance prohibits, without a permit, the removal of any regulated protected tree, including "acts that inflict damage upon root systems or other parts of the tree...," and requires that all regulated protected trees that are removed be replaced on at least a 2:1 basis with trees that are of a protected variety.

Native trees, including oaks and sycamores, occur within the Canyon de Lana area and the Arboretum area, but not in the construction area. Construction of facilities proposed under the proposed 2010 Master Plan Update is not anticipated to result in impacts on trees protected by the city's Protected Tree Ordinance. Therefore, impacts related to local policies and ordinances protecting biological resources would be less than significant.

f) Conflict with the provisions of an adopted habitat conservation plan, natural conservation community plan, other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

No Impact. The project site is not located within the jurisdiction of any approved habitat conservation plan or natural community conservation plan. No impact is anticipated to occur.

5. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☒	☐	☐	☐

Potentially Significant (as in the 2002 FEIR but less severe). An intensive-level historical resources survey of Pierce College was conducted in 2002 during preparation of the 2002 FEIR. After a review of the survey and the proposed 2010 Master Plan Update, it was determined that adverse changes related to the significance of historical resources would not be expected to occur as a result of the update. The proposed 2010 Master Plan Update does not include any substantial level of remodeling or demolition of existing key campus buildings (i.e., the permanent academic buildings within the core of the campus, extending east from Mason Street to include the Horticulture Complex). Instead, it would retain and renovate existing classroom buildings, use landscape design and other non-intrusive means to strengthen pedestrian circulation through the campus core, and locate new buildings, student activity spaces, and parking facilities where no historical resources are located. New buildings that are nearing completion, as well as proposed future buildings, are designed in a Mediterranean style with light-colored stucco exterior walls and terra cotta tile roofs. This design approach is compatible with the College’s surviving Spanish Revival/Mission Revival buildings. For this reason, it is unlikely that the revised design would introduce new, incompatible atmospheric design elements into the historic setting of the historical resources.

One listed State Historical Landmark has been identified on the Pierce College campus. Known as Old Trapper’s Lodge, this historical resource (State Historical Landmark No. 939) is a folk art sculpture installation that was created by artist John Ehn (1897–1981). It is located approximately 50 feet west of the agricultural education building and just east of the equestrian center in a vest pocket-sized park. However, the proposed 2010 Master Plan Update would not affect Old Trapper’s Lodge. It neither calls for relocation, demolition, or disassembly and reinstallation of the features that make up Old Trapper’s Lodge nor adverse atmospheric changes to the setting.

In addition to the referenced historical resource, 12 other buildings are identified as potential historical resources in the 2002 FEIR. These consist of a small number of key campus buildings that survived from the first three years of the College’s existence (1947–1950): Exposition Hall (the Quonset hut in which the College’s first classes and student assemblies were held in 1947), the business office/student store building, and the 10 faculty office cottages (located between the student store and Stadium Way). The business office/student store building and office cottages were designed by Los Angeles architect Albert B. Gardner in the Spanish Revival/Mission Revival style. The 2002 EIR describes Exposition Hall as “not architecturally noteworthy,” but it may be historically significant because of its close association with key school-wide academic activities during the first year of the College’s existence. A finding in the 2002 FEIR states that in the event that the College chooses to demolish the Exposition Hall Quonset hut, a significant and unavoidable impact on a historic resource will result. The business office/student store building was largely demolished as part of the implementation of the 2002 Master Plan. The proposed 2010 Master Plan Update does not call for the demolition, alteration, or relocation of the faculty cottages; however, construction of the new 70,000-square-foot Green Technologies Building is proposed on the site of the Facilities Plant yard, which is where three of the campus’ known surviving Quonset hut buildings are located. Demolition of all three Quonset huts is being proposed to accommodate the revised project. During February 2010, with the assistance of the College, intensive research by ICF authenticated the Exposition Hall Quonset hut, its current location within the Facilities Plant yard, its original location (circa 1947–1952), as well as the building’s condition and degree of alteration. The building was then visited and photo-documented so that its current condition and setting could be visually assessed. Because the location of Exposition Hall within the Facilities Plant compound has been documented and all the structures at that location are proposed for demolition, the revised project would result in a significantly adverse impact on this resource if pertinent mitigation measures are not established and implemented to ensure its preservation.

The integrity of Exposition Hall as a historic resource and the ability of the building to convey its historical significance were assessed using the National Park Service criteria (found in National Register Bulletin 15). Given the aforementioned criteria, Exposition Hall was found to retain essential physical features that convey its historical identity (National Register Bulletin 15, Section VII). In addition, moving the building from its original location on campus to its current location was found not to have significantly impaired its ability to convey the historical associations for which it is significant (National Register Bulletin 15, Section VII, Criteria Consideration B – Moved Buildings).

The location of the Exposition Hall Quonset hut has been authenticated within the Facilities Plant compound. The existing buildings at that location are slated for demolition for the proposed Green Technologies Building. Although altered and moved, demolition of Exposition Hall would nonetheless be a significant adverse impact under CEQA. because the building retains a sufficient degree of physical design characteristics to convey its historic identity.

To address potential impacts on Exposition Hall, the mitigation measure presented below is proposed under the 2010 Master Plan Update.

HR-1 The Exposition Hall Quonset hut shall be moved to a new location on campus where its original association with the College's early agricultural/animal husbandry education curriculum can best be interpreted. Appropriate potential locations include the Agricultural Education complex, the Equestrian Center, or the agricultural fields south of El Rancho Drive in vicinity of the Feed Mill Quonset hut. Prior to relocating Exposition Hall, the College shall prepare a preservation plan to ensure the preservation and maintenance of the building. The preservation plan shall describe the history of the resource and its character-defining design/structural features, document its current condition and the feasibility of moving the building, and outline what actions must be taken, consistent with the Secretary of the Interior's Standards, to competently relocate and rehabilitate the building. It shall also include an interpretive plan component that will provide the step-by-step strategy the College will use for interpreting the history of the resource for the educational benefit of Pierce College students. Plan approval for the Green Technologies Building by the Office of the State Architect shall be made contingent upon the completion of the preservation plan and its adoption by the LACCD Board of Trustees.

Consistent with the findings in the 2002 FEIR, were the College to propose demolition of the Exposition Hall Quonset hut, or were it to propose substantial alteration inconsistent with the building's preservation plan, that action would result in a significant and unavoidable effect on a historical resource under CEQA.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. An intensive archaeological resources survey of Pierce College was conducted in 2002 during preparation of the 2002 FEIR. No archaeological resources were identified during that survey. However, areas of sensitivity were defined, one in the southwestern corner of the College at Canyon de Lana where a water source was found and the other, a nature trail area, in the southeastern corner of the College where prehistoric Native American artifacts have reportedly been found in the past (Horne 2002). Pierce College indicated that, according to its records, the water source in Canyon de Lana is not naturally occurring. The proposed 2009 Master Plan Update would reduce impacts in areas of sensitivity through the elimination of several projects that lie outside of the developed campus core. No projects are scheduled for Canyon de Lana; however, the horticulture/animal science facility is still planned for the southeastern corner of the College under the proposed 2009 Master Plan Update.

On July 29, 2009, an archaeological field inspection of Pierce College was conducted by ICF Jones & Stokes personnel. No cultural resources were observed within the project area during this effort. Conditions described in the 2002 survey report were essentially the same in 2009. For this reason, the same mitigation measures as specified in the 2002 EIR would reduce impacts associated with the proposed 2009 Master Plan Update to a less-than-significant level. These mitigation measures are listed below.

Issues	Potentially Significant	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact

2002 EIR Mitigation Measures

AR-1 If buried cultural resources are discovered during construction, all work must be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource. In areas of archaeological sensitivity, such as in the vicinity of the water sources in the Canyon de Lana and the Chalk Hills in the southeastern corner of the campus, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources shall monitor project-related ground-disturbing activities. Specifically, monitoring is recommended during construction of the horticulture/animal science and maintenance and operations facility.

AR-2 Provisions for the disposition of recovered prehistoric artifacts shall be made in consultation with culturally affiliated Native Americans.

AR-3 In the event of an accidental discovery of any human remains, the procedures specified in Health and Safety Code Section 7050.5, CEQA Section 15064.5 (e), and Public Resources Code Section 5097.98 shall be implemented.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. Pierce College is situated on the edge of the Chalk Hills in the western San Fernando Valley. Flat portions of the campus are underlain by Quaternary alluvial fan deposits and scattered areas of artificial fill. The top few feet of these alluvial fan deposits are unlikely to contain significant vertebrate fossils, but the underlying alluvium of late Pleistocene age is known to contain vertebrate fossils. The hills in the southern part of the campus are made up of Late Miocene age Modelo Formation, which is composed of marine sedimentary rock that is likely to contain significant fossil resources. This bedrock is exposed at or near the ground surface.

A records search for paleontological resources was conducted in 2002 for the 2002 FEIR. This search indicated that fossil resources had not been identified on the Pierce College campus, but resources had been found in the same geologic formations nearby. Conditions at the College campus have not changed; therefore, the same mitigation measures specified in the 2002 EIR would reduce impacts associated with the proposed 2010 Master Plan Update to a less-than-significant level. These mitigation measures are listed below.

2002 EIR Mitigation Measures

PR-1 The monitoring of excavation in areas identified as likely to contain paleontological resources shall be conducted by a qualified paleontological monitor. The monitor shall be equipped to salvage fossils and samples of sediments as they are unearthed to avoid construction delays. The monitor shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced if the potentially fossiliferous units, previously described, are not present or, if present, are determined by qualified paleontological personnel to have a low potential to contain fossil resources.

PR-2 Recovered specimens shall be prepared to a point of identification and permanent preservation, including the washing of sediments to recover small invertebrates and vertebrates.

PR-3 Specimens shall be curated into a professional, accredited museum repository with permanent retrievable storage.

PR-4 A report of findings, with an appended itemized inventory of specimens, shall be prepared. The report and inventory, when submitted to Pierce College, would signify completion of the program to mitigate impacts on paleontological resources.

Issues	**Potentially Significant**	**Less-than-Significant Impact with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**

d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Less-than-Significant. Impact. No human remains or cemeteries are known to be present on the Pierce College campus. An archaeological resources survey of Pierce College was conducted in 2002, and no human remains were found. If human remains are discovered during construction, the coroner and designated Native American representatives would be notified in accordance with Public Resources Code Section 5097.98, Health and Safety Code Section 7050.5, and CEQA Section 15064.5(e), as specified in AR-3, above. Therefore, a less-than-significant impact would occur.

6. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐

Less-than-Significant Impact. The 2002 FIER found that the project site is not located within an Alquist-Priolo Earthquake Fault Zone and that no known active faults cross through the project area or within the immediate vicinity of the project area.[6] With respect to the proposed 2010 Master Plan Update, conditions on the project site have not changed; the impacts considered in the 2002 FEIR regarding ground rupture within the project area remain the same. Therefore, primary ground rupture is not anticipated, and impacts would be less than significant.

ii) Strong seismic ground shaking?	☐	☐	☒	☐

Less-than-Significant Impact. The 2002 FEIR found that the project would be subject to ground shaking associated with earthquakes on faults of both the San Andreas and Transverse Ranges fault systems. The campus itself is located in the vicinity of many major active faults, including the Northridge thrust, Santa Susana, and San Fernando faults. These faults are considered potentially significant sources of ground shaking. However, these ground motion hazards are not unusual for the San Fernando Valley area. It was found in the 2002 EIR that this hazard would represent a less-than-significant impact provided that design and construction conforms to all applicable provisions of the State of California, Division of the State Architect, and the guidelines set forth in the 1998 California Building Code (CBC). The CBC is based on the 1997 Uniform Building Code (UBC) and sets forth regulations concerning proper earthquake design and engineering. Construction would also conform to the 1997 UBC earthquake design criteria for Seismic Zone 4.

Impacts related to seismic ground shaking would remain the same under the proposed 2010 Master Plan Update as those described in the 2002 FEIR. The proposed 2010 Master Plan Update would also include proper design and construction guidelines, as required by the previous EIR, to reduce impacts from ground shaking. Impacts would remain less than significant.

iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐

Less-than-Significant Impact. Liquefaction is a phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of strong earthquake-induced ground shaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of granular sediments and the magnitude and frequency of earthquakes in the surrounding region. Saturated, unconsolidated silt, sand, and silty sand within

---

[6] California Division of Mines and Geology. 2001. *Seismic Hazard Zone Report for the Canoga 7.5-Minute Quadrangle, Los Angeles County, California*. Seismic Hazard Zone Report 007.

50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena may include lateral spreading, ground oscillation, loss of bearing strength, and subsidence. Lateral spreading comprises the movement of surficial blocks of sediment due to liquefaction and commonly occurs on gentle slopes of 0.3 to 3 degrees.

The 2002 FEIR found that low-lying portions of the project area are within a California Division of Mines and Geology (CDMG) Seismic Hazard Mapping Program liquefaction hazard zone.[7] Additionally, is was found that, although no historical liquefaction had been reported in the Canoga quadrangle, there was evidence of lateral spreading in the Northridge and Reseda areas after the Northridge earthquake. Furthermore, localized areas of shallow groundwater and unconsolidated sediments may exist within the project site and could lead to liquefaction phenomena. However, it was concluded that much of the campus is underlain by bedrock, and the remainder of the campus is underlain by fine-grained alluvial/colluvial material that would not be susceptible to liquefaction phenomena. Consequently, liquefaction-related phenomena would not pose a significant problem.

With respect to the proposed 2010 Master Plan Update, impacts from liquefaction would remain the same as those identified under the 2002 FEIR. As such, impacts would remain less than significant.

iv) Landslides?	☐	☐	☐	☒

No Impact. The 2002 FEIR found that impacts from landslides would not occur. The proposed 2010 Master Plan Update site is not located in an area susceptible to landslide hazards. Because the location proposed for the project would not change from that described in the 2002 EIR, it is concluded that no new impacts from landslides would occur under the proposed 2010 Master Plan Update. No impact would occur.

b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒

No Impact. The 2002 FEIR found that impacts from soil erosion or the loss of topsoil would not occur because the area is fully developed. Because the proposed 2010 Master Plan Update would occupy the same project site, it is concluded that no new impacts would occur from soil erosion or the loss of topsoil. Additionally, the proposed 2010 Master Plan Update would reduce the amount of building square footage proposed. As such, impacts would be less than those assumed under the 2002 Master Plan. There would be no new impacts.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The 2002 FEIR identified corrosion, compaction, and expansion as the soil characteristics that could have significant impacts on the design of new buildings and facilities. Corrosive soils could damage buried utilities and foundations. Loose alluvial soils and undocumented fill may be subject to compaction or settlement due to changes in foundation loads or in soil moisture content, which could result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater. Potential impacts are related to unacceptable settlement or heave for structures, concrete slabs supported on grade, and pavement supported on the aforementioned types of soil. The 2002 FEIR provided that all earthwork and grading would meet the code requirements of the State of California and follow the recommendations of the geotechnical report created for the project. Further mitigation measures were provided to reduce impacts to less-than-significant levels. With respect to the proposed 2010 Master Plan Update, the impact from unsuitable soils would pose a less-than-significant impact provided that the same appropriate mitigation measures are implemented during design and construction. Impacts would remain less than significant with mitigation incorporated.

---

[7] California Division of Mines and Geology. 1998. *Seismic Hazard Zone Map, Canoga Quadrangle*.

2002 EIR Mitigation Measures

The six mitigation measures listed below from the 2002 FEIR would reduce impacts anticipated under the proposed 2010 Master Plan Update to a less-than-significant level.

Construction Mitigation

To minimize hazards to construction workers from unstable temporary slopes, the following measures shall be implemented by the construction contractor(s):

GE-1 All earthwork and grading shall meet the requirements of State of California codes and shall be performed in accordance with the recommendations in the geotechnical investigation conducted for each proposed project at the Pierce College campus, and

GE-2 All excavation and shoring systems shall meet the minimum requirements of the Occupational Safety and Health Administration (OSHA).

Operational Mitigation

Because of the potential for strong seismic ground shaking, unsuitable soils, and soil liquefaction, the following mitigation measures shall be implemented:

2002 EIR Mitigation Measures

GS-1 Geotechnical investigations shall be performed by qualified licensed professionals before final design of any structures, and recommendations provided in these reports should be implemented, as appropriate;

GS-2 **Ground Shaking.** Design and construction of structures for the revised project shall conform to all applicable provisions of the State of California, Division of the State Architect, and the guidelines set forth in the 1998 California Building Code. The CBC is based on the 1997 Uniform Building Code and sets forth regulations concerning proper earthquake design and engineering. In addition, design and construction shall conform to the 1997 UBC earthquake design criteria for Seismic Zone 4.

GS-3 **Liquefaction.** If liquefiable soils are identified by geotechnical investigations for project structures, then mitigation should be implemented. Appropriate mitigation, which could include the use of piles, deep foundations, dynamic densification, ground improvement, grouting, or removal of suspect soils, is dependent on site-specific conditions, which should be identified by the geotechnical investigation.

GS-4 **Unsuitable Soil Conditions.** The geotechnical investigation of proposed facilities should fully characterize the presence and extent of corrosive, expansive, or loose compactable soil. After consideration of the collected data, appropriate mitigation can be designed. Mitigation options could include the following: removal of unsuitable subgrade soils and replacement with engineered fill, installation of cathodic protection systems to protect buried metal utilities, use of coated or nonmetallic (i.e., concrete or PVC) pipes that are not susceptible to corrosion, construction of foundations using sulfate-resistant concrete, support of structures on deep-pile foundation systems, densification of compactable subgrade soils with in situ techniques, and placement of moisture barriers above and around expansive subgrade soils to help prevent variations in soil moisture content.

Issues	**Potentially Significant**	**Less-than-Significant Impact with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The 2002 FEIR found that the expansion potential of soil within the project area could vary from very low for soils in sandy materials to very high for soils on lean clay units. The alluvium in several areas on campus is moderately expansive. Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variations in soil moisture content. Potential impacts are related to unacceptable settlement or heave for structures, concrete slabs supported on grade, and pavement supported on the aforementioned types of soil. The 2002 EIR found that the impact from unsuitable soils would be less than significant provided that appropriate mitigation measures are implemented during design and construction of 2002 proposed projects. This finding remains the same for the proposed 2010 Master Plan Update.

Mitigation measures that will be carried forward as part of the proposed 2010 Master Plan Update are listed below.

2002 EIR Mitigation Measures

Construction Mitigation

To minimize hazards to construction workers from unstable temporary slopes, the following measures shall be implemented by the construction contractor(s):

GE-1 All earthwork and grading shall meet the requirements of State of California codes and shall be performed in accordance with the recommendations in the geotechnical investigation conducted for each proposed project at the Pierce College campus, and

GE-2 All excavation and shoring systems shall meet the minimum requirements of OSHA.

Operational Mitigation

Because of the potential for strong seismic ground shaking, unsuitable soils, and soil liquefaction, the following mitigation measures shall be implemented:

2002 EIR Mitigation Measures

GS-1 Geotechnical investigations shall be performed by qualified licensed professionals before final design of any structures, and recommendations provided in these reports should be implemented, as appropriate;

GS-2 **Ground Shaking.** Design and construction of structures for the revised project shall conform to all applicable provisions of the State of California, Division of the State Architect, and the guidelines set forth in the 1998 California Building Code. The CBC is based on the 1997 Uniform Building Code and sets forth regulations concerning proper earthquake design and engineering. In addition, design and construction shall conform to the 1997 UBC earthquake design criteria for Seismic Zone 4.

GS-3 **Liquefaction.** If liquefiable soils are identified by geotechnical investigations for project structures, then mitigation should be implemented. Appropriate mitigation, which could include the use of piles, deep foundations, dynamic densification, ground improvement, grouting, or removal of suspect soils, is dependent on site-specific conditions, which should be identified by the geotechnical investigation.

GS-4 **Unsuitable Soil Conditions.** The geotechnical investigation of proposed facilities should fully characterize the presence and extent of corrosive, expansive, or loose compactable soil. After consideration of the collected data, appropriate mitigation can be designed. Mitigation options could include the following: removal of unsuitable subgrade soils and replacement with engineered fill, installation of cathodic protection systems to protect buried metal utilities, use of coated or nonmetallic (i.e., concrete or PVC) pipes that are not susceptible to corrosion, construction of foundations using sulfate-resistant concrete, support of structures on deep-pile foundation systems, densification of compactable subgrade soils with in situ techniques, and placement of moisture barriers above and around expansive subgrade soils to help prevent variations in soil moisture content.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

No Impact. The 2002 FEIR did not find any impacts associated with the incapability of soils to adequately support the use of septic tanks or alternative wastewater disposal systems. The project site would not change under the proposed 2010 Master Plan Update. Therefore, impacts would be similar to those identified under the 2002 FEIR. No impact is anticipated to occur.

7. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Less-than-Significant Impact. At present, a quantitative CEQA threshold does not exist that would be applicable to the revised project. The Governor's Office of Planning and Research (OPR) Technical Advisory on CEQA and Climate Change suggests that in the absence of regulatory guidance or standards, lead agencies such as LACCD must undertake a project-by-project analysis that is consistent with available guidance and current CEQA practice to ascertain project impacts under CEQA.

It is unknown by what amount the revised project would need to reduce project-related greenhouse gas (GHG) emissions to provide its share of GHG reduction and meet the Assembly Bill 32 (AB 32) statewide GHG reduction target of 1990-level GHG emissions by 2020. As such, LACCD has adopted a qualitative threshold of "a level of project-related GHG emissions that is less than 'Business as Usual' (BAU) as defined by OPR in the above-referenced technical advisory."

Project-related GHG emissions were estimated for carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) for 2020. GHG emissions were not specifically analyzed in 2002 as analysis of the emissions was not required at the time. The results, provided below in Table 11, are presented in units of carbon dioxide equivalent (CO_2e) and take into account the GHG emissions reductions that would occur as a result of the several LEED energy- and water-efficiency design features that would be incorporated into the revised project.

Table 11. Estimate of Revised Project-Related Greenhouse Gas Emissions in Metric Tons per Year

Emission Source	2020 BAU Emissions	GHG Emissions Reductions Related to LEED Measures	2020 Emissions with LEED Efficiency Measures	Percent Reduction from BAU[a]
Mobile Source	40,657	—	40,657	—
Natural Gas Combustion	3,146	(315)	2,831	10.0%
Electricity Demand-Related	7,311	(731)	6,580	10.0%
Water Consumption-Related	53	(11)	42	20.0%
Total Revised Project	**51,167**	**(880)**	**50,110**	**2.1%**

[a] LEED Silver Certification will require minimum energy and water use efficiencies of 10% and 20%, respectively, when compared to "business as usual" for new construction. Actual efficiency ratings could exceed these minimum requirements.

Source: ICF International 2010. Calculations are provided in the air quality appendix.

As shown above in Table 11, GHG emissions related to energy use and water consumption would be reduced by 10% and 20%, respectively, from BAU emission levels with adoption of LEED design measures. Overall revised project-related GHG emissions, which include mobile-source emissions, would be reduced by 880 metric tons per year, or 2.1% below BAU. As such, revised project GHG emissions would be less than significant.

Mitigation Measures

Construction-period Measures

AQ-3 Require construction equipment to use the best available technology to reduce emissions.

AQ-4 Minimize, reuse, and recycle construction-related waste.

AQ-5 Minimize grading, earthmoving, and other energy-intensive construction practices.

AQ-6 Landscape to preserve natural vegetation and maintain watershed integrity.

AQ-7 Use recycled, low-carbon, and otherwise climate-friendly building materials, such as salvaged and recycled-content materials, for buildings, hard surfaces, and non-plant landscaping.

Operational-period Measures

AQ-8 Increase exterior wall and attic/roof insulation beyond Title 24 requirements.

AQ-9 Use light-colored roof materials to reflect heat.

AQ-10 Use double-paned windows.

AQ-11 Use energy-efficient low-sodium parking lot lights.

AQ-12 Use energy-efficient and automated controls for lighting.

AQ-13 Use energy-efficient and automated controls for air conditioners.

AQ-14 Use energy-efficient appliances.

AQ-15 Use solar or low-emission water heaters.

AQ-16 For vehicles that will serve the proposed 2010 Master Plan Update on a frequent basis (e.g., forklifts), require use of alternative fuels and measures to maximize fleet efficiency.

Residual Impacts

Given the relatively small amount of GHG emissions that would be emitted from this revised project during short-term construction and long-term operations, with implementation of the above-prescribed mitigation measures, the proposed 2010 Master Plan Update's GHG emissions, without considering other cumulative global emissions, would not be large enough to cause substantial climate change directly. Thus, revised project emissions are considered less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Less-than-Significant Impact. AB 32 identified a target level of GHG emissions in California for 2020 of 427 million metric tons (MMT) of CO_2e, which is approximately 28.5% less than the 2020 BAU emissions estimate of 596 MMT CO_2e (California Air Resources Board [CARB]). To achieve this GHG reduction, there will have to be widespread reductions in GHG emissions across California. Some of these reductions will come from changes in vehicle emission and mileage standards, the use of alternative sources of electricity, and higher energy efficiency standards for existing facilities, among other measures. The remainder of the necessary GHG reductions will need to come from lower carbon intensities, compared with BAU conditions, at new facilities. Therefore, this analysis uses a threshold of significance that is in conformance with the state's goals.

On December 12, 2008, CARB adopted the AB 32 Scoping Plan, which details specific GHG emission-reduction measures that target specific GHG emissions sources. Revised project-related GHG emissions would be reduced as a result of several AB 32 Scoping Plan measures. The Scoping Plan considers a range of actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms (e.g., cap-and-trade system), among other actions. Some pertinent examples include the following:

- Mobile-source GHG emission-reduction measures:
  - Pavley emissions standards (19.8% reduction),
  - Low-carbon fuel standard (7.2% reduction),
  - Vehicle efficiency measures (2.8% reduction); and
- Energy-production-related GHG emission-reduction measures:
  - Natural gas transmission and distribution efficiency measures (7.4% reduction),
  - Natural gas extraction efficiency measures (1.6% reduction),
  - Renewables (electricity) portfolio standard (33.0% reduction).

These reductions in mobile-source and energy-production GHG emissions would be in addition to those that would be utilized for the revised project discussed above, which are related to LEED design measures that would reduce project-specific GHG emissions related to energy consumption and water use by 10% and 20%, respectively. Overall, the revised project would be consistent with the AB 32 goal of reducing statewide GHG emissions to 1990 levels by 2020. Project-related GHG emissions would be less than significant.

A project's consistency with implementing programs and regulations to achieve the statewide GHG emissions-reduction goals established under Executive Order S-3-05 and AB 32 cannot yet be evaluated because the programs and regulations are still under development. Nonetheless, the Climate Action Team (CAT), established by Executive Order S-3-05, has recommended strategies for implementation at the statewide level to meet the goals of the executive order. In the absence of an adopted plan or program, the CAT's strategies serve as current statewide approaches to reducing the state's GHG emissions. Because no other GHG emissions plan or program has been adopted that would apply to the revised project, consistency with the CAT's strategies is assessed to determine if the revised project's contribution to cumulative GHG emissions is considerable.

In its report to the governor and the legislature, the CAT recommended strategies that could be implemented by various state boards, departments, commissions, and other agencies to reduce GHG emissions. The CAT strategies relevant to the revised project, as well as the implementing agencies and the revised project design features or mitigation measures which would be consistent with the strategies, are listed in Table 12. Given the analysis in Table 12, the revised project would minimize its contribution to GHG emissions and global climate because of its consistency with these strategies.

Table 12 Revised Project Consistency with Climate Action Team Strategies

CAT Strategy	Implementing Agency	Revised Project Consistency
Vehicle Climate Change Standards	Air Resources Board	The revised project would be consistent with this strategy to the extent that new passenger vehicles and light trucks are purchased by the project's users, starting with the 2009 model year.
Hydrofluorocarbon Reduction Strategies	Air Resources Board	Revised project air-conditioning systems would comply with the latest standards for new systems. Consumer products containing hydrofluorocarbons would comply with California Air Resources Board regulations, when adopted.
Building Energy Efficiency Standards in Place	Energy Commission	The revised project will meet or exceed California energy standards or energy-efficient lighting requirements.
Appliance Energy Efficiency Standards in Place	Energy Commission	The revised project will meet or exceed California energy standards or energy-efficient lighting requirements.
Water Use Efficiency	Department of Water Resources	The revised project will meet or exceed California water use and conservation standards.
Source: California Climate Action Team. Final 2006 Climate Action Team Report to the Governor and Legislature, March 2006; compiled by ICF International, January 2010.		

With implementation of the design features, the revised project would be consistent with applicable plans, policies, and regulations. Impacts from project construction and operation related to GHG emissions plans, policies, and regulations would be less than significant. No mitigation is required.

8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The 2002 FEIR determined that the impact from use and storage of hazardous materials at Pierce College would be less than significant if anticipated areas of construction and ground disturbance would not overlap with hazardous material storage and use areas and if specified mitigation measures pertaining to remediation of asbestos-containing material and lead-based paint would be completed before any new construction or demolition of existing buildings. According to records obtained by hazardous materials specialty firm Winzler & Kelley Consulting Engineers in August 2009, hazardous materials investigations have been conducted at the College. As a standard practice, the College and its hazardous materials subconsultant prepare hazardous materials studies for new building projects prior to construction, and the hazardous materials reports are made part of the bid package and provided to the general contractor in advance of construction. Remediation is carried out as recommended by the hazardous materials consultant.

According to a report prepared in October 2005 by Leymaster Environmental Consulting, two underground storage tanks (USTs) and associated piping and fuel dispensers were removed from the College in March 2005. Both USTs were 10,000 gallons in volume. Seven soil samples were collected at the site on March 29, 2005. One of the samples from beneath the fuel dispenser contained 250 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons (TPH) as diesel. Two additional soil samples were collected on September 27, 2005. These samples were collected from beneath the fuel dispenser at depths of 5 and 10 feet. (The previous March 25, 2005, sample was collected beneath the fuel dispenser at approximately 2 feet.) TPH as diesel was not detected from the September 27, 2005, samples. The report concluded that, based on the lack of detectable TPH in the deeper samples, the 250 mg/kg of TPH in the March 2005 sample did not constitute a threat to groundwater, and no further investigation was recommended at the site.

Only one other operational UST is known to exist at the College. One UST is operational and used by the sheriff's station. Therefore, it is unlikely that the proposed construction would encounter any additional USTs. If, during construction of the 2010 Master Plan Update projects, USTs are encountered, 2002 EIR mitigation measures HM-1 and HM-2 will be implemented. Phase I studies conducted for the individual building projects included soil testing, and, to date, no herbicide or pesticide contamination has been reported. Nonetheless, soil testing for future 2010 Master Plan Update projects shall be undertaken in accordance with 2002 mitigation measure HM-3.

As a standard practice, the College conducts asbestos and lead-based paint surveys for its demolition projects. Asbestos and lead-based paint are handled and disposed of according to state and county standards. The College will continue to implement mitigation measure HM-4 for any future demolition, including that proposed in the 2010 Master Plan Update. This level of impact would remain the same under the proposed 2010 Master Plan Update. Therefore, impacts would remain less than significant with mitigation incorporated.

The mitigation measures listed below will be carried forward from the 2002 EIR as part the proposed 2010 Master Plan Update. The measures must be completed prior to construction of each revised project to allow development of appropriate worker protection and waste management plans that describe the proper handling, treatment, and storage of hazardous waste from the revised projects.

2002 EIR Mitigation Measures

HM-1 **Moderate Potential Sites.** A thorough review of available environmental records, a thorough historical land use assessment, and a site-specific inspection shall be completed. A record review shall identify data that confirm remediation of on-site and off-site contamination of former leaking underground storage tank (LUST) sites or agency-certified closure of the site. Tanks that are not reported shall undergo further record review to determine the status, condition, contents, and number of tanks. At sites with inactive or improperly abandoned underground storage tank (USTs), the tanks may be old and in poor condition and, therefore, shall be thoroughly evaluated for condition and possible leaks. A detailed site inspection of hazardous material storage areas in or near proposed project areas shall be performed to determine if leaks or spills may have caused potential environmental contamination. Results of the record review or visual inspection that indicate contamination may be present in a proposed project area shall cause sites with medium potential to be treated as sites with high potential.

Relocation of the plant facilities buildings and appurtenances will require removal and relocation of their two USTs. Removal of the active USTs in the plant facilities vehicle maintenance area shall be monitored by a qualified professional for evidence of leaks. If any evidence of leakage is noted, a site assessment shall be performed and appropriate remediation completed.

HM-2 **High Potential Site.** Current agency records of the site with high potential (P. L. Porter Company) shall be reviewed to assess and verify the extent of potential contamination of surface and underlying soil as well as shallow groundwater. If the review indicates contamination may have spread to the revised project area on campus, an investigation shall be designed and performed to verify the presence and extent of contamination at the site. A qualified and approved environmental consultant shall perform the review and investigation. Results shall be reviewed and approved by the Los Angeles County Fire Department, Health Hazardous Materials Division, or California Department of Toxic Substances Control prior to construction. The investigation shall include collecting samples for laboratory analysis and quantification of contaminant levels within the proposed excavation and surface disturbance areas. Subsurface investigation for sites with high potential shall determine appropriate worker protection and hazardous material handling and disposal procedures appropriate for the subject site.

Construction activities that require dewatering may require treatment of contaminated groundwater prior to discharge. Appropriate regulatory agencies, such as the California Environmental Protection Agency, the Regional Water Quality Control Board (RWQCB), and the Los Angeles County Fire Department, Health Hazardous Materials Division, shall be notified in advance of construction, and discharge permits identifying discharge points, quantities, and groundwater treatment (if necessary) shall be identified and obtained.

Areas with contaminated soil determined to be hazardous waste shall be excavated by personnel who have been trained under the OSHA-recommended 40-hour safety program (29 Code of Federal Regulations [CFR] Section 1910.120), with an approved plan for excavation, control of contaminant releases to the air, and off-site transport or on-site treatment. Health and safety plans prepared by a qualified and approved industrial hygienist shall be developed to protect the public and all workers in the construction area. Health and safety plans shall be reviewed and approved by the appropriate agencies, such as the Los Angeles County Fire Department, Health Hazardous Materials Division, or California Department of Toxic Substances Control.

HM-3 **Residual Pesticides/Herbicides.** Soil samples shall be collected in construction areas where the land has historically or is currently being farmed to verify and delineate the possibility of and extent of pesticide and/or herbicide contamination. Excavated materials containing elevated levels of pesticide or herbicide require and shall undergo special handling and disposal procedures. Standard dust suppression procedures shall be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Regulatory agencies for the State of California and County of Los Angeles shall be contacted to plan handling, treatment, and/or disposal options.

HM-4 **Asbestos-Containing Material and Lead-Based Paint.** Records of previously completed asbestos-containing material and lead-based paint remediation at the College shall be reviewed. A survey of buildings, structures, and pavement areas to be removed or demolished to assess the presence and extent of asbestos-containing materials and lead-based paint shall be conducted. A qualified and approved environmental specialist shall conduct this study prior to final project design. The investigation shall include collecting samples for laboratory analysis and quantification of contaminant levels in the buildings and structures proposed for demolition and in pavement disturbance areas. According to these findings, appropriate measures for handling, removal, and disposal of the materials can be developed. Regulatory agencies for the State of California and Los Angeles County shall be contacted to plan handling, treatment, and/or disposal options.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The 2002 FEIR determined that the impact from use and storage of hazardous materials at Pierce College would be less than significant if anticipated areas of construction and ground disturbance would not overlap with hazardous material storage and use areas and if specified mitigation measures pertaining to remediation of asbestos-containing material and lead-based paint would be completed before any new construction or demolition of existing buildings. This level of impact would remain the same under the revised project. The mitigation measures (HM-1–HM-4) described above under impact response 7(a) would be carried forward. Therefore, impacts would remain less than significant with mitigation incorporated.

Issues	**Potentially Significant**	**Less-than-Significant Impact with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. Various types of hazardous materials and hazardous waste are stored on campus. These include paints, solvents, and small quantities of biological waste. Additionally, a number of different types of chemicals used for instructional purposes are stored on campus. The chemicals are safely stored and/or locked away. No new buildings are proposed that would result in the storage, transport, or use of hazardous wastes in substantial amounts compared to existing conditions.

The 2002 FEIR identified, within and surrounding the project, two hazardous sites with moderate potential and one site with high potential to affect the proposed 2010 Master Plan Update. The plant facilities building, located within the footprint of Pierce College, was regarded as a site with moderate potential to emit hazardous materials. Under the 2002 EIR, the plant facilities building was to have been demolished and, therefore, would have created a significant impact. However, under the proposed 2010 Master Plan Update, the plant facilities building would no longer be demolished and would, therefore, no longer create a significant impact. Mitigation measures were provided in the 2002 EIR to prevent further contamination from the two remaining sites; such mitigation would continue to be required as part of the proposed 2010 Master Plan Update. These mitigation measures (HM-1–HM-4) are described above under impact response 7(a). As such, no new impacts would be created. Impacts would remain the same if not less because of the removal of demolition of the plant facilities building from the list of master plan projects. Impacts would be less than significant with mitigation.

d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. In support of the analysis conducted for the 2002 FEIR, field reconnaissance of the project site and surrounding project area was conducted to verify current conditions. The field reconnaissance component of the study relied on a visual survey of surface conditions by an environmental geologist to identify sites where storage containers (chemicals, paint, oil) were present or evidence of stained soil or corroded pavement was visible, suggesting chemical spillage on the ground. This survey concentrated on the project site and sites identified in the 2002 Master Plan EDR database report. A site reconnaissance of the Pierce College campus was conducted in the presence of Pierce College personnel who were familiar with campus hazardous material use, storage, and disposal. Reconnaissance of the area surrounding the campus was limited to viewing properties from adjacent public streets and alleys; no attempt was made to gain access to any properties except the open parking lot areas. The 2002 Master Plan would not have placed housing or structures on top of any parcel designated by the EDR report as lying within an area susceptible to moderate or high hazardous impacts. However, there were three sites located with a 0.25 mile of the project site that were included as part of the EDR report. Mitigation measures were prescribed as part of the 2002 Master Plan to reduce any impacts on the project because of the proximity of these hazardous sites. These mitigation measures (HM-1–HM-4) are described above under impact response 7(a). An update to the previous EDR report was produced. No new hazardous sites were found to occur on the site (EDR 2009). Therefore, impacts would remain as previously estimated, and mitigation measures HM-1–HM-4 would be carried forward as part of the proposed 2010 Master Plan Update. Therefore, impacts would remain less than significant with mitigation.

Issues	**Potentially Significant**	**Less-than-Significant Impact with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

No Impact. The 2002 EIR found no impact related to safety hazards from proximity to airports. Because the location of the project would not change and no new airports have been developed in the immediate vicinity, impacts would remain the same as those previously analyzed. No impact is anticipated to occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

No Impact. The 2002 EIR found no impact related to safety hazards from proximity to airports. Because the project location discussed in the proposed 2010 Master Plan Update has not changed and no new airstrips have been developed within 2 miles, no impact would occur as a result of the proposed 2010 Master Plan Update..

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The 2002 EIR addressed issues related to potential impacts on emergency services in the Public Services section of the EIR. Specifically, it discussed the ability of the police and fire departments to arrive promptly at the scene of an emergency. The new events center would have increased the need for additional emergency services by increasing the number of visitors to the campus. The previous EIR included emergency response mitigation measures. These mitigation measures would be carried over as part of the proposed 2010 Master Plan Update. The master plan is designed to improve accessibility to the campus for the emergency provider through roadway and street improvements as well as updated infrastructure. It is also designed to increase the success of any applicable emergency plan. Impacts would remain less than significant with mitigation.

The mitigation measure related to emergency response that would be carried over to the proposed 2010 Master Plan Update is as follows:

2002 EIR Mitigation Measures

PPS-2 Pierce College shall design and implement a Special Event Security Plan, in coordination with the Los Angeles County Sheriff's Department and the Los Angeles Police Department, for the new events center. Issues addressed may include security needs, emergency evacuation procedures, and money handling issues.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The Public Services section of the 2002 EIR addressed potential impacts from fires, including impacts related to the ability of the fire department to access the scene of a fire. According to the Zoning Information and Map Access System for the City of Los Angeles (ZIMAS), the proposed 2010 Master Plan Update would be located in an area that is designated as a Very High Fire Hazard Severity Zone (City of Los Angeles 2004). The previous EIR included measures to decrease the potential for fires to occur on campus as well as fire code and regulation compliance measures. These mitigation measures would be carried over as part of the proposed 2010 Master Plan Update. Furthermore, in contrast to the previous master plan, the proposed 2010 Master Plan Update would not include on-campus housing and, therefore, would not place housing within an area of high fire hazard. Impacts would be less than previously anticipated in the 2002 EIR. The mitigation measures are as follows:

FPS-1 The College shall consult with the city engineer and the fire department regarding appropriate standards (e.g., lane widths, grades, cut corners, etc.) for private streets and entry gates to ensure adequate access for fire department vehicles and equipment.

FPS-2 All landscaping shall use fire-resistant plants and materials.

FPS-3 Sprinkler systems shall be required throughout any structure to be built, in accordance with state codes and standards established by the State of California, Division of the State Architect, and State Fire Marshal.

FPS-4 The revised project shall comply with all applicable codes and regulations administered by the State of California, Division of the State Architect, and State Fire Marshal.

Impacts would remain less than significant with mitigation.

9. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. Similar to the 2002 FEIR, the proposed 2010 Master Plan Update would include projects that would create new sources of runoff and water discharge. However, the projects would comply with Section 404 of the federal Clean Water Act by implementing a Standard Urban Stormwater Mitigation Plan (SUSMP) to decrease impacts from runoff.

Furthermore, the 2002 Master Plan included improvements such as detention basins and water quality ponds to reduce polluted runoff and meet water quality standards established for the region; these elements would be carried forward as part the proposed 2010 Master Plan Update. Under the 2010 Master Plan Update, all new buildings will be certified under the LEED program, in accordance with the policy adopted by the Board of Trustees in May 2002. In addition, the 2010 Master Plan Update will include a series of campus-wide strategies to improve water conservation, as described below. Although a water reclamation facility was proposed in the 2002 Master Plan, it was dependent upon the expansion of City of Los Angeles graywater distribution lines to the campus, and thus, speculative. Therefore, the 2002 EIR analysis did not include the water reclamation facility in its wastewater calculations and analyzed impacts assuming no reclamation facility would be constructed. Currently, the City's plans to extend graywater distribution lines in the valley are on hold. Wastewater, as a result of the 2010 Master Plan update, would be treated similar to how wastewater is currently treated at the campus. However, some of the conservation methods incorporated into the design and campus planning would result in the reduction of water use and conservation of water over existing levels.

Maximizing Water Conservation

New buildings and landscape elements will incorporate appropriate water conservation strategies that focus on reducing the use of potable water. These strategies will include the use of efficient irrigation, low-maintenance and native plant species, low-flow plumbing fixtures, and automatic sensors. Reclaimed water will be used for irrigation should it become available at the campus.

Managing Stormwater

Stormwater management strategies would incorporate natural landscape elements to address issues related to water quantity and quality. Swales, bio-retention basins, green roofs, and permeable or porous paving materials will be used to manage stormwater by reducing runoff and the amount of contaminants.

No new impacts are anticipated, and impacts would remain as previously analyzed, less than significant with mitigation.

The following mitigation measures will be carried forward as part of the proposed 2010 Master Plan Update:

2002 EIR Mitigation Measures

SW-1 A Standard Urban Stormwater Mitigation Plan shall be developed in accordance with Los Angeles County stormwater permit requirements, and

SW-2 Water quality ponds shall be implemented, where feasible, as a best management practice (BMP) to capture and treat polluted runoff from parking lots.

SW-3 Vegetated swales and retention areas along pedestrian circulation routes, in parking lots, and around buildings will be constructed to capture stormwater runoff and allow groundwater recharge.

SW-4 A campus-wide approach to stormwater catchment and appropriate plant ecology will be implemented to reduce infrastructure loads during rain events, increase groundwater availability, and reduce annual irrigation needs.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒

No Impact. The 2002 FEIR found that building renovations, new building construction, and development of the agricultural fields would have no adverse effects on groundwater resources. The campus relies on water delivered by the Los Angeles Department of Water and Power (LADWP) through existing pipelines, which were to be improved to meet the needs of the 2002 Master Plan. These improvements would be carried forward as part of the proposed 2010 Master Plan Update. The College does not have any active wells on campus and therefore does not pump groundwater for its water needs. Because impacts on groundwater resources would not change under the proposed 2010 Master Plan Update, it is expected that impacts would remain the same as or less than previously analyzed. There would be no impacts on groundwater.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. Under the proposed 2010 Master Plan Update, the existing drainage pattern would not be altered significantly. The 2002 EIR found that the eastern portion of the campus has an existing storm drain network with a well-planned hierarchy of storm drain diameters to accommodate increased flow as the network collects additional runoff flowing toward the Los Angeles River.[8] Campus facilities personnel state that the existing system performs adequately in this portion of the campus. Under the proposed 2010 Master Plan Update, the new and renovated facilities proposed for this portion of the campus would increase the amount of runoff flowing into the existing system. As discussed in the 2002 EIR, improvements would be made through the addition of new storm drains that would increase runoff collection capacity and maintain an adequate level of service for this portion of campus. However, the cancellation of the science partnerships would reduce the previously estimated runoff and drainage impacts. Although development of the equestrian education center, the child development center building, and the agricultural partnerships would remain under the proposed 2010 Master Plan Update, impacts would remain less than significant with mitigation.

---

[8] Psomas. 2002. *Draft Preliminary Utility Evaluation for Pierce College Los Angeles Community College District*. February 11.

The mitigation measures previously described in the 2002 EIR would be carried forward for the proposed 2010 Master Plan Update. The measures are as follows:

2002 EIR Mitigation Measures

FD-1 Detention basins or other appropriate drainage facilities shall be installed, and the storm drain system shall be improved to (a) meet anticipated increases in runoff from new facilities and impervious surfaces and (b) bring the western portion of campus up to an adequate level of service and reduce flooding; and

FD-2 Earth berms, channels, or vegetated swales shall be provided to capture runoff from agricultural fields to reduce topsoil runoff.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. See impact discussion under response 8(a). As stated above, the proposed 2010 Master Plan Update would include projects that would create new sources of runoff and water discharge similar to projects proposed under the 2002 Master Plan. However, master plan parking lot development and pedestrian improvements that would be carried forward would comply with Section 404 of the federal Clean Water Act by implementing a SUSMP to decrease impacts from runoff. Furthermore, the 2002 Master Plan included improvements such as detention basins and water quality ponds to reduce polluted runoff and meet water quality standards established for the region; these elements would be carried forward as part the proposed 2010 Master Plan Update. As such, no new impacts are anticipated, and impacts would remain as previously analyzed, less than significant with mitigation.

The following mitigation measures will be carried forward as part of the proposed 2010 Master Plan Update:

2002 EIR Mitigation Measures

SW-1 A Standard Urban Stormwater Mitigation Plan shall be developed in accordance with Los Angeles County stormwater permit requirements, and

SW-2 Water quality ponds shall be implemented, where feasible, as a BMP to capture and treat polluted runoff from parking lots.

These mitigation measures would be adequate in reducing adverse effects on surface waters to levels below significant. No streams or rivers would be altered under the 2002 Master Plan or 2010 Master Plan Update.

e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. See impact discussion under response 8(a). As stated above, the proposed 2010 Master Plan Update would include projects that would create new sources of runoff and water discharge similar to projects proposed under the 2002 Master Plan. However, with respect to parking lot development and pedestrian improvements that would be carried forward as part of the proposed 2010 Master Plan Update, the project would comply with Section 404 of the federal Clean Water Act by implementing a SUSMP to decrease impacts from runoff. Furthermore, the 2002 Master Plan included improvements such as detention basins and water quality ponds to reduce polluted runoff and meet water quality standards established for the region; these elements would be carried forward as part the proposed 2010 Master

Plan Update. As such, no new impacts are anticipated, and impacts would remain as previously analyzed, less than significant with mitigation.

The following mitigation measures will be carried forward as part of the proposed 2010 Master Plan Update:

2002 EIR Mitigation Measures

SW-1 A Standard Urban Stormwater Mitigation Plan shall be developed in accordance with Los Angeles County stormwater permit requirements, and

SW-2 Water quality ponds shall be implemented, where feasible, as a BMP to capture and treat polluted runoff from parking lots.

f) Otherwise substantially degrade water quality?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The previous master plan included a public/private agricultural partnership that would have transformed 21 to 23 acres of underutilized fields into productive agricultural uses for the community and the College campus. This would have greatly increased the amount of water needed on campus as well as the amount of contaminated water from irrigation runoff. However, under the 2010 Master Plan Update, the College does not propose such substantial changes and, rather, would maintain and enhance the existing fields and operations. Therefore, impacts on water quality would be less than previously anticipated. Additionally, the mitigation measures carried forward and described under impact discussion 8(a) (SW-1 and SW-2) would further reduce any impacts on water quality. Impacts would remain less than significant with mitigation.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

No Impact. Proposed Pierce College development would not place residential structures in or near a 100-year floodplain. All construction and project operations occurring under the proposed 2010 Master Plan Update, as also found in the 2002 EIR, would be within Zone X-delineated land. Zone X is defined as areas with a 0.2% chance of flooding in any year over a 500-year period. Therefore, the project would not create a significant level of risk to properties or people by placing them in a floodplain. No impact would occur.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒

No Impact. Proposed development on Pierce College would not place structures in or near a 100-year floodplain. All construction and project operations occurring under the proposed 2010 Master Plan Update, as also found in the 2002 EIR, would be within Zone X-delineated land. Zone X is defined as areas with a 0.2% chance of flooding in any year over a 500-year period. Therefore, the project would not create a significant level of risk to properties or people by placing them in a floodplain. No impact would occur.

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The proposed 2010 Master Plan Update would not place people in an area where they would be susceptible to loss, injury, or death from flooding. However, as concluded in the 2002 EIR, deficient drainage conditions contribute to flooding on the western portion of campus. Although the agriculture private/public partnership proposed as part of the 2010 Master Plan Update is not as extensive as that proposed in 2002, similar impacts are assumed. As such, no new impacts are anticipated, and impacts would remain as previously analyzed, less than significant with mitigation incorporated.

The following mitigation measures will be carried forward as part of the proposed 2010 Master Plan Update:

2002 EIR Mitigation Measures

FD-1 Detention basins or other appropriate drainage facilities shall be installed, and the storm drain system shall be improved to (a) meet anticipated increases in runoff from new facilities and impervious surfaces and (b) bring the western portion of the campus up to an adequate level of service and reduce flooding.

FD-2 Earth berms, channels, or vegetated swales shall be provided to capture runoff from agricultural fields to reduce topsoil runoff.

j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

No Impact. The 2002 EIR did not address impacts related to seiche, tsunami, or mudflow. The College campus is not located in an area that would be subject to these types of occurrences. It is far enough inland from any coastline so that it would not incur impacts from tsunamis. Because of its current state of development and urban surrounding, the campus would not be subject to seiche or mudflow. Therefore, because the 2002 EIR did not find any impacts related to these occurrences and because the proposed 2010 Master Plan Update improvements would still be limited to the boundaries of Pierce College, impacts would remain the same. No impact is anticipated to occur.

10. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☒	☐

Less-than-Significant Impact. The proposed 2010 Master Plan Update is an update to a master plan for an existing College. The proposed improvements would not divide an already established community because the community and College have co-existed for a number of years; the College would not expand outside its existing footprint but would renovate and restructure its current layout and building uses. As noted in the 2002 FEIR, construction activities would include demolition of various existing structures, excavation and grading of specific sites on campus, construction of new facilities, and renovation and modernization of existing facilities. However, four of the eight demolition projects originally planned under the 2002 Master Plan would no longer be carried out under the proposed 2010 Master Plan Update, thereby reducing previously analyzed impacts. The remaining construction activities would result in some temporary, localized, site-specific disruptions for land uses in the area. These would be related primarily to construction-related traffic from trucks and equipment in the area, possible partial and/or complete street and lane closures, disruptions related to access to facilities and parking, increased noise and vibration, and changes in air emissions (see the air quality, noise, and traffic and circulation analyses for further discussion). Therefore, impacts would remain less than significant.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

No Impact. Applicable land use plans for the proposed 2010 Master Plan Update are the City of Los Angeles General Plan and Zoning Code and the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan. The city's general plan currently labels the project area with multiple land uses designations: Public Facilities, Open Space, and Neighborhood Office Commercial (ZIMAS 2004). The zoning code is consistent with these designations; the project area is zoned for Commercial (C4-D2), Open Space (OS), and Public Facilities (PF) (ZIMAS 2004). Educational facilities are an allowed use under the Public Facilities designation. With the open space that would be preserved under the proposed update, the proposed 2010 Master Plan Update would remain consistent with both the general plan and the community plan. Furthermore, the College has operated in this area for 62 years. Previous updates and revisions to the general and community plans recognize that the project site is dedicated to Pierce College, and both plans acknowledge the benefit of the school to the area. As such, no new impacts are expected to occur. Within the community plan, Pierce College has been described as an important part of the history of the area. Its agricultural program is one of the few remaining connections to the community's agrarian past. The proposed 2010 Master Plan Update would revitalize the agrarian nature of the College through the agricultural/equestrian educational centers. The community plan recognizes the need for continued development of equestrian, hiking, and bicycle trails in the area. No impacts were found within the 2002 EIR. As such, any impacts would be similar to those identified in the 2002 EIR. No new impacts would occur.

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☐	☐	☒

No Impact. The College supports no substantive areas of native vegetation, aside from the Ecological Studies Preserve in Canyon de Lana in the southwest corner of the campus, which supports restored native vegetation planted during the 1960s, and the Arboretum in the southeastern portion of the College, which supports some planted tree species native to southern California. Otherwise, biological resources on campus are limited to agricultural fields and large areas of open space that are dominated by non-native weedy vegetation, various (primarily non-native) horticultural tree species, and ornamental shrubs. There are no habitat conservation plans or natural community conservation plans for which the proposed 2010 Master Plan Update would be in conflict. As such, impacts would remain the same as those previously determined, and there would be no new impacts.

11. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

No Impact. The 2002 FEIR did not identify any unique geological features or important mineral resources that would be affected by the proposed 2010 Master Plan Update. Therefore, because the proposed 2010 Master Plan Update improvements would continue to be limited to the boundaries of the Pierce College campus, impacts would remain the same. There would be no impact.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

No Impact. See impact discussion under response 10(a). The 2002 Master Plan did not identify any mineral resources on the College campus. Implementation of the 2010 Master Plan Update would occur on the same site. Therefore, impacts resulting from the loss of availability of an important mineral resource recovery site are not expected to occur.

12. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The EIR for the 2002 Master Plan concluded the project would comply with City of Los Angeles Noise Ordinance limits on temporary construction noise and permanent operational noise after implementation of construction noise mitigation measures. The noise ordinance specifies the maximum noise level for powered equipment or powered hand tools.[9] Any powered equipment or powered hand tool that produces noise exceeding 75 dBA at a distance of 50 feet from construction and industrial machinery is prohibited. However, the above noise limitation shall not apply where compliance is technically infeasible.

Some of the facilities proposed by the 2002 Master Plan that were either unusually noisy or close to residential areas at the campus boundary have been cancelled. These include the following: 1) the agricultural education experiences facility and 2) the horticultural partnership facility. The 2010 Master Plan Update includes only two new facilities within 500 feet of residential areas: 1) the revised and relocated new M&O Facility (within 500 feet of dwellings at the southeast boundary) and 2) the Horticultural/Animal Science Facility (within 450 feet of homes at the west boundary). At the M&O Facility, all activities would be enclosed within the building and operations activities would not generate any unusually noise activities audible to nearby residents. Large material deliveries would be infrequent and no more than once a month on an average. These deliveries would occur between 9 a.m. and 6 p.m. The Horticultural/Animal Science Facility is a classroom building similar to existing buildings on the campus.

Construction noise is regulated under Section 41.40 of the Los Angeles Municipal Code. Construction activity is prohibited from causing "loud noises to the disturbance of persons occupying sleeping quarters" at night (defined as 9 p.m. to 7 a.m.). In addition, construction within 500 feet of residential buildings is prohibited on Sunday and during nighttime hours (defined as 6 p.m. to 8 a.m.) on Saturday or holidays. All construction contractors will be required to comply with these work-hour limitations. The construction noise mitigation measures previously described in the 2002 EIR would be carried forward for the proposed 2010 Master Plan Update.

2002 EIR Mitigation Measures

N-1 Noise control devices, such as equipment mufflers, enclosures, and barriers, shall be used where feasible and appropriate based on the noise sources and the distance to the closest sensitive receptors.

N-2 All sound-reducing devices and restrictions shall be maintained throughout the construction period.

N-3 Construction schedules shall be coordinated with academic affairs personnel to minimize noise impacts on students and faculty.

Regarding new facilities proposed under the 2010 Master Plan Update, permanent operational noise could be generated by heating, ventilation, and air-conditioning (HVAC) equipment and outdoor operations such as activity at loading docks. The proposed M&O facility would be configured to locate outdoor activities inward and away from any nearby residents. Noise from such equipment and operations is regulated under Section 112.02 of the Los Angeles Noise Ordinance. Daytime and nighttime noise levels at the boundaries of the closest parcels zoned for residential and commercial use are not allowed to exceed 5 A-weighted decibels (dBA) beyond ambient background levels. All noise-generating equipment installed at the campus would be required to comply with this regulation. Most of the new buildings are at least 1,000 feet from sensitive off-site residential receptors; therefore, in most cases, noise will not be an issue. Most currently available HVAC equipment is relatively quiet; therefore, it is unlikely to cause nighttime noise impacts, even at sensitive receptors (as close as 100 feet). However, some new buildings would be close to off-site residential areas and sensitive on-site school rooms; therefore, HVAC equipment would have the potential to cause noise impacts. Noise impacts would be reduced to less-than-significant levels by the added implementation of the new mitigation measures provided below.

N-4 Exterior noise sources associated with an individual new building or facility shall be controlled to achieve an aggregate noise source level of 62 dBA at 50 feet. That allowable noise emission ensures compliance with the daytime and nighttime exterior noise limits at the closest residential and commercial parcels outside the campus, as defined by Section 112.02 and Sections 111.02 and 111.03 of the Los Angeles Municipal Code. The upper-bound noise limit was calculated using the following assumptions:

---

[9] City of Los Angeles. *Los Angeles Municipal Code,* Section 112.05.

- the closest off-campus residential area is 370 feet from any proposed facility (the horticulture/animal science facility),
- the lower bound allowable nighttime noise level at that residential area is 45 dBA (based on default ambient noise levels specified by the city noise ordinance), and
- the allowable lower-bound noise emission rate at the horticulture/animal science facility (to achieve the lower-bound ambient noise limit) is 62 dBA at 50 feet, assuming a sound propagation rate of 6 dBA per doubling of distance and not accounting for excess attenuation by barriers or ground absorption.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The EIR for the 2002 Master Plan did not consider ground vibration or groundborne noise. A supplemental impact assessment is provided below.

The highest levels of ground vibration would be generated during temporary building demolition and building construction activity. It is anticipated that pile driving will not be required to construct new buildings. Given that assumption, vibration levels generated during building demolition and building construction are not expected to be discernible, even at nearby school buildings. The highest ground vibration levels are expected to be generated by jackhammers and hoe rams, which are used to demolish building foundations, and by vibratory rollers, which are used to level new parking lots. Ground vibration levels from such equipment generally dissipate to below discernible levels within 25 to 50 feet of the source.[10] It is unlikely that jackhammers and vibratory rollers would be used at such close distances for extended periods; therefore, in most cases, the vibration impacts would be indiscernible and less than significant. However, it is possible that a limited number of school buildings near future construction zones might contain research equipment that is exceptionally sensitive to vibration (e.g., electron microscopes). In those unusual circumstances, temporary ground vibration caused by construction activity might have the potential to disrupt research equipment. Vibration impacts from such unusual circumstances would be reduced to less-than-significant levels by implementation of the following mitigation measures:

N-5 Use of vibration-generating construction equipment at new facilities shall be coordinated with Academic Affairs personnel to minimize potential vibration impacts on exceptionally sensitive research equipment. If requested by the Academic Affairs office, a construction vibration control study will be required for specific vibration-sensitive buildings. Vibration control measures could include the following:

- preparation of a vibration control plan;
- prediction of temporary vibration levels during construction, which will be compared to acceptable vibration levels for sensitive equipment;
- specification of low-vibration construction equipment;
- vibration monitoring before and during construction activity; and
- coordination with research staff to temporarily discontinue use of sensitive equipment during critical construction activity.

Operation of the new buildings would not cause discernible ground vibration at any nearby dwellings or existing school buildings. Passenger cars, delivery trucks, and HVAC equipment used during normal operations cause negligible ground vibration.[11]

There would be no impact from groundborne noise during construction or operation. This issue is typically important only in limited circumstances involving large (usually underground) vibration sources and exceptionally sensitive indoor use areas, (e.g., a new train tunnel underneath an existing concert hall). Construction and operation of the new buildings would not cause groundborne noise at nearby buildings.

---

[10] Federal Transit Administration, 2006.

[11] Ibid.

Issues	**Potentially Significant**	**Less-than-Significant Impact with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. There are two issues related to this impact:

- Noise increases at existing on-site and off-site receptors caused by HVAC equipment and other outdoor noise sources at new buildings. Details on the impact assessment and proposed mitigation are provided in response 11(a). The impact would be less than significant after mitigation is incorporated; and
- Increased traffic noise along off-site public streets serving the campus. This impact would be less than significant, and no mitigation is required. Details are provided below.

The EIR for the 2002 Master Plan included baseline monitoring results for representative homes and apartments. It concluded that the traffic volume increases associated with the 2002 Master Plan would not be high enough to cause a significant increase in traffic noise. However, the existing noise environment has changed since the previous EIR was certified because of the recent completion of the Orange Line. In addition, the proposed 2010 Master Plan Update, as described in the 2010 Master Plan Update, would increase student enrollment to a level above the number that was estimated under the 2002 Master Plan. For these reasons, the traffic noise impact assessment was updated to reflect the changed conditions.

The significance criteria used to assess traffic noise are the same as those described in the 2002 EIR. The *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006) establishes noise compatibility criteria for various land uses, as listed in Table 13, below. Noise compatibility is based on the outdoor 24-hour Community Noise Exposure Level (CNEL).

The *L.A. CEQA Thresholds Guide* indicates that a significant noise increase would be triggered by either of the following conditions:

- If the noise level after project buildout triggers either the Normally Acceptable or Conditionally Acceptable categories, and the project-related noise increase is 5 dBA CNEL or greater; or
- If the noise level after project buildout triggers either the Normally Unacceptable or Clearly Unacceptable categories, and the project-related noise increase is 3 dBA CNEL or greater.

The EIR for the 2002 Master Plan included baseline noise monitoring at representative homes and businesses outside the campus. To support the 2010 Master Plan Update, noise monitoring was repeated at the same locations and at approximately the same time of day. The results of the supplemental 2009 baseline monitoring are shown in Table 14, below. Noise levels measured in September 2009 were lower than the noise levels measured in 2002.

The baseline noise monitoring consisted of short-term spot measurements taken during the mid-afternoon period when traffic noise levels are generally highest, while the land use compatibility categories are based on the 24-hour CNEL.

Table 13: Community Noise Exposure Levels (Exterior) and Land Use Compatibility

Land Use	Community Noise Exposure Level, dBA			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single-Family Residence	50–60	55–70	70–75	Above 70
Multi-Family Residence	50–65	60–70	70–75	Above 70
Hotel/Motel	50–65	60–70	70–80	Above 80
Auditorium	—	50–70	—	Above 65
Sports Arena	—	50–75	—	Above 70
Parks	50–70	—	67–75	Above 72
Office Building/Commercial	50–70	67–77	Above 75	—
Industrial/Manufacturing	50–75	70–80	Above 75	—

Normally Acceptable: Development is acceptable.

Conditionally Acceptable: Noise abatement should be considered as part of the development.

Normally Unacceptable: Development should generally be discouraged.

Clearly Unacceptable: Development should generally not be built.

Source: City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006.

Table 14: Noise Measurements at Noise Sensitive Uses

Site Number	Location and Land Use	Noise Level Measured in 2002 (L_{eq}, dBA)	Time and Duration of the Supplemental Measurement	Supplemental Noise Levels (L_{eq} or CNEL, dBA)[1, 2]
R-1	De Soto Avenue, north of Victory Boulevard (Residential)	79	9/23/09, 16:50	69
R-2	Mason Street, north of Victory Boulevard (Residential)	76	9/23/09, 17:40	67
R-3	Victory Boulevard, east of Mason Street (Residential)	76	9/23/09, 18:10	69
R-4	Winnetka Avenue, at the Adult Technical School (Commercial)	78	9/23/09, 18:50	68
R-5	Winnetka Avenue, north of Oxnard Street (Residential)	80	9/23/09, 19:25	70
R-6	Oxnard Street, east of De Soto Avenue (Residential)	75	9/23/09, 20:20	71

L_{eq} = noise level equivalent.

[1] L_{eq} noise reading during the measurement duration.

[2] Mid-afternoon L_{eq} levels assumed to be similar to 24-hour CNEL levels.

Source: ICF Jones & Stokes, 2009.

Because the dominant noise measured during the supplemental monitoring was traffic noise and the noise measurements were taken near the peak noise hour, it can generally be assumed that the measured L_{eq} noise levels are roughly equal to the 24-hour CNEL (Federal Transit Administration 2006). Given that assumption, the measured L_{eq} noise levels can be used to determine land use noise compatibility categories at each measurement location. In all cases, the existing noise levels, as of September 2009, were high enough to trigger the Normally Unacceptable or Clearly Unacceptable categories. Therefore, according to the *L.A. CEQA Thresholds Guide*, a significant impact would be triggered by a traffic noise increase of 3 dBA (peak-hour L_{eq} or CNEL) or more. This is the same traffic noise impact criterion that was used for the 2002 EIR.

The 2002 EIR demonstrated that to trigger the 3 dBA traffic noise impact criterion, the proposed 2010 Master Plan Update would have to cause a project-related traffic volume increase of 100% (defined as the 2015 cumulative with-project traffic volume minus the 2015 cumulative no-project base volume). The forecast traffic increases caused by the 2010 Master Plan Update would be much lower than that threshold. The updated traffic report (Fehr and Peers 2010) indicates that the forecast increases in peak-hour traffic volumes at the most heavily traveled roadways would be only 1% to 13%, which corresponds to traffic noise increases of less than 1 dBA. Given this analysis, the permanent increases in traffic noise would be less than significant, and no mitigation is required.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. Temporary short-term noise impacts at existing campus buildings could result during construction of new buildings as part of the 2010 Master Plan Update. The 2002 EIR concluded that this impact would be less than significant after implementation of construction noise mitigation. The conclusions of this supplemental analysis are the same. Details regarding the impact assessment and the required construction noise mitigation measures are presented in response 11(a).

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Less-than-Significant Impact. The 2002 EIR did not consider potential impacts from airport noise. The campus is more than 5 miles west-southwest of the closest general aviation airport (Van Nuys Airport) and more than 12 miles west of the closest commercial airport (Bob Hope/Burbank Airport). The Van Nuys Airport runway is oriented north/south, and the campus is nearly due west of the airport. Therefore, there is no potential for campus buildings to be subjected to excessive aircraft noise. No mitigation is required.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

No Impact. The campus is more than 5 miles from the nearest general aviation airport (Van Nuys Airport). Therefore, the private airport would cause no noise impact at campus buildings. No mitigation is required.

Issues	**Potentially Significant**	**Less-than-Significant Impact with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**

13. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

Less-than-Significant Impact. The 2002 FEIR found that the project would not induce substantial population growth directly or indirectly. During construction, the project would employ workers who would more than likely commute to and from the work site and not relocate their households. The Los Angeles metropolitan area has a large pool of construction labor from which to draw. With completion of the projects described in the 2002 EIR, the number of College employees would increase by 168. The previously planned science partnerships would have also increased the number of employees; however, because these partnerships are no longer part of the proposed 2010 Master Plan Update, impacts from increased population would be less than what was previously described. The 2002 EIR found that less-than-significant impacts related to population growth would occur; as such, impacts related to population under the proposed 2010 Master Plan Update would remain the same.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No Impact. The 2002 EIR found that housing would not be displaced and that there would be no impacts. The proposed 2010 Master Plan Update would not change this conclusion because it also would not remove any type or form of housing. No impact would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No Impact. The 2002 EIR found that people would not be displaced and there would be no impacts. The proposed 2010 Master Plan Update would not change this conclusion because it also would not displace any persons from the project area, thereby necessitating the construction of replacement housing. There would be no impact.

14. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a) Fire protection?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The 2002 FEIR found that less-than-significant impacts related to fire services would occur from implementation of the master plan. According to the 2002 EIR, the 2002 Master Plan proposed approximately 500,000 total gross square feet of new building space and 400 to 450 housing units. As shown in Table 3 the 2010 Master Plan Update, approximately 285,451 square feet of new building space would be provided. Therefore, the 2010 Master Plan Update would provide less new building space when compared to the 2002 Master Plan.

Because buildout under the proposed 2010 Master Plan Update would not increase the number of students beyond the number forecast under the 2002 EIR (see Table 2) and because the science public/private partnership projects described in the 2002 EIR are no longer included as part of the proposed 2010 Master Plan Update, impacts would not be greater than what was described in the 2002 EIR. Furthermore, the removal of the previously planned student housing projects would reduce the number of associated emergency calls to the fire department, calls that were originally anticipated as part of the 2002 Master Plan.

Temporary construction would affect fire department access to the College. This impact would remain under the proposed 2010 Master Plan Update because of street closures or other access impairments. The mitigation measures described in the 2002 EIR would be carried forward as part of the proposed 2010 Master Plan Update. Because no new impacts would be created, impacts would remain less than significant.

2002 EIR Mitigation Measures

FPS-1 The College shall consult with the city engineer and the fire department regarding appropriate standards (e.g., lane widths, grades, cut corners, etc.) for private streets and entry gates to ensure adequate access for fire department vehicles and equipment.

FPS-2 All landscaping shall use fire-resistant plants and materials.

FPS-3 Sprinkler systems shall be required throughout any structure to be built, in accordance with state codes and standards established by the State of California, Division of the State Architect, State Fire Marshal.

FPS-4 The revised project shall comply with all applicable codes and regulations administered by the State of California, Division of the State Architect, and State Fire Marshal.

b) Police protection?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. Police protection services for the LACCD are provided by the Los Angeles County Sheriff's Department (LASD). The 2002 EIR found that less-than-significant impacts related to police services would result from the master plan with mitigation incorporated. As noted in the response to 13(a), above, student enrollment in the buildout year (2015) under the proposed 2010 Master Plan Update would not be greater than the enrollment figure projected in the 2002 EIR. Furthermore, removal of the previously planned student housing projects and the science public/private partnerships would reduce the number of associated emergency calls to the police department, calls that were originally anticipated as part of the 2002 Master Plan. Temporary construction impacts would remain under the proposed 2010 Master Plan Update because of street closures, which could diminish.. The mitigation measures previously described in the 2002 EIR would be carried forward as part of the proposed 2010 Master Plan Update. Because no new impacts would be created, impacts would remain less than significant with mitigation incorporated.

2002 EIR Mitigation Measures

PPS-1 Pierce College shall implement security features (i.e., improved lighting, improved landscaping, and additional security phones) as part of the proposed projects described in the master plan.

PPS-2 Pierce College shall design and implement a Special Event Security Plan, in coordination with the Los Angeles County Sheriff's Department and the Los Angeles Police Department, for the new events center. Issues addressed may include security needs, emergency evacuation procedures, and money handling issues.

c) Schools?	☐	☐	☒	☐

Less-than-Significant Impact. Pierce College is located in the Los Angeles Unified School District's (LAUSD's) District C, which covers an area of approximately 70 square miles. This district is located in the southern portion of the west and central portions of the San Fernando Valley. District C includes the following communities: Encino, Reseda, Sherman Oaks, Tarzana, Van Nuys, Warner Center, and Winnetka as well as portions of Studio City, Valley Village, and Woodland Hills. The 2002 EIR found that although increases in student enrollment would have occurred because of development expected as part of the master plan, they would not have significantly affected any one school within the district and would not have over-burdened the school system. The 2002 Master Plan included the development of 400 to 450 housing units, which will no longer be carried forward as part of the proposed 2010 Master Plan Update. Additionally, the science public/private partnerships, which were part of the 2002 Master Plan, would have increased the number of employees as well as residents in the project area. Because these partnerships are no longer being carried forward, these previously estimated impacts will no longer occur as part of the proposed 2010 Master Plan Update. Impacts would be less than originally estimated and would remain less than significant.

d) Parks?	☐	☐	☒	☐

Less-than-Significant Impact. The 2002 EIR found that although increased enrollment would occur, it would not negatively affect the recreational resources of the project area or surrounding area, and impacts would be less than significant. Through the removal of the student housing element and some of the public/private partnerships, impacts originally anticipated from increased student and employee use of parks would be reduced under the proposed 2010 Master Plan Update. As such, impacts would be less than previously anticipated and would remain less than significant.

e) Other public facilities?	☐	☐	☐	☒

No Impact. The 2002 EIR provided no impact analysis pertaining to other public facilities. However, because the campus already provides libraries, health care facilities, student services, etc., it is assumed that these facilities were regarded as incurring no impacts under the 2002 Master Plan. Because the proposed 2010 Master Plan Update would no longer include the student housing element and some of the public/private partnerships, any impacts would be less than previously anticipated. Therefore, there would be no impact.

15. RECREATION.				
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Less-than-Significant Impact. The 2002 FEIR found that despite increases in the number of students and employees, recreational facilities and parks located in the vicinity of Pierce College would not be overburdened and would not experience an increase in use that would accelerate deterioration. Implementation of the previous master plan would have included projects that would have renovated and modernized existing recreational and athletic facilities on the campus. Also, public/private partnerships would have enhanced existing areas of the campus, including the horticulture area and quad area (creating a new botanical garden), which would have provided students and employees with additional green spaces. The proposed 2010 Master Plan Update still includes the renovation and modernization of the existing recreational and athletic facilities; however, some of the previously planned public/private partnership projects would not be carried forward as part of the proposed 2010 Master Plan Update. Although the removal of the partnership projects would mean that additional green spaces would not be created, it would not reduce any of the existing recreational uses at the campus. Therefore, impacts would be similar to those previously anticipated and would remain less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

Less-than-Significant Impact. The previous EIR found that no significant impacts would occur from the renovation and modernization of the existing recreational and athletic facilities, planned for completion in October of this year. Additionally, some of the public/private partnerships previously planned would not be carried forward as part of the proposed 2010 Master Plan Update. No new or expanded recreational facilities are planned as part of the proposed 2010 Master Plan Update; therefore, impacts would remain less than significant.

16. TRANSPORTATION/TRAFFIC. Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. Fehr and Peers prepared a traffic and parking study for the 2010 Master Plan Update in January 2010. Because the 2002 EIR analyzed projects only until 2010, a new traffic analysis was required to study impacts up to 2015, which is the horizon year for the 2010 Master Plan Update. The 2010 report is included in its entirety as an appendix to this document. The study analyzed potential revised project-generated traffic impacts on the street and highway system surrounding and serving the Pierce College campus. The following traffic scenarios were analyzed in the study:

- Existing (2009) Conditions – The analysis of existing traffic conditions provided a basis for the study. The existing-conditions analysis included an assessment of streets, traffic volumes, operating conditions, transit services, and on-campus parking conditions;

- Year 2015 Cumulative-Base (No-Project) Conditions – The objective of this scenario was to project the future operating conditions that could be expected to result from regional growth and related projects in the vicinity of the project site, without consideration of the proposed 2010 Master Plan Update; and

- Year 2015 Cumulative-Plus-Project Conditions – The objective of this scenario was to identify the potential impacts of the proposed 2010 Master Plan Update on future operating conditions, with traffic expected to be generated by buildout of the proposed 2010 Master Plan Update added to the base traffic forecasts.

The study evaluated the potential for traffic impacts at 32 intersections in the vicinity of the Pierce College campus during the weekday AM and PM peak hours. The study relied on established Los Angeles Department of Transportation (LADOT) threshold criteria, which are used to determine if a project will have a significant traffic impact at a specific intersection. According to LADOT criteria, a project impact would be considered significant if the conditions in Table 15 are met.

Table 15: Los Angeles Department of Transportation Threshold Criteria

Intersection Condition with Project Traffic		**Project-Related Increase in V/C Ratio**
LOS	**V/C Ratio**	
C	> 0.70–0.80	Equal to or greater than 0.04
D	> 0.80–0.90	Equal to or greater than 0.02
E, F	> 0.90	Equal to or greater than 0.01

Note:
LOS = level of service; V/C = volume to capacity.
Source: Fehr and Peers, 2010.

Existing Conditions

Table 16 summarizes the existing AM and PM peak-hour volume-to-capacity (V/C) ratios and corresponding levels of service at each of the study intersections. As can be seen, 11 of the 32 intersections currently operate at LOS E or F during the AM and/or PM peak hours. These intersections are as follows:

- De Soto Avenue and Saticoy Street,
- De Soto Avenue and Sherman Way,
- De Soto Avenue and Vanowen Street,
- Topanga Canyon Boulevard and Victory Boulevard,
- De Soto Avenue and Victory Boulevard,
- Winnetka Avenue and Victory Boulevard,
- Corbin Avenue and Victory Boulevard,
- Tampa Avenue and Victory Boulevard,
- Wilbur Avenue and Victory Boulevard,
- Reseda Avenue and Victory Boulevard, and
- Winnetka Avenue and Ventura Boulevard.

The remaining study intersections operate at fair to good levels of service (LOS D or better) during both the AM and PM peak hours.

2015 Cumulative Base Conditions – Without Proposed 2010 Master Plan Update

The traffic analysis prepared for the 2010 Master Plan Update analyzed potential future traffic conditions under 2015 cumulative base conditions, assuming no growth on the Pierce College campus between the 2002 FTE baseline and 2015. Table 16, included below, summarizes these results.

Table 16: Existing (2008–2009) Intersection Levels of Service

		AM Peak Hour		PM Peak Hour	
	Intersection	**V/C**	**LOS**	**V/C**	**LOS**
*1.	De Soto Av and Saticoy St	0.870	D	0.905	E
*2.	Mason Av and Saticoy St	0.834	D	0.789	C
*3.	Winnetka Av and Saticoy St	0.775	C	0.823	D
**4.	De Soto Av and Sherman Way	0.735	C	0.958	E
**5.	Mason Av and Sherman Way	0.710	C	0.627	B
**6.	Winnetka Av and Sherman Way	0.810	D	0.814	D
**7.	De Soto Av and Vanowen St	0.815	D	0.936	E
*8.	Mason Av and Vanowen St	0.805	D	0.681	B
*9.	Winnetka Av and Vanowen St	0.874	D	0.875	D
**10.	Shoup Av and Victory Blvd	0.865	D	0.874	D
**11.	Topanga Canyon Blvd and Victory Blvd	0.679	B	0.910	E
**12.	Canoga Av and Victory Blvd	0.607	B	0.861	D
**13.	De Soto Av and Victory Blvd	0.836	D	1.004	F
**14.	Mason Av and Victory Blvd	0.752	C	0.719	C

		AM Peak Hour		PM Peak Hour	
	Intersection	**V/C**	**LOS**	**V/C**	**LOS**
**15.	Winnetka Av and Victory Blvd	0.982	E	0.912	E
**16.	Topham St and Victory Blvd	0.243	A	0.200	A
**17.	Corbin Av and Victory Blvd	0.907	E	0.925	E
**18.	Tampa Av and Victory Blvd	0.930	E	1.056	F
**19.	Wilbur Av and Victory Blvd	0.975	E	0.852	D
**20.	Reseda Blvd and Victory Blvd	0.949	E	0.970	E
**21.	De Soto Av and El Rancho Dr	0.429	A	0.394	A
**22.	De Soto Av and Erwin St	0.612	B	0.451	A
**23.	Winnetka Av and Calvert St	0.545	A	0.430	A
**24.	De Soto Av and Oxnard St	0.737	C	0.625	B
**25.	Winnetka Av and Oxnard St	0.763	C	0.640	B
**26.	De Soto Av and Burbank Blvd West	0.564	A	0.583	A
**27.	De Soto Av and U.S. 101 WB Ramps	0.618	B	0.649	B
**28.	De Soto Av and U.S. 101 EB Ramps	0.729	C	0.583	A
**29.	De Soto Av and Ventura Blvd	0.764	C	0.662	B
**30.	Winnetka Av and U.S. 101 WB Ramps	0.553	A	0.504	A
**31.	Winnetka Av and U.S. 101 EB Ramps	0.685	B	0.666	B
**32.	Winnetka Av and Ventura Blvd	0.885	D	0.911	E

Notes:

* Intersection is currently operating under ATSAC system.

* *Intersection is currently operating under ATCS system.

EB = eastbound; WB = westbound.

Source: Fehr and Peers, 2010.

The following 13 study intersections are projected to operate at LOS E or F during one or both of the peak hours under 2015 cumulative base conditions (see Table 17):

- De Soto Avenue and Saticoy Street,
- De Soto Avenue and Sherman Way,
- Winnetka Avenue and Vanowen Street,
- Shoup Avenue and Victory Boulevard
- Topanga Canyon Boulevard and Victory Boulevard,
- Canoga Avenue and Victory Boulevard,
- De Soto Avenue and Victory Boulevard,
- Winnetka Avenue and Victory Boulevard,
- Corbin Avenue and Victory Boulevard
- Tampa Avenue and Victory Boulevard,
- Wilbur Avenue and Victory Boulevard,
- Reseda Avenue and Victory Boulevard, and
- Winnetka Avenue and Ventura Boulevard.

Table 17 reveals a slight deterioration in future operating conditions when compared with existing conditions, with 11 of the intersections operating at LOS E or F during one or both of the peak hours. Thus, background traffic growth and traffic generated by related projects would have some impact on operating conditions in the study area even without consideration of potential growth on the Pierce College campus.

2015 Cumulative Conditions – With Proposed 2010 Master Plan Update

The traffic study analyzed cumulative-plus-project traffic volumes to determine potential future operating conditions and traffic impacts with the addition of incremental project-generated traffic associated with buildout of the master plan through 2015 (see Table 17).

As indicated in Table 17, 13 of the study intersections are projected to operate at LOS E or F during one or both peak hours under cumulative-plus-project conditions. Application of the City of Los Angeles’ significance criteria indicate that the project would create significant traffic impacts at one study intersection:

- Winnetka Avenue and Victory Boulevard.

This impact would be generated by the estimated general growth in academic-related traffic to/from the campus between the 2002 campus base year and the 2015 master plan buildout year. However, the mitigation below would reduce impacts at the affected intersection.

Table 17: Intersection Level of Service Analysis – Cumulative Base and Cumulative-Plus-Project Conditions

Intersection		Peak Hour	Cumulative Base 2015		Cumulative + Project 2015		Project Increase in V/C	Significant Project Impact	With-Project Mitigation		Project Increase in V/C	Residual Impacts
			V/C	LOS	V/C	LOS			V/C	LOS		
*1.	De Soto Av and Saticoy St	AM	0.933	E	0.935	E	0.002	NO				
		PM	0.984	E	0.987	E	0.003	NO				
*2.	Mason Av and Saticoy St	AM	0.885	D	0.892	D	0.007	NO				
		PM	0.839	D	0.843	D	0.004	NO				
*3.	Winnetka Av and Saticoy St	AM	0.829	D	0.833	D	0.004	NO				
		PM	0.877	D	0.879	D	0.002	NO				
**4.	De Soto Av and Sherman Way	AM	0.796	C	0.800	C	0.004	NO				
		PM	1.041	F	1.043	F	0.002	NO				
**5.	Mason Av and Sherman Way	AM	0.755	C	0.764	C	0.009	NO				
		PM	0.672	B	0.676	B	0.004	NO				
**6.	Winnetka Av and Sherman Way	AM	0.872	D	0.878	D	0.006	NO				
		PM	0.872	D	0.875	D	0.003	NO				
**7.	De Soto Av and Vanowen St	AM	0.852	D	0.853	D	0.001	NO				
		PM	0.876	D	0.878	D	0.002	NO				
*8.	Mason Av and Vanowen St	AM	0.848	D	0.859	D	0.011	NO				
		PM	0.727	C	0.732	C	0.005	NO				
*9.	Winnetka Av and Vanowen St	AM	0.931	E	0.938	E	0.007	NO				
		PM	0.939	E	0.945	E	0.006	NO				
**10.	Shoup Av and Victory Blvd	AM	0.943	E	0.947	E	0.004	NO				
		PM	0.875	D	0.879	D	0.004	NO				
**11.	Topanga Cyn Blvd and Victory Blvd	AM	0.744	C	0.748	C	0.004	NO				
		PM	0.975	E	0.981	E	0.006	NO				

Intersection		Peak Hour	Cumulative Base 2015		Cumulative + Project 2015		Project Increase in V/C	Significant Project Impact	With-Project Mitigation		Project Increase in V/C	Residual Impacts
			V/C	LOS	V/C	LOS			V/C	LOS		
**12.	Canoga Av and Victory Blvd	AM	0.705	C	0.712	C	0.007	NO				
		PM	0.957	E	0.963	E	0.006	NO				
**13.	De Soto Av and Victory Blvd	AM	0.798	C	0.808	D	0.010	NO				
		PM	0.987	E	0.993	E	0.006	NO				
**14.	Mason Av and Victory Blvd	AM	0.701	C	0.706	C	0.005	NO				
		PM	0.662	B	0.674	B	0.012	NO				
**15.	Winnetka Av and Victory Blvd	AM	1.051	F	1.067	F	0.016	YES	0.958	E	-0.093	NO
		PM	0.971	E	0.988	E	0.017	YES	0.944	E	-0.027	NO
**16.	Topham St and Victory Blvd	AM	0.149	A	0.155	A	0.006	NO				
		PM	0.107	A	0.111	A	0.004	NO				
**17.	Corbin Av and Victory Blvd	AM	0.974	E	0.981	E	0.007	NO				
		PM	1.006	F	1.010	F	0.004	NO				
**18.	Tampa Av and Victory Blvd	AM	1.003	F	1.007	F	0.004	NO				
		PM	1.146	F	1.149	F	0.003	NO				
**19.	Wilbur Av and Victory Blvd	AM	1.066	F	1.067	F	0.001	NO				
		PM	0.932	E	0.934	E	0.002	NO				
**20.	Reseda Blvd and Victory Blvd	AM	1.030	F	1.035	F	0.005	NO				
		PM	1.059	F	1.061	F	0.002	NO				
**21.	De Soto Av and El Rancho Dr	AM	0.467	A	0.468	A	0.001	NO				
		PM	0.416	A	0.430	A	0.014	NO				
**22.	De Soto Av and Erwin St	AM	0.678	B	0.678	B	0.000	NO				
		PM	0.512	A	0.515	A	0.003	NO				

Intersection		Peak Hour	Cumulative Base 2015		Cumulative + Project 2015		Project Increase in V/C	Significant Project Impact	With-Project Mitigation		Project Increase in V/C	Residual Impacts
			V/C	LOS	V/C	LOS			V/C	LOS		
**23.	Winnetka Av and Calvert St	AM	0.555	A	0.582	A	0.027	NO				
		PM	0.453	A	0.463	A	0.010	NO				
**24.	De Soto Av and Oxnard St	AM	0.813	D	0.815	D	0.002	NO				
		PM	0.691	B	0.694	B	0.003	NO				
**25.	Winnetka Av and Oxnard St	AM	0.818	D	0.824	D	0.006	NO				
		PM	0.680	B	0.689	B	0.009	NO				
**26.	De Soto Av and Burbank Blvd West	AM	0.631	B	0.633	B	0.002	NO				
		PM	0.641	B	0.644	B	0.003	NO				
**27.	De Soto Av and U.S. 101 WB Ramps	AM	0.683	B	0.686	B	0.003	NO				
		PM	0.708	C	0.711	C	0.003	NO				
**28.	De Soto Av and U.S. 101 EB Ramps	AM	0.795	C	0.797	C	0.002	NO				
		PM	0.641	B	0.643	B	0.002	NO				
**29.	De Soto Av and Ventura Blvd	AM	0.832	D	0.835	D	0.003	NO				
		PM	0.732	C	0.733	C	0.001	NO				
**30.	Winnetka Av and U.S. 101 WB Ramps	AM	0.584	A	0.594	A	0.010	NO				
		PM	0.534	A	0.545	A	0.011	NO				
**31.	Winnetka Av and U.S. 101 EB Ramps	AM	0.729	C	0.737	C	0.008	NO				
		PM	0.701	C	0.713	C	0.012	NO				
**32.	Winnetka Av and Ventura Blvd	AM	0.962	E	0.962	E	0.000	NO				
		PM	0.992	E	0.992	E	0.000	NO				

Notes:

* Intersection is currently operating under ATSAC system.

** Intersection is currently operating under ATCS system.
Source: Fehr and Peers, 2010.

Mitigation Measures

The traffic analysis prepared for the proposed update identified the following mitigation measure to reduce impacts on the affected intersection, which is identical to the mitigation measure for this intersection in the 2002 FEIR. (See Table 3-49 No. 15 from the 2002 FEIR). The following physical and/or operational improvements shall be implemented at the affected intersection:

TR-1 **Winnetka Avenue and Victory Boulevard.** Intersection impacts may be mitigated during both peak periods with the provision of dual left-turn lanes on both the eastbound and westbound approaches on Victory Boulevard. This mitigation will require the acquisition of 4 feet of right-of-way from the north side of Victory Boulevard, east and west of Winnetka Avenue. The mitigation will also require the removal of approximately 32 on-street parking spaces along the eastbound approach and departure of Victory Boulevard on either side of Winnetka Avenue. This will result in changing existing lane configurations for both the westbound and eastbound approaches on Victory Boulevard at Winnetka Avenue from one left-turn lane, two through lanes, and one shared through/right-turn lane to two left-turn lanes, two through lanes, and one shared through/right-turn lane. (A figure to illustrate the proposed intersection mitigation is included in Appendix C.)

The proposed mitigation is identified as cumulative mitigation in the Warner Center Specific Plan (WCSP) Transportation Improvement Mitigation Program (TIMP). The WCSP TIMP states that future intersection improvements are to be funded, in part, by Warner Center Transportation Impact Assessment (TIA) fees from development within Warner Center.[12] However, these improvements are not fully funded by the Warner Center TIA fee because the WCSP determined that a portion of the need for these improvements would be generated by existing traffic and future development in the area outside of Warner Center (such as growth at Pierce College).

Residual Impacts

Implementation of mitigation measure TR-1 would fully mitigate the revised project's impacts at the affected intersection. Thus, with the proposed intersection improvements identified herein, the intersection impacts would be less than significant.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The traffic and parking analysis conducted by Fehr and Peers identified two Congestion Management Program (CMP) arterial monitoring locations where the proposed 2010 Master Plan Update may add 50 or more trips per hour:

- Topanga Canyon Boulevard and Victory Boulevard, and
- Winnetka Boulevard and Victory Boulevard.[13]

---

[12] Kaku Associates Inc. 2000. *Draft Transportation Technical Report for the Warner Center Specific Plan Transportation Improvement and Management Program Restudy and Supplemental Environmental Impact Report.* October.

[13] Fehr and Peers. 2010. *Traffic and Parking Study for the Pierce College Facilities Master Plan Update Environmental Impact Report.* January.

Under 2015 conditions, the proposed 2010 Master Plan Update is projected to create a significant impact on one of the two CMP arterial monitoring intersections: Winnetka Avenue/Victory Boulevard. However, with implementation of intersection mitigation measure TR-1, described in response 15(a), above, this impact would be mitigated to less-than-significant levels.

Two other study intersections, Winnetka Boulevard/Ventura Boulevard and Reseda Boulevard/Victory Boulevard, are also CMP arterial monitoring intersections. However, according to the traffic analysis prepared for the 2010 Master Plan Update, fewer than 50 project trips are projected to traverse these intersections in the AM or PM peak hours. Therefore, CMP analysis of these intersections was not required.[14]

In addition, one CMP mainline freeway monitoring location (U.S. 101 at Winnetka Avenue) was identified, an area where the proposed 2010 Master Plan Update may add 150 or more trips per hour in either direction. According to the traffic analysis, the proposed 2010 Master Plan Update is expected to add the greatest number of new trips to the segment of U.S. 101 east of Winnetka Avenue.

Given the CMP significance criteria, no significant impact is projected to occur at the U.S. 101 monitoring location east of Winnetka Avenue under the proposed 2010 Master Plan Update. Because the proposed 2010 Master Plan Update is expected to contribute the greatest number of new trips to this segment, and because the revised project's impact at this location would not be significant, the revised project would not have significant impacts elsewhere on the freeway system. This would be considered a less-than-significant impact.

Mitigation Measures

The mitigation measure related to the Winnetka Avenue/Victory Boulevard intersection in response 15(a) would also reduce impacts on CMP intersections.

Residual Impacts

Implementation of mitigation measures would reduce traffic impacts to less-than-significant levels.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	☐	☐	☐	☒

No Impact. The proposed 2010 Master Plan Update would update an existing master plan based on changing conditions, including student enrollment. The 2010 Master Plan Update would include new construction and renovation and demolition projects. The proposed 2010 Master Plan Update would not result in a change in air traffic patterns or result in any air safety risks. The proposed 2010 Master Plan Update does not propose tall buildings that would require air traffic to be rerouted. No impact is anticipated to occur.

d) Substantially increase hazards related to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e. g., farm equipment)?	☐	☐	☐	☒

No Impact. See response 15(c), above. Implementation of the new construction and renovation and demolition projects proposed under the 2010 Master Plan Update would not increase hazards related to a design feature or incompatible uses. No impact would occur.

---

[14] Ibid.

Issues	**Potentially Significant**	**Less-than-Significant Impact with Mitigation Incorporated**	**Less-than-Significant Impact**	**No Impact**

e) Result in inadequate emergency access?	☐	☐	☒	☐

Less-than-Significant Impact. Existing vehicular access to the Pierce College campus is available from four access points, as described below.

- Brahma Drive – Brahma Drive is an internal street that provides access from Winnetka Avenue on the east side of the campus. Brahma Drive intersects Winnetka Avenue opposite Calvert Street; its intersection with Winnetka Avenue/Calvert Street is controlled by a traffic signal. On campus, Brahma Drive provides access to Lot 1 and connects to Stadium Way, which, in turn, ultimately connects to Mason Street.
- Mason Street – Mason Street is an internal street that provides access from Victory Boulevard on the north side of the campus. Mason Street intersects Victory Boulevard opposite Mason Avenue; its intersection with Victory Boulevard is signalized. On campus, Mason Street provides access to parking lot 7. It then intersects with Olympic Drive and El Rancho Drive and continues as Stadium Way, ultimately connecting with Brahma Drive.
- El Rancho Drive – El Rancho Drive is an internal street that provides access from a signalized intersection with De Soto Avenue on the west side of the campus. On campus, El Rancho Drive connects to Mason Street/Stadium Way.
- Lot 7 Driveway – In addition to the three signalized access points described above, there is an unsignalized driveway from parking lot 7, leading directly to Victory Boulevard east of Mason Avenue.

Additional internal streets that provide circulation on the campus include the following:

- Olympic Drive – Olympic Drive runs along the south side of parking lot 7 and has a security gate at the east end of the lot. Beyond the security gate, it continues into the campus core, becoming part of the internal system, with a second gate near the sheriff’s substation.
- Stadium Way – Stadium Way is the primary through route around the south side of the campus core. It connects Brahma Drive with Mason Street and El Rancho Drive and provides access to Shepard Stadium and several student parking lots.

Proposed vehicular access under the 2010 Master Plan Update would not change the existing access, as described above. Similarly, emergency access to the campus would not change under the 2010 Master Plan Update. However, as described earlier, diminished access to the College would occur temporarily during construction activities (see Public Services, responses 13(a) and 13(b), above). Projects included under the proposed update would comply with all applicable City of Los Angeles codes and regulations related to emergency access (see also Hazards and Hazardous Materials, response 7(g), for a mitigation measure related to emergency access.)

Implementation of the 2010 Master Plan Update is not anticipated to result in a permanent impact related to inadequate emergency access. Mitigation measures included in the 2002 EIR have also been included in this document. This would be considered a less-than-significant impact.

f) Result in inadequate parking capacity?	☐	☐	☐	☒

No Impact. A traffic and parking impact analysis was conducted for the proposed 2010 Master Plan Update by Fehr and Peers in January 2010. The 2010 Master Plan Update would affect future parking at the College. The major proposed changes would include the following:

- Of the seven main student lots, most would be retained in roughly their existing size, while parking lot 6 would be reduced in size;
- Certain smaller existing parking lots would be eliminated, generally in or adjacent to the core area of the campus at locations where future buildings would be constructed;

- Curb parking on many internal campus streets would be eliminated (including El Rancho Drive, Mason Street, Olympic Drive, Pierce Lane, and the auto shop roadway). Curb parking would remain on Stadium Way, including the portion to be realigned with Brahma Drive; and
- Approximately 40 new spaces would be provided at the new maintenance and operations facility.

Under existing conditions, the campus has approximately 4,116 on-site and off-site parking spaces. Of these spaces, approximately 3,845 are located on-site in parking facilities, while approximately 271 are off-campus spaces on surrounding streets.

The 2010 Master Plan Update proposes some minor changes to the future parking supply serving the College. There would be a loss of approximately 32 on-street parking spaces as a result of proposed mitigation measure TR-1 near the intersection of Victory Boulevard and Winnetka Avenue. Therefore, under the 2010 Master Plan Update, 4,084 parking spaces would be available. According to the parking study prepared for the proposed 2010 Master Plan Update, the estimated future supply of parking available to support activities on campus (3,958 spaces) would be adequate to accommodate projected peak parking needs at buildout (2,887 spaces for weekdays and 2,226 spaces for weeknights). Surpluses of about 1,200 (weekday) to 1,800 spaces (weeknight) are projected. (The parking analysis is included in its entirety in Appendix C.)

Because a parking surplus would continue to occur, implementation of the 2010 Master Plan Update would not result in inadequate parking capacity. No impact would occur.

g) Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

No Impact. Implementation of projects included under the 2010 Master Plan Update would consist of new construction and renovation and demolition projects on the campus. The proposed 2010 Master Plan Updates would not conflict with policies that support alternative transportation (e.g., bus turnouts, bicycle racks). The proposed update would maintain the existing roadways on the project site and would not conflict with any policies adopted by the city that address alternative modes of transportation. No impact would occur.

17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The 2002 FEIR found that although increased wastewater flows would occur, the flows would not be significant enough to exceed the wastewater treatment requirements of the Regional Water Quality Control Board. Although a water reclamation facility was proposed in the 2002 Master Plan, it was dependent upon the expansion of City of Los Angeles graywater distribution lines to the campus. Therefore, the 2002 EIR analysis did not include the water reclamation facility in its wastewater calculations.

As indicated in Table 2, FTE enrollment anticipated under 2015 buildout conditions would be greater than existing FTE enrollment estimates. However, FTE enrollment under 2015 buildout conditions would be slightly less than the FTE enrollment estimates under buildout conditions previously analyzed in the 2002 EIR. Additionally, the proposed 2010 Master Plan Update assumes a reduction in impacts because of the removal of student housing and the science public/private partnerships, which were part of the 2002 Master Plan. This reduction in impacts is anticipated to occur even without the development of a water reclamation facility, which was proposed in 2002 but never constructed. Table 18 shows projected wastewater generation based on buildout-year FTE enrollment levels.

Table 18: Projected Wastewater Generation Based on FTE Enrollment

Measured Item	Unit	Wastewater Generation Rate	Wastewater Flow (gallons per day [gpd])
2002 Master Plan EIR 2010 Buildout Year	15,960 students	1.8 gpd/student	28,728
2010 Master Plan Update 2015 Buildout Year	15,500 students	1.8 gpd/student	27,900

Source: ICF Jones & Stokes, 2010.

The proposed 2010 Master Plan Update would follow the “green,” energy-efficient, sustainable design guidelines set forth under the LEED program. Proposed buildings would be LEED certified. In addition, the proposed 2010 Master Plan Update would include a series of campus-wide strategies to improve water conservation. These include strategies that focus on reducing the use of potable water. Other strategies include the use of efficient irrigation, low-maintenance and native plant species, low-flow plumbing fixtures, and automatic sensors. Stormwater management strategies and landscaping recommendations are also included.

Pierce College has already begun following green design guidelines in existing buildings and will apply such elements throughout the proposed 2010 Master Plan Update. High-efficiency wastewater fixtures would be installed on campus during construction and renovation. These fixtures help to decrease the amount of sewage generated on the campus. As such, impacts would be less than previously anticipated and would remain less than significant. Although no significant impacts were anticipated, the mitigation measures prescribed in the 2002 Master Plan will be carried forward as part of the proposed 2010 Master Plan Update. These mitigation measures include the following:

2002 EIR Mitigation Measures

WW-1 Existing campus sewer lines shall be flushed on a regular basis to mitigate negative effects of below-criteria velocity flows, and

WW-2 All new construction and renovation shall include water conservation measures, such as low-flush toilets.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

Less-than-Significant Impact. See the response to impact 16(a). The proposed 2010 Master Plan Update assumes a reduction in associated impacts because of the removal of student housing and the science public/private partnerships, which were part of the 2002 Master Plan. Impacts of the 2015 buildout conditions would be slightly less than the impacts of the buildout conditions analyzed in the 2002 EIR. Additionally, the proposed 2010 Master Plan Update would follow the “green,” energy-efficient, sustainable design guidelines set forth under the LEED program. The College has already begun implementing these design guidelines in existing buildings and will continue to apply such elements throughout the proposed 2010 Master Plan Update. High-efficiency wastewater fixtures would be installed on campus during construction and renovation. These fixtures help to decrease the amount of sewage generated at the College. As such, impacts would be less than previously anticipated and would remain less than significant.

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. The 2002 EIR found that significant impacts would occur at those storms drains that were, at the time, performing inadequately. The area in question is south of Victory Boulevard and west of Mason Street, which would flood during large runoff events. As noted in the 2002 Master Plan's Preliminary Utility Evaluation Report, it was found that improvements and upgrades made as part of the parking lot 7 replacement project would help area storm drains to accommodate any increased storm flows that could have occurred due to development in the academic core of the campus. These improvements, as required by the mitigation measure prescribed in the 2002 Master Plan, would reduce impacts in the Victory Boulevard drainage area. With completion of the parking lot 7 replacement project, it is anticipated that the proposed 2010 Master Plan Update improvements will result in no new impacts related to stormwater drainage facilities. The proposed 2010 Master Plan Update would not increase the amount of development anticipated under the 2002 Master Plan. Finally, the mitigation measure developed for the 2002 Master Plan would be carried forward as part of the proposed 2010 Master Plan Update, and impacts would remain less than significant with mitigation. The mitigation measure is as follows:

SD-1 The area west of Mason Street and south of Victory Boulevard shall be upgraded during development of the specific projects in that area (as was done with parking lot 7) to develop a system that can adequately handle existing and future runoff. Proposed enhancements may include those identified in the Preliminary Utility Evaluation Report.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☒	☐	☐

Less-than-Significant Impact with Mitigation Incorporated. It was found in the 2002 EIR that the projected increase in water consumption would not exceed LADWP's available supplies. However, potential issues were raised about possible pressure loss due to pipe friction, which could decrease the amount of water the system would provide to a level below the anticipated demand of the College. However mitigation measures were presented as part of the 2002 EIR to reduce these impacts. These mitigation measures will be carried forward as part of the proposed 2010 Master Plan Update. Finally, as noted earlier, student housing is no longer proposed and the impacts of the 2015 buildout conditions would not be greater than the impacts of the buildout conditions analyzed in the 2002 EIR. Therefore, water demand would not be greater than the demand originally anticipated under the 2002 Master Plan.

Pierce College has already begun implementing "green" design elements based on the national LEED guidelines pertaining to sustainable standards for existing buildings and will continue to apply these design elements throughout the master plan process. The College intends to plant water-efficient landscaping, install high-efficiency fixtures, and possibly use gray water for non-potable applications. These strategies will help to reduce demands on the water supply and the system. However, due to the potential for impacts related to pressure loss, mitigation measures are carried forward from the 2002 EIR. These are as follows:

2002 EIR Mitigation Measures

WS-1 A 12-inch pipeline shall be installed from the main campus along El Rancho Drive to a new 12-inch service line off of De Soto Avenue or an 8-inch service line shall be installed at Victory Boulevard along the east edge of parking lot 7, a 12-inch main line shall be installed along the east edge of parking lot 7, and either a new 12-inch service line off of De Soto Avenue or a new main line along El Rancho Drive from the main campus shall be installed to provide adequate fire service to the proposed equestrian education center; and

Issues	Potentially Significant	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact

WS-2 Three new 12-inch distribution lines shall be installed to convey fire flows to the vicinity of the proposed new facilities while providing tie points to the existing distribution piping. (College to confirm whether WS-2 has been implemented already.)

e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Less-than-Significant Impact. See response to impact 16(a). As stated above, the proposed 2010 Master Plan Update would reduce impacts because of the removal of student housing and the science public/private partnerships, which were part of the 2002 Master Plan. Additionally, the proposed 2010 Master Plan Update would follow the “green,” energy-efficient, sustainable design guidelines set forth under the LEED program. Pierce College has already begun implementing these design guidelines in existing buildings and would continue to apply such elements throughout the implementation process for the proposed 2010 Master Plan Update. High-efficiency wastewater fixtures would be installed on campus during construction and renovation. These fixtures would help to decrease the amount of sewage generated at the College. As such, impacts would be less than previously anticipated and would remain less than significant.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

Less-than-Significant Impact. The 2002 Master Plan found that the projected increases in solid waste that could occur under the plan would be negligible and that local area landfills would have adequate capacity to meet project demands. The 2002 EIR assumed an FTE enrollment of 15,960 under the 2010 buildout year. Currently, a 15,500 FTE enrollment is assumed for the buildout year of 2015. This would result in a decrease (by 460) in FTE enrollment under the proposed 2010 Master Plan Update. Additionally, the proposed 2010 Master Plan Update would not include the previously planned student housing or the science public/private partnerships; these changes would result in solid waste reductions. As stated previously, the projects included under the proposed 2010 Master Plan Update would follow “green,” energy-efficient, sustainable design guidelines as set forth under the LEED program. The College has, in fact, already started implementing these guidelines in existing buildings and has also implemented waste diversion practices. When appropriate, existing building equipment will be reused in the new and renovated facilities. A construction waste management plan will be considered to recycle or salvage construction, demolition, and land clearing waste. As such, impacts will remain less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

No Impact. The 2002 EIR found no impacts related to complying with federal, state, and local statutes or regulations pertaining to solid waste. The College consistently diverts its solid waste (above the required 50% diversion rate) and will continue to do so throughout the master plan implementation process. Additionally, the proposed 2010 Master Plan Update would follow “green,” energy-efficient, sustainable design guidelines as set forth under the LEED program. The College has, in fact, already started implementing these guidelines in existing buildings and has also implemented waste diversion practices. When appropriate, existing building equipment will be reused in the new and renovated facilities. Finally, a construction waste management plan would be considered to recycle or salvage construction, demolition, and land clearing waste. As such, there would be no new impacts.

Issues	Potentially Significant	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
18. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐

Less-than-Significant Impact. The analysis in this addendum concluded that no new unavoidable significant impacts on the environment would occur. Applicable 2002 mitigation measures, in addition to new mitigation measures proposed for air quality, biological resources, geology, hazardous materials, cultural resources, hydrology, noise, public services, transportation, and utilities, would be adequate to mitigate any potential impacts related to the proposed 2010 Master Plan Update. Mitigation measures would reduce impacts to less-than-significant levels. In addition, most of the impacts from the 2010 Master Plan Update projects would be construction related and therefore temporary and short term. Once constructed, the buildings would be more energy efficient than the existing buildings on campus, including the ones they would replace, resulting in long-term benefits in terms of energy conservation and efficiency. Therefore, implementation of the proposed 2010 Master Plan Update is not anticipated to degrade the quality of the environment. This would be considered a less-than-significant impact.

b) Does the project have impacts that are individually limited but cumulatively considerable? ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐

Less-than-Significant Impact. A significant impact may occur if the proposed 2010 Master Plan Update, in conjunction with related projects, would result in impacts that are less than significant when viewed separately but significant when viewed together. All potential impacts of the proposed 2010 Master Plan Update have been identified, and mitigation measures have been prescribed, where applicable, to reduce potential impacts to less-than-significant levels. None of these potential impacts is considered cumulatively considerable, and implementation of the mitigation measures identified in this addendum would ensure that no cumulative impacts would occur as a result of the proposed 2010 Master Plan Update.

Although related projects are proposed in the project vicinity, the cumulative impacts to which the proposed 2010 Master Plan Update would contribute would be less than significant, as discussed in the previous sections. The 2002 FEIR analyzed a total 45 related projects while 32 related projects are identified for the 2010 Master Plan Update. The 2010 related projects can be found in Table 5 of the Traffic Study provided as Appendix C.

Similar to the 2002 related projects, the 2010 related projects would include mostly commercial, retail and residential projects. Some institutional (school) uses are also proposed. In 2002, seven residential, seven institutional, two transportation, and one light industrial projects were proposed in the surrounding area. The remaining 27 were commercial, retail, or mixed-use projects. Of the 32 related projects included in the 2010 analysis, ten are residential, six are institutional and the remaining 16 are commercial, retail or mixed use. Four of the projects included in the 2010 analysis are the same as included under the 2002 FEIR. (These include residential uses at 6000 De Soto Ave., retail uses at 5960 Canoga Ave., fast food uses at 20956 Ventura Blvd., and institutional uses at 22555 Oxnard St.)

Issues	Potentially Significant	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact

All potential impacts of the proposed 2010 Master Plan Update would be reduced to less-than-significant levels with implementation of the mitigation measures provided in the previous sections. None of these potential impacts is considered cumulatively considerable, and implementation of the mitigation measures identified in this addendum would ensure that no significant cumulative impacts would occur as a result of the proposed 2010 Master Plan Update. Cumulative impacts would be considered less than or similar to impacts determined in 2002.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

No Impact. All potential impacts of the proposed 2010 Master Plan Update have been identified, and mitigation measures have been prescribed, where applicable, to reduce all potential impacts to less-than-significant levels. Upon implementation of mitigation measures, the proposed 2010 Master Plan Update would not have the potential to result in substantial adverse impacts on human beings either directly or indirectly.

d) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☐	☐	☐	☒

No Impact. The revised project would result in long-term benefits by designing the buildings and campus improvements to current codes and sustainability standards. Additionally, with the greater emphasis on reduction of GHG emissions at the District level, more sustainable practices and features are included in the 2010 Master Plan Update than what existed in the 2002 Master Plan. The revised project is also more in line with the enrollment trends at the College and better responds to the needs of the College curriculum. The revised project would result in short-term disruptions due to construction activities on the campus, but in the long-term it would result in construction of energy-efficient and state-of-the-art facilities. Therefore, the 2010 Master Plan Update would not result in any long-term environmental harm at the cost of short-term gains.

The revised project would not result in new significant impacts or exacerbate previously identified significant impacts. Mitigation measures included in the 2002 EIR in addition to added proposed mitigation measures would reduce all potentially significant impacts to less than significant levels. None of the conditions described in Section 15162 requiring the preparation of a subsequent EIR have occurred. Therefore, this addendum is considered to be the appropriate environmental document for the proposed 2010 Master Plan Update. The revised project would not achieve short-term environmental goals to the disadvantage of long-term environmental goals.

REFERENCES

All of the following references are incorporated herewith as though set forth in full. The references are available for review by contacting Shilpa Trisal, ICF Jones & Stokes, Inc.

California Air Resources Board. 2008. *Climate Change Scoping Plan.* December.

California Climate Action Team. 2006. *Final 2006 Climate Action Team Report to the Governor and Legislature.* March.

California Department of Transportation. 1997. *Transportation Project-level Carbon Monoxide Protocol.*

California Division of Mines and Geology. 1998. *Seismic Hazard Zone Map, Canoga Quadrangle.*

California Division of Mines and Geology. 2001. *Seismic Hazard Zone Report for the Canoga 7.5-minute Quadrangle, Los Angeles County, California.* Seismic Hazard Zone Report 007.

City of Los Angeles. 2004. *Zoning Information and Map Access System.*

City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide*.

City of Los Angeles. n.d. *Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan.* Department of City Planning. Available: <http://cityplanning.lacity.org/complan/pdf/cpksumlu.pdf>. Accessed: June 28, 2009.

Environmental Data Resources, Inc. 2002a. *Radius Map with GeoCheck, Pierce College, Woodland Hills, CA.* March 14.

Environmental Data Resources, Inc. 2002b. *Historical Topographic Map Report, Pierce College, Woodland Hills, CA*. March 15.

Environmental Data Resources, Inc. 2002c. *Aerial Photography Print Service (1928, 1952, 1965, 1976, 1989, and 1994), Pierce College, Woodland Hills, CA.* March 18

Federal Transit Administration. 2006. *Transit Noise and Vibration Assessment.* Report No. FTA-VA-1003-06. May.

Fehr and Peers. 2010. *Traffic and Parking Study for the Pierce College Facilities Master Plan Update Environmental Impact Report.* January.

Governor's Office of Planning and Research. 2008. *Technical Advisory on CEQA and Climate Change.* June.

Kaku Associates Inc. 2000. *Draft Transportation Technical Report for the Warner Center Specific Plan Transportation Improvement and Management Program Restudy and Supplemental Environmental Impact Report.* October.

Leymaster Environmental Consulting, LLC. 2005. *Supplemental Soil Sampling Report*. October 21.

Los Angeles County. 1990. *Los Angeles County General Plan*, Safety Element.

Los Angeles Pierce College. n.d. *About Pierce College*. Available: <http://www.piercecollege.edu/pierce_about.asp>. Accessed: June 25, 2009.

Myra L. Frank & Associates. 2002. *Los Angeles Pierce College Facilities Master Plan Final Environmental Impact Report*.

Psomas. 2002. *Draft Preliminary Utility Evaluation for Pierce College Los Angeles Community College District.* February 11.

South Coast Air Quality Management District. 1993. *CEQA Air Quality Handbook.*

South Coast Air Quality Management District. 2003. *Localized Significance Threshold Methodology for CEQA Evaluations.*

Southern California Association of Governments. 1996. *Regional Comprehensive Plan and Guide.* March.

Winzler & Kelley Consulting Engineers. 2003. Hazardous materials survey reports (for various on-campus structures).

Personal Communication

Abu-Ghazaleh, Nabil. Staff member. Los Angeles Pierce College. November 16 and 30 and December 23, 2009—email communication.

Taylor, Scott, Swinerton Consulting. August 2009—meeting.

Tsao, David, Swinerton Consulting. May 2010—e-mail communication.

LIST OF PREPARERS

Lead Agency

Los Angeles Community College District

ICF International

Lee Lisecki, Project Director

Shilpa Trisal, Project Manager

Tamseel Mir, Planner

Lynze Milne, Planner

Jim Wilder, Noise

Victor Ortiz, Air Quality

Erin Schorr, Biological Resources

Carson Anderson, Historic Resources

Namrata Belliappa, GIS

John Mathias, Editor

Consultant

Fehr and Peers, Traffic

APPENDICES

APPENDIX A

AESTHETIC RESOURCES PHOTOGRAPHIC DOCUMENTATION

PHOTO 1: SWEEPING VIEW LOOKING NORTHWEST TOWARDS SANTA SUSANA MOUNTAINS (from Equestrian Center)

Source: ICF Jones & Stokes. August 2009

PHOTO 2: SOUTH-FACING VIEW TOWARD CHALK HILLS (from El Rancho Road)

Source: ICF Jones & Stokes. August 2009

PHOTO 3: VIEW NORTHWEST FROM CHALK HILLS ACROSS THE CAMPUS (the Santa Susana Mountains Appearing as a Backdrop)

Source: ICF Jones & Stokes. August 2009

PHOTO 4: VIEW NORTHWEST FROM CHALK HILLS IN THE FAR SOUTHWEST CORNER OF THE CAMPUS (Canyon de Lana)

Source: ICF Jones & Stokes. August 2009

PHOTO 5: VIEW NORTHWEST FROM CHALK HILLS

Source: ICF Jones & Stokes. August 2009

PHOTO 6: VIEW SOUTHWEST FROM EQUESTRIAN CENTER (Shows Close-in Development Blocking Some Views From/Into the Campus)

Source: ICF Jones & Stokes. July 2009

APPENDIX B

AIR QUALITY DATA SHEETS

CONSERVATIVE ESTIMATE OF UNMITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO$_X$	CO	SO$_X$	PM$_{10}$[a]	PM$_{2.5}$[a]	CO$_2$
Demolition Emissions							
On-site Total	1.14	7.68	4.68	-	20.67	4.72	700.30
Fugitive Dust	-	-	-	-	20.08	4.18	-
Off-Road Diesel	1.14	7.68	4.68	-	0.59	0.54	700.30
Off-site Total	1.62	20.74	8.99	0.03	0.95	0.81	2,938.22
On-Road Diesel	1.59	20.68	7.94	0.03	0.94	0.81	2,813.83
Worker Trips	0.03	0.06	1.05	-	0.01	-	124.39
Grand Total	**2.76**	**28.42**	**13.67**	**0.03**	**21.62**	**5.53**	**3,638.52**
Site Grading Emissions							
On-site Total	3.00	24.99	12.46	-	11.03	3.19	2,247.32
Fugitive Dust	-	-	-	-	9.78	2.04	-
Off-Road Diesel	3.00	24.99	12.46	-	1.25	1.15	2,247.32
Off-site Total	0.03	0.06	1.05	-	0.01	-	124.39
On-Road Diesel	-	-	-	-	-	-	-
Worker Trip	0.03	0.06	1.05	-	0.01	-	124.39
Grand Total	**3.03**	**25.05**	**13.51**	**-**	**11.04**	**3.19**	**2,371.71**
Building Erection/Finishing Emissions							
On-site Total	11.58	8.51	4.68	-	0.54	0.50	893.39
Off-Road Diesel, Bldg Cnst	1.11	8.51	4.68	-	0.54	0.50	893.39
Arch Coatings Off-Gas	10.47	-	-	-	-	-	-
Asphalt Off-Gas	-	-	-	-	-	-	-
Off-Road Diesel, Asphalt	-	-	-	-	-	-	-
Off-site Total	0.12	0.59	3.15	-	0.05	0.03	445.55
Worker Trips, Bldg Cnst	0.08	0.16	2.68	-	0.03	0.01	342.26
Vendor Trips, Bldg Cnst	0.04	0.42	0.35	-	0.02	0.02	88.10
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	-	-	-	-	-	-	-
Worker Trips, Asphalt	-	0.01	0.12	-	-	-	15.19
Grand Total	**11.70**	**9.10**	**7.83**	**-**	**0.59**	**0.53**	**1,338.94**
On-site Emissions Totals							
Demolition	1.1	7.7	4.7	-	20.7	4.7	700.3
Site Grading	3.0	25.0	12.5	-	11.0	3.2	2,247.3
Building Erection/Finishing	11.6	8.5	4.7	-	0.5	0.5	893.4
Maximum On-site Emissions	**12**	**25**	**12**	**-**	**21**	**5**	**2,247**
Localized Significance Threshold[b]	--	212	1,510	--	35	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Regional Emissions Totals							
Demolition	2.8	28.4	13.7	0.0	21.6	5.5	3,638.5
Site Grading	3.0	25.1	13.5	-	11.0	3.2	2,371.7
Building Erection/Finishing	11.7	9.1	7.8	-	0.6	0.5	1,338.9
Maximum Regional Emissions	**12**	**28**	**14**	**0**	**22**	**6**	**3,639**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are attached.

[a] Fugitive PM$_{10}$ and PM$_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 6. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (50 meters), and project area that could be under construction on any given day (five acres).

CONSERVATIVE ESTIMATE OF MITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	0.27	3.45	4.68	-	20.35	4.43	700.30
Fugitive Dust	-	-	-	-	20.08	4.18	-
Off-Road Diesel	0.27	3.45	4.68	-	0.27	0.25	700.30
Off-site Total	1.62	20.74	8.99	0.03	0.95	0.81	2,938.22
On-Road Diesel	1.59	20.68	7.94	0.03	0.94	0.81	2,813.83
Worker Trips	0.03	0.06	1.05	-	0.01	-	124.39
Grand Total	**1.89**	**24.19**	**13.67**	**0.03**	**21.30**	**5.24**	**3,638.52**
Site Grading Emissions							
On-site Total	0.71	11.27	12.46	-	10.34	2.55	2,247.32
Fugitive Dust	-	-	-	-	9.78	2.04	-
Off-Road Diesel	0.71	11.27	12.46	-	0.56	0.51	2,247.32
Off-site Total	0.03	0.06	1.05	-	0.01	-	124.39
On-Road Diesel	-	-	-	-	-	-	-
Worker Trip	0.03	0.06	1.05	-	0.01	-	124.39
Grand Total	**0.74**	**11.33**	**13.51**	**-**	**10.35**	**2.55**	**2,371.71**
Building Erection/Finishing Emissions							
On-site Total	10.73	3.83	4.68	-	0.26	0.24	893.39
Off-Road Diesel, Bldg Cnst	0.26	3.83	4.68	-	0.26	0.24	893.39
Arch Coatings Off-Gas	10.47	-	-	-	-	-	-
Asphalt Off-Gas	-	-	-	-	-	-	-
Off-Road Diesel, Asphalt	-	-	-	-	-	-	-
Off-site Total	0.12	0.59	3.15	-	0.05	0.03	445.55
Worker Trips, Bldg Cnst	0.08	0.16	2.68	-	0.03	0.01	342.26
Vendor Trips, Bldg Cnst	0.04	0.42	0.35	-	0.02	0.02	88.10
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	-	-	-	-	-	-	-
Worker Trips, Asphalt	-	0.01	0.12	-	-	-	15.19
Grand Total	**10.85**	**4.42**	**7.83**	**-**	**0.31**	**0.27**	**1,338.94**
On-site Emissions Totals							
Demolition	0.3	3.4	4.7	-	20.3	4.4	700.3
Site Grading	0.7	11.3	12.5	-	10.3	2.6	2,247.3
Building Erection/Finishing	10.7	3.8	4.7	-	0.3	0.2	893.4
Maximum On-site Emissions	**11**	**11**	**12**	**-**	**20**	**4**	**2,247**
Localized Significance Threshold[b]	--	212	1,510	--	35	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Regional Emissions Totals							
Demolition	1.9	24.2	13.7	0.0	21.3	5.2	3,638.5
Site Grading	0.7	11.3	13.5	-	10.3	2.6	2,371.7
Building Erection/Finishing	10.9	4.4	7.8	-	0.3	0.3	1,338.9
Maximum Regional Emissions	**11**	**24**	**14**	**0**	**21**	**5**	**3,639**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are attached.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 6. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (50 meters), and project area that could be under construction on any given day (five acres).

Pierce College

Regional Emission Calculations (lbs/day)

	ROC	NOx	CO	SOx	PM10	PM2.5
Existing Condition						
Mobile	0.0	0.0	0.0	0.0	0.0	0.0
Area	0.0	0.0	0.0	0.0	0.0	0.0
Stationary	0.0	0.0	0.0	0.0	0.0	0.0
Total Existing	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Project Condition						
Mobile	23.0	32.0	286.0	0.0	65.0	13.0
Area	2.0	3.0	4.0	0.0	0.0	0.0
Stationary	0.1	11.0	1.9	1.1	0.4	0.3
Total Project	**25.1**	**46.0**	**291.9**	**1.1**	**65.4**	**13.4**
Net Project Emissions						
Net Mobile	23.0	32.0	286.0	0.0	65.0	13.0
Net Area	2.0	3.0	4.0	0.0	0.0	0.0
Net Stationary	0.1	11.0	1.9	1.1	0.4	0.3
Total Net	25.1	46.0	291.9	1.1	65.4	13.4
SCAQMD Significance Threshold	55	55	550	150	150	55
Difference	**(30)**	**(9)**	**(258)**	**(149)**	**(85)**	**(42)**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Electricity Usage

		Electricity			Emission Factors (lbs/MWh) [b]				
		Usage Rate [a]	Total Electricity Usage		CO	ROC	NOx	PM10	SOx
Land Use	1,000 Sqft	(kWh\sq.ft\yr)	(KWh\year)	(MWh\Day)	0.2	0.01	1.15	0.04	0.12
Existing					**Emissions from Electricity Consumption (lbs/day)**				
Office	0.0	12.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Retail	0.0	13.55	0	0.000	0.000	0.000	0.000	0.000	0.000
Hotel/Motel	0.0	9.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Restaurant	0.0	47.45	0	0.000	0.000	0.000	0.000	0.000	0.000
Food Store	0.0	53.30	0	0.000	0.000	0.000	0.000	0.000	0.000
Warehouse	0.0	4.35	0	0.000	0.000	0.000	0.000	0.000	0.000
College/University	0.0	11.55	0	0.000	0.000	0.000	0.000	0.000	0.000
High School	0.0	10.50	0	0.000	0.000	0.000	0.000	0.000	0.000
Elementary School	0.0	5.90	0	0.000	0.000	0.000	0.000	0.000	0.000
Hospital	0.0	21.70	0	0.000	0.000	0.000	0.000	0.000	0.000
Miscellaneous	0.0	10.50	0	0.000	0.000	0.000	0.000	0.000	0.000
Residential (DU)	0.0	5,627	0	0.000	0.000	0.000	0.000	0.000	0.000
Total Existing			**0**	**0.000**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Project									
Office	0.0	12.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Retail	0.0	13.55	0	0.000	0.000	0.000	0.000	0.000	0.000
Hotel/Motel	0.0	9.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Restaurant	0.0	47.45	0	0.000	0.000	0.000	0.000	0.000	0.000
Food Store	0.0	53.3	0	0.000	0.000	0.000	0.000	0.000	0.000
Warehouse	0.0	4.35	0	0.000	0.000	0.000	0.000	0.000	0.000
College/University	301.0	11.55	3,476,550	9.525	1.905	0.095	10.954	0.381	1.143
High School	0.0	10.5	0	0.000	0.000	0.000	0.000	0.000	0.000
Elementary School	0.0	5.9	0	0.000	0.000	0.000	0.000	0.000	0.000
Hospital	0.0	21.7	0	0.000	0.000	0.000	0.000	0.000	0.000
Miscellaneous	0.0	10.5	0	0.000	0.000	0.000	0.000	0.000	0.000
Residential (DU)	0.0	5,627	0	0.000	0.000	0.000	0.000	0.000	0.000
Total Project			**3,476,550**	**9.525**	**1.91**	**0.10**	**10.95**	**0.38**	**1.14**
Net Emissions From Electricity Usage					**1.91**	**0.10**	**10.95**	**0.38**	**1.14**

Summary of Stationary Emissions

	CO	ROC	NOx	PM10	SOx
Total Existing Emissions (lbs/day)	0.00	0.00	0.00	0.00	0.00
Total Project Emissions (lbs/day)	1.91	0.10	10.95	0.38	1.14
Total Net Emissions (lbs/day)	**1.91**	**0.10**	**10.95**	**0.38**	**1.14**

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[b] Emission Factors from Table A9-11-B, CEQA Air Quality Handbook, SCAQMD, 1993.

[c] Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[d] Emission Factors from Table A9-12-B, CEQA Air Quality Handbook, SCAQMD, 1993.

[e] The emission factors for NOx in lbs per million cuft of natural gas are 120 for nonresidential uses and 80 for residential uses.

Pierce College

Regional Greenhouse Gas Emission Calculations (lbs/day)

	CO_2	CH_4	N_2O	CO_2e
Existing Condition				
Mobile	-	-	-	-
Area	-	-	-	-
Stationary	-	-	-	-
Total Existing	**-**	**-**	**-**	**-**
Project Condition				
Mobile	38,881.00	8.45	8.11	41,572.76
Area	5,779.00	0.64	0.01	5,795.88
Stationary	13,442.08	0.71	0.05	13,471.15
Total Project	**58,102.09**	**9.80**	**8.17**	**60,839.79**
Net Project Emissions				
Net Mobile	38,881.00	8.45	8.11	41,572.76
Net Area	5,779.00	0.64	0.01	5,795.88
Net Stationary	13,442.08	0.71	0.05	13,471.15
Total Net	58,102.09	9.80	8.17	60,839.79
SCAQMD Significance Threshold	--	--	--	--
Difference	**--**	**--**	**--**	**--**
Significant?	**No**	**No**	**No**	**No**

Pierce College

Stationary Sources

Electricity Usage

		Electricity Usage Rate [a]	Total Electricity Usage		Emission Factors (lbs/MWh) [b]			
					CO_2	CH_4	N_2O	CO_2e
Land Use	1,000 Sqft	(kWh\sq.ft\yr)	(KWh\year)	(MWh\day)	804.54	0.0067	0.0037	21/310[c]
Existing					Emissions from Electricity (lbs/day)			
Office	0.0	12.95	-	-	-	-	-	-
Retail	0.0	13.55	-	-	-	-	-	-
Hotel/Motel	0.0	9.95	-	-	-	-	-	-
Restaurant	0.0	47.45	-	-	-	-	-	-
Food Store	0.0	53.30	-	-	-	-	-	-
Warehouse	0.0	4.35	-	-	-	-	-	-
College/University	0.0	11.55	-	-	-	-	-	-
High School	0.0	10.50	-	-	-	-	-	-
Elementary School	0.0	5.90	-	-	-	-	-	-
Hospital	0.0	21.70	-	-	-	-	-	-
Miscellaneous	0.0	10.50	-	-	-	-	-	-
Residential (DU)	0.0	5,627	-	-	-	-	-	-
	Total Existing		**-**	**-**	**-**	**-**	**-**	**-**
Project								
Office	0.0	12.95	-	-	-	-	-	-
Retail	0.0	13.55	-	-	-	-	-	-
Hotel/Motel	0.0	9.95	-	-	-	-	-	-
Restaurant	0.0	47.45	-	-	-	-	-	-
Food Store	0.0	53.3	-	-	-	-	-	-
Warehouse	0.0	4.35	-	-	-	-	-	-
College/University	301.0	11.55	3,476,550.00	9.52	7,663.08	0.06	0.04	7,675.27
High School	0.0	10.5	-	-	-	-	-	-
Elementary School	0.0	5.9	-	-	-	-	-	-
Hospital	0.0	21.7	-	-	-	-	-	-
Miscellaneous	0.0	10.5	-	-	-	-	-	-
Residential (DU)	0.0	5,627	-	-	-	-	-	-
	Total Project		**3,476,550.00**	**9.52**	**7,663.08**	**0.06**	**0.04**	**7,675.27**
	Net Emissions From Electricity Usage				**7,663.08**	**0.06**	**0.04**	**7,675.27**

Area Sources

Natural Gas Usage

		Natural Gas Usage Rate [d]	Total Natural Gas Usage		Emission Factors (kg/MMBtu) [e]			
					CO_2	CH_4	N_2O	CO_2e
Land Use	1,000 Sqft	(cu.ft\sq.ft\mo)	(cu.ft\mo)	(Btu/day)[f]	53.05	0.0059	0.0001	21/310[c]
Existing					Emissions from Natural Gas (lbs/day)			
Office	0.0	2.0	**-**	**-**	-	-	-	-
Retail	0.0	2.9	**-**	**-**	-	-	-	-
Hotel/Motel	0.0	4.8	**-**	**-**	-	-	-	-
Restaurant	0.0	4.8	**-**	**-**	-	-	-	-
Food Store	0.0	2.9	**-**	**-**	-	-	-	-
Warehouse	0.0	2.0	**-**	**-**	-	-	-	-
College/University	0.0	4.8	**-**	**-**	-	-	-	-
High School	0.0	2.9	**-**	**-**	-	-	-	-
Elementary School	0.0	2.0	**-**	**-**	-	-	-	-
Hospital	0.0	4.8	**-**	**-**	-	-	-	-
Miscellaneous	0.0	2.9	**-**	**-**	-	-	-	-
Residential (Single Family DU)	0.0	6,665	**-**	**-**	-	-	-	-
Residential (Multi-Family DU)	0.0	4,012	**-**	**-**	-	-	-	-
	Total Existing		**-**	**-**	**-**	**-**	**-**	**-**
Project								
Office	0.0	2.0	**-**	**-**	-	-	-	-
Retail	0.0	2.9	**-**	**-**	-	-	-	-
Hotel/Motel	0.0	4.8	**-**	**-**	-	-	-	-
Restaurant	0.0	4.8	**-**	**-**	-	-	-	-
Food Store	0.0	2.9	**-**	**-**	-	-	-	-
Warehouse	0.0	2.0	**-**	**-**	-	-	-	-
College/University	0.0	4.8	**1,444,800.00**	**49,412,160.00**	5,779.00	0.64	0.01	5,795.88
High School	0.0	2.9	**-**	**-**	-	-	-	-
Elementary School	0.0	2.0	**-**	**-**	-	-	-	-
Hospital	0.0	4.8	**-**	**-**	-	-	-	-
Miscellaneous	0.0	2.9	**-**	**-**	-	-	-	-
Residential (Single Family DU)	0.0	6,665	**-**	**-**	-	-	-	-
Residential (Multi-Family DU)	0.0	4,012	**-**	**-**	-	-	-	-
	Total Project		**1,444,800.00**	**49,412,160.00**	**5,779.00**	**0.64**	**0.01**	**5,795.88**
	Net Emissions From Natural Gas Usage				**5,779.00**	**0.64**	**0.01**	**5,795.88**

Summary of Stationary and Area Source Emissions

	CO_2	CH_4	N_2O	CO_2e
Total Existing Emissions (lbs/day)	-	-	-	-
Total Project Emissions (lbs/day)	########	0.71	0.05	#######
Total Net Emissions (lbs/day)	**########**	**0.71**	**0.05**	**#######**

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[b] Emission Factors from Table C.1 and Table C.2, General Reporting Protocol, California Climate Action Registry, March 2007.

[c] Global Warming Potential is 21 for CH_4 and 310 for N_2O, General Reporting Protocol, California Climate Action Registry, March 2007.

[d] Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[e] Emission Factors from Table C.5 and Table C.6, General Reporting Protocol, California Climate Action Registry, March 2007.

[f] 1 Cubic Foot of natural gas = 1,026 Btu. Energy Information Administration. Available http://www.eia.doe.gov/basics/conversion_basics.html

Mobile Sources

	Percent Type	VMT by Type	Emission Factors [a]		CH$_4$	N$_2$O	CO$_2$e
Vehicle Type	**0**	**0**	**CH$_4$**	**N$_2$O**			**21/310[b]**
Existing					**Emissions from Mobile Sources (lbs/day)**		
Light Auto	0.0	-	0.06	0.08	-	-	-
Light Truck < 3750 lbs	0.0	-	0.11	0.14	-	-	-
Light Truck 3751-5750 lbs	0.0	-	0.11	0.14	-	-	-
Med Truck 5751-8500 lbs	0.0	-	0.18	0.09	-	-	-
Lite-Heavy Truck 8501-10,000 lbs	0.0	-	0.18	0.09	-	-	-
Lite-Heavy Truck 10,001-14,000 lbs	0.0	-	0.18	0.09	-	-	-
Med-Heavy Truck 14,001-33,000 lbs	0.0	-	0.08	0.05	-	-	-
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	-	0.08	0.05	-	-	-
Other Bus	0.0	-	0.08	0.05	-	-	-
Urban Bus	0.0	-	0.08	0.05	-	-	-
Motorcycle	0.0	-	0.42	0.01	-	-	-
School Bus	0.0	-	0.08	0.05	-	-	-
Motor Home	0.0	-	0.11	0.14	-	-	-
Total Existing			**1.75**	**1.03**	**-**	**-**	**-**

	Percent Type	VMT by Type	Emission Factors [a]		CH$_4$	N$_2$O	CO$_2$e
Vehicle Type	**100**	**37701.15**	**CH$_4$**	**N$_2$O**			**21/310[b]**
Project							
Light Auto	51.1	19,265.29	0.06	0.08	2.55	3.40	1,106.84
Light Truck < 3750 lbs	7.3	2,752.18	0.11	0.14	0.67	0.85	277.35
Light Truck 3751-5750 lbs	23.1	8,708.97	0.11	0.14	2.11	2.69	877.63
Med Truck 5751-8500 lbs	10.8	4,071.72	0.18	0.09	1.62	0.81	284.38
Lite-Heavy Truck 8501-10,000 lbs	1.7	640.92	0.18	0.09	0.25	0.13	44.76
Lite-Heavy Truck 10,001-14,000 lbs	0.5	188.51	0.18	0.09	0.07	0.04	13.17
Med-Heavy Truck 14,001-33,000 lbs	0.9	339.31	0.08	0.05	0.06	0.04	12.85
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	226.21	0.08	0.05	0.04	0.02	8.57
Other Bus	0.1	37.70	0.08	0.05	0.01	0.00	1.43
Urban Bus	0.1	37.70	0.08	0.05	0.01	0.00	1.43
Motorcycle	2.8	1,055.63	0.42	0.01	0.98	0.02	27.74
School Bus	0.1	37.70	0.08	0.05	0.01	0.00	1.43
Motor Home	0.9	339.31	0.11	0.14	0.08	0.10	34.19
Total Project			**1.75**	**1.03**	**8.45**	**8.11**	**2,691.76**
Net Emissions From Mobile Sources					**8.45**	**8.11**	**2,691.76**

[a] Emission factors from Table C.4, General Reporting Protocol, California Climate Action Registry, March 2007.

[b] Global Warming Potential is 21 for CH$_4$ and 310 for N$_2$O, General Reporting Protocol, California Climate Action Registry, March 2007.

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Los Angeles\3_Projects_Air Quality\Pierce College\Impact Analysis\Pierce Construction.urb924

Project Name: Pierce Construction

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	3.04	28.42	13.67	0.03	20.18	1.44	21.61	4.21	1.32	5.53	3,638.52
2011 TOTALS (lbs/day unmitigated)	11.70	9.09	7.83	0.00	0.02	0.57	0.59	0.01	0.52	0.53	1,338.94

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 7/15/2010-8/13/2010 Active Days: 22	2.76	**28.42**	**13.67**	**0.03**	**20.18**	**1.44**	**21.61**	**4.21**	**1.32**	**5.53**	**3,638.52**
Demolition 07/15/2010-08/14/2010	2.76	28.42	13.67	0.03	20.18	1.44	21.61	4.21	1.32	5.53	3,638.52
Fugitive Dust	0.00	0.00	0.00	0.00	20.08	0.00	20.08	4.18	0.00	4.18	0.00
Demo Off Road Diesel	1.14	7.68	4.68	0.00	0.00	0.59	0.59	0.00	0.54	0.54	700.30
Demo On Road Diesel	1.59	20.68	7.94	0.03	0.09	0.85	0.94	0.03	0.78	0.81	2,813.83
Demo Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 8/16/2010-9/30/2010 Active Days: 34	3.04	25.05	13.51	0.00	5.99	1.25	7.25	1.25	1.15	2.40	2,371.71
Mass Grading 08/15/2010-09/30/2010	3.04	25.05	13.51	0.00	5.99	1.25	7.25	1.25	1.15	2.40	2,371.71
Mass Grading Dust	0.00	0.00	0.00	0.00	5.99	0.00	5.99	1.25	0.00	1.25	0.00
Mass Grading Off Road Diesel	3.00	24.99	12.46	0.00	0.00	1.25	1.25	0.00	1.15	1.15	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Mass Grading Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 10/1/2010-12/31/2010 Active Days: 66	1.34	9.80	8.08	0.00	0.02	0.60	0.62	0.01	0.56	0.56	1,323.82
Building 10/01/2010-09/30/2011	1.34	9.80	8.08	0.00	0.02	0.60	0.62	0.01	0.56	0.56	1,323.82
Building Off Road Diesel	1.21	9.16	4.81	0.00	0.00	0.58	0.58	0.00	0.53	0.53	893.39
Building Vendor Trips	0.04	0.46	0.38	0.00	0.00	0.02	0.02	0.00	0.02	0.02	88.10
Building Worker Trips	0.09	0.17	2.88	0.00	0.02	0.01	0.03	0.01	0.01	0.01	342.33
Time Slice 1/3/2011-5/31/2011 Active Days: 107	1.23	9.08	7.71	0.00	0.02	0.57	0.59	0.01	0.52	0.53	1,323.74
Building 10/01/2010-09/30/2011	1.23	9.08	7.71	0.00	0.02	0.57	0.59	0.01	0.52	0.53	1,323.74
Building Off Road Diesel	1.11	8.51	4.68	0.00	0.00	0.54	0.54	0.00	0.50	0.50	893.39
Building Vendor Trips	0.04	0.42	0.35	0.00	0.00	0.02	0.02	0.00	0.02	0.02	88.10
Building Worker Trips	0.08	0.16	2.68	0.00	0.02	0.01	0.03	0.01	0.01	0.01	342.26
Time Slice 6/1/2011-9/30/2011 Active Days: 88	11.70	9.09	7.83	0.00	0.02	0.57	0.59	0.01	0.52	0.53	1,338.94
Building 10/01/2010-09/30/2011	1.23	9.08	7.71	0.00	0.02	0.57	0.59	0.01	0.52	0.53	1,323.74
Building Off Road Diesel	1.11	8.51	4.68	0.00	0.00	0.54	0.54	0.00	0.50	0.50	893.39
Building Vendor Trips	0.04	0.42	0.35	0.00	0.00	0.02	0.02	0.00	0.02	0.02	88.10
Building Worker Trips	0.08	0.16	2.68	0.00	0.02	0.01	0.03	0.01	0.01	0.01	342.26
Coating 06/01/2011-09/30/2011	10.47	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.19
Architectural Coating	10.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.19

Phase Assumptions

Phase: Demolition 7/15/2010 - 8/14/2010 - Default Demolition Description

Building Volume Total (cubic feet): 478010

Building Volume Daily (cubic feet): 47800

On Road Truck Travel (VMT): 663.89

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Mass Grading 8/15/2010 - 9/30/2010 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 1.97

Maximum Daily Acreage Disturbed: 0.49

Fugitive Dust Level of Detail: Default

12.22 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 10/1/2010 - 9/30/2011 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 6/1/2011 - 9/30/2011 - Type Your Description Here

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

10/9/2009 01:31:51 PM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Los Angeles\3_Projects_Air Quality\Pierce College\Impact Analysis\Urbemis\Pierce Operations.urb924

Project Name: Pierce College Operations

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	2.09	2.93	4.00	0.00	0.02	0.02	3,499.63

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	20.69	28.69	255.35	0.40	65.12	12.67	38,852.43

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	22.78	31.62	259.35	0.40	65.14	12.69	42,352.06

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.21	2.91	2.45	0.00	0.01	0.01	3,496.82

Hearth - No Summer Emissions							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings	1.76						
TOTALS (lbs/day, unmitigated)	2.09	2.93	4.00	0.00	0.02	0.02	3,499.63

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Junior college (2 yrs)	20.69	28.69	255.35	0.40	65.12	12.67	38,852.43
TOTALS (lbs/day, unmitigated)	20.69	28.69	255.35	0.40	65.12	12.67	38,852.43

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2015 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Junior college (2 yrs)		13.77	1000 sq ft	301.45	4,150.97	37,701.15
					4,150.97	37,701.15

10/9/2009 01:31:51 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.2	99.6	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.2	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.8	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	48.3	51.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Junior college (2 yrs)				5.0	2.5	92.5

Title : Los Angeles County Avg Annual CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/30 10:26:29
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Annual
Area : Los Angeles
****
Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Los Angeles County Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Carbon Monoxide Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	ALL
3	2.599	4.806	4.154	5.713	11.687	5.805	9.211	16.755	7.249	26.271	27.934	18.977	24.611	4.354
4	2.527	4.624	4.036	5.504	11.687	5.805	9.211	16.755	7.249	26.271	27.934	18.977	24.611	4.256
5	2.458	4.454	3.925	5.309	11.687	5.805	9.211	16.755	7.249	26.271	27.934	18.977	24.611	4.164
6	2.393	4.294	3.819	5.128	10.729	5.338	8.493	15.52	6.675	23.978	26.884	17.473	22.587	3.993
7	2.331	4.145	3.718	4.958	9.871	4.918	7.846	14.369	6.158	21.936	25.92	16.122	20.775	3.833
8	2.272	4.006	3.622	4.8	9.101	4.541	7.263	13.298	5.693	20.115	25.034	14.905	19.151	3.685
9	2.216	3.875	3.531	4.651	8.41	4.202	6.737	12.303	5.274	18.488	24.22	13.809	17.692	3.547
10	2.163	3.753	3.444	4.511	7.789	3.896	6.261	11.38	4.896	17.032	23.472	12.82	16.38	3.418
11	2.112	3.639	3.361	4.38	7.229	3.62	5.83	10.527	4.554	15.727	22.786	11.925	15.199	3.298
12	2.063	3.531	3.281	4.256	6.724	3.371	5.44	9.74	4.245	14.555	22.156	11.116	14.135	3.186
13	2.016	3.429	3.205	4.139	6.268	3.146	5.086	9.018	3.965	13.503	21.58	10.383	13.173	3.081
14	1.971	3.334	3.132	4.029	5.855	2.942	4.764	8.358	3.711	12.555	21.053	9.718	12.304	2.983
15	1.928	3.244	3.063	3.925	5.482	2.757	4.472	7.758	3.48	11.701	20.572	9.114	11.518	2.892
16	1.887	3.159	2.996	3.827	5.144	2.589	4.206	7.218	3.271	10.93	20.134	8.566	10.805	2.806
17	1.848	3.079	2.932	3.733	4.837	2.436	3.963	6.734	3.08	10.234	19.738	8.066	10.159	2.726
18	1.81	3.003	2.87	3.645	4.558	2.297	3.742	6.307	2.906	9.604	19.381	7.612	9.573	2.652
19	1.773	2.931	2.811	3.561	4.305	2.171	3.54	5.918	2.748	9.034	19.06	7.197	9.04	2.581
20	1.738	2.862	2.754	3.481	4.075	2.056	3.355	5.709	2.604	8.517	18.775	6.819	8.556	2.519
21	1.704	2.798	2.699	3.405	3.865	1.951	3.187	5.512	2.472	8.049	18.523	6.474	8.115	2.46
22	1.672	2.736	2.646	3.333	3.674	1.856	3.033	5.326	2.352	7.623	18.305	6.159	7.714	2.405
23	1.64	2.678	2.596	3.265	3.501	1.768	2.892	5.151	2.242	7.237	18.118	5.871	7.349	2.352
24	1.61	2.623	2.547	3.199	3.343	1.689	2.763	4.986	2.141	6.886	17.962	5.608	7.017	2.302
25	1.581	2.57	2.5	3.137	3.198	1.616	2.645	4.829	2.049	6.567	17.836	5.368	6.714	2.254
26	1.553	2.52	2.455	3.078	3.067	1.55	2.537	4.682	1.966	6.278	17.741	5.148	6.438	2.209
27	1.525	2.473	2.411	3.021	2.948	1.49	2.438	4.543	1.889	6.015	17.675	4.948	6.188	2.166
28	1.499	2.428	2.369	2.968	2.839	1.435	2.347	4.412	1.819	5.776	17.638	4.765	5.96	2.125
29	1.474	2.385	2.329	2.916	2.741	1.385	2.265	4.289	1.755	5.56	17.631	4.598	5.753	2.087
30	1.45	2.345	2.289	2.868	2.651	1.339	2.189	4.173	1.697	5.364	17.655	4.446	5.566	2.05
31	1.426	2.306	2.252	2.821	2.57	1.298	2.121	4.064	1.645	5.186	17.708	4.307	5.396	2.015
32	1.403	2.269	2.216	2.777	2.497	1.261	2.058	3.963	1.597	5.027	17.793	4.182	5.244	1.982
33	1.381	2.235	2.181	2.735	2.432	1.227	2.002	3.867	1.553	4.883	17.91	4.068	5.106	1.951
34	1.36	2.202	2.147	2.695	2.373	1.197	1.95	3.779	1.514	4.754	18.06	3.966	4.984	1.921
35	1.34	2.171	2.114	2.657	2.321	1.169	1.904	3.696	1.479	4.639	18.245	3.874	4.874	1.893
36	1.32	2.142	2.083	2.621	2.275	1.145	1.862	3.62	1.448	4.538	18.465	3.792	4.778	1.867
37	1.301	2.114	2.053	2.587	2.234	1.124	1.825	3.55	1.42	4.448	18.723	3.719	4.694	1.842
38	1.283	2.089	2.024	2.555	2.2	1.106	1.793	3.485	1.396	4.371	19.02	3.655	4.622	1.819
39	1.265	2.065	1.996	2.525	2.17	1.09	1.764	3.427	1.374	4.305	19.359	3.599	4.56	1.798
40	1.249	2.042	1.97	2.497	2.146	1.076	1.739	3.374	1.356	4.249	19.743	3.552	4.51	1.778

```
           CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                    JUNE 1989 VERSION
                    PAGE   1

               JOB:   DE SOTO AND VICTORY   AMNP
               RUN: Hour 1            (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

          U=    .5 M/S              Z0= 100. CM            ALT=     0. (M)
        BRG= WORST CASE             VD=    .0 CM/S
       CLAS=     7 (G)              VS=    .0 CM/S
       MIXH= 1000. M               AMB=    .0 PPM
      SIGTH=    5. DEGREES        TEMP= 15.6 DEGREE (C)

  II.  LINK VARIABLES

       LINK       *  LINK COORDINATES (M)   *              EF     H     W
    DESCRIPTION   *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
 -----------------*-------------------------*------------------------------
 A. NF            *     7  -450     7  -150 *  AG   1080   2.1     .0  19.5
 B. NA            *     7  -150     7     0 *  AG   1010   3.4     .0  13.5
 C. ND            *     7     0     7   150 *  AG   1031   2.4     .0  13.5
 D. NE            *     7   150     7   450 *  AG   1031   2.1     .0  19.5
 E. SF            *    -7   450    -7   150 *  AG   1658   2.1     .0  19.5
 F. SA            *    -7   150    -7     0 *  AG   1577   3.7     .0  13.5
 G. SD            *    -7     0    -7  -150 *  AG   1952   2.9     .0  13.5
 H. SE            *    -7  -150    -7  -450 *  AG   1952   2.1     .0  19.5
 I. WF            *   450     7   150     7 *  AG   2024   2.1     .0  19.5
 J. WA            *   150     7     0     7 *  AG   1509   3.4     .0  13.5
 K. WD            *     0     7  -150     7 *  AG   1665   2.4     .0  13.5
 L. WE            *  -150     7  -450     7 *  AG   1665   2.1     .0  19.5
 M. EF            *  -450    -7  -150    -7 *  AG   1171   2.1     .0  19.5
 N. EA            *  -150    -7     0    -7 *  AG   1086   3.3     .0  13.5
 O. ED            *     0    -7   150    -7 *  AG   1285   2.3     .0  13.5
 P. EE            *   150    -7   450    -7 *  AG   1285   2.1     .0  19.5
 Q. NL            *     0     0     2  -150 *  AG     70   3.4     .0   9.9
 R. SL            *     0     0    -2   150 *  AG     81   3.4     .0   9.9
 S. WL            *     0     0   150     2 *  AG    515   3.2     .0   9.9
 T. EL            *     0     0  -150    -2 *  AG     85   3.2     .0   9.9

 III.  RECEPTOR LOCATIONS

              *    COORDINATES (M)
   RECEPTOR   *    X      Y      Z
 -------------*---------------------
 1. NE3       *     17     17   1.8
 2. SE3       *     17    -17   1.8
 3. SW3       *    -17    -17   1.8
 4. NW3       *    -17     17   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

              *       * PRED  *                CONC/LINK
              *  BRG  * CONC  *                  (PPM)
  RECEPTOR    * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
--------------*-------*-------*---------------------------------------
 1. NE3       *  187. *    1.2 *   .0   .4   .0   .0   .0   .0   .1   .2
 2. SE3       *  277. *    1.1 *   .0   .2   .0   .0   .0   .0   .2   .0
 3. SW3       *   81. *    1.3 *   .0   .1   .0   .0   .0   .0   .3   .0
 4. NW3       *   97. *    1.4 *   .0   .0   .0   .0   .0   .3   .0   .0

              *                          CONC/LINK
              *                            (PPM)
  RECEPTOR    *   I    J    K    L    M    N    O    P    Q    R    S    T
 -------------*-----------------------------------------------------------
 1. NE3       *  .0   .3   .0   .0   .0   .0   .1   .0   .0   .0   .0   .0
 2. SE3       *  .0   .0   .1   .1   .0   .4   .0   .0   .0   .0   .0   .0
 3. SW3       *  .1   .2   .0   .0   .0   .0   .3   .0   .0   .0   .1   .0
 4. NW3       *  .0   .6   .0   .0   .0   .0   .0   .1   .0   .0   .1   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   DE SOTO AND VICTORY   AMWP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     7  -450     7  -150 *  AG   1101   2.1     .0  19.5
B. NA           *     7  -150     7     0 *  AG   1029   3.4     .0  13.5
C. ND           *     7     0     7   150 *  AG   1035   2.4     .0  13.5
D. NE           *     7   150     7   450 *  AG   1035   2.1     .0  19.5
E. SF           *    -7   450    -7   150 *  AG   1682   2.1     .0  19.5
F. SA           *    -7   150    -7     0 *  AG   1593   3.7     .0  13.5
G. SD           *    -7     0    -7  -150 *  AG   1982   2.9     .0  13.5
H. SE           *    -7  -150    -7  -450 *  AG   1982   2.1     .0  19.5
I. WF           *   450     7   150     7 *  AG   2037   2.1     .0  19.5
J. WA           *   150     7     0     7 *  AG   1519   3.4     .0  13.5
K. WD           *     0     7  -150     7 *  AG   1676   2.4     .0  13.5
L. WE           *  -150     7  -450     7 *  AG   1676   2.1     .0  19.5
M. EF           *  -450    -7  -150    -7 *  AG   1224   2.1     .0  19.5
N. EA           *  -150    -7     0    -7 *  AG   1139   3.3     .0  13.5
O. ED           *     0    -7   150    -7 *  AG   1351   2.3     .0  13.5
P. EE           *   150    -7   450    -7 *  AG   1351   2.1     .0  19.5
Q. NL           *     0     0     2  -150 *  AG     72   3.4     .0   9.9
R. SL           *     0     0    -2   150 *  AG     89   3.4     .0   9.9
S. WL           *     0     0   150     2 *  AG    518   3.2     .0   9.9
T. EL           *     0     0  -150    -2 *  AG     85   3.2     .0   9.9

III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *     17     17   1.8
2. SE3      *     17    -17   1.8
3. SW3      *    -17    -17   1.8
4. NW3      *    -17     17   1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  187. *   1.3 *   .0   .4   .0   .0   .0   .0   .1   .2
2. SE3      *  277. *   1.2 *   .0   .2   .0   .0   .0   .0   .2   .0
3. SW3      *   81. *   1.3 *   .0   .1   .0   .0   .0   .0   .3   .0
4. NW3      *   97. *   1.4 *   .0   .0   .0   .0   .0   .3   .0   .0

            *                          CONC/LINK
            *                            (PPM)
 RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-----------------------------------------------------------
1. NE3      *   .0   .3   .0   .0   .0   .0   .1   .0   .0   .0   .0   .0
2. SE3      *   .0   .0   .1   .1   .0   .5   .0   .0   .0   .0   .0   .0
3. SW3      *   .1   .2   .0   .0   .0   .0   .4   .0   .0   .0   .1   .0
4. NW3      *   .0   .6   .0   .0   .0   .0   .0   .1   .0   .0   .1   .0
```

```
           CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                    JUNE 1989 VERSION
                    PAGE   1

               JOB:   DE SOTO AND VICTORY  PMNP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

          U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
        BRG= WORST CASE            VD=   .0 CM/S
       CLAS=     7 (G)             VS=   .0 CM/S
       MIXH= 1000. M              AMB=   .0 PPM
      SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

  II.  LINK VARIABLES

       LINK      *  LINK COORDINATES (M)   *              EF     H     W
    DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
 ----------------*-------------------------*------------------------------
 A. NF           *     7  -450     7  -150 *  AG   1784   2.1     .0  19.5
 B. NA           *     7  -150     7     0 *  AG   1711   4.2     .0  13.5
 C. ND           *     7     0     7   150 *  AG   1818   2.7     .0  13.5
 D. NE           *     7   150     7   450 *  AG   1818   2.1     .0  19.5
 E. SF           *    -7   450    -7   150 *  AG   1203   2.1     .0  19.5
 F. SA           *    -7   150    -7     0 *  AG   1095   3.7     .0  13.5
 G. SD           *    -7     0    -7  -150 *  AG   1288   2.4     .0  13.5
 H. SE           *    -7  -150    -7  -450 *  AG   1288   2.1     .0  19.5
 I. WF           *   450     7   150     7 *  AG   1507   2.1     .0  19.5
 J. WA           *   150     7     0     7 *  AG   1251   3.2     .0  13.5
 K. WD           *     0     7  -150     7 *  AG   1403   2.3     .0  13.5
 L. WE           *  -150     7  -450     7 *  AG   1403   2.1     .0  19.5
 M. EF           *  -450    -7  -150    -7 *  AG   2482   2.1     .0  19.5
 N. EA           *  -150    -7     0    -7 *  AG   2036   3.7     .0  13.5
 O. ED           *     0    -7   150    -7 *  AG   2467   2.6     .0  13.5
 P. EE           *   150    -7   450    -7 *  AG   2467   2.1     .0  19.5
 Q. NL           *     0     0     2  -150 *  AG     73   3.4     .0   9.9
 R. SL           *     0     0    -2   150 *  AG    108   3.4     .0   9.9
 S. WL           *     0     0   150     2 *  AG    256   3.1     .0   9.9
 T. EL           *     0     0  -150    -2 *  AG    446   3.1     .0   9.9

 III.  RECEPTOR LOCATIONS

             *    COORDINATES (M)
   RECEPTOR  *    X      Y      Z
 ------------*---------------------
 1. NE3      *     17     17   1.8
 2. SE3      *     17    -17   1.8
 3. SW3      *    -17    -17   1.8
 4. NW3      *    -17     17   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

             *       * PRED  *                CONC/LINK
             *  BRG  * CONC  *                  (PPM)
  RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
-------------*-------*-------*----------------------------------------
 1. NE3      *  187. *   1.6 *   .0   .8   .0   .0   .0   .0   .0   .1
 2. SE3      *  277. *   1.7 *   .0   .4   .0   .0   .0   .0   .1   .0
 3. SW3      *   83. *   1.5 *   .0   .2   .0   .0   .0   .0   .2   .0
 4. NW3      *   97. *   1.3 *   .0   .0   .2   .0   .0   .2   .0   .0

             *                          CONC/LINK
             *                            (PPM)
  RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
 ------------*------------------------------------------------------------
 1. NE3      *   .0   .2   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
 2. SE3      *   .0   .0   .0   .1   .0   .8   .0   .0   .0   .0   .0   .0
 3. SW3      *   .1   .1   .0   .0   .0   .0   .7   .0   .0   .0   .0   .0
 4. NW3      *   .0   .5   .0   .0   .0   .0   .1   .2   .0   .0   .0   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   DE SOTO AND VICTORY   PMWP
              RUN: Hour 1          (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
      BRG= WORST CASE            VD=   .0 CM/S
     CLAS=     7 (G)             VS=   .0 CM/S
     MIXH= 1000. M              AMB=   .0 PPM
    SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

     LINK      *  LINK COORDINATES (M)   *              EF     H     W
  DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
---------------*-------------------------*------------------------------
A. NF          *     7  -450     7  -150 *  AG   1804   2.1     .0  19.5
B. NA          *     7  -150     7     0 *  AG   1724   4.2     .0  13.5
C. ND          *     7     0     7   150 *  AG   1833   2.7     .0  13.5
D. NE          *     7   150     7   450 *  AG   1833   2.1     .0  19.5
E. SF          *    -7   450    -7   150 *  AG   1213   2.1     .0  19.5
F. SA          *    -7   150    -7     0 *  AG   1102   3.7     .0  13.5
G. SD          *    -7     0    -7  -150 *  AG   1314   2.4     .0  13.5
H. SE          *    -7  -150    -7  -450 *  AG   1314   2.1     .0  19.5
I. WF          *   450     7   150     7 *  AG   1550   2.1     .0  19.5
J. WA          *   150     7     0     7 *  AG   1279   3.2     .0  13.5
K. WD          *     0     7  -150     7 *  AG   1433   2.3     .0  13.5
L. WE          *  -150     7  -450     7 *  AG   1433   2.1     .0  19.5
M. EF          *  -450    -7  -150    -7 *  AG   2508   2.1     .0  19.5
N. EA          *  -150    -7     0    -7 *  AG   2062   3.7     .0  13.5
O. ED          *     0    -7   150    -7 *  AG   2495   2.6     .0  13.5
P. EE          *   150    -7   450    -7 *  AG   2495   2.1     .0  19.5
Q. NL          *     0     0     2  -150 *  AG     80   3.4     .0   9.9
R. SL          *     0     0    -2   150 *  AG    111   3.4     .0   9.9
S. WL          *     0     0   150     2 *  AG    271   3.1     .0   9.9
T. EL          *     0     0  -150    -2 *  AG    446   3.1     .0   9.9

III.  RECEPTOR LOCATIONS

           *    COORDINATES (M)
  RECEPTOR *    X      Y      Z
-----------*--------------------
1. NE3     *     17     17   1.8
2. SE3     *     17    -17   1.8
3. SW3     *    -17    -17   1.8
4. NW3     *    -17     17   1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

           *       * PRED  *                CONC/LINK
           *  BRG  * CONC  *                  (PPM)
 RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
-----------*-------*-------*----------------------------------------
1. NE3     *  187. *   1.6 *   .0   .8   .0   .0   .0   .0   .0   .1
2. SE3     *  277. *   1.7 *   .0   .4   .0   .0   .0   .0   .1   .0
3. SW3     *   83. *   1.5 *   .0   .2   .0   .0   .0   .0   .2   .0
4. NW3     *   97. *   1.4 *   .0   .0   .2   .0   .0   .2   .0   .0

           *                          CONC/LINK
           *                            (PPM)
 RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
-----------*------------------------------------------------------------
1. NE3     *   .0   .2   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
2. SE3     *   .0   .0   .0   .1   .0   .8   .0   .0   .0   .0   .0   .0
3. SW3     *   .1   .1   .0   .0   .0   .0   .7   .0   .0   .0   .0   .0
4. NW3     *   .0   .5   .0   .0   .0   .0   .1   .2   .0   .0   .0   .0
```

```
           CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                    JUNE 1989 VERSION
                    PAGE   1

               JOB:   WINNETKA AND US101 EB RAMPS   AMNP
               RUN: Hour 1          (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

  II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *             EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
 ---------------*-------------------------*-----------------------------
 A. NF          *     5  -450     5  -150 *  AG    836   2.1     .0  15.0
 B. NA          *     5  -150     5     0 *  AG    836   2.8     .0   9.9
 C. ND          *     5     0     5   150 *  AG   1021   2.2     .0   9.9
 D. NE          *     5   150     5   450 *  AG   1021   2.1     .0  15.0
 E. SF          *    -5   450    -5   150 *  AG   1428   2.1     .0  15.0
 F. SA          *    -5   150    -5     0 *  AG    951   2.9     .0   9.9
 G. SD          *    -5     0    -5  -150 *  AG   1181   2.2     .0   9.9
 H. SE          *    -5  -150    -5  -450 *  AG   1181   2.1     .0  15.0
 I. WF          *   450     2   150     2 *  AG      0   2.1     .0  10.5
 J. WA          *   150     2     0     2 *  AG      0   4.0     .0   9.9
 K. WD          *     0     2  -150     2 *  AG      0   2.6     .0   9.9
 L. WE          *  -150     2  -450     2 *  AG      0   2.1     .0  10.5
 M. EF          *  -450    -2  -150    -2 *  AG    626   2.1     .0  10.5
 N. EA          *  -150    -2     0    -2 *  AG    230   4.0     .0   9.9
 O. ED          *     0    -2   150    -2 *  AG    688   4.4     .0   9.9
 P. EE          *   150    -2   450    -2 *  AG    688   2.1     .0  10.5
 Q. NL          *     0     0     2  -150 *  AG      0   2.7     .0   9.9
 R. SL          *     0     0    -2   150 *  AG    477   2.9     .0   9.9
 S. WL          *     0     0   150     2 *  AG      0   4.0     .0   9.9
 T. EL          *     0     0  -150    -2 *  AG    396   4.4     .0   9.9

 III.  RECEPTOR LOCATIONS

             *    COORDINATES (M)
   RECEPTOR  *    X      Y      Z
 ------------*--------------------
 1. NE3      *     12      8   1.8
 2. SE3      *     12     -8   1.8
 3. SW3      *    -12     -8   1.8
 4. NW3      *    -12      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

             *       * PRED  *                CONC/LINK
             *  BRG  * CONC  *                  (PPM)
  RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
-------------*-------*-------*---------------------------------------
 1. NE3      *  264. *    .7 *   .0   .0   .1   .0   .0   .1   .0   .0
 2. SE3      *  354. *    .9 *   .0   .0   .3   .0   .1   .1   .0   .0
 3. SW3      *    6. *    .9 *   .0   .0   .0   .0   .0   .4   .0   .0
 4. NW3      *   97. *    .7 *   .0   .0   .0   .0   .0   .2   .0   .0

             *                          CONC/LINK
             *                            (PPM)
  RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
 ------------*-----------------------------------------------------------
 1. NE3      *   .0   .0   .0   .0   .0   .1   .0   .0   .0   .0   .0   .3
 2. SE3      *   .0   .0   .0   .0   .0   .0   .2   .0   .0   .1   .0   .0
 3. SW3      *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .1   .0   .1
 4. NW3      *   .0   .0   .0   .0   .0   .0   .3   .0   .0   .0   .0   .0
```

```
           CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                    JUNE 1989 VERSION
                    PAGE   1

               JOB:   WINNETKA AND US101 EB RAMPS   AMWP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

          U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
        BRG= WORST CASE            VD=   .0 CM/S
       CLAS=     7 (G)             VS=   .0 CM/S
       MIXH= 1000. M              AMB=   .0 PPM
      SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

  II.  LINK VARIABLES

       LINK      *  LINK COORDINATES (M)   *              EF     H     W
    DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
 ----------------*-------------------------*------------------------------
 A. NF           *     5  -450     5  -150 *  AG    857   2.1     .0  15.0
 B. NA           *     5  -150     5     0 *  AG    857   2.8     .0   9.9
 C. ND           *     5     0     5   150 *  AG   1042   2.2     .0   9.9
 D. NE           *     5   150     5   450 *  AG   1042   2.1     .0  15.0
 E. SF           *    -5   450    -5   150 *  AG   1445   2.1     .0  15.0
 F. SA           *    -5   150    -5     0 *  AG    955   2.9     .0   9.9
 G. SD           *    -5     0    -5  -150 *  AG   1185   2.2     .0   9.9
 H. SE           *    -5  -150    -5  -450 *  AG   1185   2.1     .0  15.0
 I. WF           *   450     2   150     2 *  AG      0   2.1     .0  10.5
 J. WA           *   150     2     0     2 *  AG      0   4.2     .0   9.9
 K. WD           *     0     2  -150     2 *  AG      0   2.6     .0   9.9
 L. WE           *  -150     2  -450     2 *  AG      0   2.1     .0  10.5
 M. EF           *  -450    -2  -150    -2 *  AG    626   2.1     .0  10.5
 N. EA           *  -150    -2     0    -2 *  AG    230   4.2     .0   9.9
 O. ED           *     0    -2   150    -2 *  AG    701   4.4     .0   9.9
 P. EE           *   150    -2   450    -2 *  AG    701   2.1     .0  10.5
 Q. NL           *     0     0     2  -150 *  AG      0   2.7     .0   9.9
 R. SL           *     0     0    -2   150 *  AG    490   2.9     .0   9.9
 S. WL           *     0     0   150     2 *  AG      0   4.2     .0   9.9
 T. EL           *     0     0  -150    -2 *  AG    396   4.4     .0   9.9

 III.  RECEPTOR LOCATIONS

             *    COORDINATES (M)
   RECEPTOR  *    X      Y      Z
 ------------*---------------------
 1. NE3      *     12      8   1.8
 2. SE3      *     12     -8   1.8
 3. SW3      *    -12     -8   1.8
 4. NW3      *    -12      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

             *       * PRED  *                CONC/LINK
             *  BRG  * CONC  *                  (PPM)
  RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
-------------*-------*-------*-----------------------------------------
 1. NE3      *  264. *     .8 *   .0   .0   .1   .0   .0   .1   .0   .0
 2. SE3      *  354. *     .9 *   .0   .0   .3   .0   .1   .1   .0   .0
 3. SW3      *    6. *    1.0 *   .0   .0   .0   .0   .0   .4   .0   .0
 4. NW3      *   97. *     .7 *   .0   .0   .0   .0   .0   .2   .0   .0

             *                          CONC/LINK
             *                            (PPM)
  RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
 ------------*------------------------------------------------------------
 1. NE3      *   .0   .0   .0   .0   .0   .1   .0   .0   .0   .0   .0   .3
 2. SE3      *   .0   .0   .0   .0   .0   .0   .2   .0   .0   .1   .0   .0
 3. SW3      *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .1   .0   .1
 4. NW3      *   .0   .0   .0   .0   .0   .0   .4   .0   .0   .0   .0   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   WINNETKA AND US101 EB RAMPS   PMNP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     5  -450     5  -150 *  AG    996   2.1     .0  15.0
B. NA           *     5  -150     5     0 *  AG    996   2.9     .0   9.9
C. ND           *     5     0     5   150 *  AG   1148   2.2     .0   9.9
D. NE           *     5   150     5   450 *  AG   1148   2.1     .0  15.0
E. SF           *    -5   450    -5   150 *  AG   1070   2.1     .0  15.0
F. SA           *    -5   150    -5     0 *  AG    710   2.8     .0   9.9
G. SD           *    -5     0    -5  -150 *  AG    909   2.2     .0   9.9
H. SE           *    -5  -150    -5  -450 *  AG    909   2.1     .0  15.0
I. WF           *   450     2   150     2 *  AG      0   2.1     .0  10.5
J. WA           *   150     2     0     2 *  AG      0   4.0     .0   9.9
K. WD           *     0     2  -150     2 *  AG      0   2.6     .0   9.9
L. WE           *  -150     2  -450     2 *  AG      0   2.1     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    630   2.1     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    199   4.0     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    639   4.4     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    639   2.1     .0  10.5
Q. NL           *     0     0     2  -150 *  AG      0   2.7     .0   9.9
R. SL           *     0     0    -2   150 *  AG    360   2.8     .0   9.9
S. WL           *     0     0   150     2 *  AG      0   4.0     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    431   4.4     .0   9.9

III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *     12      8   1.8
2. SE3      *     12     -8   1.8
3. SW3      *    -12     -8   1.8
4. NW3      *    -12      8   1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*----------------------------------------
1. NE3      *  185. *    .8 *   .0   .4   .0   .0   .0   .0   .0   .1
2. SE3      *  354. *    .9 *   .0   .0   .3   .0   .1   .0   .0   .0
3. SW3      *    5. *    .8 *   .0   .0   .0   .1   .0   .3   .0   .0
4. NW3      *  174. *    .7 *   .0   .1   .0   .0   .0   .0   .3   .0

            *                          CONC/LINK
            *                            (PPM)
 RECEPTOR   *  I    J    K    L    M    N    O    P    Q    R    S    T
------------*------------------------------------------------------------
1. NE3      *  .0   .0   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
2. SE3      *  .0   .0   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
3. SW3      *  .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .1
4. NW3      *  .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .1
```

```
           CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                    JUNE 1989 VERSION
                    PAGE   1

               JOB:   WINNETKA AND US101 EB RAMPS   PMWP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

          U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
        BRG= WORST CASE            VD=   .0 CM/S
       CLAS=     7 (G)             VS=   .0 CM/S
       MIXH= 1000. M              AMB=   .0 PPM
      SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

  II.  LINK VARIABLES

       LINK      *  LINK COORDINATES (M)   *              EF     H     W
    DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
 ----------------*-------------------------*------------------------------
 A. NF           *     5  -450     5  -150 *  AG   1005   2.1     .0  15.0
 B. NA           *     5  -150     5     0 *  AG   1005   2.9     .0   9.9
 C. ND           *     5     0     5   150 *  AG   1157   2.2     .0   9.9
 D. NE           *     5   150     5   450 *  AG   1157   2.1     .0  15.0
 E. SF           *    -5   450    -5   150 *  AG   1122   2.1     .0  15.0
 F. SA           *    -5   150    -5     0 *  AG    723   2.8     .0   9.9
 G. SD           *    -5     0    -5  -150 *  AG    922   2.2     .0   9.9
 H. SE           *    -5  -150    -5  -450 *  AG    922   2.1     .0  15.0
 I. WF           *   450     2   150     2 *  AG      0   2.1     .0  10.5
 J. WA           *   150     2     0     2 *  AG      0   4.0     .0   9.9
 K. WD           *     0     2  -150     2 *  AG      0   2.6     .0   9.9
 L. WE           *  -150     2  -450     2 *  AG      0   2.1     .0  10.5
 M. EF           *  -450    -2  -150    -2 *  AG    630   2.1     .0  10.5
 N. EA           *  -150    -2     0    -2 *  AG    199   4.0     .0   9.9
 O. ED           *     0    -2   150    -2 *  AG    678   4.4     .0   9.9
 P. EE           *   150    -2   450    -2 *  AG    678   2.1     .0  10.5
 Q. NL           *     0     0     2  -150 *  AG      0   2.7     .0   9.9
 R. SL           *     0     0    -2   150 *  AG    399   2.8     .0   9.9
 S. WL           *     0     0   150     2 *  AG      0   4.0     .0   9.9
 T. EL           *     0     0  -150    -2 *  AG    431   4.4     .0   9.9

 III.  RECEPTOR LOCATIONS

             *    COORDINATES (M)
   RECEPTOR  *    X      Y      Z
 ------------*---------------------
 1. NE3      *     12      8   1.8
 2. SE3      *     12     -8   1.8
 3. SW3      *    -12     -8   1.8
 4. NW3      *    -12      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

             *       * PRED  *                CONC/LINK
             *  BRG  * CONC  *                  (PPM)
  RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
-------------*-------*-------*-----------------------------------------
 1. NE3      *  185. *    .8 *   .0   .4   .0   .0   .0   .0   .0   .1
 2. SE3      *  354. *    .9 *   .0   .0   .3   .0   .1   .0   .0   .0
 3. SW3      *    5. *    .8 *   .0   .0   .0   .1   .0   .3   .0   .0
 4. NW3      *  174. *    .7 *   .0   .1   .0   .0   .0   .0   .3   .0

             *                          CONC/LINK
             *                            (PPM)
  RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
 ------------*------------------------------------------------------------
 1. NE3      *   .0   .0   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
 2. SE3      *   .0   .0   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
 3. SW3      *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .1
 4. NW3      *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .1
```

APPENDIX C

TRAFFIC IMPACT STUDY

DRAFT

TRAFFIC AND PARKING STUDY
FOR THE
PIERCE COLLEGE FACILITIES MASTER PLAN UPDATE
ENVIRONMENTAL IMPACT REPORT

JANUARY 2010

PREPARED FOR

ICF/JONES & STOKES

PREPARED BY

FEHR & PEERS
TRANSPORTATION CONSULTANTS

DRAFT

TRAFFIC AND PARKING STUDY
FOR THE
PIERCE COLLEGE FACILITIES MASTER PLAN UPDATE
ENVIRONMENTAL IMPACT REPORT

January 2010

Prepared for:

ICF JONES & STOKES

Prepared by:

FEHR & PEERS
201 Santa Monica Boulevard, Suite 500
Santa Monica, California 90401
(310) 458-9916

Ref: OC09-0135

TABLE OF CONTENTS

Appendix A: Intersection Configurations
Appendix B: AM and PM Peak Hour Intersection Turning Movements
Appendix C: Intersection Level of Service Worksheets
Appendix D: Pierce College Parking Utilization Survey Data

LIST OF FIGURES

LIST OF TABLES

I. INTRODUCTION

This report documents the results of a study evaluating potential traffic and parking impacts of the proposed Pierce College Facilities Master Plan update. The study was conducted by Fehr & Peers in support of the supplemental environmental impact report (EIR) for the Master Plan update.

PROJECT DESCRIPTION

The Pierce College campus is located in the western portion of the San Fernando Valley in the City of Los Angeles. The campus encompasses an area generally bounded by Winnetka Avenue on the east, Victory Boulevard on the north, De Soto Avenue on the west, and residential uses on the south. Based on information provided by the University, the existing student full-time equivalent (FTE) was 16,079 for the 2008-2009 academic year. Due to State budget cuts, the existing FTE declined from 16,079 to an estimated 14,763 for the 2009-2010 academic year. Over the buildout period of the Master Plan to Year 2015, enrollment is projected to increase at a modest rate to a projected FTE of about 15,500.

The proposed Facilities Master Plan envisions a series of improvements to the campus academic-related facilities, including new or renovated academic buildings and facilities, campus parking facilities, and support facilities. Previous versions of the Pierce College Master Plan included one or more proposed public/private partnership projects, however; these components have been removed from the project description and are therefore not included in this current traffic analysis.

Existing and future vehicular access to the Pierce College campus is and would be obtained via four access points: Brahma Drive via a signalized intersection with Winnetka Avenue, an unsignalized driveway onto Victory Boulevard from Parking Lot 7, Mason Street via a signalized intersection with Victory Boulevard, and El Rancho Drive via a signalized intersection with De Soto Avenue. There are presently approximately 3,719 parking spaces on campus (including an estimated 85 unmarked spaces in dirt parking areas), provided in a number of both large and small parking lots and as curb parking along internal roadways. An estimated 3,958 parking spaces would be provided on campus at buildout of the Master Plan.

The proposed illustrative master plan is presented in Figure 1. Further project description data is presented as appropriate in the discussions of trip generation and parking impacts later in this report.

STUDY SCOPE

The study analyzed the potential project-generated traffic impacts on the street and highway system surrounding and serving the Pierce College campus. The following traffic scenarios were analyzed in the study:

- Existing (Year 2009) Conditions – The analysis of existing traffic conditions provided a basis for the remainder of the study. The existing conditions analysis included an assessment of streets, traffic volumes, operating conditions, transit services, and on-campus parking conditions.
- Year 2015 Cumulative Base (No Project) Conditions – The objective of this scenario was to project future traffic growth and operating conditions that could be expected to result from regional growth and related projects in the vicinity of the project site, without consideration of the proposed project.
- Year 2015 Cumulative plus Project Conditions – The objective of this scenario was to identify potential impacts of the proposed project on projected future traffic operating conditions with traffic expected to be generated by buildout of the proposed Master Plan added to the cumulative base traffic forecasts.

Buildout of the campus Master Plan is projected by 2015. Thus, potential project traffic impacts are evaluated against projected Year 2015 cumulative conditions.

The potential for project impacts is evaluated in the study for weekday AM and PM peak hours of traffic at 32 intersections in the west San Fernando Valley near the Pierce College campus. The analysis locations are illustrated in Figure 2 and are as follows:

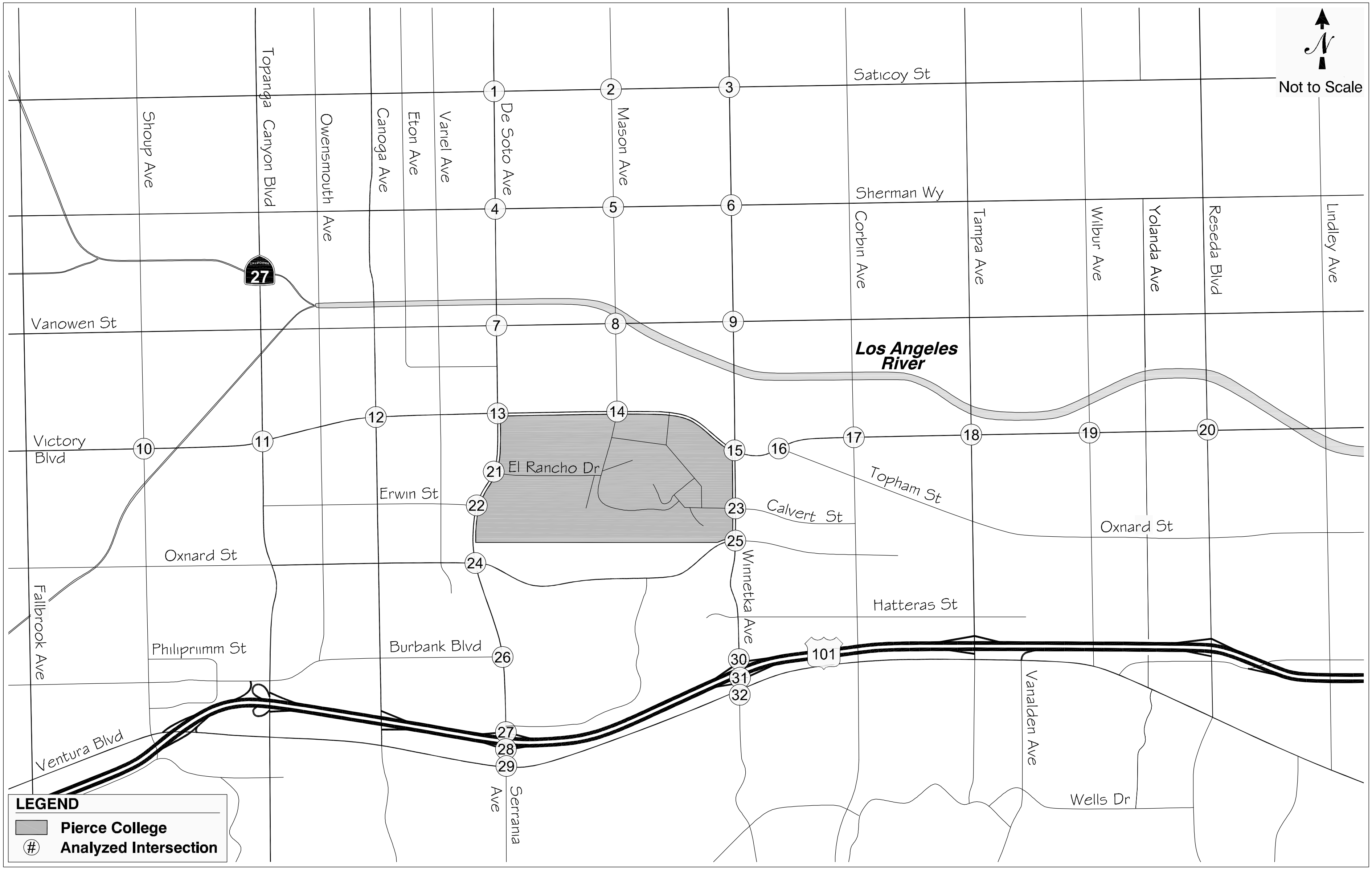
Source: ICF Jones & Stokes

FEHR & PEERS
TRANSPORTATION CONSULTANTS

May 24, 2010 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

LOS ANGELES PIERCE COLLEGE - ILLUSTRATIVE MASTER PLAN

FIGURE 1



FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

STUDY AREA AND ANALYZED INTERSECTIONS

FIGURE 2

1. De Soto Avenue & Saticoy Street
2. Mason Avenue & Saticoy Street
3. Winnetka Avenue & Saticoy Street
4. De Soto Avenue & Sherman Way
5. Mason Avenue & Sherman Way
6. Winnetka Avenue & Sherman Way
7. De Soto Avenue & Vanowen Street
8. Mason Avenue & Vanowen Street
9. Winnetka Avenue & Vanowen Street
10. Shoup Avenue & Victory Boulevard
11. Topanga Canyon Boulevard & Victory Boulevard
12. Canoga Avenue & Victory Boulevard
13. De Soto Avenue & Victory Boulevard
14. Mason Avenue & Victory Boulevard
15. Winnetka Avenue & Victory Boulevard
16. Topham Street & Victory Boulevard
17. Corbin Avenue & Victory Boulevard
18. Tampa Avenue & Victory Boulevard
19. Wilbur Avenue & Victory Boulevard
20. Reseda Avenue & Victory Boulevard
21. De Soto Avenue & El Rancho Drive
22. De Soto Avenue & Erwin Street
23. Winnetka Avenue & Calvert Street/Brahma Drive
24. De Soto Avenue & Oxnard Street
25. Winnetka Avenue & Oxnard Street
26. De Soto Avenue & Burbank Boulevard (west)
27. De Soto Avenue & US 101 westbound ramps
28. De Soto Avenue & US 101 eastbound ramps
29. De Soto Avenue & Ventura Boulevard
30. Winnetka Avenue & US 101 westbound ramps
31. Winnetka Avenue & US 101 eastbound ramps
32. Winnetka Avenue & Ventura Boulevard

The study also evaluates the adequacy of the proposed future on-campus parking supply to accommodate projected campus parking demands.

Finally, the study includes an analysis of potential project impacts on the regional highway and transit systems in accordance with requirements of the Los Angeles County Congestion Management Program (CMP).

ORGANIZATION OF REPORT

This report is divided into eight chapters. Chapter II describes the existing circulation system, traffic volumes, and traffic conditions within the study area. Chapter II also describes the existing Pierce College access and circulation system and analyzes existing parking conditions on the campus. The methodologies used to forecast future cumulative and project traffic volumes, and the resultant forecasts, are described in Chapter III. Chapter IV presents an assessment of potential traffic impacts and identifies potential traffic mitigation measures. An analysis of potential impacts on neighborhood streets is presented in Chapter V. Chapter VI presents the results of the Congestion Management Program regional transportation system impact analysis. Chapter VII contains an analysis of potential impacts of the project on campus parking conditions and site access. Finally, conclusions and recommendations of the study are summarized in Chapter VIII.

II. EXISTING CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing transportation and parking conditions within and adjacent to the Pierce College campus. The assessment of existing conditions relevant to this study included street system, traffic volumes and operating conditions, public transit service, campus access system, and existing parking conditions on the Pierce College campus.

EXISTING STREET SYSTEM

The Pierce College campus is bounded by Victory Boulevard on the north, Winnetka Avenue on the east, and De Soto Avenue on the west. To the north, east, and west of the campus, the street system is a north-south/east-west grid system. To the south of the campus, the street grid is disrupted by the Chalk Hills and, further to the south beyond Ventura Boulevard, the Santa Monica Mountains.

The street system in the study area is illustrated in Figure 2. Primary regional access to the area is provided by the Ventura Freeway (U.S. 101), which runs east-west approximately one mile south of the campus. Winnetka Avenue and De Soto Avenue on either side of the campus are north-south arterial facilities providing access to the Ventura Freeway. Victory Boulevard is an east-west arterial facility. Mason Avenue is a secondary highway providing access to the campus to/from the north.

Additional arterial facilities serving the surrounding study area include Topanga Canyon Boulevard, Canoga Avenue, Tampa Avenue, and Reseda Avenue running north-south and Saticoy Street, Sherman Way, and Ventura Boulevard running east-west.

Descriptions of key roadways serving the study area are provided below:

- Ventura Freeway (U.S. 101) - The Ventura Freeway is a major regional facility that travels in an east-west orientation through the southern portion of the study area. The freeway provides access from the study area to the eastern San Fernando Valley and metropolitan Los Angeles to the east and to the Agoura/Westlake areas and Ventura County to the west. Key interchanges providing access to the Pierce College Campus are full diamond interchanges at Winnetka Avenue and De Soto Avenue. In the study area, the freeway provides 10 lanes (five in each direction) east of Topanga Canyon Boulevard and eight lanes (four in each direction) west of Topanga Canyon Boulevard.

- Shoup Avenue - Shoup Avenue is a north-south street located about 1.5 miles west of Pierce College. It is classified as a secondary highway north of, and a collector street south of, Ventura Boulevard. North of Ventura Boulevard to Roscoe Boulevard, Shoup Avenue provides four through lanes, with on-street parking.

- Topanga Canyon Boulevard (SR 27) - Topanga Canyon Boulevard is a north-south major highway located about one mile west of the Pierce College campus. Topanga Canyon provides access across the Santa Monica Mountains to Pacific Coast Highway (SR 1) to the south, and to the Simi Valley Freeway (SR 118) and the northwestern portion of the San Fernando Valley to the north. Four through lanes are provided north of Vanowen Street, five through lanes (three northbound and two southbound) are provide between Vanowen Street and Burbank Boulevard, and six through lanes are provided south of Burbank Boulevard. A raised median island is present south of Burbank Boulevard. On-street parking is prohibited along the east side of the roadway throughout the Warner Center area, although it is allowed along most of the west side within Warner Center and on both sides north of Vanowen Street. The City of Los Angeles *Draft Bicycle Plan* (Los Angeles Department of City Planning, September 2009) proposes Class II bike lanes along Topanga Canyon Boulevard north of Hart Street in the study area.

- Canoga Avenue - Canoga Avenue is a north-south street located about one-half mile west of the Pierce College campus. It is classified as a major highway between Ventura Boulevard and Victory Boulevard and as a secondary highway both to the north of Victory Boulevard and to the south of Ventura Boulevard. Six through lanes are provided between Victory Boulevard and the Ventura Freeway. Four through lanes are provided to the north of Victory Boulevard and between the Ventura Freeway and Ventura Boulevard, narrowing to two lanes south of Ventura Boulevard. A raised median island is present between Victory Boulevard and Burbank Boulevard. On-street parking is prohibited along much of Canoga Avenue within the study area, although unrestricted parking is allowed south of Ventura Boulevard and along the west side north of Hart Street.

- De Soto Avenue - De Soto Avenue is a north-south street that forms the western boundary of the Pierce College campus. It is classified as a major highway north of Ventura Boulevard and as a collector street south of Ventura Boulevard (where the street changes name to Serrania Avenue). Four through lanes are provided north of Victory Boulevard, six lanes are provided between Victory Boulevard and the Ventura Freeway, five lanes (three northbound and two southbound) are provided between the freeway and Ventura Boulevard, and two lanes are provided south of Ventura Boulevard. On-street parking is prohibited along De Soto Avenue between Victory Boulevard and Ventura Boulevard.

Parking is allowed north of Victory Boulevard, although peak period parking restrictions are used in this section to provide a third southbound travel lane during the morning peak period and a third northbound travel lane during the evening peak period. Unrestricted parking is allowed south of Ventura Boulevard on Serrania Avenue. Bicycle lanes are present on both sides between the Pierce College driveway (El Rancho Drive) and Burbank Boulevard. The City of Los Angeles *Draft Bicycle Plan* identifies De Soto Avenue south of Victory Boulevard as having Class II bike lanes and De Soto Avenue between Victory Boulevard and Sherman Way as having Class III bike routes within the study area.

- Mason Avenue - Mason Avenue is a north-south secondary highway providing access between Pierce College and areas to the north. Mason Avenue terminates as a public street at its intersection with Victory Boulevard on the north side of the campus, and continues within the campus as an internal campus roadway. Mason Avenue provides four through lanes with on-street parking.

- Winnetka Avenue - Winnetka Avenue is a north-south street forming the eastern boundary of the Pierce College campus. It is classified as a major highway north of, and a collector street south of, Ventura Boulevard. Four through lanes and a two-way continuous left-turn lane are provided north of Ventura Boulevard, and two lanes are provided south of Ventura Boulevard. On-street parking is allowed both north of Calvert Street/Pierce College driveway (Brahma Drive) and south of Ventura Boulevard, but is prohibited between Calvert Street and Ventura Boulevard.

- Corbin Avenue - Corbin Avenue is a north-south secondary highway located one-half mile east of Pierce College. In the study area, four through lanes are present north of Topham Street and two through lanes are present south of Topham Street. On-street parking is provided.

- Tampa Avenue - Tampa Avenue is a north-south major highway located one mile east of Pierce College. Tampa Avenue provides four through lanes with on-street parking during off-peak hours. During peak periods, street parking is prohibited to provide additional travel lanes.

- Wilbur Avenue - Wilbur Avenue is a north-south secondary highway located 1.5 miles east of Pierce College. Wilbur Avenue provides four through lanes with on-street parking.

- Reseda Avenue - Reseda Avenue is a north-south major highway located two miles east of Pierce College. In the study area, Reseda Avenue provides four through lanes with on-street parking.

- Saticoy Street - Saticoy Street is a four-lane east-west secondary highway located about 1.5 miles north of Pierce College. A two-way continuous left-turn lane is provided throughout most of the study area, as is on-street parking.

- Sherman Way - Sherman Way is an east-west major highway located about one mile north of Pierce College. It is classified as a divided major highway east of Variel Avenue, where six through lanes and a raised median island are provided. West of Variel Avenue, it is classified as a major highway and provides four through lanes and a two-way continuous left-turn lane. On-street parking is allowed throughout the study area.

- Vanowen Street - Vanowen Street is a four-lane east-west secondary highway located about one-half mile north of the Pierce College campus. On-street parking is permitted on the north side throughout the study area, and on the south side in certain sections.

- Victory Boulevard - Victory Boulevard is an east-west major highway with a two-way continuous left-turn lane throughout the study area. Four through lanes are provided from east of Fallbrook Avenue to Topanga Canyon Boulevard. Six through lanes are provided between Topanga Canyon Boulevard and De Soto Avenue within Warner Center, with some sections of eight lanes. Five through lanes (three eastbound and two westbound) are provided east of De Soto Avenue to Winnetka Avenue adjacent to the Pierce College campus. Four through lanes are provided east of Winnetka Avenue. On-street parking is allowed east of De Soto Avenue. Parking restrictions are used along the north side east of De Soto Avenue to provide a third westbound travel lane during both the morning and evening peak periods.

- Oxnard Street - Oxnard Street is an east-west secondary highway located to the south of the Pierce College campus. Four lanes are provided throughout most of the study area, narrowing to two lanes both west of Shoup Avenue and east of Winnetka Avenue. A raised median island is present between Topanga Canyon Boulevard and Canoga Avenue. On-street parking is prohibited between Topanga Canyon Boulevard and De Soto Avenue in Warner Center, but is allowed to the east of De Soto Avenue. The City of Los Angeles *Draft Bicycle Plan* identifies Oxnard Street as having Class II bike lanes throughout the study area.

- Burbank Boulevard - West of De Soto Avenue, Burbank Boulevard is an east-west secondary highway providing four through lanes between De Soto Avenue and Farralone Avenue. On-street parking is allowed between Canoga Avenue and Topanga Canyon Boulevard. At De Soto Avenue, Burbank Boulevard jogs to the south and continues to the east as a two-lane collector street with on-street parking.

- Ventura Boulevard - Ventura Boulevard is an east-west major highway located about one mile south of the Pierce College campus. Three through lanes are provided in the westbound direction throughout most of the study area, although two lanes are provided east of Winnetka Avenue. In the eastbound direction, two through lanes are provided west of West Hills Drive, three lanes are provided between West Hills Drive and the Chalk Hill summit, two lanes east of the summit, three lanes are provided approaching Winnetka Avenue, and two lanes are provided east of Winnetka Avenue. On-street parking is allowed throughout most of the study area, although parking restrictions are used to provide a third eastbound through lane during both the morning and evening peak periods in the sections between Topanga Canyon Boulevard and West Hills Drive and east of Winnetka Avenue. Parking is also restricted along the south side of Ventura Boulevard immediately adjacent to Taft High School (west of Winnetka Avenue) on school days. A raised median island is present for short sections just east of West Hills Drive (over the Chalk Hill summit).

Diagrams of the existing lane configurations at the 32 study intersections are provided in Appendix A to this report.

EXISTING TRAFFIC VOLUMES AND OPERATING CONDITIONS

The following sections present the existing peak hour traffic volumes at the study intersections, a description of the methodology used to analyze intersection operating conditions, and the resulting level of service at each location under existing conditions.

Existing Peak Hour Traffic Volumes

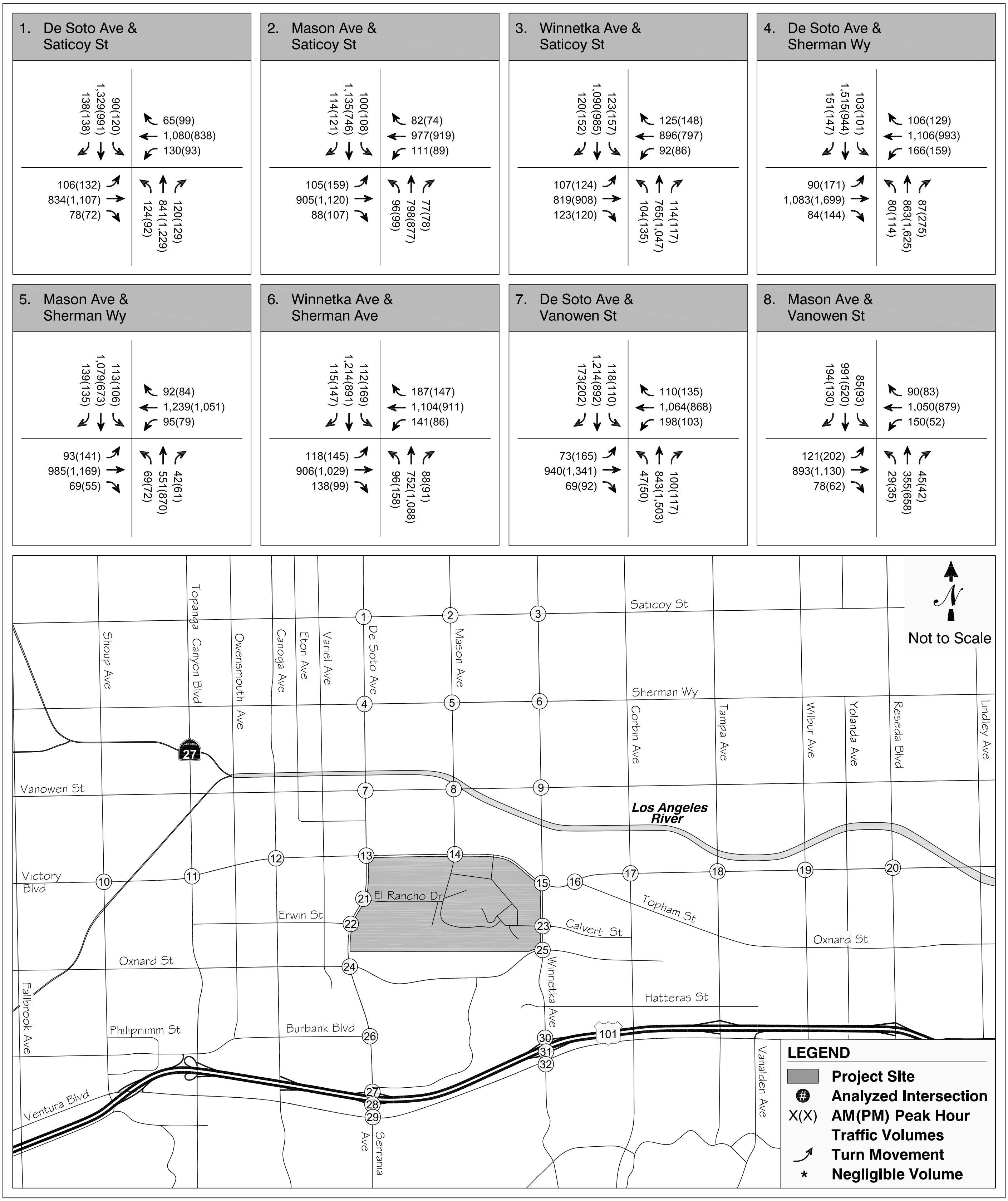
Weekday AM and PM peak period intersection turning movement counts were conducted at the 32 study intersections in 2007 or 2009. To provide a conservative analysis, a growth factor of one percent per year was applied to counts taken in 2007 to reflect 2009 conditions. The existing weekday peak hour turning movement volumes at the analyzed intersections are shown on Figure 3 and the turning movement count sheets are provided in Appendix B.

Intersection Level of Service Standards and Methodology

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. Level of service definitions for signalized intersections are provided in Table 1.

The City of Los Angeles typically uses LOS D as a standard, meaning that LOS D or better is considered to represent satisfactory conditions, while LOS E or F is generally considered to be substandard. The Warner Center Specific Plan establishes LOS E as the minimum acceptable level of service within the Warner Center Specific Plan area (to the west of the Pierce College campus).

All of the study intersections are currently controlled by traffic signals. The City of Los Angeles Department of Transportation (LADOT) requires that the "Critical Movement Analysis" (CMA) method (Transportation Research Board, 1980) of intersection capacity analysis be used to determine the intersection volume to capacity (V/C) ratio and corresponding level of service for the given turning movements and intersection characteristics at signalized intersections. The



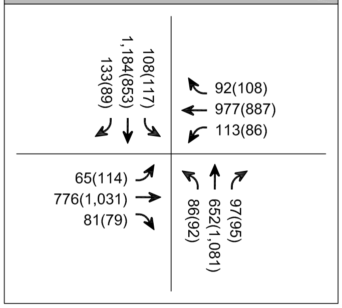
FEHR & PEERS
TRANSPORTATION CONSULTANTS

EXISTING (2008-2009)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

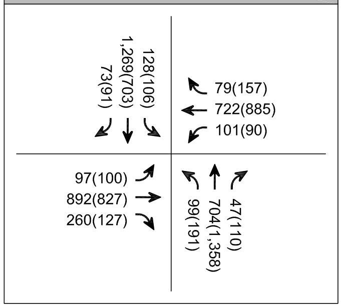
Oct 15, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

FIGURE 3

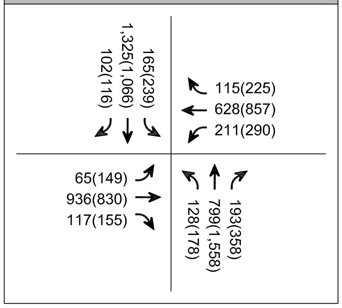
9. Winnetka Ave & Vanowen St



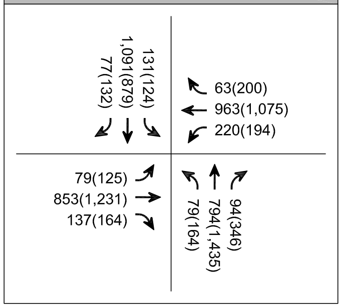
10. Shoup Ave & Victory Blvd



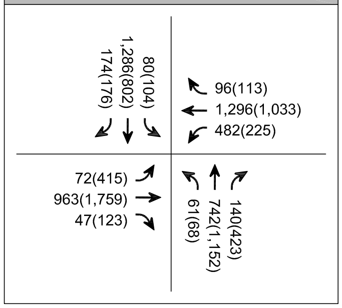
11. Topanga Canyon Blvd & Victory Blvd



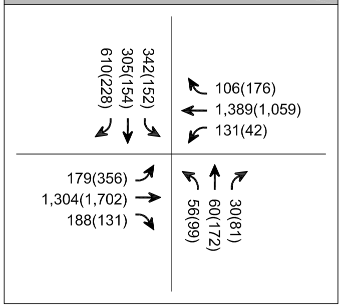
12. Canoga Ave & Victory Blvd



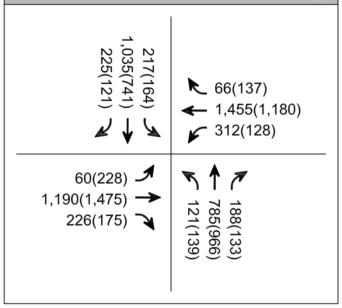
13. De Soto Ave & Victory Blvd



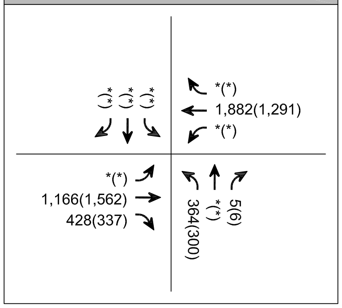
14. Mason Ave & Victory Blvd

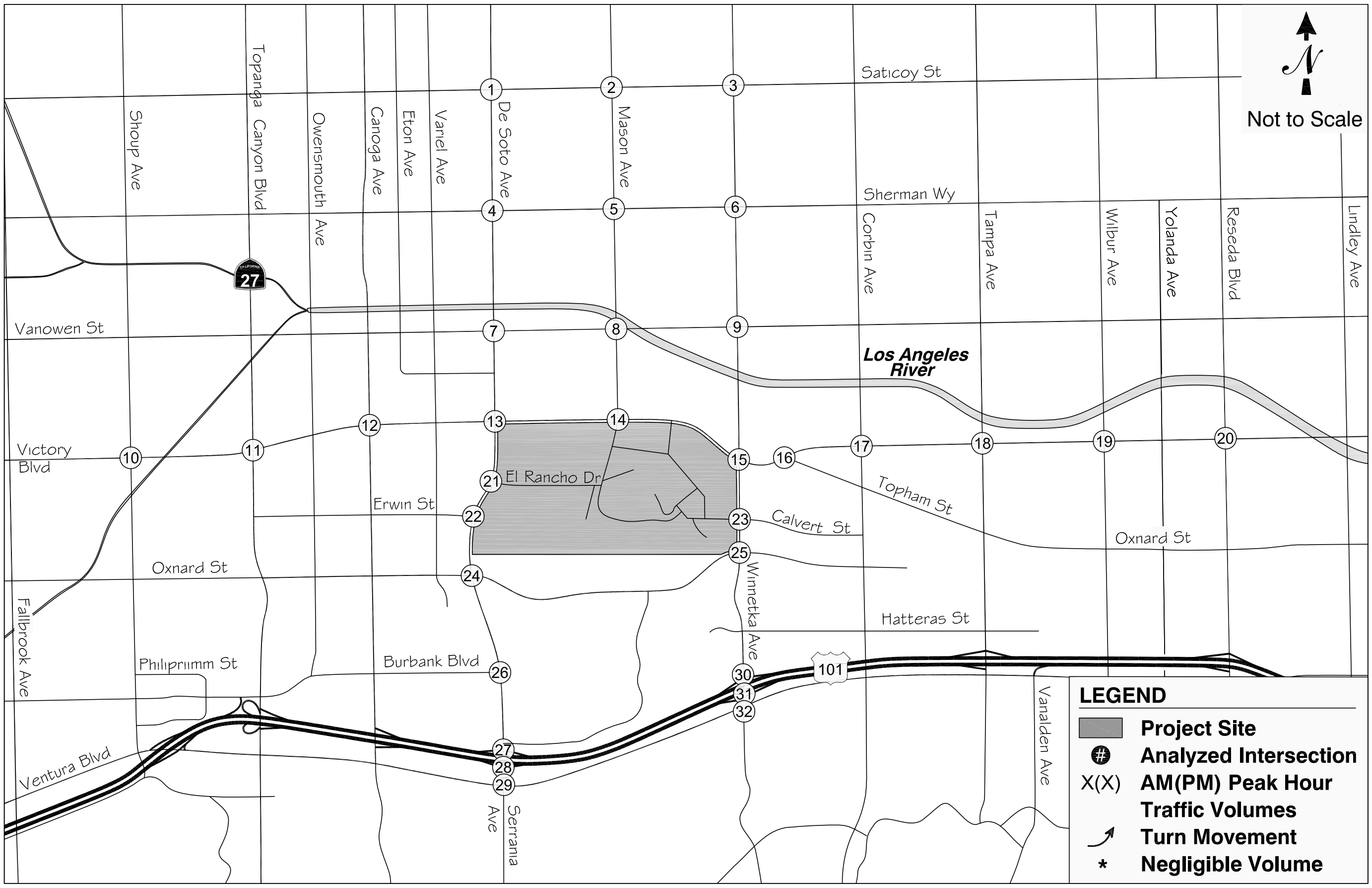


15. Winnetka Ave & Victory Blvd



16. Topham St & Victory Blvd



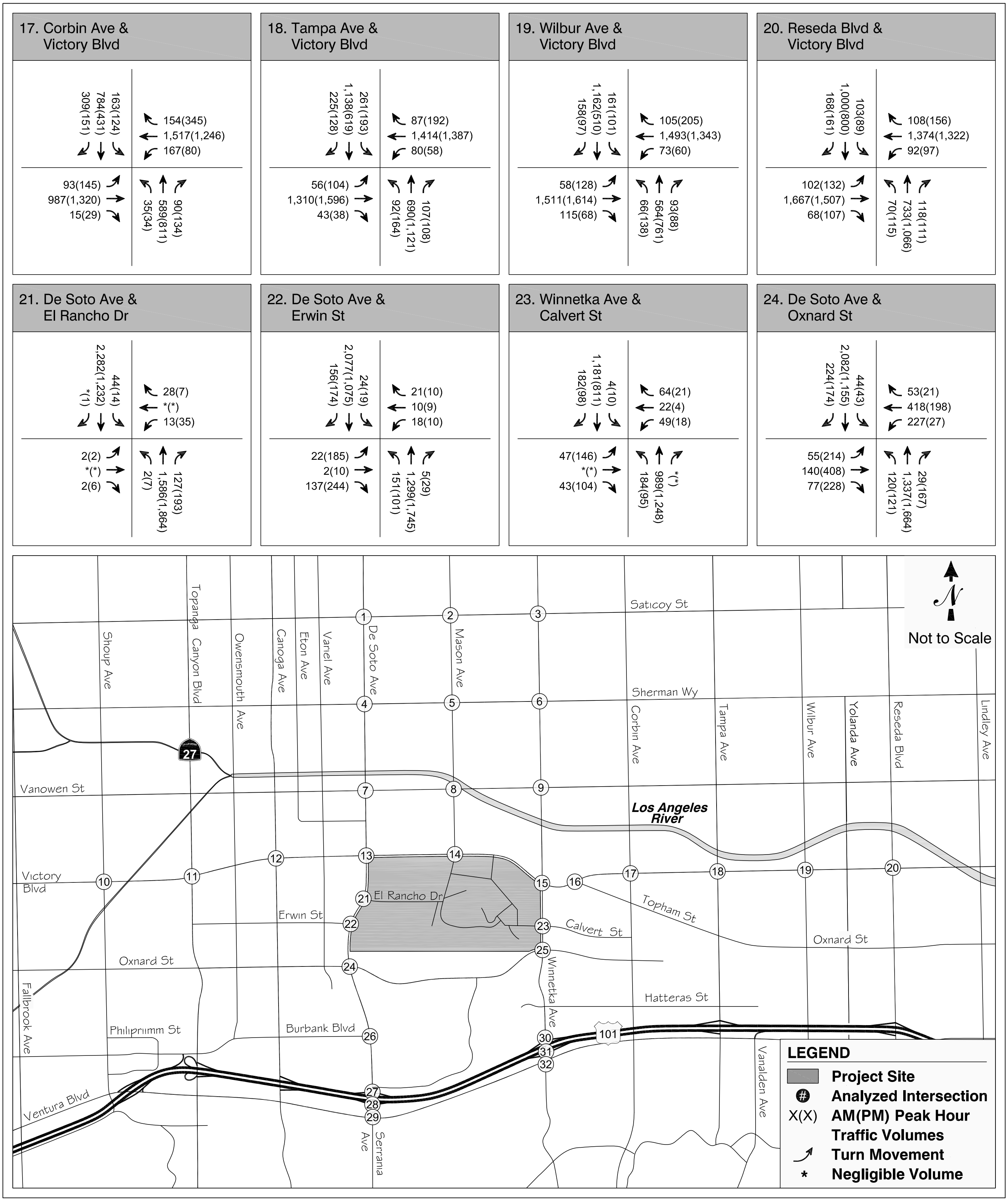


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 15, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

EXISTING (2008-2009) WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 3 (CONT.D)

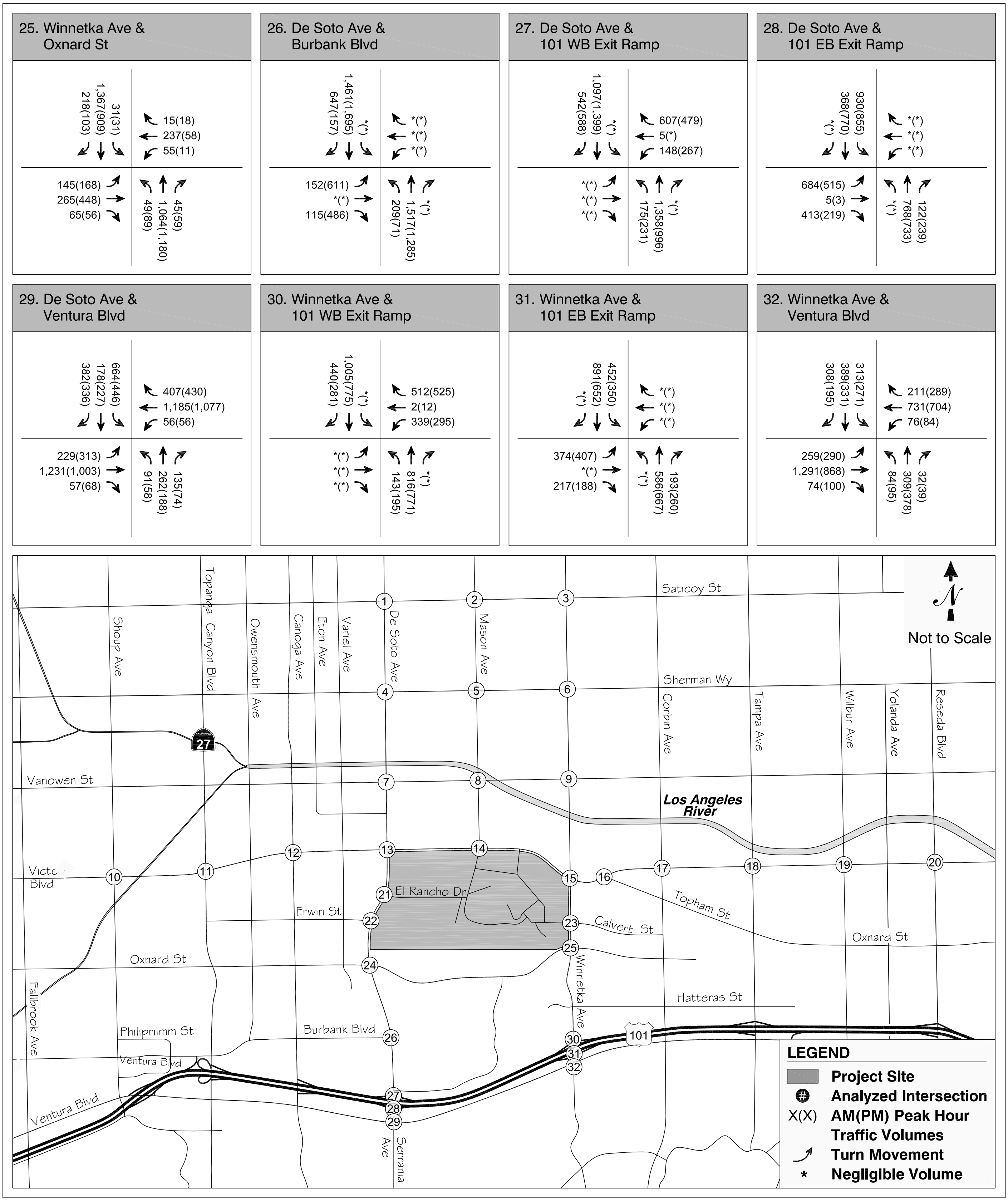


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 15, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

EXISTING (2008-2009)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 3 (CONT.D)



FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 15, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

EXISTING (2008-2009)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 3 (CONT.D)

TABLE 1
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Intersection Capacity Utilization	Definition
A	0.000-0.600	EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.
B	0.601-0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701-0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801-0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901-1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, Transportation Research Board, 1980.

CALCADB software package developed by LADOT was used to implement the CMA methodology in this study.

All of the study intersections are currently controlled by the City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) system. In accordance with LADOT procedures, a capacity increase of 7% (0.07 V/C adjustment) was applied to reflect the benefits of ATSAC control at these intersections. Twenty-seven study intersections (all study intersections except for the three along Saticoy Street and the intersections of Vanowen Street with Mason Avenue and Winnetka Avenue) are currently controlled by the City of Los Angeles' Adaptive Traffic Control System (ATCS) system. In accordance with LADOT procedures, an additional capacity increase of 3% (0.03 V/C adjustment) was applied to reflect the benefits of ATCS control at these 27 intersections. Thus, a capacity increase of 7% was applied to five study intersections and a net capacity increase of 10% was applied at 27 study intersections.

Existing Peak Hour Intersection Levels of Service

The existing weekday AM and PM peak hour turning movements shown in Figure 3 were used in conjunction with the level of service methodology described above to determine existing operating conditions at each of the study intersections. Level of service calculation worksheets are included in Appendix C.

Table 2 summarizes the existing AM and PM peak hour V/C ratios and corresponding levels of service at each of the study intersections. As can be seen, 11 of the 32 intersections currently operate at LOS E or F during one or both of the AM and PM peak hours. These intersections are:

- De Soto Avenue & Saticoy Street
- De Soto Avenue & Sherman Way
- De Soto Avenue & Vanowen Street
- Topanga Canyon Boulevard & Victory Boulevard
- De Soto Avenue & Victory Boulevard
- Winnetka Avenue & Victory Boulevard
- Corbin Avenue & Victory Boulevard
- Tampa Avenue & Victory Boulevard
- Wilbur Avenue & Victory Boulevard
- Reseda Avenue & Victory Boulevard
- Winnetka Avenue & Ventura Boulevard

TABLE 2
EXISTING (YEAR 2008-2009) INTERSECTION LEVELS OF SERVICE

	AM Peak Hour		PM Peak Hour	
Intersection	V/C	LOS	V/C	LOS
*1. De Soto Av & Saticoy St	0.870	D	0.905	E
*2. Mason Av & Saticoy St	0.834	D	0.789	C
*3. Winnetka Av & Saticoy St	0.775	C	0.823	D
**4. De Soto Av & Sherman Way	0.735	C	0.958	E
**5. Mason Av & Sherman Way	0.710	C	0.627	B
**6. Winnetka Av & Sherman Way	0.810	D	0.814	D
**7. De Soto Av & Vanowen St	0.815	D	0.936	E
*8. Mason Av & Vanowen St	0.805	D	0.681	B
*9. Winnetka Av & Vanowen St	0.874	D	0.875	D
**10. Shoup Av & Victory Blvd	0.865	D	0.874	D
**11. Topanga Canyon Blvd & Victory Blvd	0.679	B	0.910	E
**12. Canoga Av & Victory Blvd	0.607	B	0.861	D
**13. De Soto Av & Victory Blvd	0.736	D	0.904	F
**14. Mason Av & Victory Blvd	0.652	C	0.619	C
**15. Winnetka Av & Victory Blvd	0.982	E	0.912	E
**16. Topham St & Victory Blvd	0.816	D	0.659	B
**17. Corbin Av & Victory Blvd	0.907	E	0.925	E
**18. Tampa Av & Victory Blvd	0.930	E	1.056	F
**19. Wilbur Av & Victory Blvd	0.975	E	0.852	D
**20. Reseda Blvd & Victory Blvd	0.949	E	0.970	E
**21. De Soto Av & El Rancho Dr	0.429	A	0.394	A
**22. De Soto Av & Erwin St	0.612	B	0.451	A
**23. Winnetka Av & Calvert St	0.545	A	0.430	A
**24. De Soto Av & Oxnard St	0.737	C	0.625	B
**25. Winnetka Av & Oxnard St	0.763	C	0.640	B
**26. De Soto Av & Burbank Blvd West	0.564	A	0.583	A
**27. De Soto Av & I-101 WB Ramps	0.618	B	0.649	B
**28. De Soto Av & I-101 EB Ramps	0.729	C	0.583	A
**29. De Soto Av & Ventura Blvd	0.764	C	0.662	B
**30. Winnetka Av & I-101 WB Ramps	0.553	A	0.504	A
**31. Winnetka Av & I-101 EB Ramps	0.685	B	0.666	B
**32. Winnetka Av & Ventura Blvd	0.885	D	0.911	E

Notes:

* Intersection is currently operating under ATSAC system.

* *Intersection is currently operating under ATCS system.

The remaining study intersections operate at fair to good levels of service (LOS D or better) during both the AM and PM peak hours.

EXISTING PUBLIC TRANSIT SERVICE

The Pierce College campus is currently served by bus service provided by the Los Angeles County Metropolitan Transit Authority (Metro) and the Santa Clarita Transit Authority (SCTA). Existing bus routes providing direct service along Victory Boulevard, Winnetka Avenue, and/or De Soto Avenue adjacent to the campus include:

- Metro Orange Line – The Metro Orange Line is a bus rapid transit (BRT) line that operates on a dedicated east-west ROW between the North Hollywood Metro Red Line station and Canoga Park. The line then exits the dedicated ROW and operates on streets, looping through Warner Center to provide service at the Warner Center Transit Hub adjacent to the Promenade, approximately one-half mile from the project site, before re-entering the ROW in the opposite direction. The line operates with average headways[1] of four to five minutes during peak periods.

- Metro Line 164 – Line 164 provides local service along Victory Boulevard between Valley Circle Boulevard, Woodland Hills, Warner Center, Reseda, Van Nuys, North Hollywood and Burbank. Service is provided seven days per week. In the vicinity of the Pierce College campus, Line 164 stops on Victory Boulevard east of Mason Avenue adjacent to Lot 7.

- Metro Line 242/243 – Line 242/243 provides local service between Chatsworth, Canoga Park, Warner Center, Woodland Hills, Winnetka, and Northridge, along a "U" shaped route that includes both Tampa Avenue and Winnetka Avenue. Service is provided six days per week (Monday through Saturday). In the vicinity of Pierce College, Line 242/243 stops on Winnetka Avenue south of Victory Boulevard southbound, on Winnetka Avenue north of Victory Boulevard northbound, north of Brahma Drive/Calvert Street northbound, and south of Brahma Drive/Calvert Street southbound.

- Metro Line 244/245 – Line 244/245 provides local service between Chatsworth, Canoga Park, Warner Center, and Woodland Hills along a "U" shaped route that includes both De Soto Avenue and Topanga Canyon Boulevard. Service is provided seven days per week. In the vicinity of Pierce College, Line 244/245 stops on De Soto Avenue south of Victory Boulevard southbound, north of El Rancho Drive northbound, and south of El Rancho Drive southbound.

- SCTA Commuter Route 796 – This line provides limited stop service between Santa Clarita and Warner Center. Service is provided Monday through Friday only, with five runs traveling inbound from Santa Clarita to Warner Center in the morning peak period and five

---

[1] Headways are the time between buses arriving at a particular bus stop. In this case, four minute headways means that a bus comes by each stop along this bus route once every four minutes.

runs traveling outbound from Warner Center to Santa Clarita in the evening peak period. Route 791/796 travels along De Soto Avenue in the vicinity of Pierce College.

The paths of the transit routes near Pierce College are shown in Figure 4.

PIERCE COLLEGE CAMPUS ACCESS AND INTERNAL CIRCULATION SYSTEM

Vehicular access to the Pierce College campus is provided at four locations:

- Brahma Drive - Brahma Drive is an internal street providing access from Winnetka Avenue on the east side of the campus. Brahma Drive intersects Winnetka Avenue opposite Calvert Street, and its intersection with Winnetka Avenue/Calvert Street is controlled by a traffic signal. On campus, Brahma Drive provides access to Lot 1 and connects to Stadium Way, which in turn ultimately connects to Mason Street.

- Mason Street - Mason Street is an internal street providing access from Victory Boulevard on the north side of the campus. Mason Street intersects Victory Boulevard opposite Mason Avenue, and its intersection with Victory Boulevard is signalized. On campus, Mason Street provides access to Lot 7. It then intersects with Olympic Drive and El Rancho Drive and continues as Stadium Way, ultimately connecting with Brahma Drive.

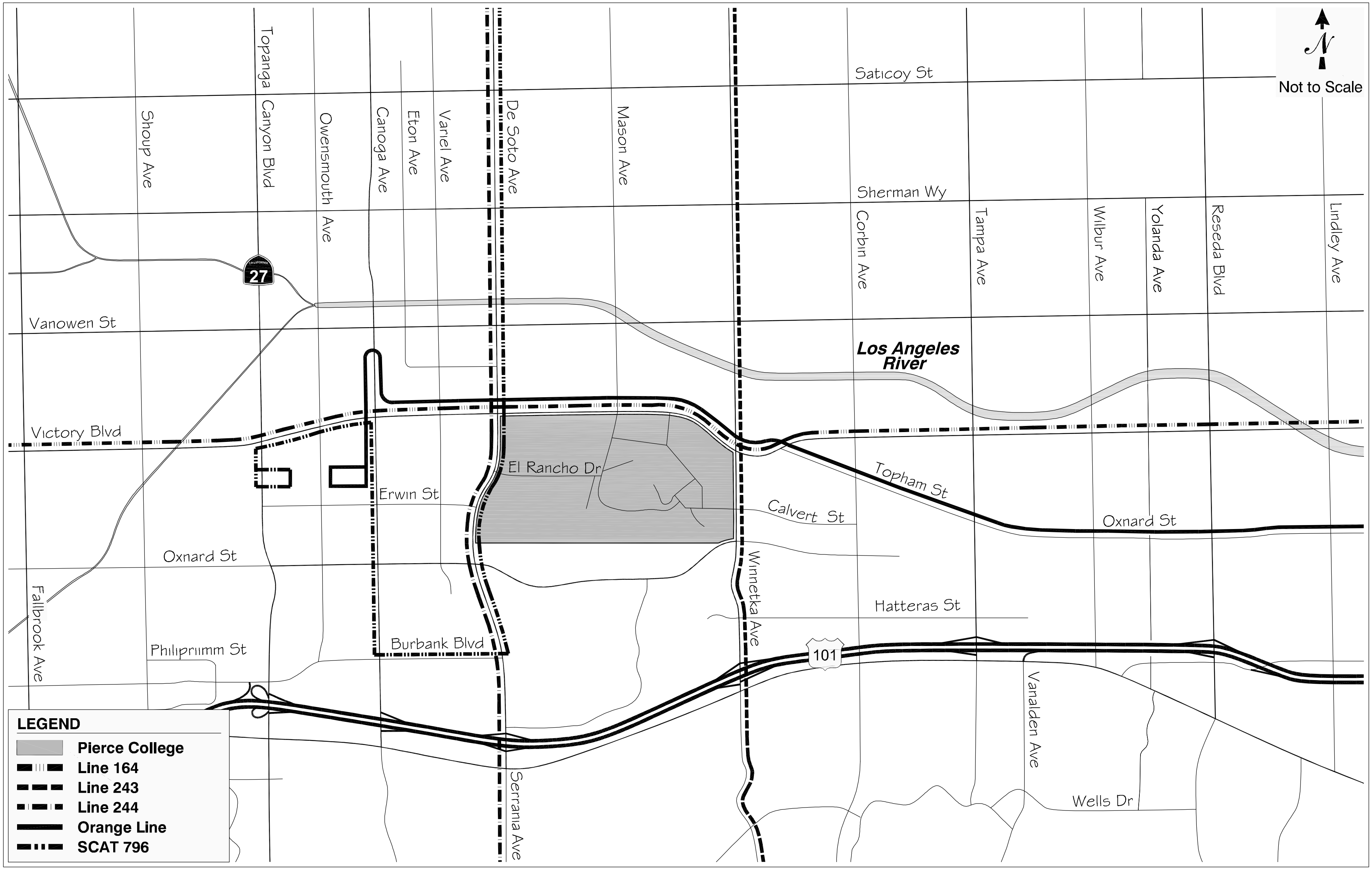
- El Rancho Drive - El Rancho Drive is an internal street providing access from a signalized intersection with De Soto Avenue on the west side of the campus. On campus, El Rancho Drive connects to Mason Street/Stadium Way.

- Lot 7 Driveway - In addition to the three signalized access points described above, there is an unsignalized driveway from parking Lot 7 directly onto Victory Boulevard, east of Mason Avenue.

Additional internal streets providing circulation on the campus include:

- Olympic Drive - Olympic Drive runs along the south side of Lot 7 and has a security gate at the east end of the lot. Beyond the security gate, it continues into the campus core, becoming part of the internal system with a second gate near the sheriff substation.

- Stadium Way - Stadium Way is the primary through route around the south side of the campus core. It connects Brahma Drive with Mason Street and El Rancho Drive, and provides access to Shepard Stadium and several student parking lots.



FEHR & PEERS
TRANSPORTATION CONSULTANTS

EXISTING TRANSIT SERVICE

FIGURE 4

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

EXISTING PIERCE COLLEGE PARKING CONDITIONS

Parking is a critical component of Piece College's transportation system since the majority of students, faculty, staff, and visitors access the campus by vehicle. This section discusses the existing campus parking supply and compares it to the existing demand for parking in order to assess the ability of the current parking supply to serve the campus community.

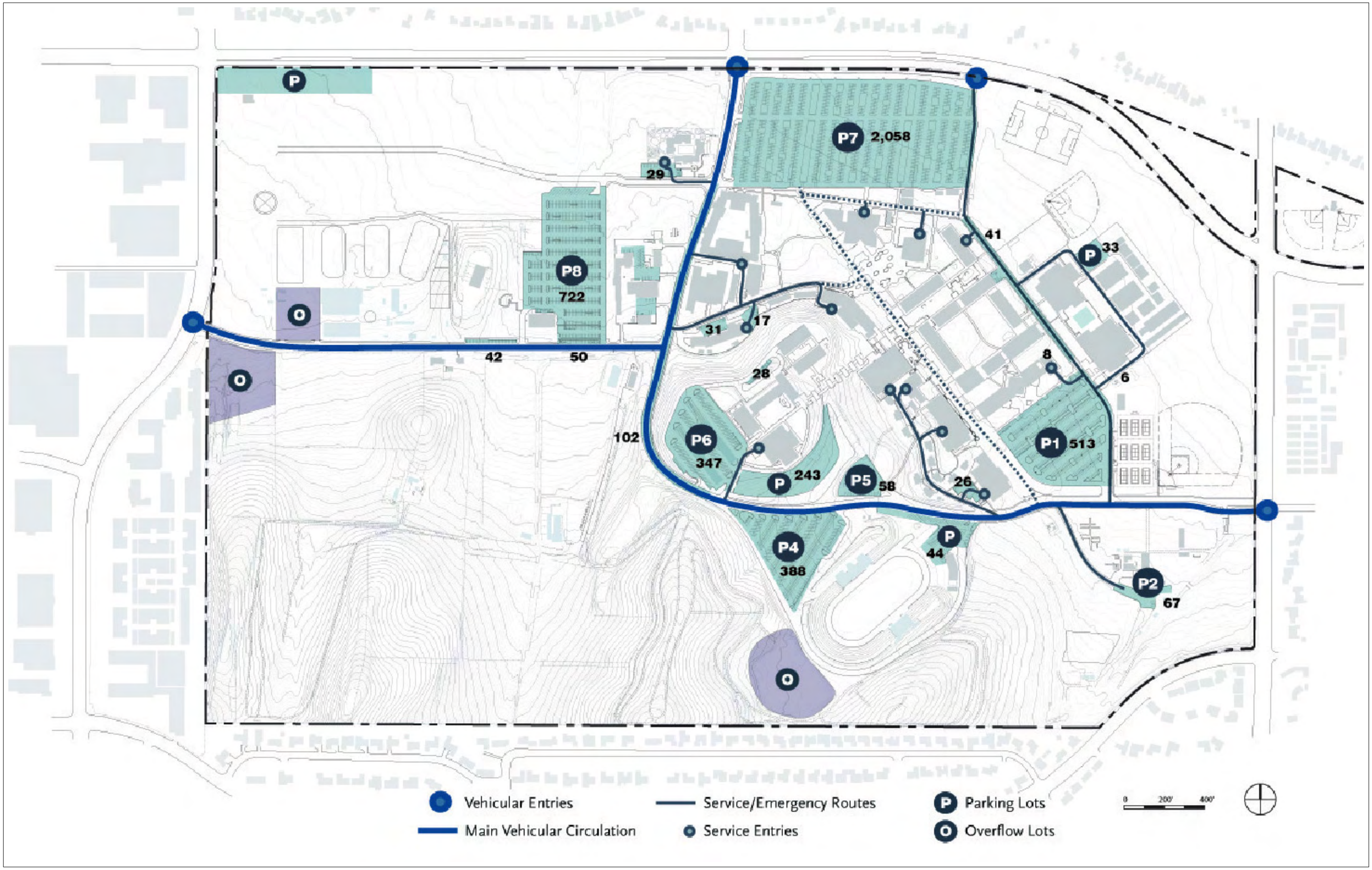
Existing Campus Parking Supply

This section describes the current inventory of parking on the Pierce College campus, including location, amount, and type of existing parking. This information was either provided by the college, gathered through field investigation, or both. Specifically, the field investigation involved counting the number and type of spaces at each campus lot and adjacent on-street parking locations in spring 2009.

Parking for the Pierce College community is provided in numerous surface parking lots and street parking on adjacent frontages of Victory Boulevard and Winnetka Avenue. The locations of these lots are illustrated in Figure 5. As summarized in Table 3, a total of approximately 3,719 parking spaces are available on the campus in seven major student lots and numerous smaller lots. This includes about 3,138 spaces in student or undesignated lots (including approximately 85 unmarked parking spaces in dirt parking areas) and 581 spaces in designated staff lots. The seven major student lots range in size from about 45 spaces in Lot 3 to 1,127 spaces in Lot 7 (the large lot adjacent to Victory Boulevard).

Access to the student lots is physically unrestricted, although students are required to purchase a pass to use these spaces. Access to the staff lots is typically controlled by security gates and is restricted to faculty, staff, and visitors with passes.

In addition to the on-campus parking supply, it is estimated that there are approximately 271 off-campus curbside unmarked parking spaces along Victory Boulevard and Winnetka Avenue immediately adjacent to the campus. This includes about 45 spaces on the west side of Winnetka Avenue between Victory Boulevard and Brahma Drive/Calvert Street, about 114 spaces on the south side of Victory Boulevard between Mason Avenue and Winnetka Avenue, and about 112 spaces on the south side of Victory Boulevard between De Soto Avenue and Mason Avenue.



LOCATIONS OF EXISTING PARKING FACILITIES SERVING PIERCE COLLEGE CAMPUS

FIGURE 5

TABLE 3
EXISTING PIERCE COLLEGE PARKING INVENTORY BY LOT

Map #	Location/ Description	Use	Type	# of Parking Spaces	Inventory Notes
ON-CAMPUS PARKING					
1	Parking Lot 1	Staff & Student Parking	Lot	448	
2	Parking Lot 2 & Dirt Parking	Staff & Student Parking	Lot	58	33 student spaces, 5 faculty spaces, and 20 estimated dirt spaces.
3	Parking Lot 3	Student Parking	Lot	45	
4	Parking Lot 4	Student Parking	Lot	411	
5	Parking Lot 5	Staff Parking	Lot	68	
6A	Parking Lot 6 West	Student Parking	Curb/Lot	N/A	This lot was closed at the time parking counts were conducted.
6B	Parking Lot 6 East	Staff & Student Parking	Dirt Lot	208	21 Faculty spaces and 187 student spaces.
7	Parking Lot 7	Staff & Student Parking	Lot	1,286	
8	Parking Lot 8	Staff & Student Parking	Lot	695	14 faculty spaces and 681 student spaces
9	Parking Lot 9	Student Parking	Lot	150	
10	Curb Parking NS of El Rancho Drive South of Lot 8	Student Parking	Curb	71	30 unmarked spaces estimated at time of counts
11	ES of Mason Street South of Victory Boulevard	Student Parking	Curb	27	
12	Staff Parking WS of Olympic Drive near North Gym	Staff Parking	Curb	35	
13	Staff Parking Lot West of Olympic Drive near Chemistry	Staff Parking	Lot	2	
14	Staff Parking Lot West of Olympic Drive near Computer Science	Staff Parking	Lot	4	
15	Staff Parking East of North Gym	Staff Parking	Lot	45	
16	Staff Parking East of Pool	Staff Parking	Lot	6	
17	Staff Parking East of South Gym	Staff Parking	Lot	3	
18	Staff Parking South of Industrial Technology	Staff Parking	Lot	33	
19	Staff Parking near Anthropology	Staff Parking	Curb	6	
20	Curb Parking Stadium Way South of El Rancho Drive	Student Parking	Curb	79	
21	Curb Parking Stadium Way North of Lot 4	Student Parking	Curb	20	
22	Student Parking South of South Gym	Student Parking	Lot	15	
23	Curb Parking North of Lot 1	Staff Parking	Curb	4	
	ON-CAMPUS SUBTOTAL			**3,719**	
	Estimated Spaces in Unmarked Dirt Lots			**85**	
	On-Campus Subtotal not including Dirt Spaces			**3,634**	

TABLE 3
EXISTING PIERCE COLLEGE PARKING INVENTORY BY LOT

Map #	Location/ Description	Use	Type	# of Parking Spaces	Inventory Notes
OFF-CAMPUS (ADJACENT STREET) PARKING					
24	Parking on South Side of Victory Blvd., De Soto to Mason	General Parking	Curb	112	Spaces unmarked, number estimated.
25	Parking on South Side of Victory Blvd., Mason to Winnetka	General Parking	Curb	114	Spaces unmarked, number estimated.
26	Parking on West Side of Winnetka Ave., Victory to Calvert	General Parking	Curb	45	Spaces unmarked, number estimated.
	OFF-CAMPUS SUBTOTAL			**271**	
GRAND TOTAL ON- AND OFF-CAMPUS PARKING					
	TOTAL SPACES			**3,990**	

Note: Parking inventory conducted February 2002.

Existing Campus Parking Demand

A parking utilization survey was conducted as part of this study on Wednesday, April 29, 2009, to assess the utilization of the various parking facilities throughout a typical weekday with school in session. The survey was conducted during the twelfth week of classes in the Spring 2009 semester, after campus activity levels had stabilized. The survey was conducted hourly throughout the day from 8:00 AM to 7:00 PM in each of the on-campus parking facilities as well as the adjacent street parking.

Table 4 summarizes the results of the utilization survey. As can be seen, a maximum of 2,726 parking spaces were observed to be utilized at 12:00 PM, including 2,570 on-campus spaces and 156 off-campus/on-street spaces. Figure 6 illustrates the hourly variation of existing parking demand for the entire campus parking system.

The peak demand-to-supply ratio for the entire system is around 68% at 12:00 PM. The morning hours between 10:00 AM and 12:00 noon experience the highest demand levels, ranging from 64% to 68% of the spaces utilized. The 7:00 PM hour, with 53% of the spaces utilized, is the fifth highest demand hour of the day, due to relatively high attendance at evening classes.

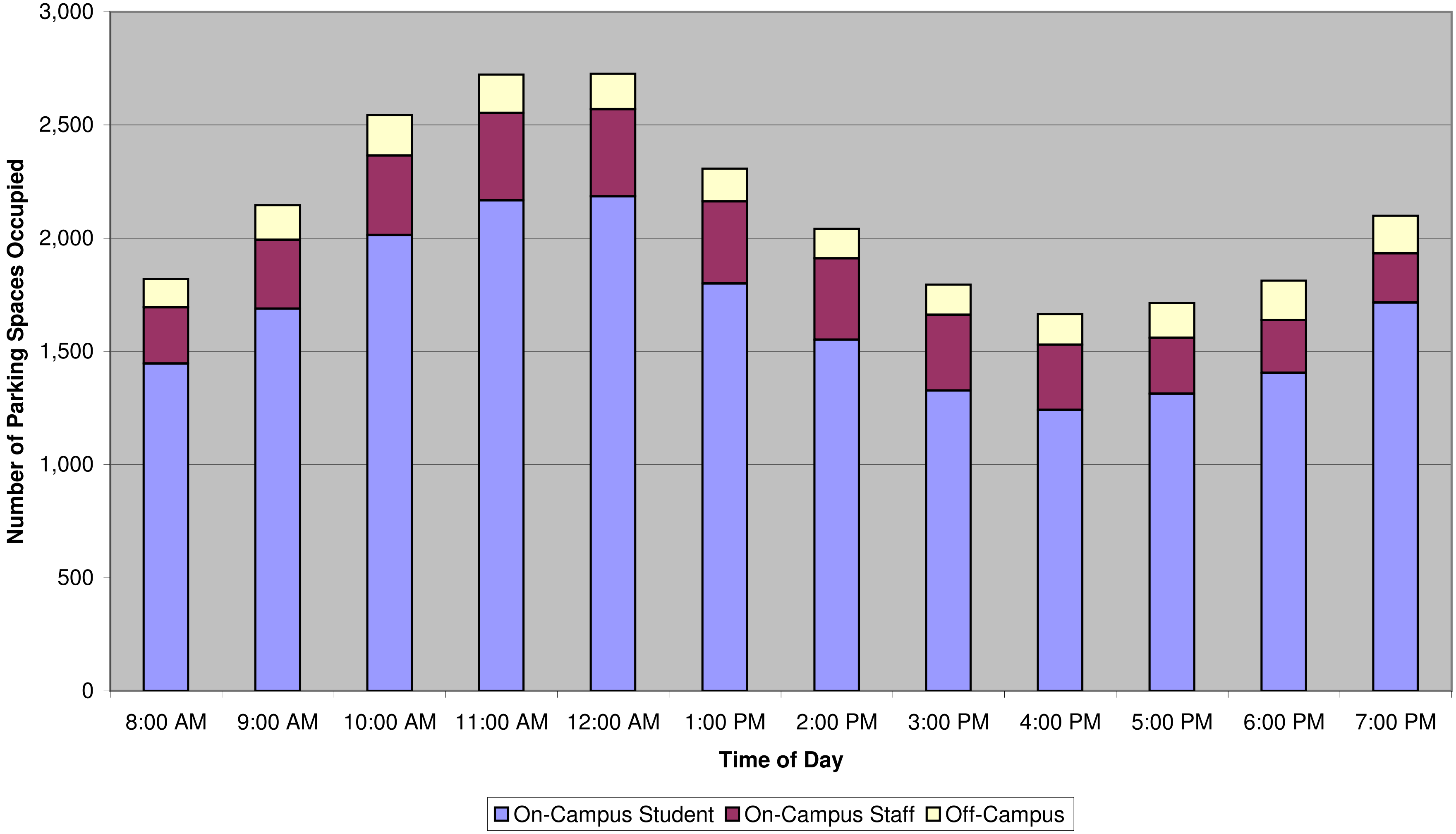
Typically, demand/supply ratios of 85% to 90% are considered to indicate a fully-utilized parking supply. A parking area would be considered effectively full despite the 10% to 15% remaining capacity since the time to find an empty space would be excessive. Since utilization of the existing Pierce College parking system currently peaks at about 68%, there is presently a substantial amount of excess capacity in the system as a whole. Certain individual lots, however, have demand/supply ratios of greater than 90% at certain times of the day, including student Lots 1, 3, and 7 (see Appendix D for details of the utilization survey results by parking lot).

TABLE 4
SUMMARY OF EXISTING PIERCE COLLEGE PARKING INVENTORY AND UTILIZATION
Wednesday, April 29, 2009

	Inventory (# of Spaces)	Number and Percent of Parking Spaces Occupied by Time of Day											
		8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM
Number of Spaces Occupied													
On-Campus:													
Student Lots	3,138 [a]	1,446	1,688	2,014	2,167	2,185	1,799	1,552	1,327	1,241	1,313	1,405	1,715
Staff Lots	581	248	305	351	386	385	363	359	334	288	247	233	218
Subtotal	3,719 [a]	1,694	1,993	2,365	2,553	2,570	2,162	1,911	1,661	1,529	1,560	1,638	1,933
Off-Campus	271 [b]	125	153	179	170	156	145	131	134	136	154	174	166
Total	3,990	1,819	2,146	2,544	2,723	2,726 *	2,307	2,042	1,795	1,665	1,714	1,812	2,099
Percent of Spaces Occupied													
On-Campus:													
Student Lots		46%	54%	64%	69%	70%	57%	49%	42%	40%	42%	45%	55%
Staff Lots		43%	52%	60%	66%	66%	62%	62%	57%	50%	43%	40%	38%
Subtotal		46%	54%	64%	69%	69%	58%	51%	45%	41%	42%	44%	52%
Off-Campus		46%	56%	66%	63%	58%	54%	48%	49%	50%	57%	64%	61%
Total		46%	54%	64%	68%	68% *	58%	51%	45%	42%	43%	45%	53%

Notes:
- * Denotes peak demand.
- a. On-campus inventory includes approximately 65 unmarked parking spaces in dirt parking lots.
- b. Approximate number of on-street spaces immediately fronting campus along south side of Victory Boulevard and west side of Winnetka Avenue.

FIGURE 6
EXISTING PIERCE COLLEGE PARKING UTILIZATION BY TIME OF DAY
Wednesday, April 29, 2009



III. FUTURE TRAFFIC PROJECTIONS

In order to properly evaluate potential impacts of the proposed project on the street system, it was necessary to develop estimates of future traffic conditions in the study area both with and without the project. Future traffic volumes were first estimated for the study area without the project. These future forecasts reflect traffic increases due to general regional growth and traffic expected to be generated by other specific developments in the vicinity of the project and represent cumulative base (no project) conditions. Incremental project traffic was then estimated and separately assigned to the surrounding street system. The sum of the cumulative base and project-generated traffic represents the Cumulative plus Project conditions. Development of each of these future traffic scenarios is described in this chapter.

CUMULATIVE BASE TRAFFIC PROJECTIONS

The cumulative base traffic projections reflect growth in traffic over existing conditions from two primary sources, including growth in the existing traffic volumes to reflect the effects of overall regional growth and development outside of the study area and traffic generated by specific related projects within, or in the vicinity of, the study area. In addition, trips generated by population growth on the Pierce College campus between the 2002 base year and current Year 2009 conditions have been estimated and removed from the 2015 baseline. These factors are described below.

Areawide Traffic Growth

The background regional growth in traffic was estimated by adjusting the existing traffic volumes upwards using a growth factor. A factor of 1% per year was used in this analysis, based on general traffic volume growth factors suggested in *2004 Congestion Management Program for Los Angeles County* (Los Angeles County Metropolitan Transportation Authority, July 2004) for the San Fernando Valley. Using this growth rate, the existing (year 2009) traffic volumes were adjusted upwards by 6% to reflect six years of regional growth from 2009 to 2015. The existing plus ambient growth weekday peak hour turning movement volumes at the analyzed intersections are shown in Figure 7.

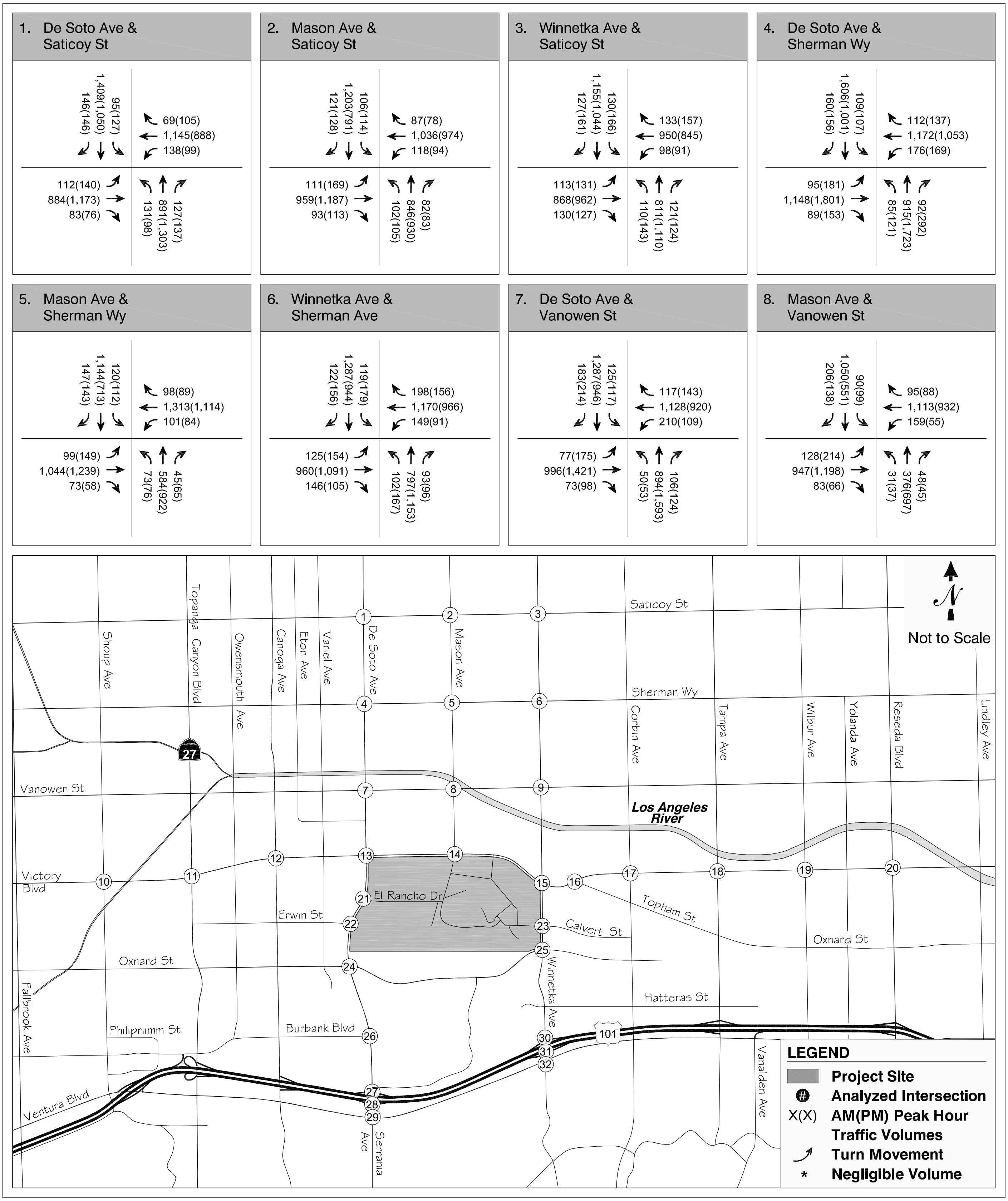
Cumulative Development Projects

Traffic expected to be generated by specific development projects within, or with the potential to affect, the study was also considered. Information regarding future projects that are either under construction, planned, or proposed for development was obtained from the City of Los Angeles Department of Transportation (LADOT). A total of 32 related projects were identified for inclusion in the analysis. The locations of these projects are illustrated in Figure 8 and the estimated trip generation for each is listed in Table 5. Trip generation estimates for the related projects were provided by LADOT. The weekday peak hour turning movement volumes representing related project only volumes at the analyzed intersections are shown on Figure 9.

The geographic distribution of traffic generated by developments such as those included in the analysis is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of the population from which employees and/or patrons of the proposed development are drawn, and the location of the project in relation to the surrounding street system. Trip distribution patterns for each related project were developed based on the above factors.

Pierce College Baseline Adjustment

In 2002 an environmental review was conducted to analyze the potential environmental impacts of the proposed Pierce College Facilities Master Plan (*Traffic and Parking Study for the Pierce College Facilities Master Plan Environmental Impact Report*, Kaku Associates, 2002). The scheduled buildout year for that project was 2010. The Pierce College Master Plan evaluated in 2002 is being updated and analyzed in this document. To accurately analyze the entire project, this analysis is analyzing a 2015 cumulative base that replicates conditions based on 2002 FTE. In addition to ambient growth and related projects, the incremental project trips generated by the project based on changes in FTE between 2002 and 2009 have been removed from the street

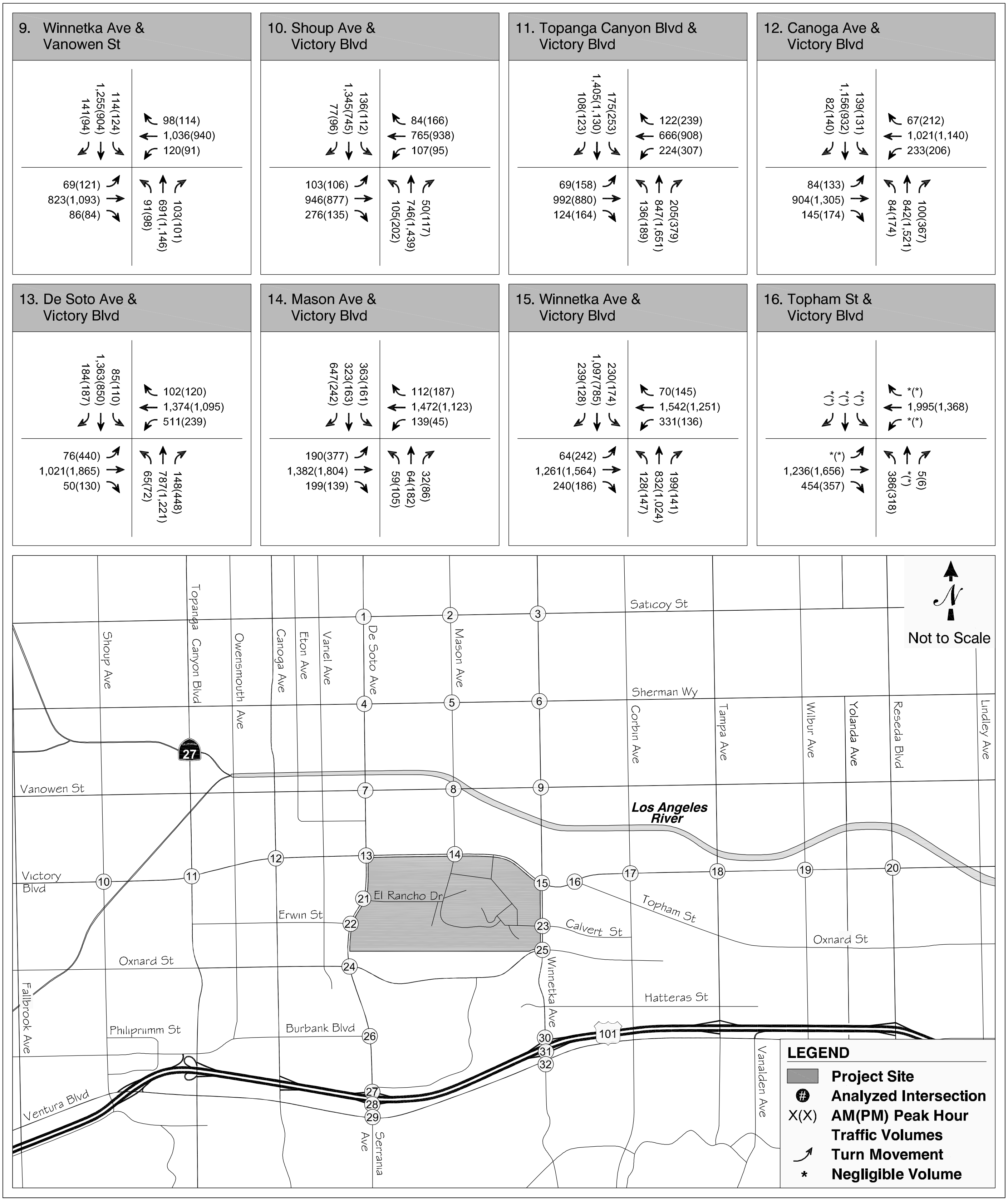


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

EXISTING PLUS AMBIENT WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 7

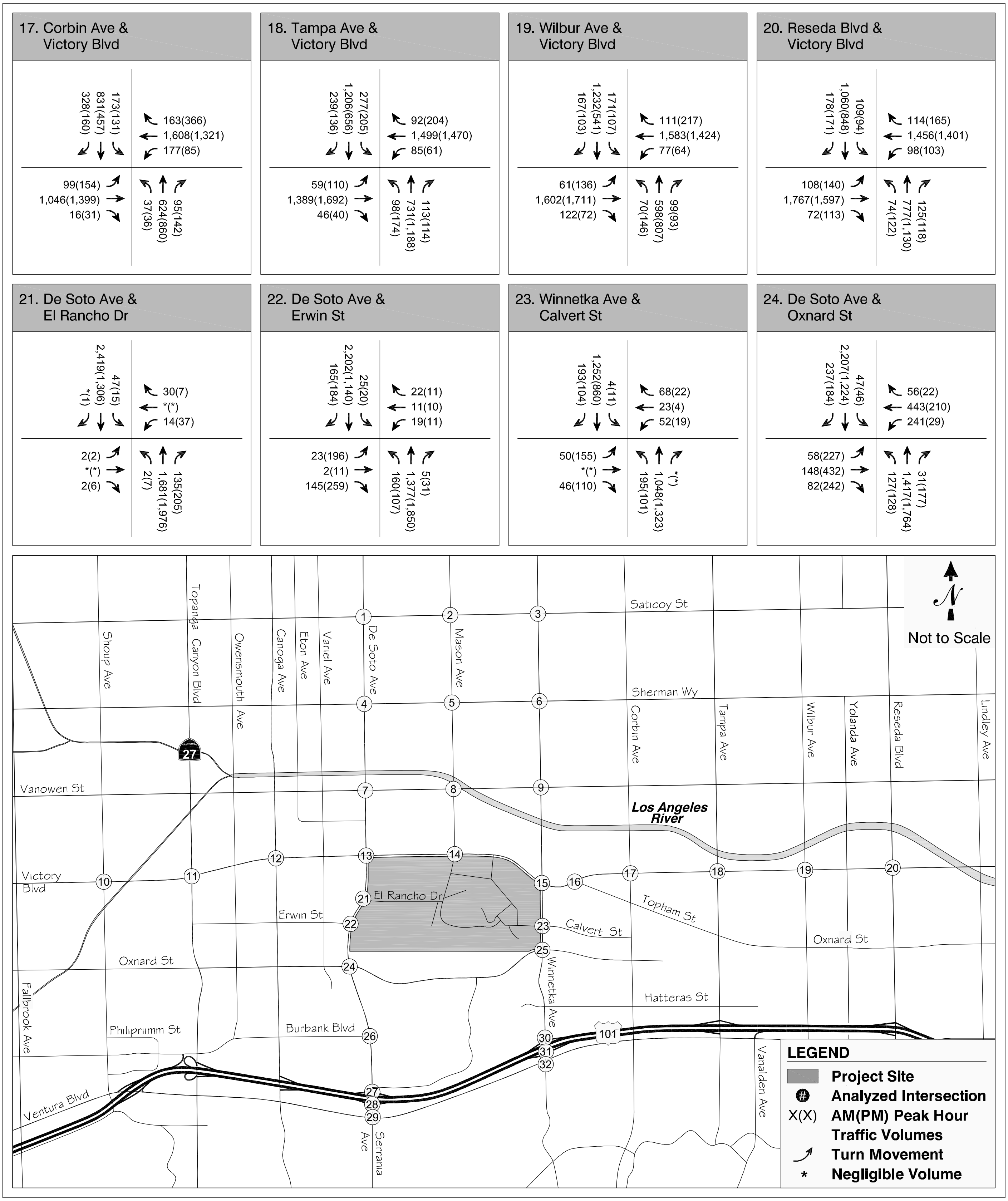


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

EXISTING PLUS AMBIENT WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 7 (CONT.D)

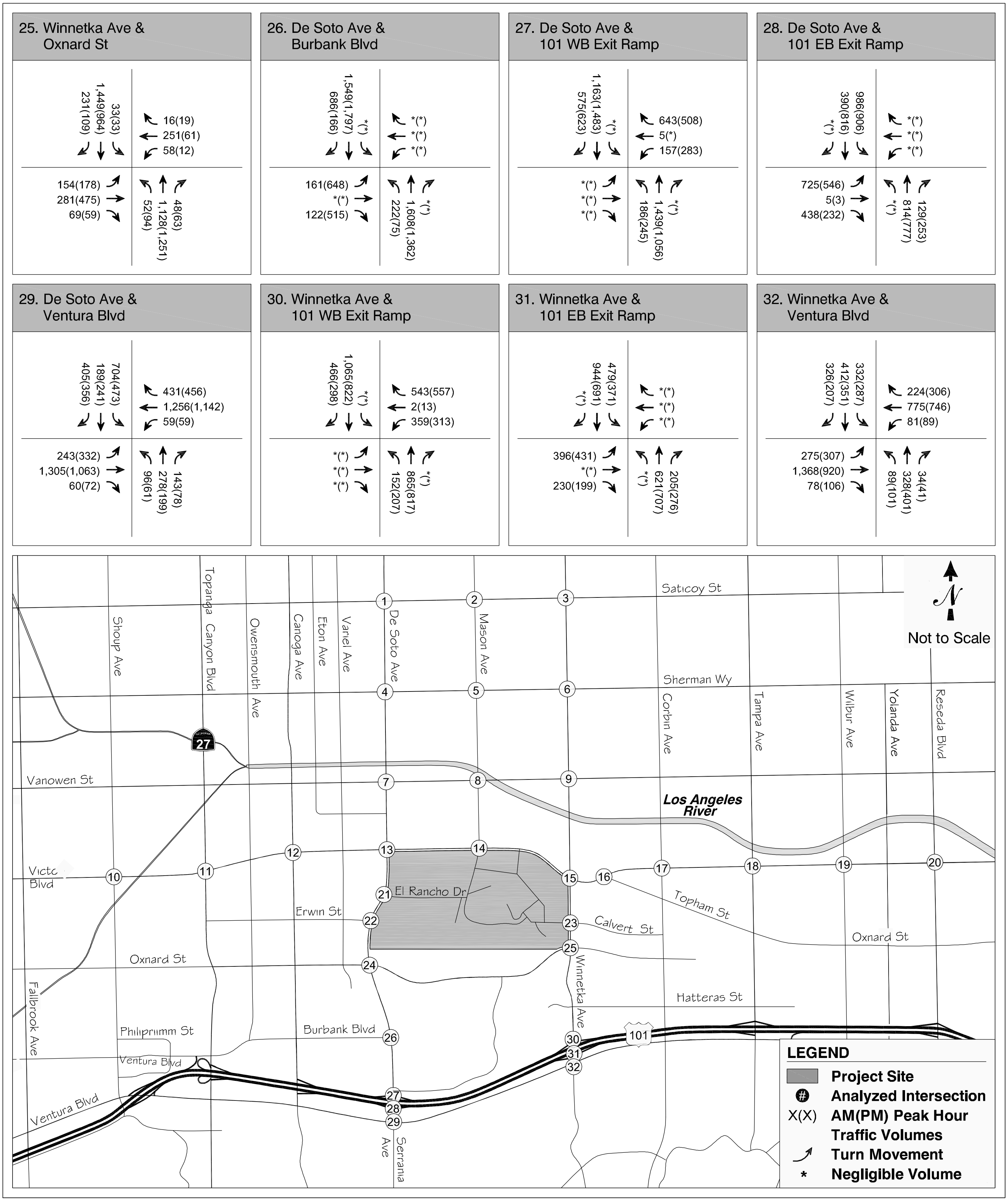


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

EXISTING PLUS AMBIENT
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 7 (CONT.D)

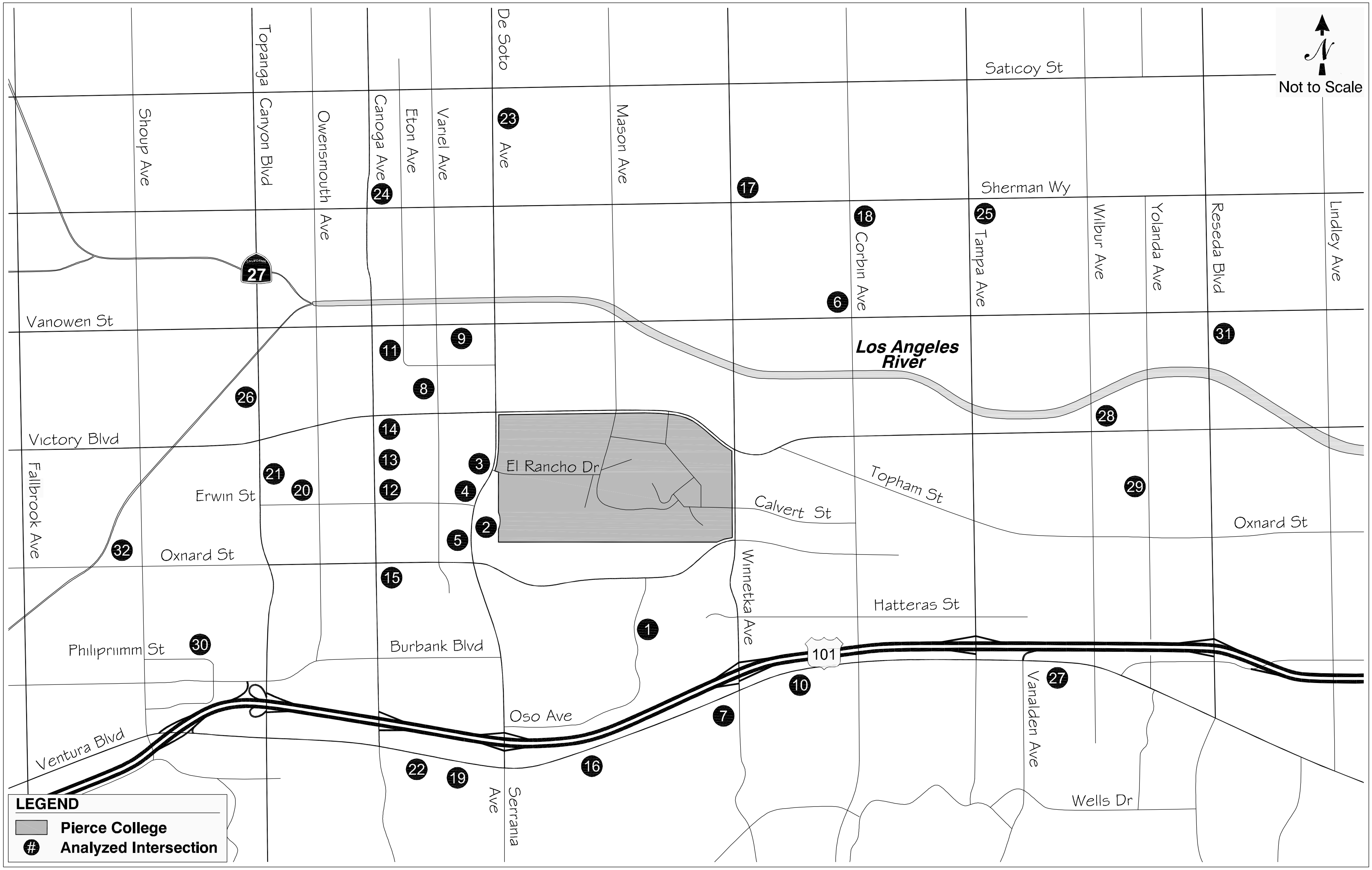


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

EXISTING PLUS AMBIENT WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 7 (CONT.D)



FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

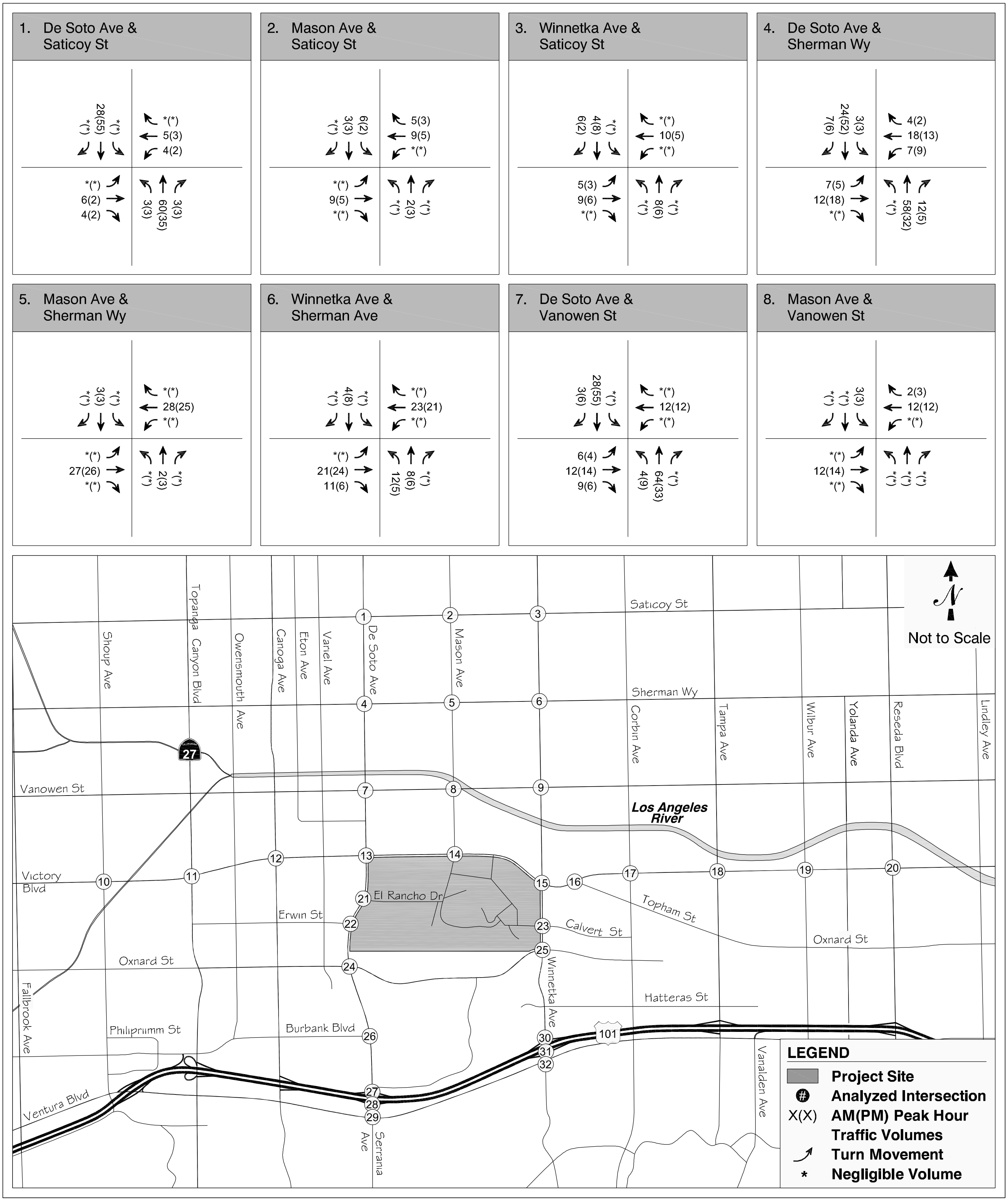
LOCATION OF RELATED PROJECTS

FIGURE 8

TABLE 5
TRIP GENERATION ESTIMATES FOR RELATED PROJECTS [a]

				AM Peak			PM Peak					
Index	**Address**	**Project Title**	**DOT Case**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**Size**	**Unit**	**Comments**
1	5724 Oso Av	Oso High School	SFV-2003-84	104	88	192	26	30	56	400	Enrollment	
2	6000 De Soto Av	Bella Vista Phase 2	WC-1998-16	15	76	91	74	36	110	190	Dwelling Unit	Final part of Warner Ridge
3	6355 De Soto Av	Trammell Crow Residential (TCR)	WC-04-043 ISP	-22	105	83	102	9	111	306	Dwelling Unit	Trips as calc by consultant.
4	6219 De Soto Av	REW Holdings LLC	WC-2003-22	90	358	448	354	191	545	879	Dwelling Unit	Panovision Apartments
5	6051 De Soto Av	Ivy Academia Charter School	WC-2004-18	39	32	71	22	26	48	300	Enrollment	Trips based on elementary school since proposed grades 1-7. See also 2004-47.
6	19701 Vanowen St	Vanowen & Corbin shopping center	Pending	70	49	119	74	76	150	28289	Sq. Footage	15789 pharmacy w/ dr thru, 8500 retail, 4000 fast food no dr thru replacing 9146 furniture store
7	19900 Ventura Bl	Bank	VEN-2004-76	1	7	8	64	58	122	4849	Sq. Footage	
8	6625 Variel Av	Archstone Apartments	WC-2002-6	-102	65	-37	148	-49	99	522	Dwelling Unit	Bought out Ray Art's Studios for new 522-units Archstone Apts.
9	21050 Vanowen St	Avalon Bay Canoga Park	WC-2004-23	-32	79	47	63	-54	9	210	Dwelling Unit	210 Apartments to replace 39ksf office bldg
10	19750 Ventura Bl	Corbin Village Shopping Center	VEN-2003-17	36	23	59	95	87	182	55340	Sq. Footage	Proposed Supermarket to replace 99 cent store
11	6700 Eton Av	Residential Project	WC 05-007ISPR	64	142	206	144	105	249	438	units	apartments
12	6250 Canoga Av	The Plaza	WC-2003-8	66	234	300	243	139	382	601	Dwelling Unit	Apartment units + 10000 s.f. local retail
13	6300 Canoga Av	Trillium health club expansion	WC-2003-5	7	9	16	27	26	53	13000	Sq. Footage	New addition to existing health club
14	6464 Canoga Avenue	Office & retail	SFV-2006-98	152	21	173	24	117	141	16.177	ksf retail	Office & retail
15	5960 Canoga Av	Coffee shop, dry cleaner, convenience store	WC-2003-6	141	135	276	93	94	187	2972	Sq. Footage	Add to existing gas station: 583sf coffee shop; 973sf dry cleaners; 3,444 sf conv-store
16	20600 Ventura Bl	Chalk Hill Residential Project	VEN-2004-78	37	160	197	134	78	212		Mixed Use	340 Condominiums + 16000 sf retail replacing church
17	20001 Sherman Way	Valley Region Elementary School #10	SFV-2005-257	202	182	384	82	100	182	650	Seats	P.M. trips based on ITE rates
18	19640 Sherman Way	Panda Express	SFV-2007-169	1	2	3	18	17	35	2500	Sq. Footage	2000 s.f. Panda Express w/ drive thru and 500 s.f. additional retail
19	20956 Ventura Bl	McDonalds	VEN-2003-21	47	46	93	32	29	61	3500	Sq. Footage	Fast food w/ drive-thru.
20	21757 Erwin St	Financial Partners Credit Union	WC-2005-44	2	3	5	34	32	66	4,000	Sq. Footage	Proposed Credit Union in place of retail. See also WC-2004-32, WC-2005-20
21	6360 Topanga Cyn Bl	The Village at Westfield Topanga	WC-2007-34	655	254	909	470	732	1202	1,125,440	Sq. Footage	Mixed Use Project
22	21108 Ventura Bl	Wells Fargo Bank	VEN-2004-67	3	6	9	79	79	158	5593	Sq. Footage	Replacing specialty retail (wireless phone store)
23	7510 De Soto Av	Multicultural Learning Center	SFV-2006-57	79	65	144	46	52	98	160	Seats	Expansion of charter school (K-8)
24	21355 Sherman Way	McDonalds & Starbucks	SFV-2002-40	85	78	163	77	75	152	4400	Sq. Footage	fast-food w/ drive through
25	7150 Tampa Av	Jewish Home for the Aging Expansion	SFV-2003-050	26	32	58	47	30	77		Other	nursing home w/ 162 net retirement apts, 150 net nursing beds, 24630 sf dining & kitchen
26	6537 Topanga Canyon Bl	California National Bank	WC-2005-3	5		5	21	39	60	8331	Sq. Footage	Bank to replace 3 day blinds
27	5530 Donna Av	Samiti Yog/Meditation Center	SFV-2005-059	41	39	80			0	240	Seats	seats = attendees
28	18855 Victory Bl	Jewish Home for the Aging Expansion	SFV-2005-67	21	11	32	22	28	50	228	Beds	Assisted living facility
29	6155 Yolanda Av	Crestview Private Elementary School	SFV-2003-014	181	205	386	97	79	176	420	Enrollment	18701 Calvert St
30	22201 Philipriimm St.	44 new SFDs	N/A	8	25	33	28	16	44	44	Dwelling Unit	New single family dwellings
31	6724 Reseda Bl	Reseda Auto Electric Center	SFV-2004-113	23	9	32	21	22	43	19	Bays	19 bay auto care center + 2200 sf office
32	22555 Oxnard St	Woodland Hills Private School	SFV-2001-15	89	57	146	13	18	31	185	Students	185 net student increase for K-12 private school

Notes:
[a] - Trip generation estimates and project data provided by LADOT, September 2004.

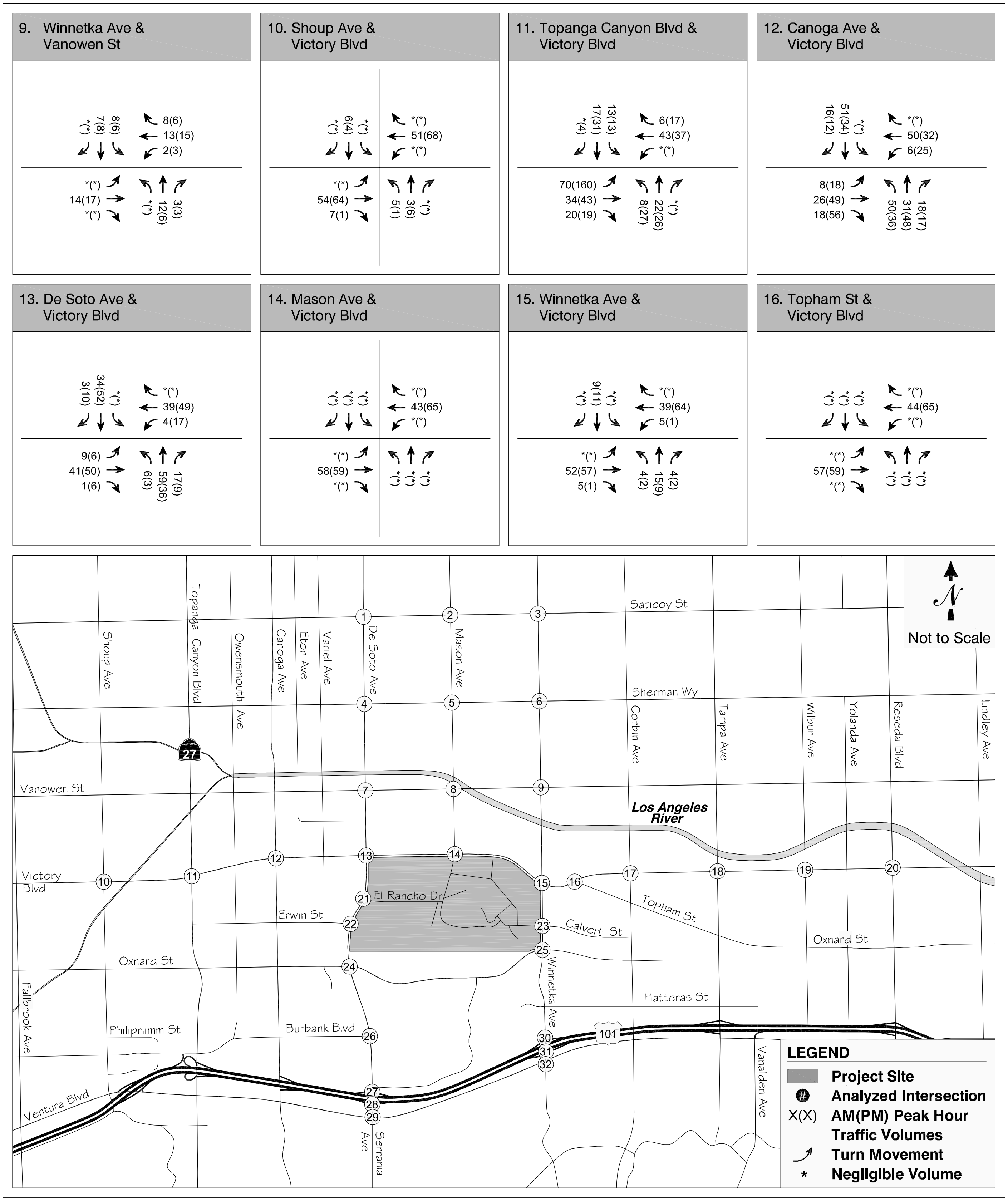


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

RELATED PROJECTS ONLY
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 9

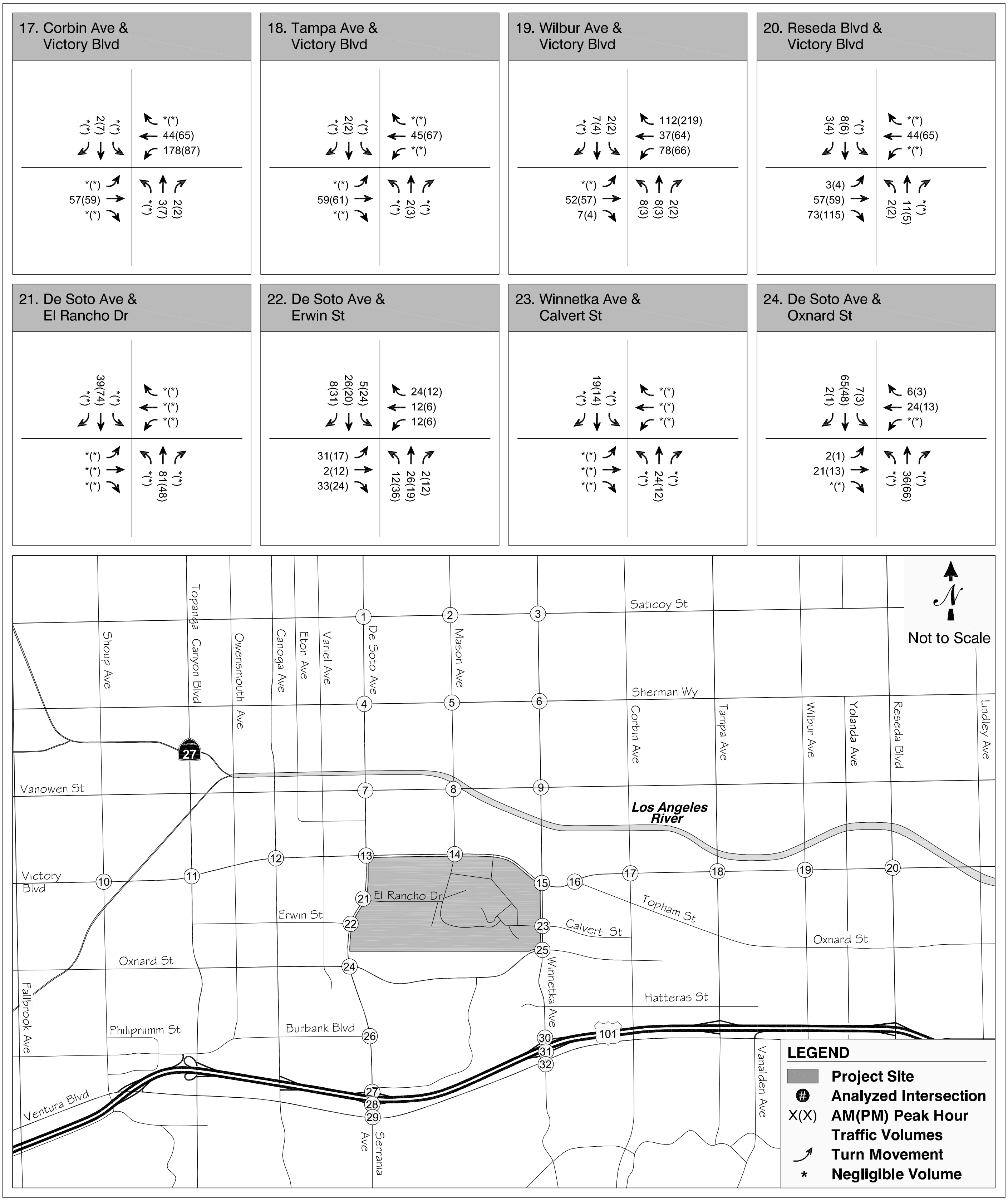


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

RELATED PROJECTS ONLY
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 9 (CONT.D)

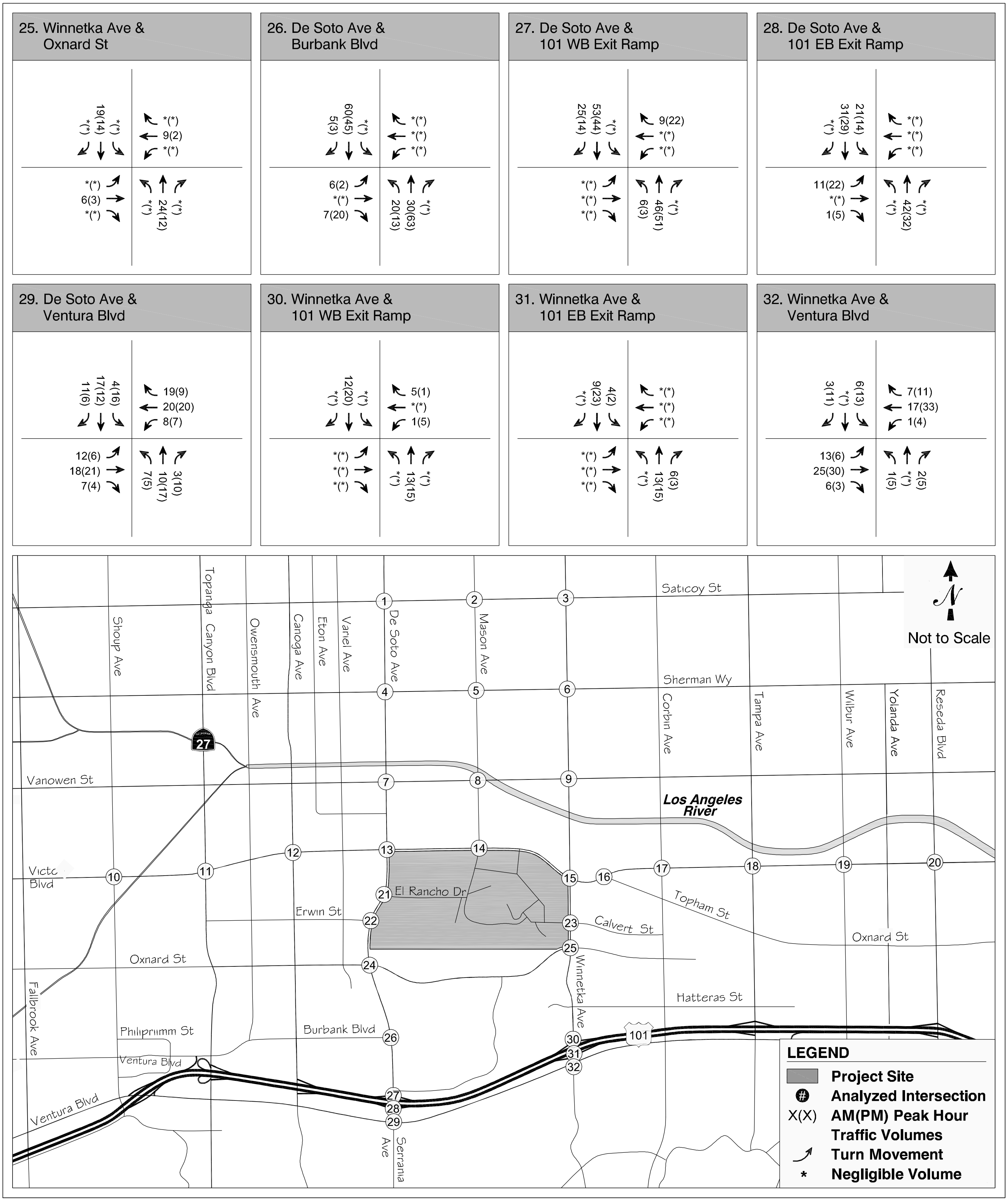


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

RELATED PROJECTS ONLY
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 9 (CONT.D)



FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

RELATED PROJECTS ONLY
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 9 (CONT.D)

network for 2015 cumulative base conditions. To account for changes in campus population and fully analyze the impacts of the updated Master Plan, the 2015 cumulative plus project conditions analyze the incremental trip increases from 2002 to 2015 based on projected FTE. As such, the incremental project impact of campus growth between 2002 and 2015 has been isolated, allowing for analysis of the entire project as the growth projected from 2002 to 2015. The weekday peak hour turning movement volumes representing project trips generated by changes in FTE from 2002 to 2009 to be removed at the analyzed intersections are shown on Figure 10.

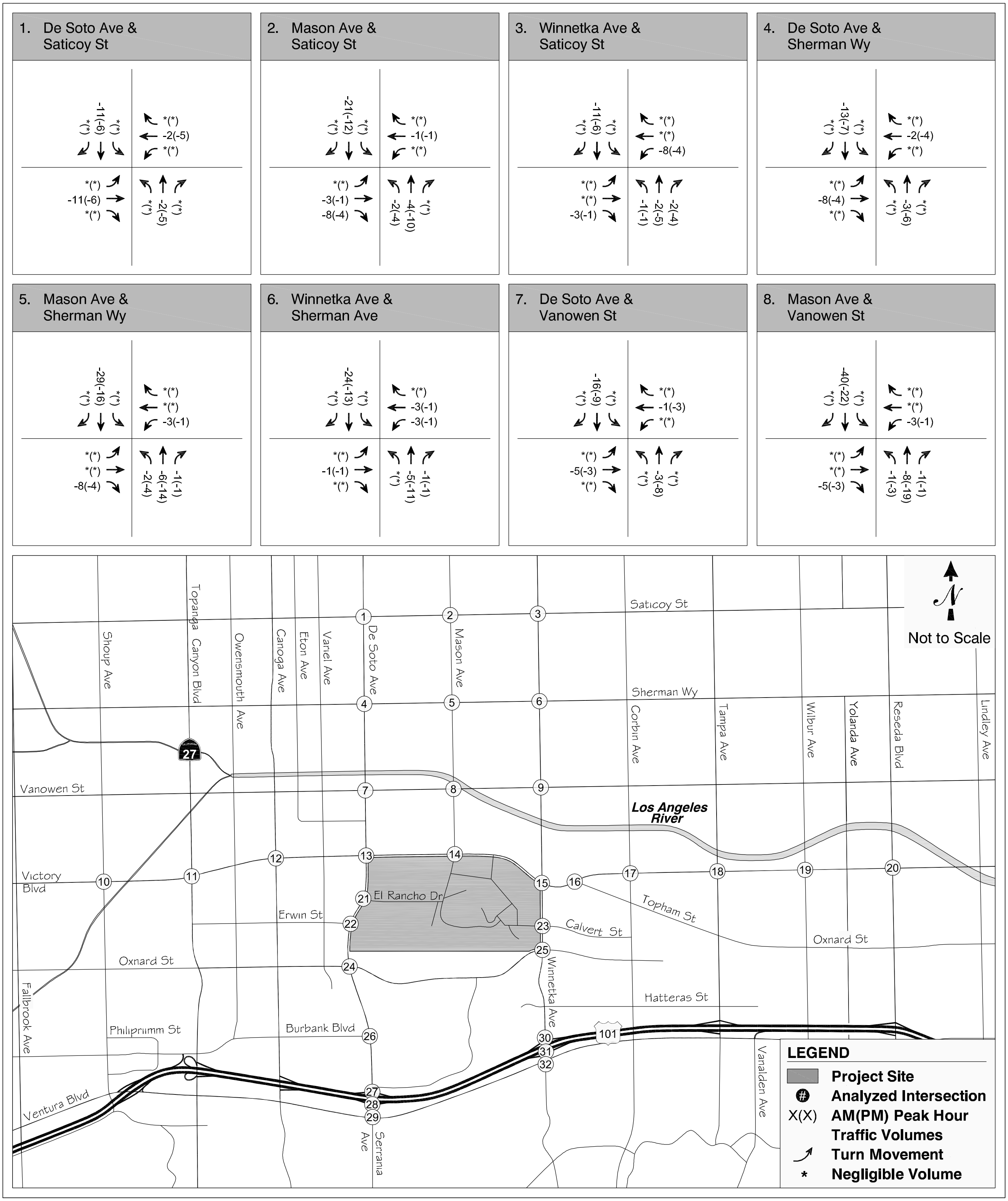
Table 6 provides the peak hour trip generation estimates for Pierce College based on the changes in FTE from 2002 to 2009 that were removed from the street network as shown in Figure 10. Approximately 3,210 daily trips are projected from the Pierce College year 2002 FTE baseline to year 2009 FTE, including about 323 trips during the AM peak hour and 274 trips during the PM peak hour. The derivation of trip generation rates and project trip distribution patterns used to remove the trips generated by changes in FTE from 2002 to 2009 are discussed in the section of this chapter following cumulative base traffic volumes.

Cumulative Base Traffic Volumes

Using the estimated trip generation and trip distribution patterns, traffic generated by the 32 related projects was assigned to the street network and added to the ambient background increase of six percent, while project generated trips based on the change in FTE from the 2002 Pierce College baseline to 2009 were removed. The resulting traffic volumes, representing 2015 cumulative base conditions without the project, are presented in Figure 11.

BASELINE TRANSPORTATION SYSTEM IMPROVEMENTS

Information was collected from LADOT regarding committed transportation system improvements programmed for implementation within the study area and timeframe. These include:

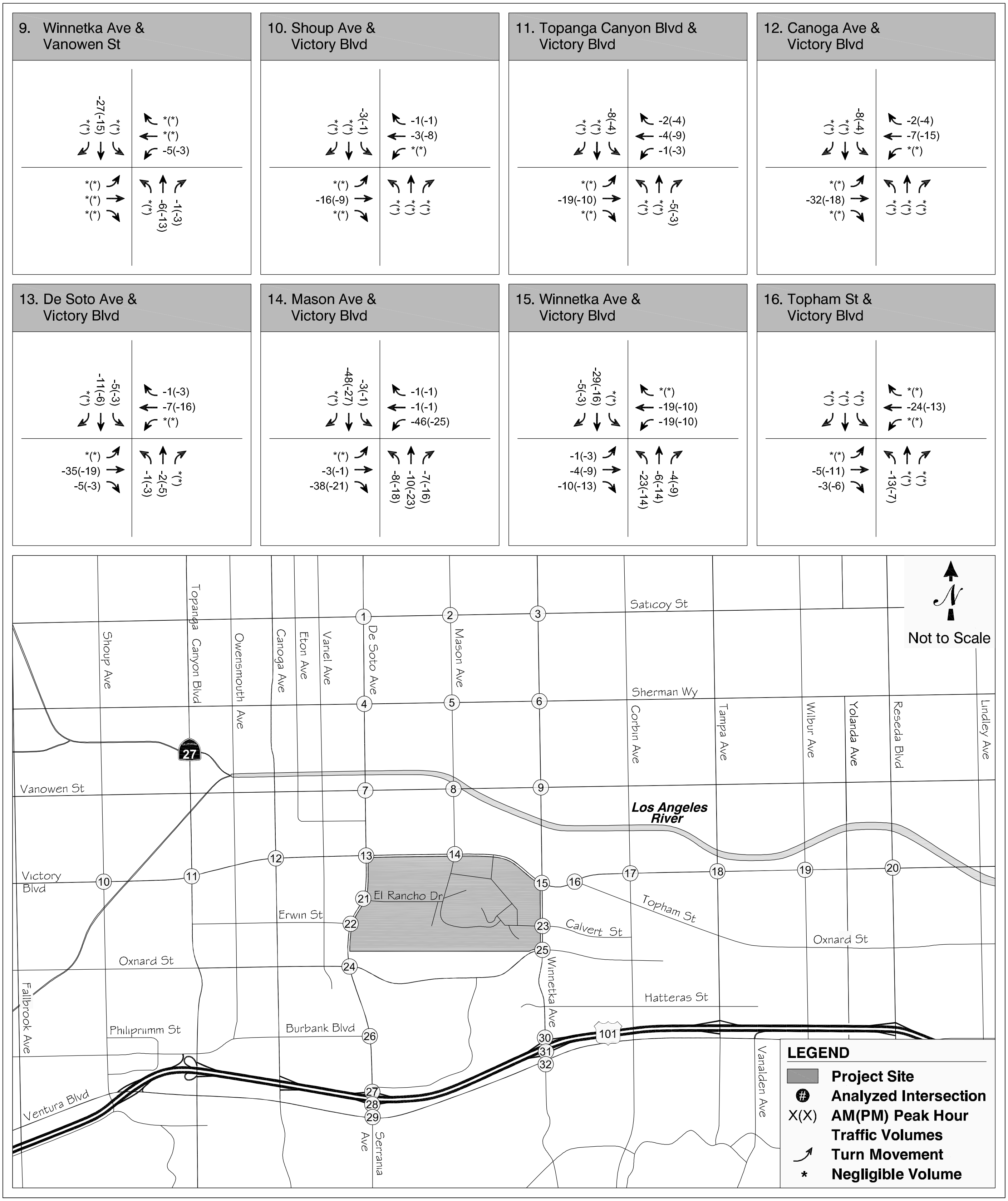


FEHR & PEERS
TRANSPORTATION CONSULTANTS

2002-2009 FTE REMOVED
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

FIGURE 10

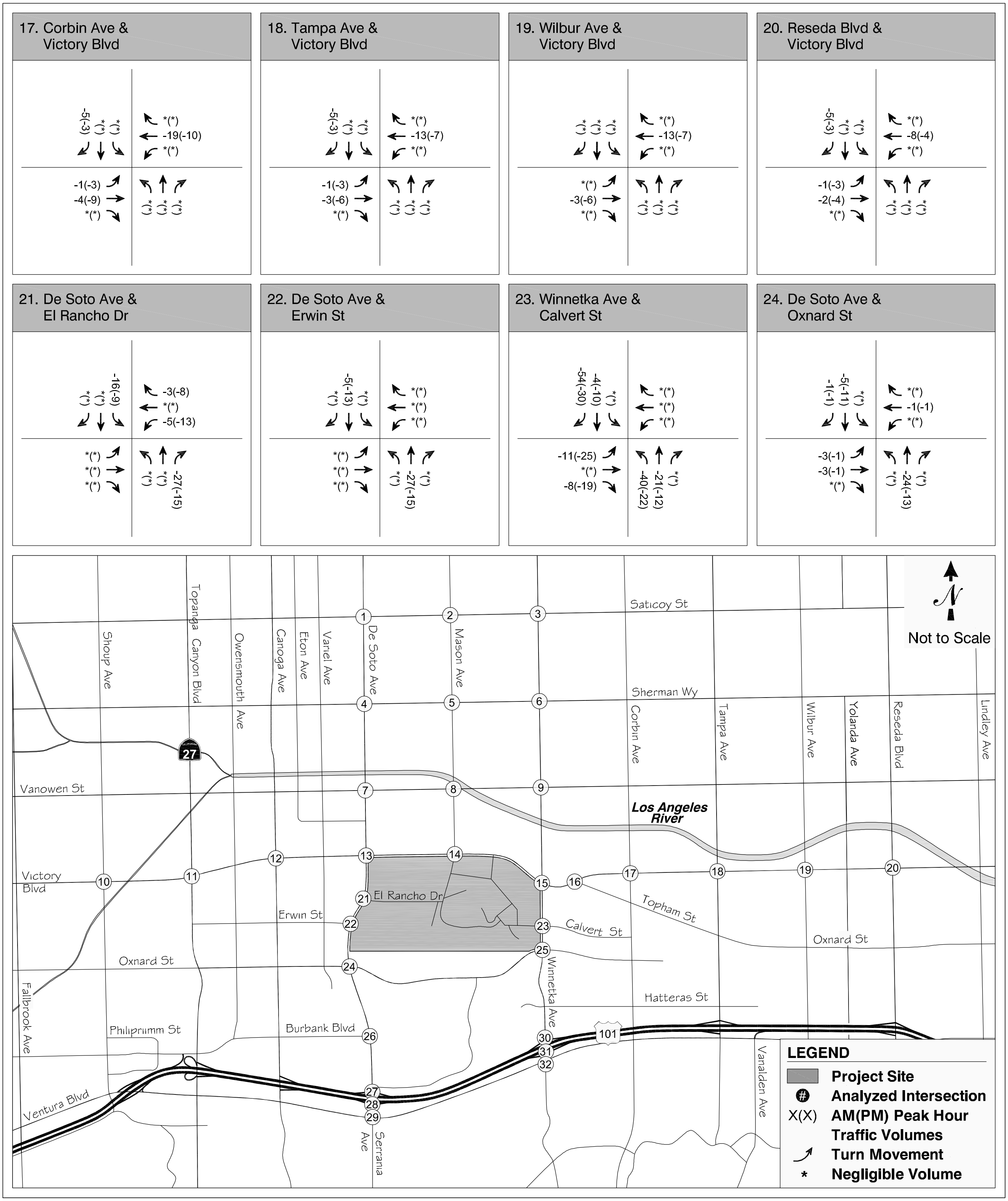


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

2002-2009 FTE REMOVED
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 10 (CONT.D)

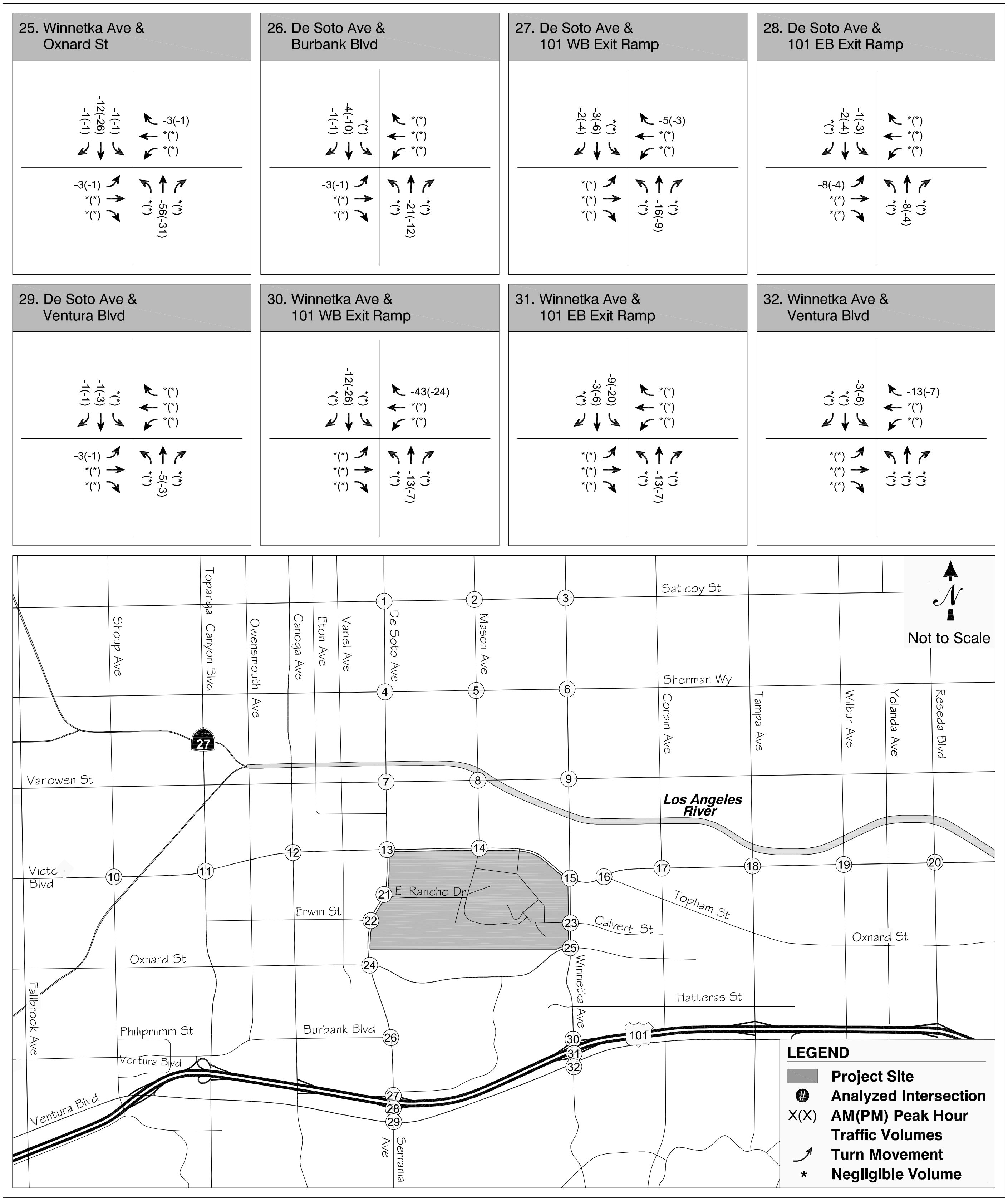


FEHR & PEERS
TRANSPORTATION CONSULTANTS

2002-2009 FTE REMOVED
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

FIGURE 10 (CONT.D)



FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

2002-2009 FTE REMOVED
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 10 (CONT.D)

TABLE 6
PIERCE COLLEGE FACILITIES MASTER PLAN UPDATE
TRIP GENERATION ESTIMATES: ACADEMIC GROWTH

	Student		AM Peak Hour [a]			PM Peak Hour [a]		
	FTE	Daily	In	Out	Total	In	Out	Total
Existing Pierce College In/Out Trips (November 2008/March 2009)								
Mason Street Driveway			624	146	770	327	352	679
Lot 7 Driveway on Victory Boulevard			447	65	512	159	122	281
Calvert Street Driveway			388	90	478	197	250	447
El Rancho Drive Driveway			171	41	212	207	42	249
Total Driveway Trips		19,720	1,630	342	1,972	890	766	1,656
Estimate for On-Street Parkers [b]		990	82	17	99	45	38	83
Estimated Total Existing Trips		20,710	1,712	359	2,071	935	804	1,739
Empirical Trip Rates Based on 2008-2009 Data								
FTE (2008-2009) [c]	16,079							
2008-2009 Trip Rate per FTE		1.29	83%	17%	0.13	54%	46%	0.11
Base and Future FTE								
FTE (2001-2002 Base) [d]	13,591							
FTE (2008-2009 Existing) [c]	16,079							
FTE (2014-2015 Buildout) [c]	15,500							
Trips Added by Pierce College Academic Growth								
Change in FTE: 2002 to 2009	2,488	3,210	268	55	323	148	126	274
Change in FTE: 2009 to 2015	(579)	(750)	(62)	(13)	(75)	(35)	(29)	(64)
Change in FTE: 2002 to 2015	1,909	2,460	206	42	248	113	97	210

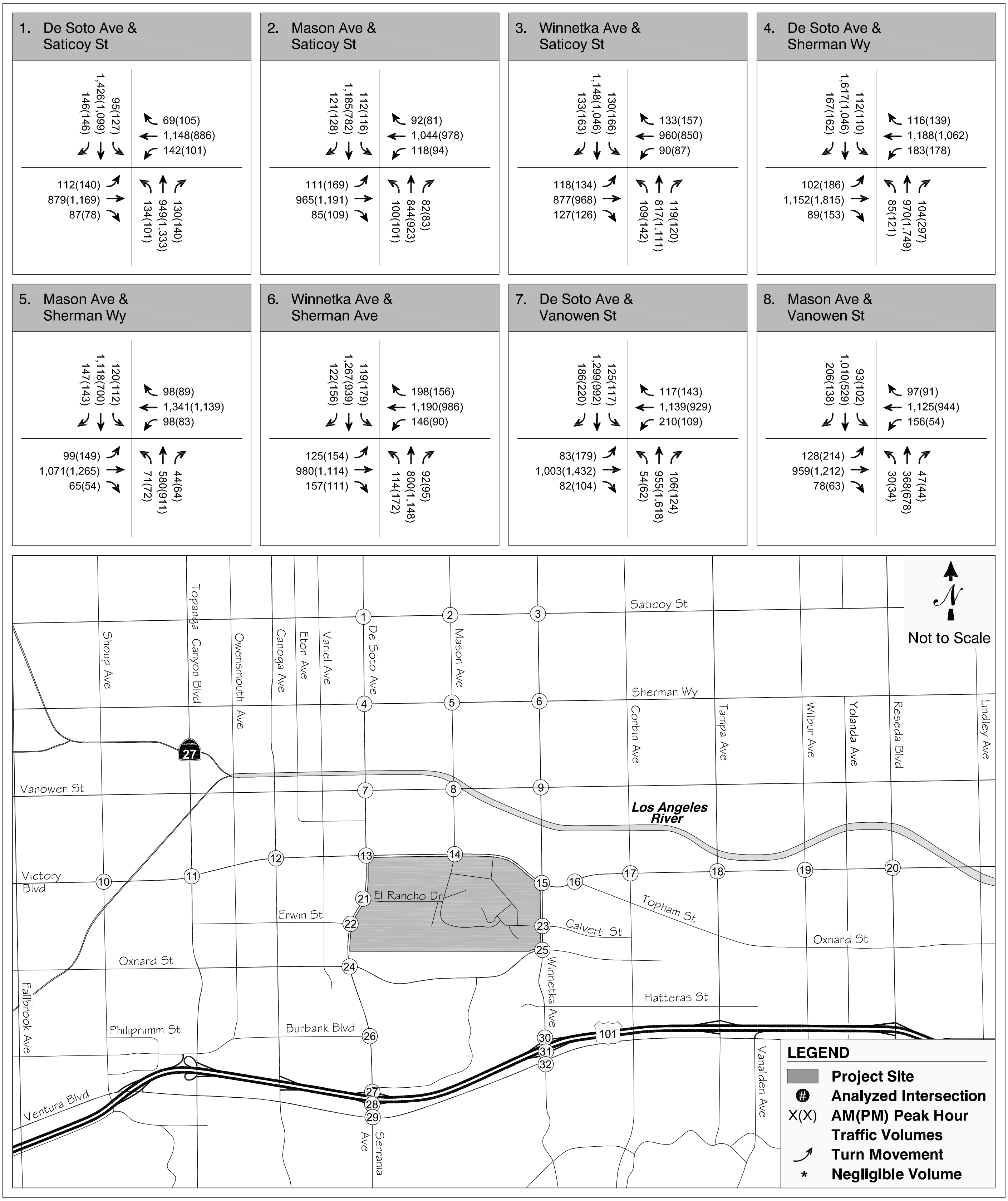
Notes:

a. Trip estimates are based on November 2008 and March 2009 manual in/out counts and estimated FTE.

b. Estimated existing trips generated by Pierce College students parked on surrounding street frontages (Victory Boulevard and Winnetka Avenue). Assumed to be 5% addition to driveway trips, based on percent of existing peak parking demands that are on-street

c. Source: Pierce College, November 2009.

d. Source: Pierce College, June 2002.

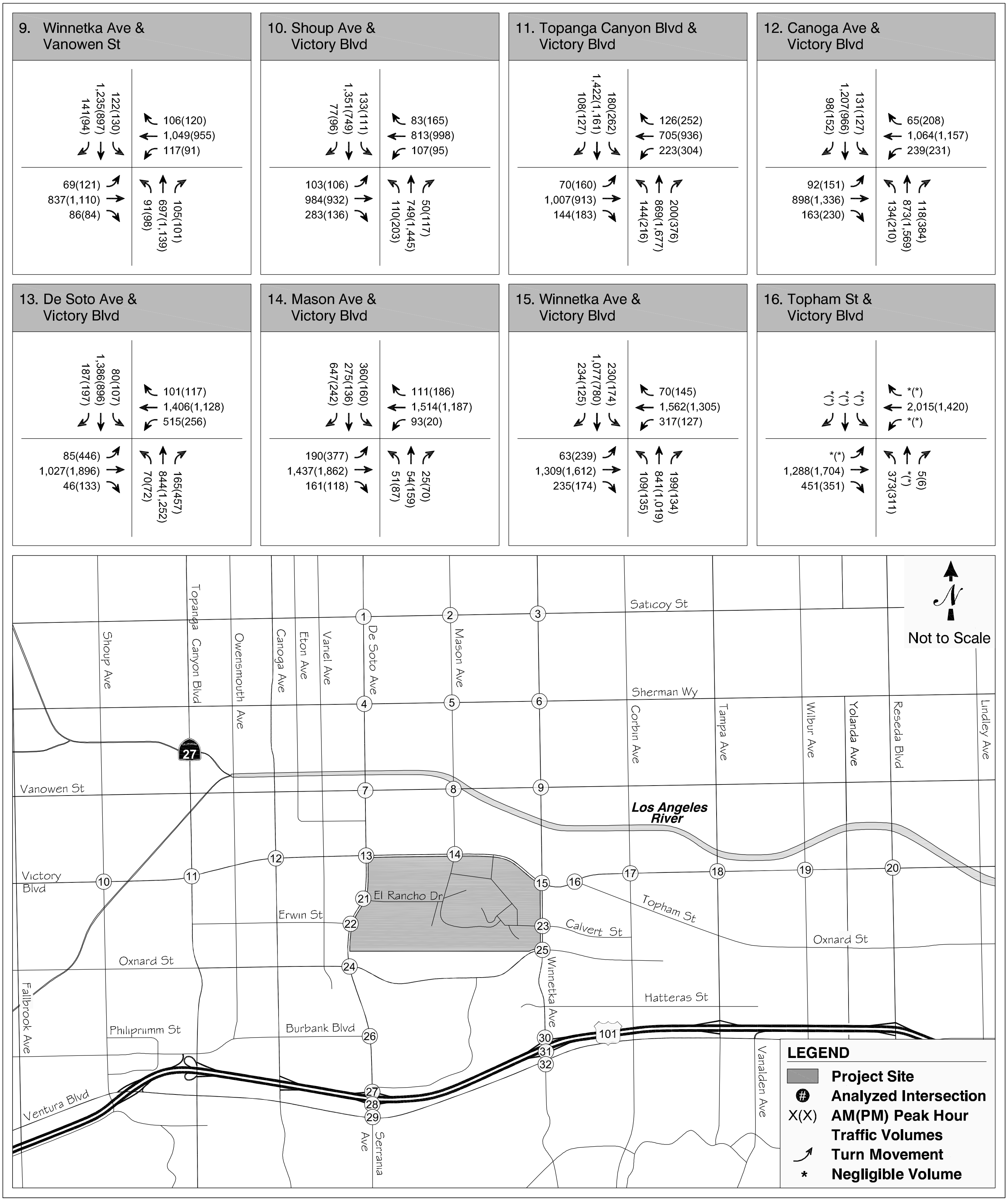


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

CUMULATIVE BASE (2015)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 11

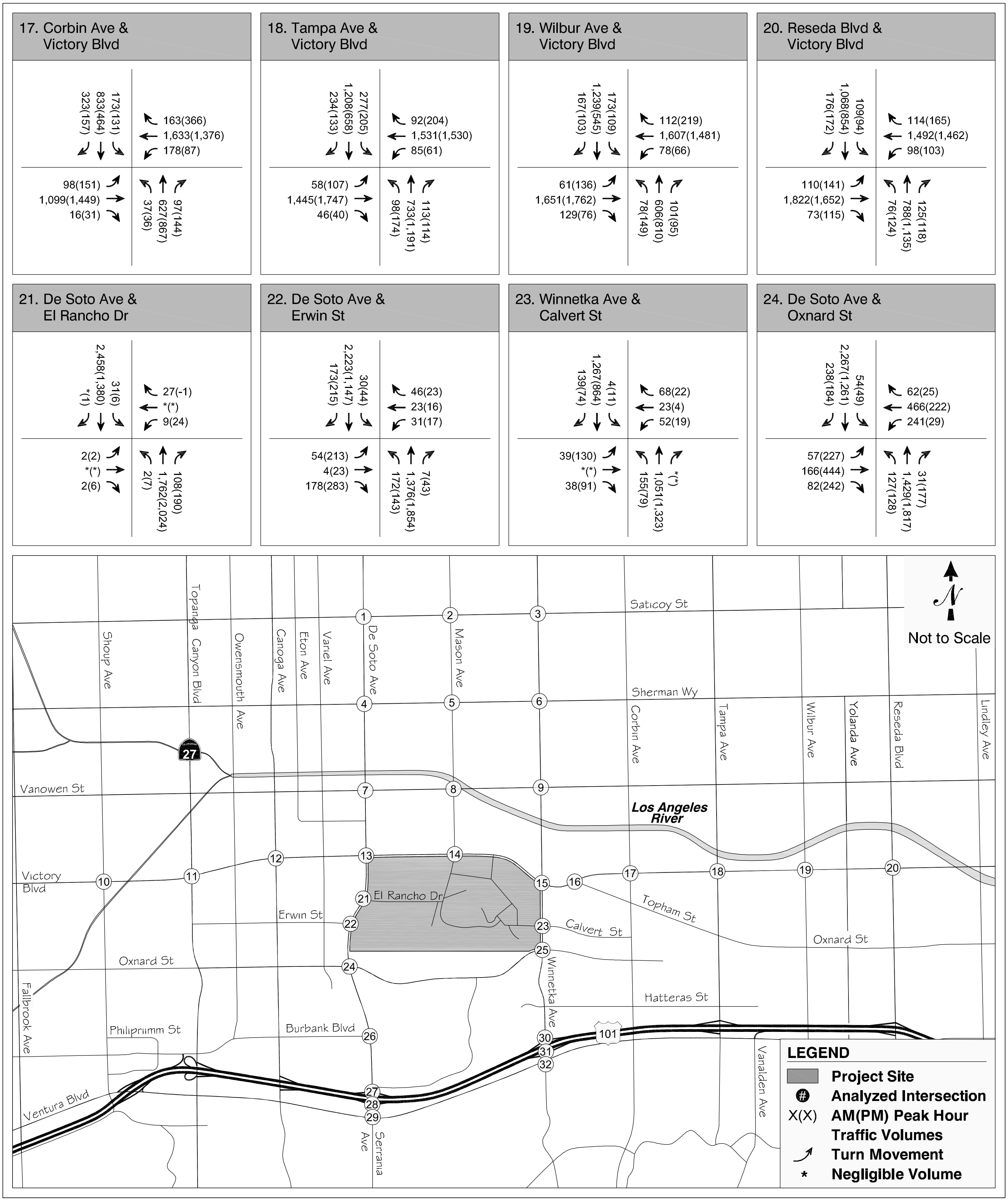


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

CUMULATIVE BASE (2015)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 11 (CONT.D)

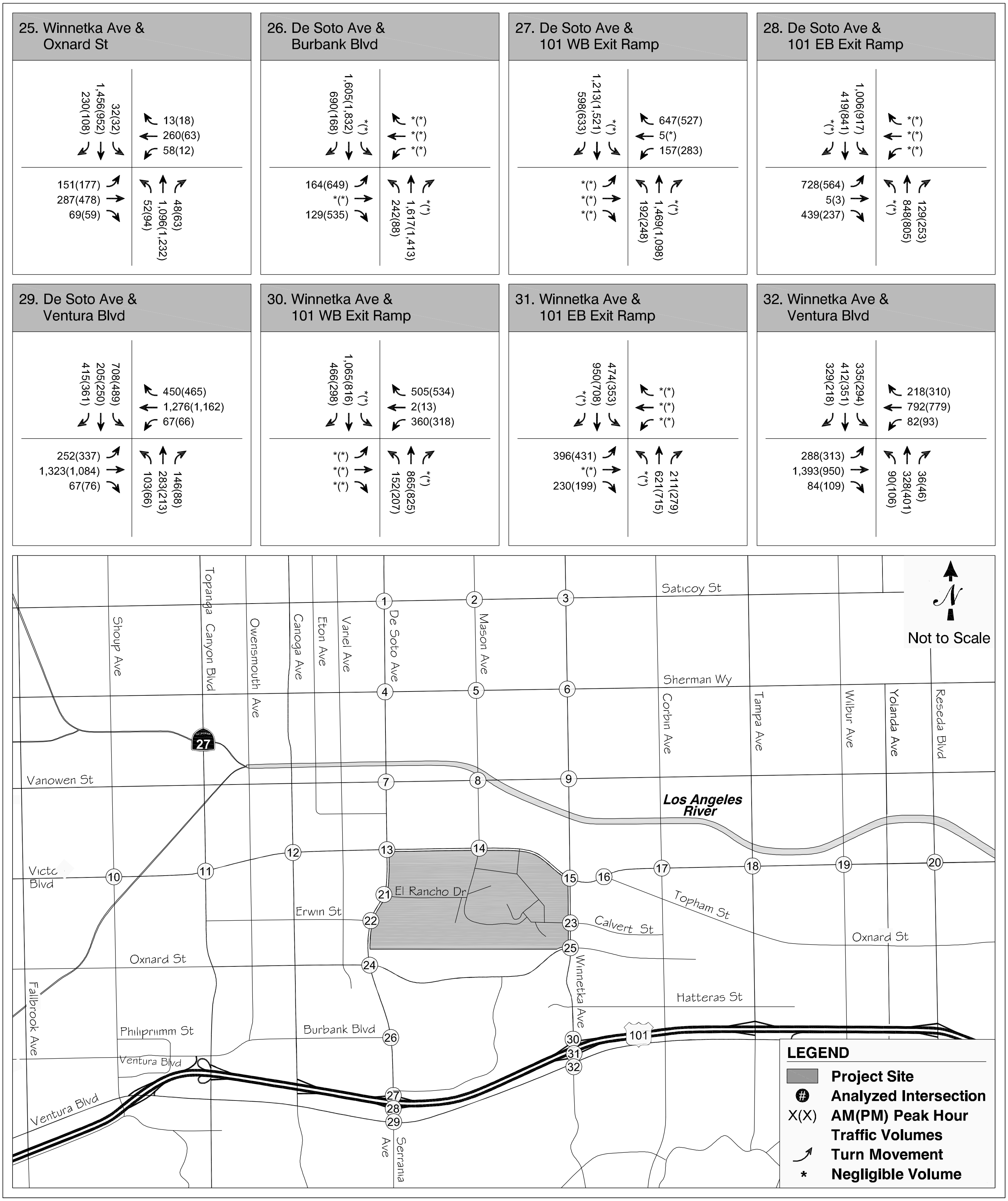


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

CUMULATIVE BASE (2015)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 11 (CONT.D)



FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

CUMULATIVE BASE (2015)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 11 (CONT.D)

- De Soto Avenue/Vanowen Street – Restripe eastbound approach of Vanowen Street from the existing left-turn lane, two through lanes, and right-turn lane to one left-turn lane, two through lanes, and one shared through/right-turn lane.

- Shoup Avenue/Victory Boulevard – Restripe northbound approach of Shoup Avenue from the existing left-turn lane, one through lane, and shared through/right-turn lane to one left-turn lane, two through lanes, and one right-turn lane.

- Topanga Canyon Boulevard/Victory Boulevard – Widen Victory Boulevard on the eastern leg and restripe from the existing dual left-turn lanes, two through lanes, and right-turn lane to dual left-turn lanes, three through lanes, and one right-turn lane.

- Canoga Avenue/Victory Boulevard – Restripe westbound approach of Victory Boulevard from the existing left-turn lane, three through lanes, and right-turn lane to one left-turn lane, three through lanes, and one shared through/right-turn lane.

These improvements were assumed to be in place as part of the cumulative base traffic forecasts in this study.

The Transportation Improvement and Management Program (TIMP) set forth in the Warner Center Specific Plan also includes additional future improvements at certain of the study intersections. The Specific Plan also requires that developers within Warner Center pay a Traffic Impact Assessment (TIA) fee to help pay for these improvements. However, since the TIA fee by design does not fully fund these improvements (since it funds only the portion of the improvements needed as a result of Warner Center future development), these improvements have not been assumed as a baseline condition in this study. Instead, they are considered as applicable later in the mitigation section of this report.

PROJECT TRAFFIC PROJECTIONS

Project Trip Generation

Future traffic volumes were projected for the Pierce College campus for buildout (Year 2015) of the updated campus Master Plan. The methodology for development of the volume projections included:

- Academic Growth (Students, Faculty/Staff and Visitors) – The Master Plan envisions academic growth to 15,500 FTE students by 2015. Growth in trips generated by students, faculty/staff, and campus visitors related to this projected academic growth were estimated by applying empirical trip generation rates derived from existing Pierce College conditions.

  Empirical trip generation rates per FTE were derived through comparison of the total number of existing vehicles entering and exiting the campus to the existing (year 2008-2009) estimated student FTE. The rates were adjusted upward to incorporate those students who currently park on-street on either Victory Boulevard or Winnetka Avenue who were not captured in the in/out traffic counts. Based on this analysis, it is estimated that, on average, the number of vehicle trips currently generated per FTE on the Pierce College campus is as follows:

Vehicle Trips per Student FTE		
Daily	AM Peak Hour	PM Peak Hour
1.29	0.13 (83% in/17% out)	0.11 (54% in/46% out)

  These trip generation rates were applied to the projected future FTE to project the increase in future trips generated by academic purposes through 2015.

Table 6 summarizes the estimated incremental increase in external trips generated on the Pierce College campus related to the future campus academic population growth from the Pierce College Year 2002 FTE baseline to Year 2015. As can be seen, a total net increase of about 2,460 daily, 248 AM peak hour, and 210 PM peak hour external trips are projected based on the increases in FTE between 2002 and 2015.

Project Traffic Distribution and Assignment

A trip distribution pattern was developed for the Pierce College campus based on inspection of two data sources: zip code data of existing Pierce College student residences (supplied by Pierce College for fall 2004); and existing volumes and turning movements at the campus access points (Brahma Drive, Mason Street, Lot 7 driveway, and El Rancho Drive) as an indication of both the existing split of traffic accessing the campus between the various access points and the existing direction of travel of these trips at the access points.

The following table summarizes the top 10 zip codes, all of which are in the San Fernando Valley, identified as residence locations of Pierce College students:

TABLE 7
DISTRIBUTION OF ZIP CODES OF RESIDENCE
PIERCE COLLEGE STUDENTS – FALL 2004

ZIP CODE	FREQUENCY	PERCENT
91335	1,933	10.29%
91306	1,314	7%
91304	1,266	6.74%
91367	1,105	5.88%
91325	777	4.14%
91311	773	4.12%
91356	706	3.76%
91344	698	3.72%
91307	695	3.70%
91406	683	3.64%
Other	8,828	47.01%
Total	18,778	100.0%

Source: Pierce College, May 2009.

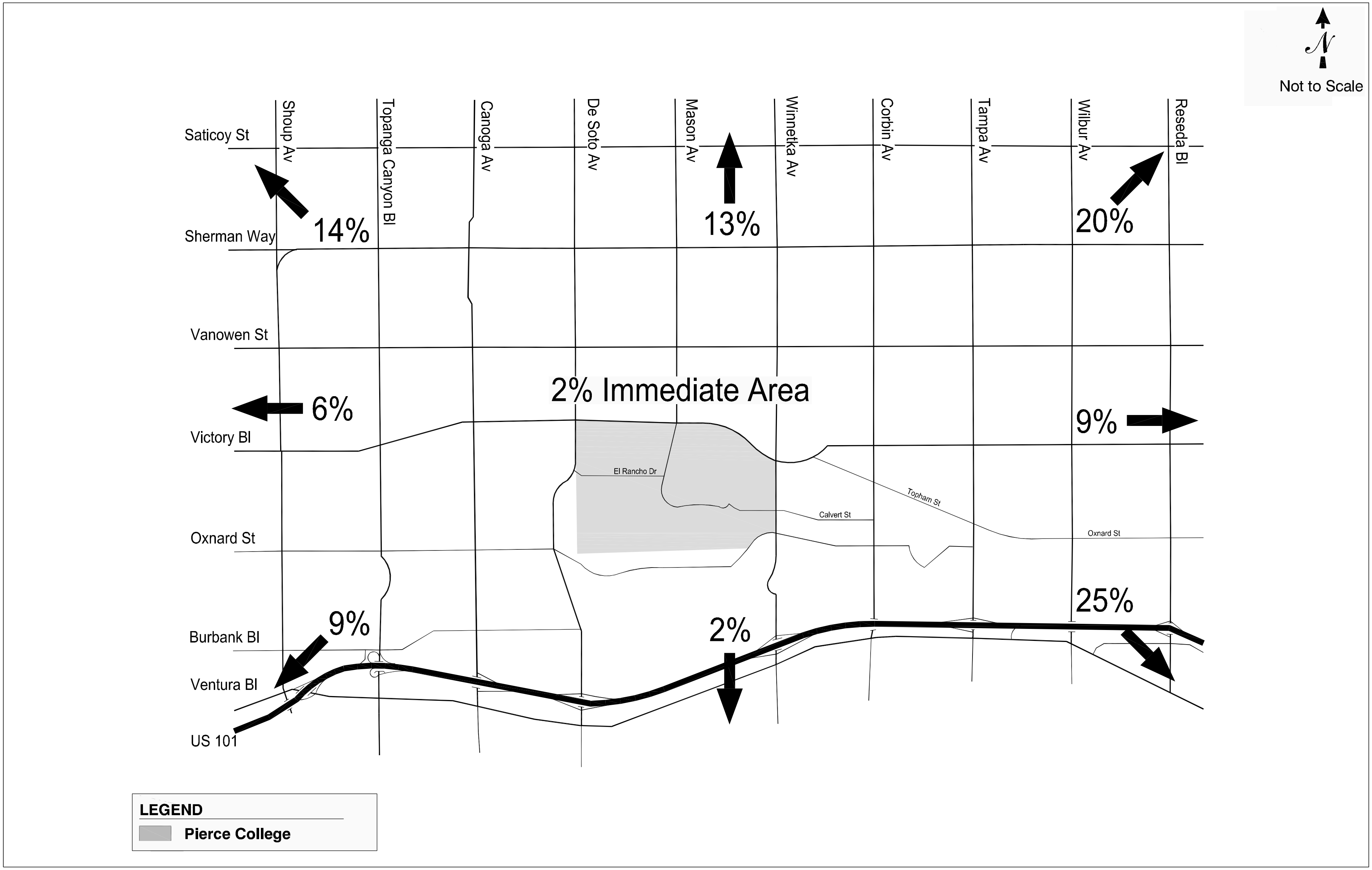
Taking this data into consideration along with the direction of travel at the campus access points, a trip distribution pattern was developed for project trips as illustrated in Figure 12.

Using the estimated trip generation and the distribution patterns developed above, the traffic generated by the proposed project was assigned to the street network following the trip assignment percentages shown in Figure 13 for the academic uses.

The net incremental project only traffic volumes generated by the buildout of the proposed Master Plan at the study intersections are shown on Figure 14.

CUMULATIVE PLUS PROJECT TRAFFIC PROJECTIONS

The project-generated traffic volumes shown in Figure 14 were then added to the cumulative base traffic projections shown in Figure 11 to yield the cumulative plus project traffic forecasts. The resulting projected cumulative plus project peak hour traffic volumes are presented in Figure 15.

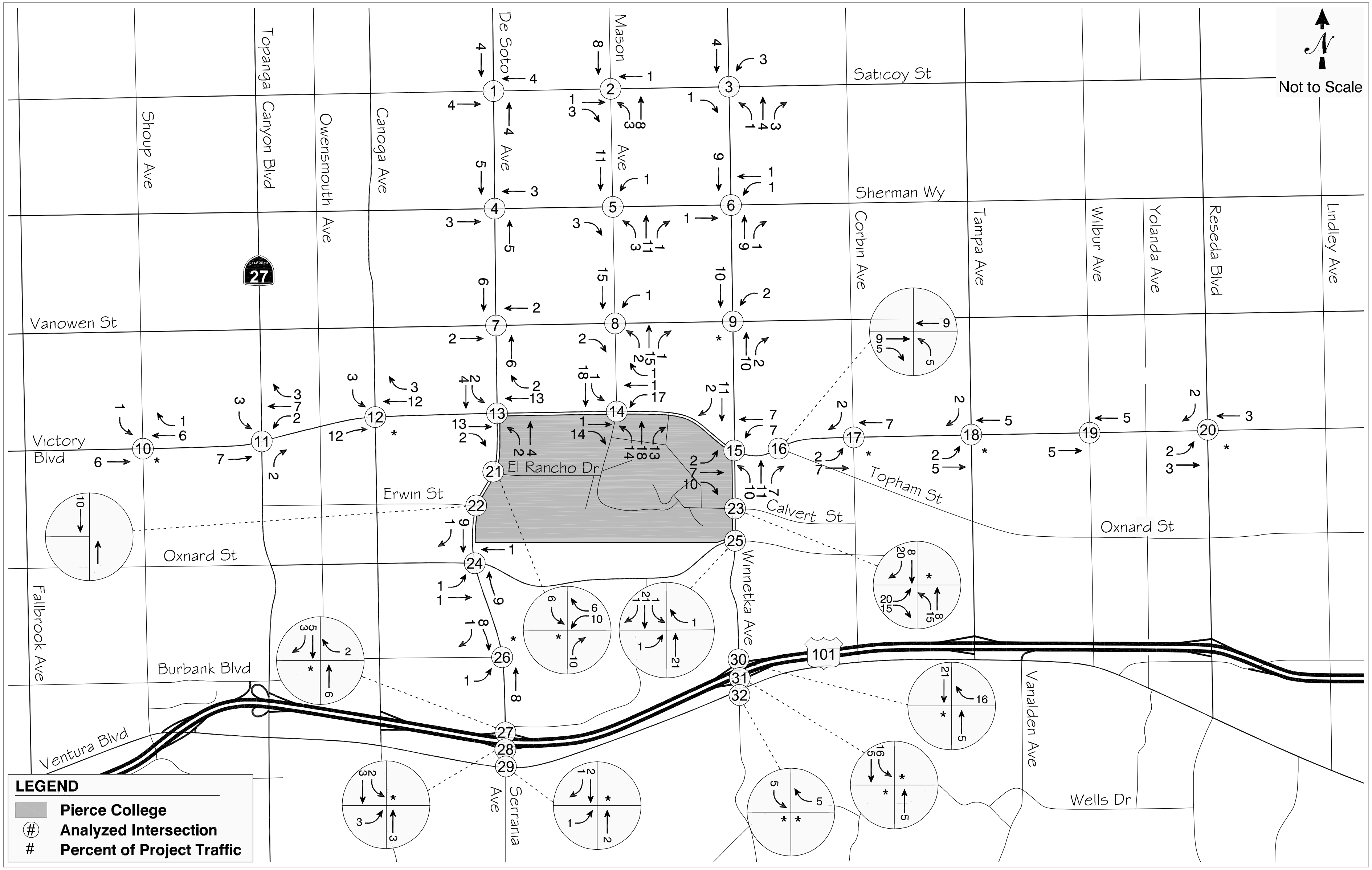


GENERALIZED PROJECT TRIP DISTRIBUTION PATTERN

FIGURE 12

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 JS
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\1461base.dwg

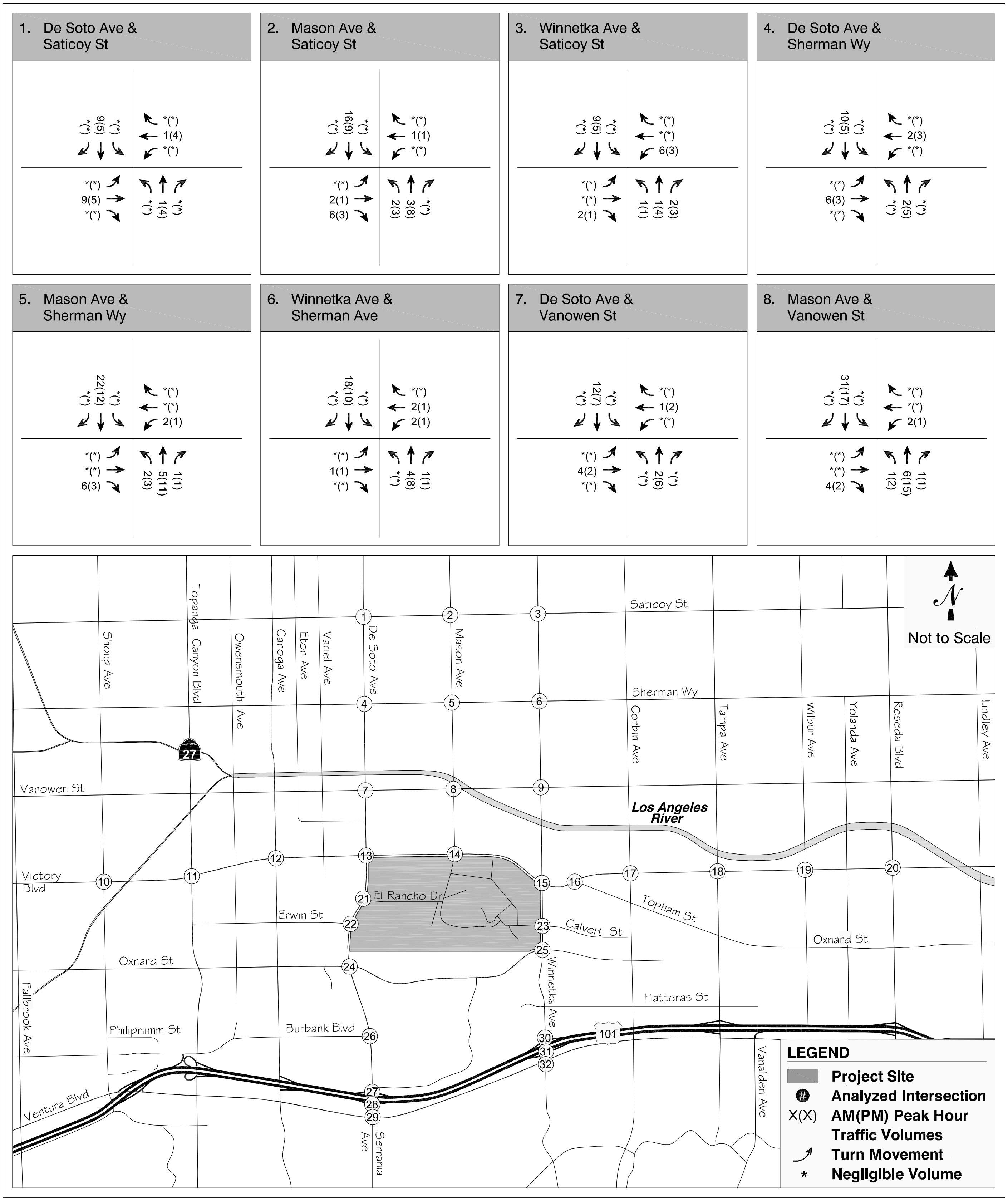


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 SP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

ACADEMIC PROJECT TRIP DISTRIBUTION

FIGURE 13

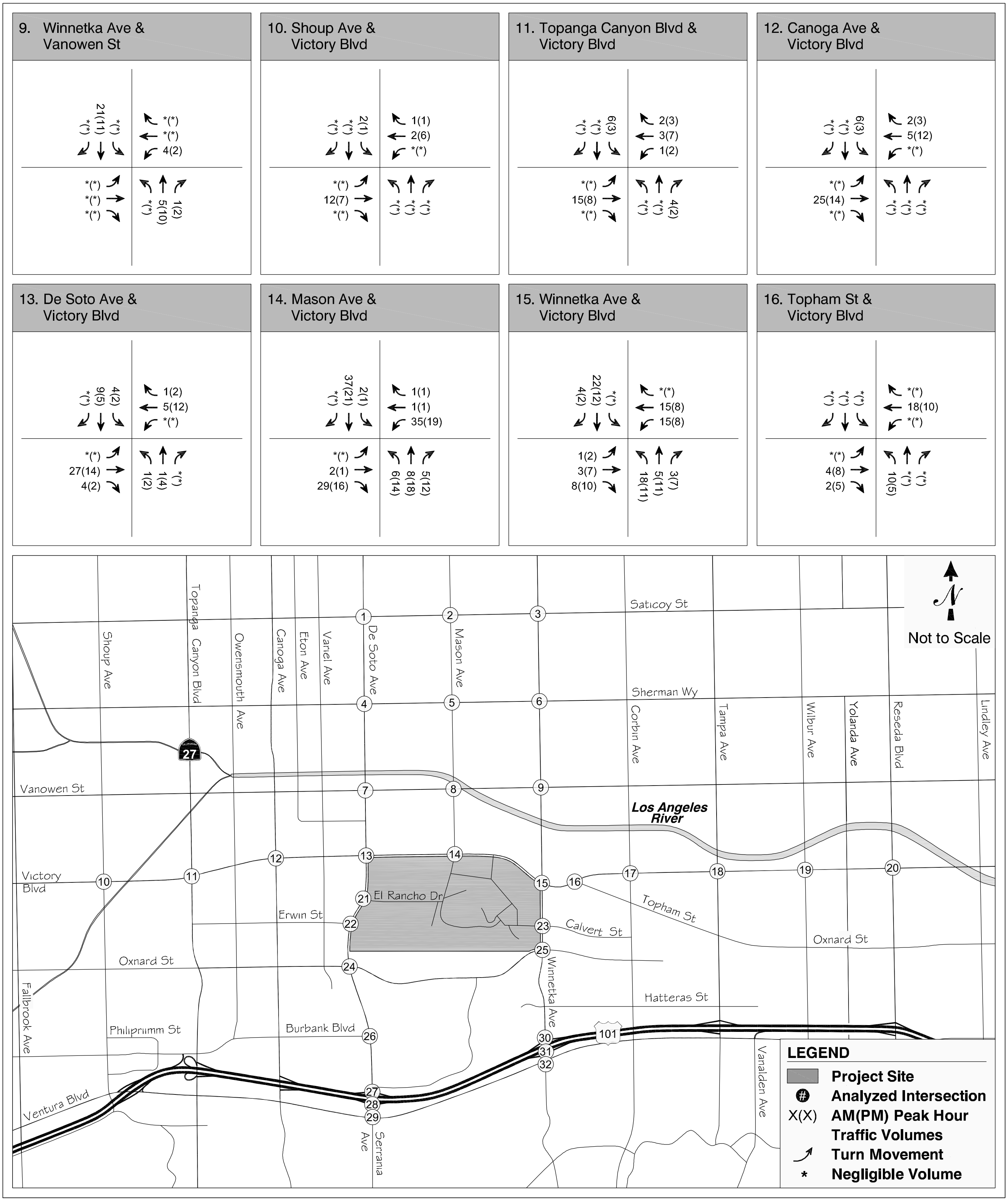


FEHR & PEERS
TRANSPORTATION CONSULTANTS

PROJECT-GENERATED TRIPS: CAMPUS ACADEMIC GROWTH WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 14

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

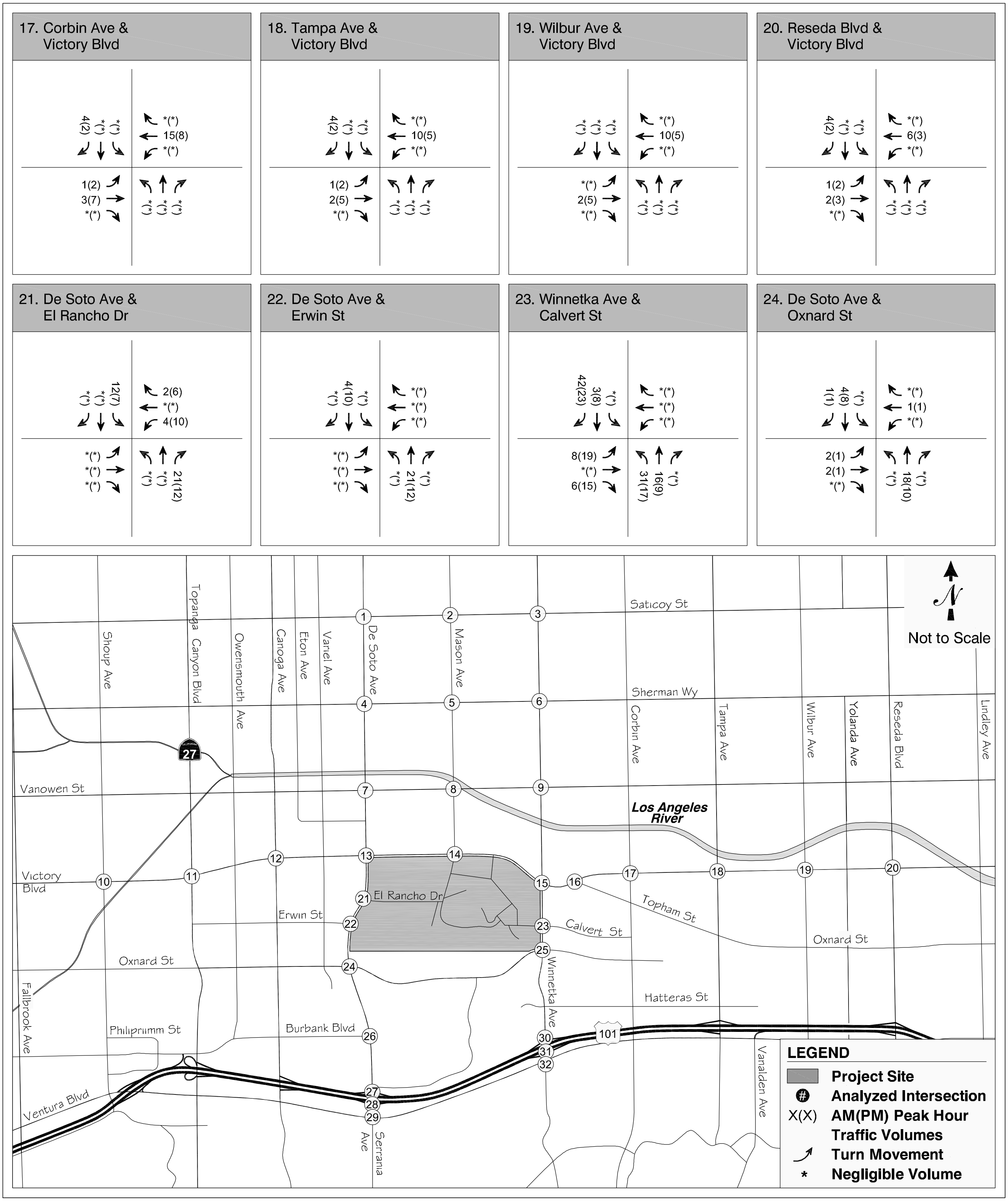


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

PROJECT-GENERATED TRIPS: CAMPUS ACADEMIC GROWTH WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 14 (CONT.D)

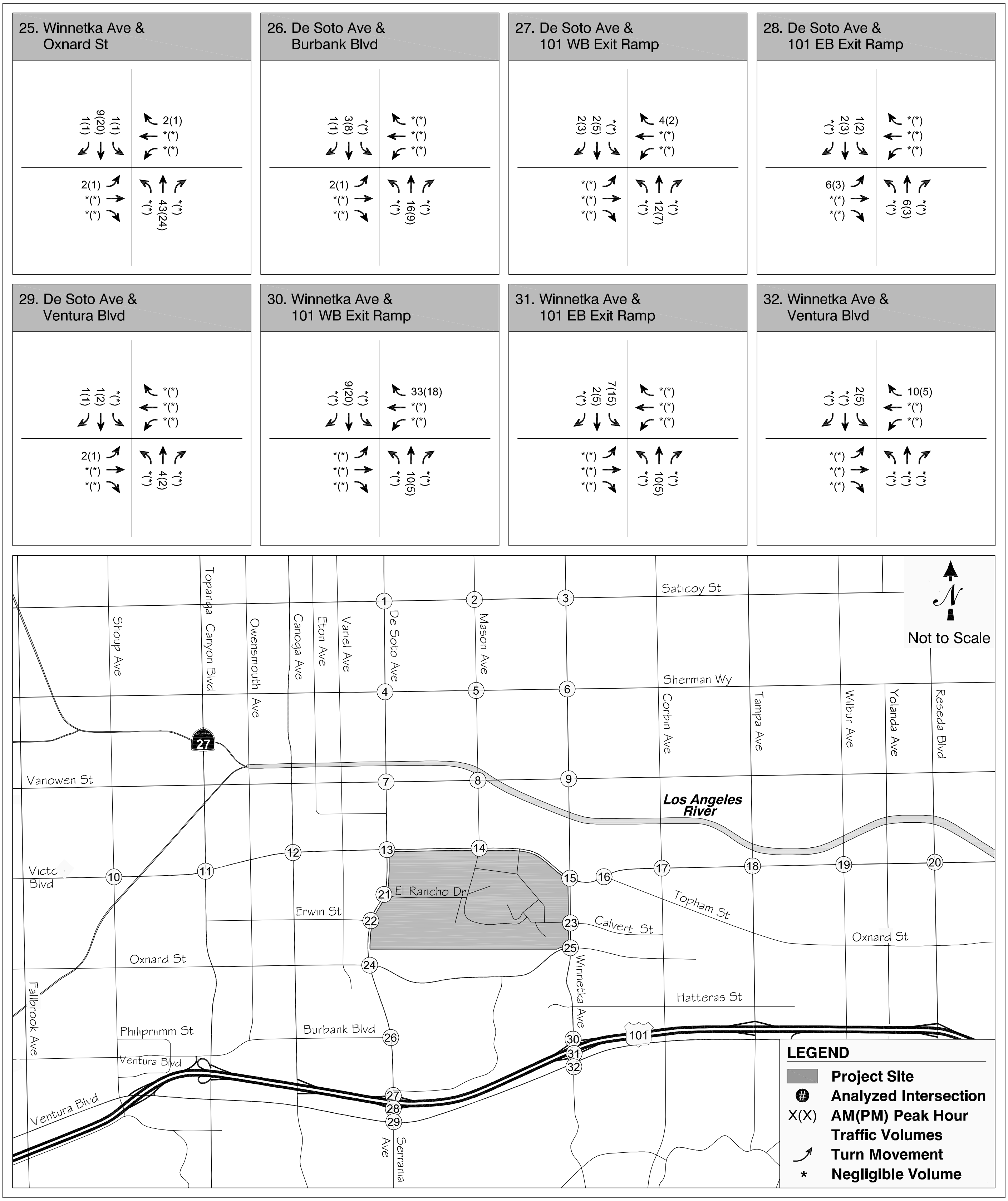


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

**PROJECT-GENERATED TRIPS:
CAMPUS ACADEMIC GROWTH
WEEKDAY PEAK HOUR TRAFFIC VOLUMES**

FIGURE 14 (CONT.D)

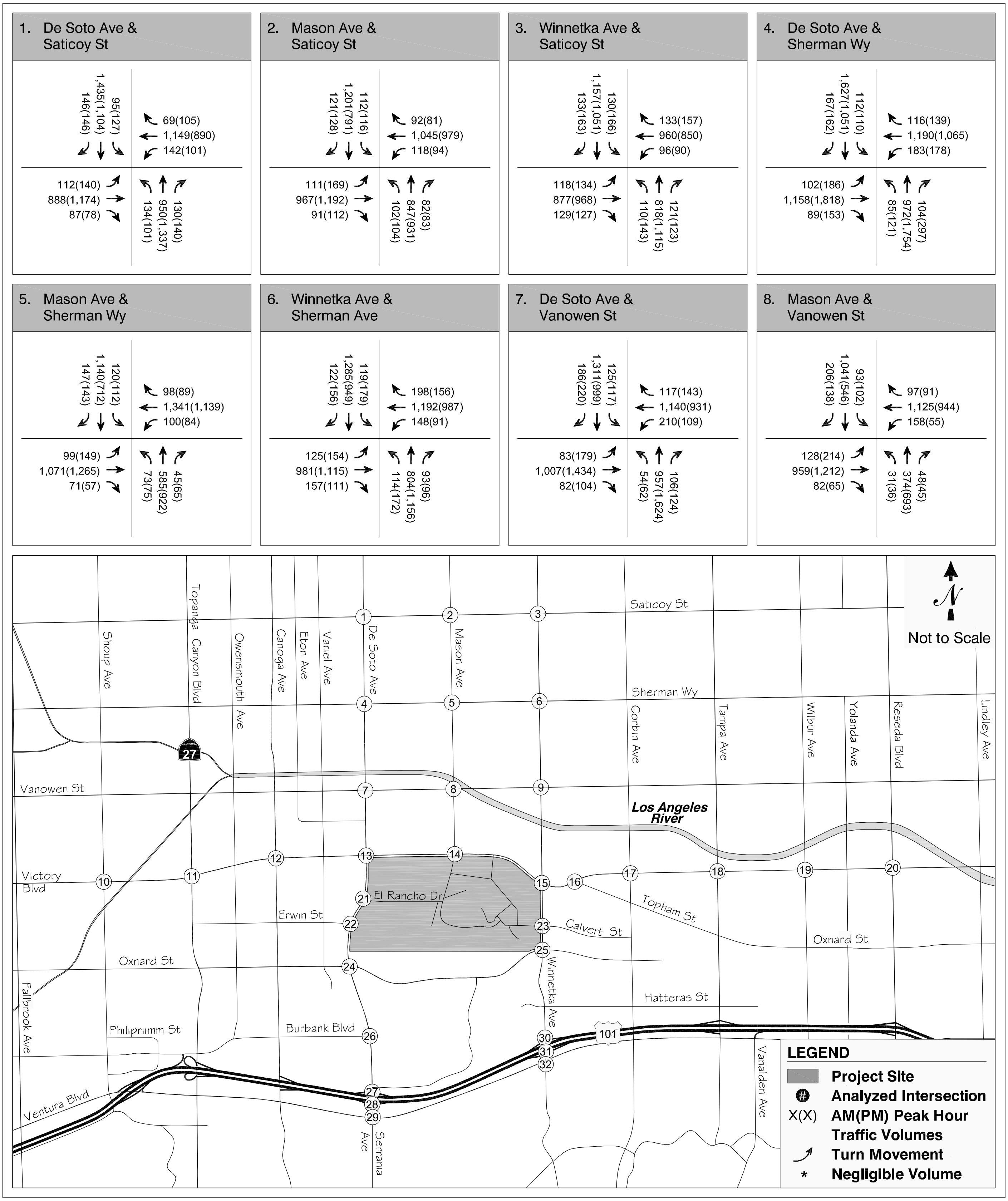


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

PROJECT-GENERATED TRIPS: CAMPUS ACADEMIC GROWTH WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 14 (CONT.D)

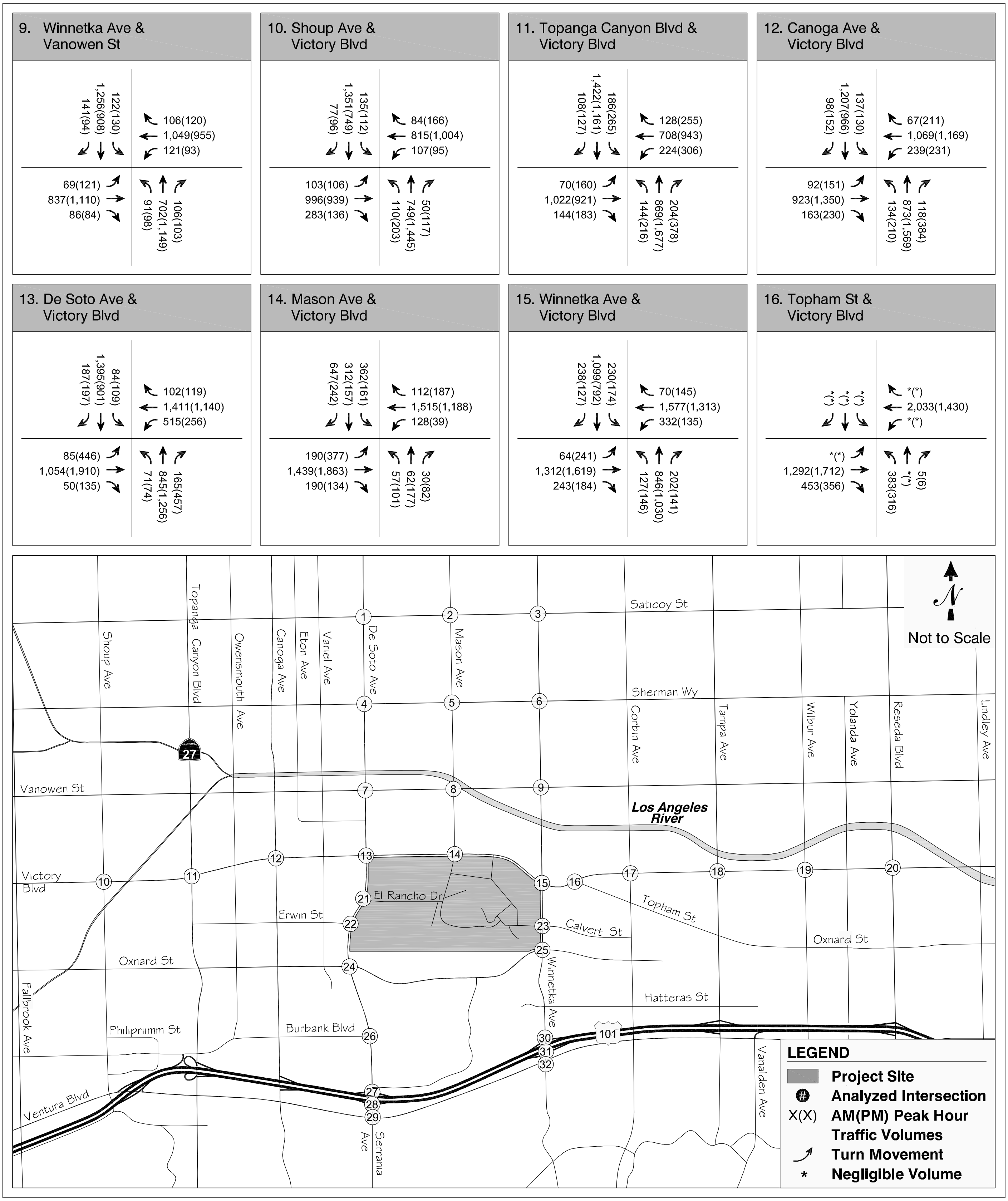


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

CUMULATIVE PLUS PROJECT (2015)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 15

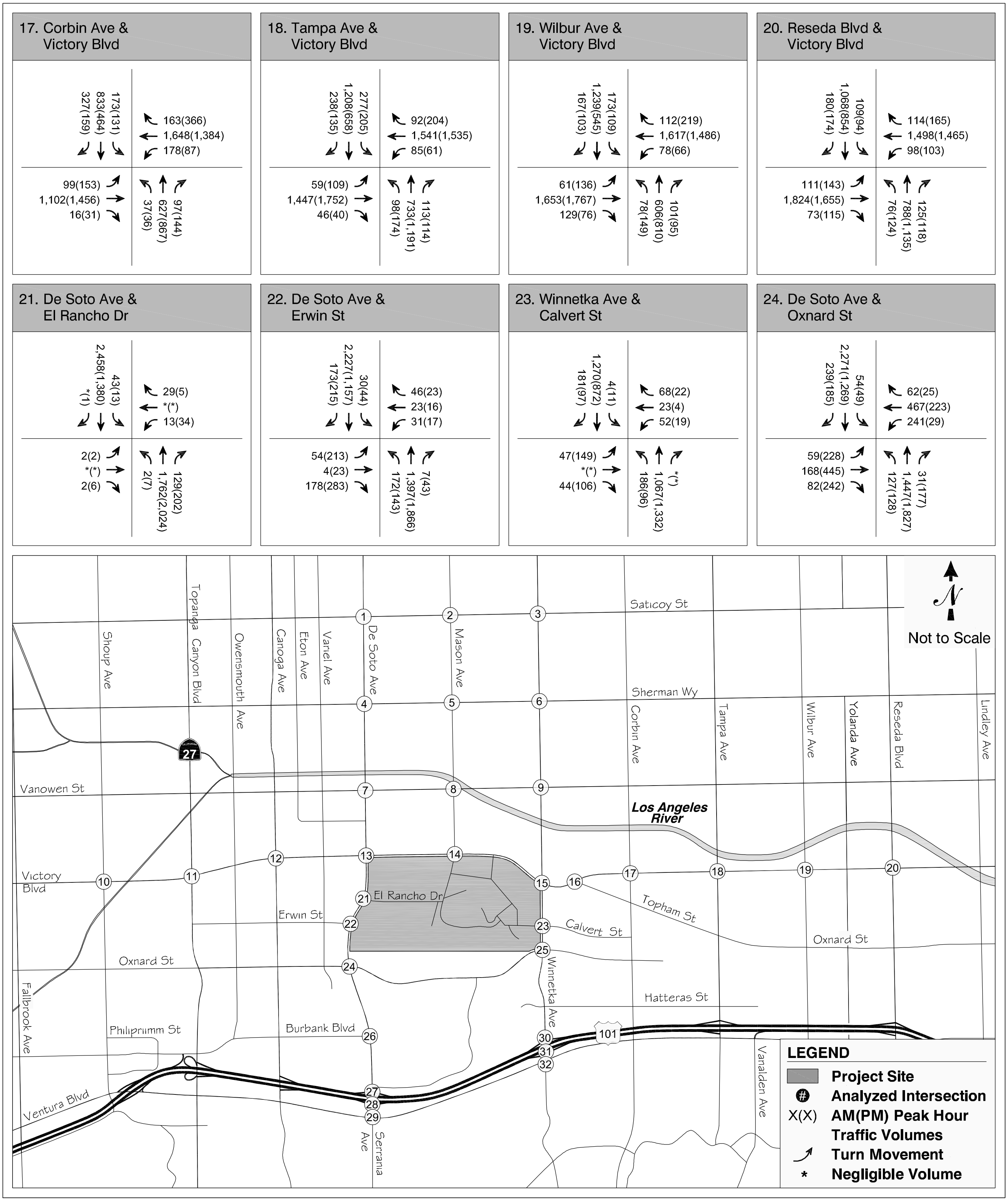


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

CUMULATIVE PLUS PROJECT (2015) WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 15 (CONT.D)

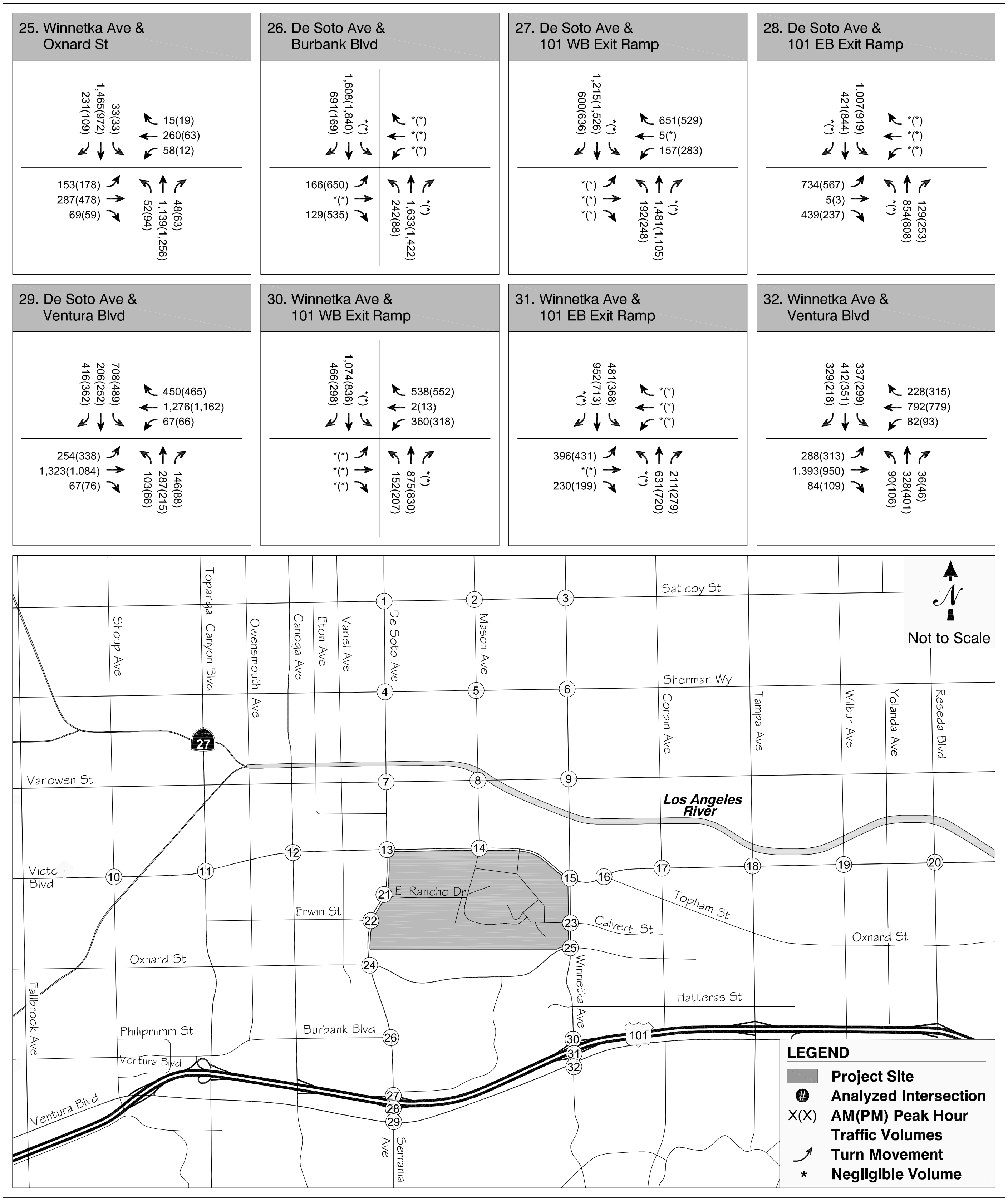


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

CUMULATIVE PLUS PROJECT (2015)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 15 (CONT.D)



FEHR & PEERS
TRANSPORTATION CONSULTANTS

Dec 17, 2009 TP
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_Base.dwg

CUMULATIVE PLUS PROJECT (2015)
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FIGURE 15 (CONT.D)

IV. TRAFFIC IMPACT ANALYSIS

This chapter presents an analysis of the potential impacts of the traffic generated by buildout of the Pierce College Facilities Master Plan project on the local street system. The analysis compares the projected levels of service at each study location under cumulative conditions both with and without the project to determine potential impacts, using significance criteria established by the City of Los Angeles.

CRITERIA FOR DETERMINATION OF SIGNIFICANT TRAFFIC IMPACT

LADOT has established threshold criteria that determine if a project has a significant traffic impact at a specific intersection. According to the LADOT criteria, a project impact would be considered significant if the following conditions were met:

Intersection Condition With Project Traffic		Project-Related Increase in V/C Ratio
LOS	V/C Ratio	
C	> 0.70 - 0.80	Equal to or greater than 0.04
D	> 0.80 - 0.90	Equal to or greater than 0.02
E, F	> 0.90	Equal to or greater than 0.01

CUMULATIVE BASE INTERSECTION OPERATING CONDITIONS

This section presents an analysis of potential future traffic conditions under Year 2015 Cumulative Base conditions if no growth were assumed to occur on the Pierce College campus between the year 2002 FTE baseline and Year 2015. The cumulative base traffic volumes projected in Chapter III were analyzed using the level of service methodologies described in Chapter II to forecast cumulative base peak hour levels of service at the study locations.

The first columns in Table 8 summarize the results of this analysis. As can be seen, the following 13 study intersections are projected to operate at LOS E or F during one or both peak hours under Year 2015 Cumulative Base conditions:

- De Soto Avenue & Saticoy Street
- De Soto Avenue & Sherman Way
- Winnetka Avenue & Vanowen Street
- Shoup Avenue & Victory Boulevard
- Topanga Canyon Boulevard & Victory Boulevard
- Canoga Avenue & Victory Boulevard
- De Soto Avenue & Victory Boulevard
- Winnetka Avenue & Victory Boulevard
- Corbin Avenue & Victory Boulevard
- Tampa Avenue & Victory Boulevard
- Wilbur Avenue & Victory Boulevard
- Reseda Avenue & Victory Boulevard
- Winnetka Avenue & Ventura Boulevard

This represents a slight deterioration in operating conditions from existing conditions since, as discussed in Chapter II (Table 2), 11 of the intersections currently operate at LOS E or F during one or both peak hours. Thus, background traffic growth and traffic generated by related projects will have some impact on operating conditions in the study area even without consideration of potential growth on the Pierce College campus.

The cumulative base conditions projected in Table 8 and discussed above assume implementation of the committed baseline transportation system improvements described in Chapter III. These cumulative base projections also include the subtraction of academic trips generated based on 2002-2009 FTE, as shown on Figure 10, contributing to slightly improved LOS projections than if those volumes had been left in the cumulative base projections.

PROJECT TRAFFIC IMPACT ANALYSIS

The cumulative plus project traffic volumes as projected in the previous chapter were analyzed to determine potential future operating conditions and traffic impacts with the addition of incremental project-generated traffic associated with buildout of the Pierce College Master Plan through 2015. The middle columns in Table 8 show the results of this analysis.

TABLE 8
INTERSECTION LEVEL OF SERVICE ANALYSIS
CUMULATIVE BASE AND CUMULATIVE PLUS PROJECT CONDITIONS

Intersection	Peak Hour	Cumulative Base 2015		Cumulative + Project 2015		Project Increase in V/C	Significant Project Impact	With Project Mitigation		Project Increase in V/C	Residual Impacts
		V/C	LOS	V/C	LOS			V/C	LOS		
*1. De Soto Av &	**AM**	0.933	E	0.935	E	0.002	NO				
Saticoy St	**PM**	0.984	E	0.987	E	0.003	NO				
*2. Mason Av &	**AM**	0.885	D	0.892	D	0.007	NO				
Saticoy St	**PM**	0.839	D	0.843	D	0.004	NO				
*3. Winnetka Av &	**AM**	0.829	D	0.833	D	0.004	NO				
Saticoy St	**PM**	0.877	D	0.879	D	0.002	NO				
**4. De Soto Av &	**AM**	0.796	C	0.800	C	0.004	NO				
Sherman Way	**PM**	1.041	F	1.043	F	0.002	NO				
**5. Mason Av &	**AM**	0.755	C	0.764	C	0.009	NO				
Sherman Way	**PM**	0.672	B	0.676	B	0.004	NO				
**6. Winnetka Av &	**AM**	0.872	D	0.878	D	0.006	NO				
Sherman Way	**PM**	0.872	D	0.875	D	0.003	NO				
**7. De Soto Av &	**AM**	0.852	D	0.853	D	0.001	NO				
Vanowen St	**PM**	0.876	D	0.878	D	0.002	NO				
*8. Mason Av &	**AM**	0.848	D	0.859	D	0.011	NO				
Vanowen St	**PM**	0.727	C	0.732	C	0.005	NO				
*9. Winnetka Av &	**AM**	0.931	E	0.938	E	0.007	NO				
Vanowen St	**PM**	0.939	E	0.945	E	0.006	NO				
**10. Shoup Av &	**AM**	0.943	E	0.947	E	0.004	NO				
Victory Blvd	**PM**	0.875	D	0.879	D	0.004	NO				
**11. Topanga Cyn Blvd &	**AM**	0.744	C	0.748	C	0.004	NO				
Victory Blvd	**PM**	0.975	E	0.981	E	0.006	NO				
**12. Canoga Av &	**AM**	0.705	C	0.712	C	0.007	NO				
Victory Blvd	**PM**	0.957	E	0.963	E	0.006	NO				
**13. De Soto Av &	**AM**	0.798	C	0.808	D	0.010	NO				
Victory Blvd	**PM**	0.987	E	0.993	E	0.006	NO				
**14. Mason Av &	**AM**	0.701	C	0.706	C	0.005	NO				
Victory Blvd	**PM**	0.662	B	0.674	B	0.012	NO				
**15. Winnetka Av &	**AM**	1.051	F	1.067	F	0.016	**YES**	0.958	E	-0.093	NO
Victory Blvd	**PM**	0.971	E	0.988	E	0.017	**YES**	0.944	E	-0.027	NO
**16. Topham St &	**AM**	0.869	D	0.882	D	0.013	NO				
Victory Blvd	**PM**	0.716	C	0.722	C	0.006	NO				
**17. Corbin Av &	**AM**	0.974	E	0.981	E	0.007	NO				
Victory Blvd	**PM**	1.006	F	1.010	F	0.004	NO				
**18. Tampa Av &	**AM**	1.003	F	1.007	F	0.004	NO				
Victory Blvd	**PM**	1.146	F	1.149	F	0.003	NO				
**19. Wilbur Av &	**AM**	1.066	F	1.067	F	0.001	NO				
Victory Blvd	**PM**	0.932	E	0.934	E	0.002	NO				
**20. Reseda Blvd &	**AM**	1.030	F	1.035	F	0.005	NO				
Victory Blvd	**PM**	1.059	F	1.061	F	0.002	NO				
**21. De Soto Av &	**AM**	0.467	A	0.468	A	0.001	NO				
El Rancho Dr	**PM**	0.416	A	0.430	A	0.014	NO				
**22. De Soto Av &	**AM**	0.678	B	0.678	B	0.000	NO				
Erwin St	**PM**	0.512	A	0.515	A	0.003	NO				
**23. Winnetka Av &	**AM**	0.555	A	0.582	A	0.027	NO				
Calvert St	**PM**	0.453	A	0.463	A	0.010	NO				
**24. De Soto Av &	**AM**	0.813	D	0.815	D	0.002	NO				
Oxnard St	**PM**	0.691	B	0.694	B	0.003	NO				
**25. Winnetka Av &	**AM**	0.818	D	0.824	D	0.006	NO				
Oxnard St	**PM**	0.680	B	0.689	B	0.009	NO				

TABLE 8
INTERSECTION LEVEL OF SERVICE ANALYSIS
CUMULATIVE BASE AND CUMULATIVE PLUS PROJECT CONDITIONS

Intersection	Peak Hour	Cumulative Base 2015		Cumulative + Project 2015		Project Increase in V/C	Significant Project Impact	With Project Mitigation		Project Increase in V/C	Residual Impacts
		V/C	LOS	V/C	LOS			V/C	LOS		
**26. De Soto Av &	**AM**	0.631	B	0.633	B	0.002	NO				
Burbank Blvd West	**PM**	0.641	B	0.644	B	0.003	NO				
**27. De Soto Av &	**AM**	0.683	B	0.686	B	0.003	NO				
US101 WB Ramps	**PM**	0.708	C	0.711	C	0.003	NO				
**28. De Soto Av &	**AM**	0.795	C	0.797	C	0.002	NO				
US101 EB Ramps	**PM**	0.641	B	0.643	B	0.002	NO				
**29. De Soto Av &	**AM**	0.832	D	0.835	D	0.003	NO				
Ventura Blvd	**PM**	0.732	C	0.733	C	0.001	NO				
**30. Winnetka Av &	**AM**	0.584	A	0.594	A	0.010	NO				
US101 WB Ramps	**PM**	0.534	A	0.545	A	0.011	NO				
**31. Winnetka Av &	**AM**	0.729	C	0.737	C	0.008	NO				
US101 EB Ramps	**PM**	0.701	C	0.713	C	0.012	NO				
**32. Winnetka Av &	**AM**	0.962	E	0.962	E	0.000	NO				
Ventura Blvd	**PM**	0.992	E	0.992	E	0.000	NO				

Notes:

* Intersection is currently operating under ATSAC system.
** Intersection is currently operating under ATCS system.

As indicated in the table, 13 of the study intersections are projected to operate at LOS E or F during one or both peak hours under cumulative plus project conditions. Application of the City of Los Angeles' significance criteria indicates that the project would create significant traffic impacts at one study intersection:

- Winnetka Avenue & Victory Boulevard

This impact would be generated by the estimated general growth in academic-related traffic to/from the campus from the 2002 campus base year to the 2015 Master Plan buildout year.

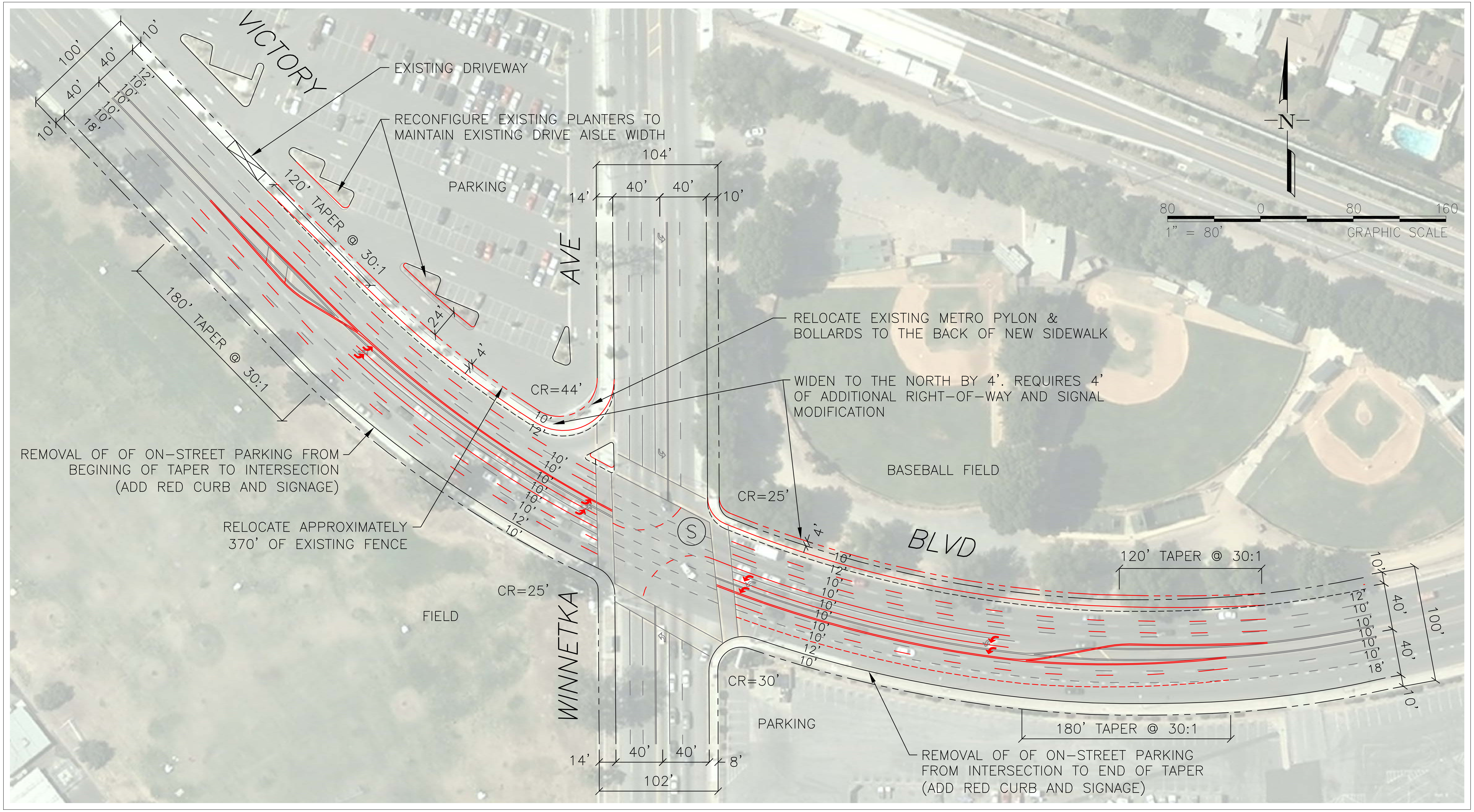
TRAFFIC MITIGATION MEASURES

The traffic impact analysis presented above determined that buildout of the Pierce College Master Plan would result in significant impacts on operating conditions at one of the study intersections. A potential mitigation measure to address this impact is discussed below:

- Winnetka Avenue and Victory Boulevard – This intersection could be mitigated during both peak periods with the provision of dual left-turn lanes on both the eastbound and westbound approaches on Victory Boulevard. This mitigation would require the acquisition of four feet of right-of-way from the north side of Victory Boulevard, east and west of Winnetka Avenue. The mitigation would also require the removal of approximately 32 on-street parking spaces along the eastbound approach and departure of Victory Boulevard on either side of Winnetka Avenue. This would result in changing existing lane configurations for both the westbound and eastbound approaches on Victory Boulevard at Winnetka Avenue from one left-turn lane, two through lanes, and one shared through/right-turn lane to two left-turn lanes, two through lanes, and one shared through/right-turn lane, as shown on Figure 16.

  The proposed mitigation is identified as a cumulative mitigation in the WCSP TIMP. The WCSP TIMP provides that future intersection improvements at these locations are to be funded in part by Warner Center Transportation Impact Assessment (TIA) fees paid by development within Warner Center. However, these improvements are not fully funded by the Warner Center TIA fee since the WCSP determined that a portion of the need for these improvements would be generated by existing traffic and other future development in the area outside of Warner Center (such as Pierce College growth).

Projected Year 2015 intersection operating conditions with implementation of the intersection mitigation measure described above are shown in the final columns in Table 8. As indicated in the table, the proposed intersection improvements would fully mitigate the Pierce College



FEHR & PEERS
TRANSPORTATION CONSULTANTS

WINNETKA AVENUE & VICTORY BOULEVARD

PROPOSED INTERSECTION MITIGATION

FIGURE 16

Dec 24, 2009
N:\Orange County Projects\OC09-0135 Pierce College Mitigations\0135 Figures R5.dwg

project impact at the impacted intersection. Thus, with the mitigation measure proposed herein, no unavoidable significant impacts are anticipated.

V. NEIGHBORHOOD IMPACT ANALYSIS

Five neighborhood street segments were selected for analysis of potential neighborhood intrusion impacts of the proposed project. The five street segments include:

- Calvert Street east of Winnetka Avenue
- Oxnard Street east of Winnetka Avenue
- Hatteras Street east of Winnetka Avenue
- Oxnard Street west of Winnetka Avenue
- Oxnard Street east of De Soto Avenue

DAILY TRAFFIC PROJECTIONS

Existing 24-hour machine counts were conducted at the five locations in March 2009. The existing daily volumes are included in Table 9.

Future daily traffic volumes were projected in a manner similar to that used for the AM/PM peak hour analysis of the 32 intersections. Six percent ambient growth and related project volumes were added to Year 2009 existing volumes. As was done with the peak hour intersection analysis, to obtain Year 2015 Cumulative Base projections, the daily trips generated by the increase in FTE at the college between 2002 and 2009, were removed from the street network to replicate cumulative base conditions in 2015 without the student trips generated since 2002 on the street network. Once the cumulative base conditions for 2015 were established, the addition of incremental growth in project traffic based on increases in FTE between 2002 and 2015 in the cumulative plus project condition, allows for analysis of the impact of incrementally adding daily project trips generated by Pierce College between 2002 and 2015, and the public-private science partnership project.

Daily project volumes were added to Cumulative Base projections to obtain Cumulative plus Project projections. The distribution of daily project volumes was based on the distribution used for the AM and PM peak hour analysis. The distribution was refined using zip code data and driveway turning movement counts to better reflect the potential use of residential streets east of

TABLE 9
NEIGHBORHOOD TRAFFIC IMPACT ANALYSIS

		Weekday 2-Way Daily Volume				Impact Analysis		
Location	City	Existing ADT	Cumulative Base	Project Only	Cumulative plus Project	% Change	Significance Threshold	Significant Impact?
Calvert Street east of Winnetka Avenue	Los Angeles	680	721	17	738	2.3%	+16.0%	No
Oxnard Street east of De Soto Avenue	Los Angeles	6,650	7,426	74	7,500	1.0%	+8.0%	No
Oxnard Street west of Winnetka Avenue	Los Angeles	8,120	8,570	99	8,669	1.1%	+8.0%	No
Oxnard Street east of Winnetka Avenue	Los Angeles	4,420	4,712	17	4,729	0.4%	+8.0%	No
Hatteras Street east of Winnetka Avenue	Los Angeles	1,040	1,102	17	1,119	1.5%	+12.0%	No

Winnetka Avenue. Given the percentage of students living in the neighborhood south of Victory Boulevard, east of Winnetka Avenue, and west of Reseda Boulevard (including areas south of Ventura Boulevard), about 2% of daily Pierce College traffic was estimated to travel on Oxnard Street, Hatteras Street, and Calvert Street east of Winnetka Avenue. Based on count data at the Calvert Street/Brahma Drive driveway, about a third of these trips (i.e., 0.7% of daily Pierce College traffic) was estimated to travel on Calvert Street. The remainder was split between Oxnard and Hatteras Streets. The daily traffic volumes for both the existing and future conditions are summarized in Table 9.

The existing daily traffic volumes on weekdays vary from a low of about 680 vehicles per day (vpd) on Calvert Street to a high of about 8,120 vpd on Oxnard Street. The proposed project is projected to add approximately 39 to 67 vpd on the five segments.

NEIGHBORHOOD IMPACT SIGNIFICANCE CRITERIA

The City of Los Angeles has established criteria for determining significant impacts on neighborhood streets. A local residential street is deemed significantly impacted based on an increase in the projected average daily traffic (ADT) volumes as follows:

Projected Daily Traffic With Project (Final ADT)	Project-Related Increase in Daily Traffic
0 to 999	16 percent or more of final ADT
1,000 or more	12 percent or more of final ADT
2,000 or more	10 percent or more of final ADT
3,000 or more	8 percent of more of final ADT

The threshold for significance decreases as the volume on the residential street increases. An 8% increase would be significant if a segment's volume was over 3,000 vpd, but it would not be significant if the volume was less than 3,000 vpd.

ASSESSMENT OF SIGNIFICANT TRAFFIC IMPACT

The potential impacts of the proposed project traffic on the adjacent neighborhood impacts were assessed by applying the City's significance criteria to the projected traffic volumes. The results of the analysis, summarized in Table 9, indicate that the proposed project would not have a significant impact on any of the five neighborhood street segments studied.

VI. CONGESTION MANAGEMENT PROGRAM ANALYSIS

This section presents the Congestion Management Program (CMP) transportation impact analysis for the proposed project. This analysis was conducted in accordance with the transportation impact analysis (TIA) procedures outlined in the *2004 Congestion Management Program for Los Angeles County* (Los Angeles County Metropolitan Transportation Authority, July 2004). The CMP requires that, when an environmental impact report is prepared for a project, traffic and transit impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to utilize these facilities.

CMP TRAFFIC IMPACT ANALYSIS

CMP Analysis Locations

The CMP guidelines for determining the study area of the analysis for CMP arterial monitoring intersections and for freeway monitoring locations are:

- All CMP arterial monitoring intersections where the proposed project is expected to add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic.
- All CMP mainline freeway monitoring locations where the proposed project is expected to add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

The Cumulative plus Project traffic projections described in Chapter III were used to track the locations where the incremental additional project-generated trips at buildout may exceed these thresholds.

Based on this evaluation, two CMP arterial monitoring intersections were identified where the project may add 50 or more trips per hour:

- Topanga Canyon Boulevard & Victory Boulevard
- Winnetka Boulevard & Victory Boulevard

Two other study intersections, Winnetka Boulevard & Ventura Boulevard and Reseda Boulevard & Victory Boulevard, are also CMP arterial monitoring intersections. However, less than 50 project trips are projected to traverse these intersections in the AM and PM peak hours and thus CMP analysis of these intersections is not required.

In addition, one CMP mainline freeway monitoring location was identified where the proposed project may add 150 or more trips per hour in either direction:

- U.S. 101 at Winnetka Avenue

It should be noted that the proposed project is expected to add more new trips to the segment of U.S. 101 east of Winnetka Avenue than to any other freeway segment, either along U.S. 101 or other freeways. Thus, the maximum level of project impact on the freeway system would be expected at this location.

Level of Service Methodologies

The "Critical Movement Analysis" (CMA) method of intersection capacity analysis was used to determine the intersection volume to capacity ratio and corresponding level of service for the two CMP arterial monitoring stations being studied. Existing, cumulative base, and cumulative plus project conditions were analyzed using the turning movement volumes and intersection characteristics described in previous chapters with LADOT's CALCADB CMA software. Both intersections are currently controlled by ATSAC and ATCS. In accordance with LADOT procedures, a capacity increase of 7% (0.07 V/C adjustment) was applied to reflect the benefits of ATSAC control at these intersections included in the ATSAC program. . In accordance with LADOT procedures, a capacity increase of 3% (0.03 V/C adjustment) was applied to reflect the benefits of ATCS control at these intersections included in the ATCS program. With the combination of ATSAC and ATCS control at these locations, a total capacity increase of 10% (0.10 V/C adjustment) was applied at these locations, as per LADOT procedures.

The freeway segment levels of service are determined based on the computed demand-to-capacity (D/C) ratios and the definitions shown in Table 10. In accordance with values

TABLE 10
LEVEL OF SERVICE DEFINITIONS FOR FREEWAY MAINLINE SEGMENTS

Level of Service	Demand/Capacity Ratio
A	0.00-0.35
B	>0.35-0.54
C	>0.54-0.77
D	>0.77-0.93
E	>0.93-1.00
F(0)	>1.00-1.25
F(1)	>1.25-1.35
F(2)	>1.35-1.45
F(3)	>1.45

Source: Los Angeles County Metropolitan Transportation Authority, 2004 Congestion Management Program for Los Angeles County, July 2004, Exhibit B-6.

established in the 2000 *Highway Capacity Manual*, a capacity of 2,200 vehicles per hour per lane (vphpl) was utilized for freeway mixed-flow lanes.

Existing Conditions

Weekday AM and PM peak period intersection turning movement counts were conducted at the two CMP analysis intersections in May of 2007 for the intersection of Topanga Canyon Boulevard/Victory Boulevard and March of 2009 for the intersection of Winnetka Avenue/Victory Boulevard. An annual growth rate of one percent per year was applied to the count taken in 2007 to represent 2009 existing conditions. The existing weekday peak hour turning movements at the analyzed intersections are shown in Figure 3.

These volumes were analyzed utilizing the CMA methodology described above. Table 11 presents the results of this analysis. As can be seen, the analysis indicates that both intersections currently operate at LOS E conditions during one of the AM or PM peak hours.

Existing traffic volumes at the CMP freeway monitoring station were obtained from the California Freeway Performance Measurement System (PeMS: https://pems.eecs.berkeley.edu). Freeway LOS was analyzed utilizing the D/C methodology described above. Table 12 presents the results of this analysis. As can be seen, the analysis indicates that U.S. 101 currently operates at LOS C east of Winnetka Avenue.

Criteria for Determination of Significant Impact

For the purpose of a CMP TIA, a significant project impact occurs when the addition of project traffic increases demand at a CMP facility by 2% of capacity (i.e., V/C increase $\geq$0.020), causing or worsening LOS F (V/C >1.000) operating conditions.

TABLE 11
CMP ARTERIAL INTERSECTION IMPACT ANALYSIS

Intersection	Peak Hour	Existing		Cumulative Base		Cumulative + Project		Project Increase in V/C	Significant Project Impact	With Project Mitigation		Project Increase in V/C	Residual Impacts
		V/C	LOS	V/C	LOS	V/C	LOS			V/C	LOS		
*11. Topanga Cyn Blvd &	**AM**	0.679	B	0.744	C	0.748	C	0.004	NO				
Victory Blvd	**PM**	0.910	E	0.975	E	0.981	E	0.006	NO				
*15. Winnetka Av &	**AM**	0.982	E	1.051	F	1.067	F	0.016	**YES**	0.958	E	-0.093	NO
Victory Blvd	**PM**	0.912	E	0.971	E	0.988	E	0.017	**YES**	0.944	E	-0.027	NO

Notes:

* Intersection is currently operating under both ATSAC and ATCS systems.

TABLE 12
CMP FREEWAY MAINLINE IMPACT ANALYSIS

					EXISTING CONDITIONS						CUMULATIVE BASE						CUMULATIVE PLUS PROJECT									
			Capacity		EB			WB			EB			WB			EB					WB				
Freeway Analysis Locations	City	Peak	EB	WB	Volume	D/C	LOS*	Volume	D/C	LOS*	Volume	D/C	LOS*	Volume	D/C	LOS*	Volume	D/C	LOS*	D/C Change	Sig Impact?	Volume	D/C	LOS*	D/C Change	Sig Impact?
US101 east of Winnetka	Los Angeles	AM	11,000	11,000	7,021	0.638	C	9,128	0.830	D	7,464	0.679	C	9,644	0.877	D	7,472	0.679	C	0.001	No	9,681	0.880	D	0.003	No
		PM	11,000	11,000	8,565	0.779	C	8,658	0.787	C	9,075	0.825	D	9,179	0.834	D	9,092	0.827	D	0.002	No	9,199	0.836	D	0.002	No

* Note that F(0) through F(3) represent gradations of LOS F (see Table 12).

Arterial Intersection Impact Analysis

Year 2015 projected traffic volumes at the two analyzed CMP arterial monitoring intersections with and without the proposed project were analyzed utilizing the V/C methodology described above. As shown in Table 11, the project is projected to create a significant impact at one of the two CMP arterial monitoring intersections under Year 2015 conditions: Winnetka Avenue & Victory Boulevard.

However, with implementation of the intersection mitigation measures described in Chapter IV, this impact would be mitigated.

Freeway Impact Analysis

Projected Year 2015 traffic volumes and the resultant freeway capacity analysis for the cumulative base and cumulative plus project scenarios are presented in Table 12 for the one freeway analysis segment. As can be seen, based on the CMP significance criteria, no significant impact is projected on the U.S. 101 monitoring location east of Winnetka Avenue with the proposed project.

Since the project is expected to contribute more new traffic to this segment than to any other freeway segment and the project's impact at this location would not be significant, it can be concluded that the project would not have significant impacts elsewhere on the freeway system.

CMP TRANSIT IMPACT ANALYSIS

Summary of Existing and Proposed Transit Services

Existing Transit Services. As discussed in Chapter II, Pierce College is currently served by bus service provided by the Los Angeles County Metropolitan Authority (LACMTA) and the Santa Clarita Transit Authority (SCTA). Five bus routes currently provide direct service along Victory Boulevard, Winnetka Avenue, and De Soto Avenue adjacent to the campus: Metro Orange Line, Metro Line 164, Metro Line 243, Metro Line 244, and SCTA Commuter Route 796.

Current schedules indicate that the Orange Line operates approximately 152 buses per direction per weekday. In the AM peak hour (defined as 7:30 to 8:30 AM by the CMP), the Orange Line operates approximately 12 buses per direction. In the PM peak hour (defined as 4:30 to 5:30 PM by the CMP), the Orange Line operates approximately 12 buses per direction.

Metro Lines 164, 243, and 244 operate 55, 25, and 41 buses per direction per weekday, respectively. In the AM peak hour (defined as 7:30 to 8:30 AM by the CMP), Line 164 operates 3 buses in the eastbound direction and eight buses in the westbound direction. In the AM peak hour Line 243 operates two buses in the northbound direction and three buses in the southbound direction. In the AM peak hour Line 244 operates two buses in the northbound direction and five buses in the southbound direction. In the PM peak hour (defined as 4:30 to 5:30 PM by the CMP), Line 164 operates five buses in the eastbound direction and three buses in the westbound direction. In the PM peak hour Lines 243 and 242 both operate two buses per direction.

Currently, SCTA Line 796 operates five buses per direction per day. SCTA Line 796 operates only during the peak periods. Of these buses, two operate in the AM and PM peak hours.

The five routes combined currently provide 556 bus trips per weekday, of which 37 operate during the AM peak hour and 30 operate during the PM peak hour.

Significance Criteria

Project impacts on public transit services would be considered significant if the project results in a substantial increase in ridership on the existing public transit system, creating capacity shortages on the system and thereby necessitating system improvements to accommodate additional transit service.

Projected Increase in Pierce College Transit Trips

Potential increases in transit person trips generated at the Pierce College campus were estimated as follows. The estimated number of existing and future vehicle trips was converted to person trips by multiplying the number of vehicle trips by a factor of 1.4 (per the CMP). Baseline future transit trips were then estimated by multiplying the future person trips by the transit mode split of 7% (also from the CMP as required for a primarily commercial development within one-quarter mile of a CMP transit corridor). As shown in Table 13, this results in an estimated increase in campus-generated transit person trips based solely on the projected increases in academic population of approximately 241 daily trips, 24 trips during the AM peak hour, and 21 trips during the PM peak hour.

Transit Impact Analysis

As discussed, the campus is immediately adjacent to five bus lines, including Metro's Orange Line. With the proximity of Metro's Orange Line and other existing transit lines, future transit service levels and capacity would be sufficient in the vicinity of the Pierce College campus (including along the BRT corridor itself and on north-south feeder bus lines such as Line 243 and Line 244 on Winnetka Avenue and De Soto Avenue). While transit trips generated on the Pierce College campus are projected to increase, significant impacts on transit system capacity are not anticipated given the number of new transit trips projected relative to the anticipated future transit system capacity.

TABLE 13
CMP TRANSIT ANALYSIS

	Factor	Daily	AM Peak Hour	PM Peak Hour
Existing Trips				
Vehicle Trips [a]		20,710	2,071	1,739
Person Trips [b]	1.4	28,994	2,899	2,435
Transit Person Trips [c]	7.0%	2,030	203	170
Future Trips				
Vehicle Trips [a]		23,170	2,319	1,949
Person Trips [b]	1.4	32,438	3,247	2,729
Transit Person Trips:	7.0%	2,271	227	191
Net New Trips				
Vehicle Trips [a]		2,460	248	210
Person Trips [b]	1.4	3,444	347	294
Transit Person Trips:	7.0%	241	24	21

Notes:

a. Estimated existing and future vehicle trips from Table 6.

b. Person trips estimated from vehicle trips via application of 1.4 person to vehicle ratio as per Appendix B of 2004 LA County CMP.

c. Transit mode split as per Appendix B of 2004 LA County CMP.

VII. PARKING AND SITE ACCESS IMPACT ANALYSIS

This chapter presents an analysis of the projected future parking supply, peak parking demand, and site access associated with buildout of the proposed Pierce College Master Plan. The proposed parking supply was reviewed with respect to the future parking demands to ensure that the plan provides sufficient parking supply to accommodate the projected needs. In accordance with the *L.A. Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles*, (City of Los Angeles, 2006), project access impacts would be considered significant if the primary site driveway(s) are projected to operate at an unacceptable LOS E or F during one or both of the AM and PM peak hours.

FUTURE PARKING SUPPLY

The Master Plan proposes some minor changes to the future parking supply serving the Pierce College campus. There is a reduction of approximately 32 on-street parking spaces as a result of the proposed mitigation measure for the intersection of Victory Boulevard and Winnetka Avenue. The existing and projected future parking supply is summarized in the following table:

TABLE 14
SUMMARY OF EXISTING AND PROJECTED PARKING SUPPLY

	Existing Number of Spaces [a]	Total Future Spaces
Existing On-Campus Parking Facilities	3,719	3,719
New On-Campus Parking Facilities	n/a	0
Future On-Campus Subtotal	n/a	3,719
Off-Campus Street Parking [b]	271	239
Grand Total	3,990	3,958

Notes:

a. Existing parking inventory conducted by National Data & Surveying Services, April 2009.

b. Future on-street spaces reduced to reflect possible loss of spaces on Victory Boulevard due to implementation of traffic mitigation measures.

PROJECTED PEAK PARKING NEEDS

Future peak parking needs were projected for buildout (Year 2015) of the Master Plan. The methodology used to develop the parking demand projections consisted of:

- <u>Academic Growth (Students, Faculty/Staff and Visitors)</u> – The Master Plan envisions academic growth to 15,500 FTE students by Year 2015. Growth in parking need generated by students, faculty/staff, and campus visitors related to this projected academic growth were estimated by applying empirical parking requirement ratios derived from existing Pierce College conditions.

Empirical parking requirement ratios per FTE were derived through comparison of the total number of existing vehicles parked on the campus at the 11:00 AM weekday daytime peak and at the 7:00 PM weekday evening peak to the existing (year 2008-2009) estimated student FTE. For planning purposes, the observed peak parking demands were adjusted upward by a 10% circulation factor, since parking facilities are typically considered to be fully utilized when used at 85 to 90% of capacity. Based on this analysis, it is estimated that, on average, the peak parking requirement ratio currently generated per FTE on the Pierce College campus is as follows:

Peak Parking Requirement - Spaces per Student FTE	
Weekday Daytime Peak	Weekday Evening Peak
0.186 spaces per FTE	0.144 spaces per FTE

These parking requirement ratios were applied to the projected future FTE to project the future peak parking requirement generated by academic purposes at Year 2015 buildout.

Table 15 presents the results of this analysis, including both the derivation of the empirical parking ratios and the projection of future peak parking requirements. As can be seen, a peak requirement for about 2,887 parking spaces is projected during weekdays and 2,226 spaces on weeknights in support of future academic activities at buildout.

PARKING SUPPLY AND DEMAND ANALYSIS

Tables 14 and 15 show that the estimated future supply of parking available to support activities on campus (3,958 spaces) would be adequate to accommodate the projected peak parking needs at buildout (2,887 spaces weekday daytime and 2,226 spaces weeknight). Surpluses of about 1,200 spaces (weekday) to 1,800 spaces (weeknight) are projected.

PROJECT ACCESS PLAN

Existing and future vehicular access to the Pierce College campus is and would be obtained via four access points: Brahma Drive via a signalized intersection with Winnetka Avenue, an unsignalized driveway onto Victory Boulevard from Parking Lot 7, Mason Street via a signalized intersection with Victory Boulevard, and El Rancho Drive via a signalized intersection with De Soto Avenue. The unsignalized driveway onto Victory Boulevard from Parking Lot 7 is limited to right-out only for outbound vehicles while inbound vehicles can enter via a right or left turn into

TABLE 15
PIERCE COLLEGE FACILITIES MASTER PLAN
PEAK PARKING ANALYSIS: ACADEMIC GROWTH

	Existing (2008-2009)		2015 MP Buildout	
	Weekday Daytime [a]	Weekday Evening (7 PM)	Weekday Daytime	Weekday Evening
Student Population				
Enrollment [b]	22,164		22,931	
FTE [b]	16,079		15,500	
Parking Demand & Requirement				
Peak Parking Demand [c]				
On-Campus Students	2,167	1,715		
On-Campus Staff	386	218		
Off-Campus/On-Street Spaces	170	166		
Total	2,723	2,099		
Contingency/Circulation Factor	10%	10%		
Parking Requirement				
Total [d]	2,995	2,309	2,887	2,226
Parking Requirement Ratio (Spaces per FTE)	0.186	0.144		
Parking Supply & Adequacy				
Parking Supply				
Existing On-Campus Spaces [e,f]	3,719	3,719	3,719	3,719
New On-Campus Spaces	n/a	n/a	0	0
Off-Campus/On-Street Spaces [g]	271	271	239	239
Total [d]	3,990	3,990	3,958	3,958
Surplus/(Shortfall)				
Relative to Requirement	995	1,681	1,071	1,732

Notes:

a. Peak weekday daytime parking demand at 12 PM, per campus parking utilization surveys conducted 4/29/09+.

b. Existing enrollment is fall 2008; existing student FTE is 2008-2009 annual. Source: Pierce College, 2009.

c. Source for existing peak parking demand: parking utilization surveys conducted 4/29/09 (see Appendix D). Future parking demand and requirement estimated using parking ratios empirically derived from surveys, applied to future FTE.

d. Includes vehicles parked off-campus in immediately-fronting street spaces.

e. Existing inventory includes approximately 65 unmarked parking spaces in dirt lots.

f. Changes to existing supply estimated from Land Use Master Plan and illustrative Master Plan maps (see Appendix F).

g. Future on-street spaces reduced to reflect possible loss of spaces due to implementation of traffic mitigation measures.

Parking Lot 7. The three remaining access points do not include any turn restrictions for inbound or outbound vehicles.

A pedestrian plaza is being constructed on the northeast corner of the Pierce College campus on the southwest corner of the intersection of Victory Boulevard & Winnetka Avenue. This plaza would enhance pedestrian access to the campus for pedestrians and patrons of the Orange Line and other transit lines serving this location.

LEVEL OF SERVICE AT PROJECT ACCESS POINTS

The signalized driveways were analyzed using the *Critical Movements Analysis* (Transportation Research Board, 1980) methodology to evaluate the ability of the project access plan to accommodate the anticipated traffic levels at the access points. For future with project conditions, through traffic on the surrounding roadways was increased for both ambient growth and related projects, as discussed in Chapter III. Project-generated traffic was also added. The three signalized driveways were analyzed as full movement driveways.

Table 8 in Chapter IV shows the resulting LOS for the three signalized driveways in the AM and PM peak hours. As Table 8 indicates, the driveways are projected to operate at LOS C or better for the AM and PM peak hours for all three locations. According to the criteria set forth in the City of Los Angeles' *CEQA Threshold Guide*, no significant project access impacts are anticipated.

VIII. SUMMARY AND CONCLUSIONS

This study was undertaken to analyze potential traffic and parking impacts of the proposed Pierce College Facilities Master Plan. The following summarizes the key findings of the study:

- AM and PM peak hour capacity analyses were conducted for a total of 32 intersections on the street system in the vicinity of the Pierce College campus. Eleven of these intersections currently operate at LOS E or F during the AM or PM peak hours.
- Under Year 2015 Cumulative Base (i.e., no project) conditions, 13 of the analyzed intersections are projected to operate at unacceptable LOS E or F conditions. The cumulative base forecasts include traffic generated by anticipated from 32 related projects, some of which are within the Warner Center Specific Plan area, and background traffic growth.
- Buildout of the proposed Master Plan is anticipated by the Year 2015. The projected campus population growth from the year 2002 Pierce College FTE baseline through Year 2015 Master Plan buildout is projected to generate a net incremental increase of approximately 2,460 daily trips, about 248 trips during the AM peak hour, and about 210 trips during the PM peak hour.
- Based on City of Los Angeles impact criteria, the proposed project is projected to have significant impacts at one of the study intersections (Winnetka Avenue and Victory Boulevard) if no mitigations were to be implemented. A mitigation strategy is proposed for this location that consists of intersection improvements. With implementation of the proposed mitigation measure, the project impact would be mitigated to a level of insignificance at the impacted location.
- The current campus parking accommodates the existing campus parking demands, with peak occupancies of about 68% of the available spaces used during the weekday late morning peak period and 53% at the 7:00 PM peak for evening classes. The proposed future parking supply on the Pierce College campus, assuming implementation of the parking system changes anticipated in the Master Plan and described herein, would be more than sufficient to accommodate projected parking demands on the campus generated by academic growth to Year 2015 plus additional parking demand generated by the public/private partnership project. In addition, no significant site access impacts are anticipated.
- Analyses of potential impacts on the regional transportation system conducted in accordance with CMP requirements determined that the project would not have a significant impact on the mainline freeway system nor the regional transit system. The project would have significant impacts on one CMP arterial monitoring intersection (Winnetka Avenue & Victory Boulevard), but the intersection mitigation measures

suggested in Chapter IV would also mitigate this CMP system impact to a level of insignificance.

REFERENCES

Draft Facilities Master Plan, Los Angeles Pierce College, July 2002.

Final Draft 2004 Congestion Management Program for Los Angeles County, Los Angeles County Metropolitan Transportation Authority, July 2004.

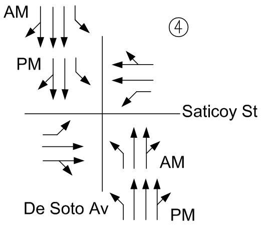
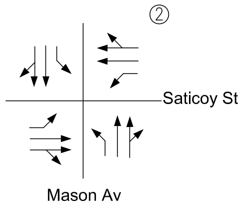
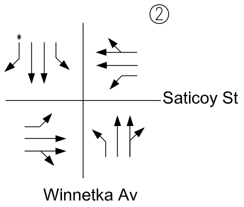
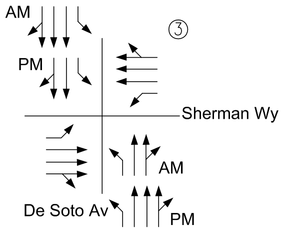
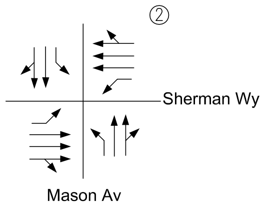
L.A. Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles, City of Los Angeles, 2006.

Traffic and Parking Study for the Pierce College Facilities Master Plan Environmental Impact Report, Kaku Associates, July 2002.

Trip Generation, 7th Edition, Institute of Transportation Engineers, 2003.

APPENDIX A

INTERSECTION CONFIGURATIONS

	Existing (2002) Conditions	Cumulative Base & Cumulative Plus Project	Cumulative Plus Project Plus Mitigation
1. De Soto Av & Saticoy St		SAME AS EXISTING	NO IMPACT
2. Mason Av & Saticoy St		SAME AS EXISTING	NO IMPACT
3. Winnetka Av & Saticoy St		SAME AS EXISTING	NO IMPACT
4. De Soto Av & Sherman Wy		SAME AS EXISTING	NO IMPACT
5. Mason Av & Sherman Wy		SAME AS EXISTING	NO IMPACT

LEGEND

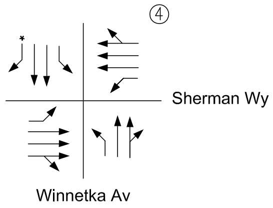
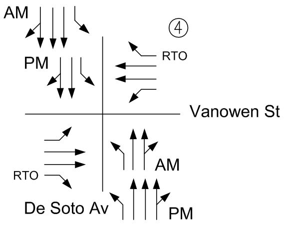
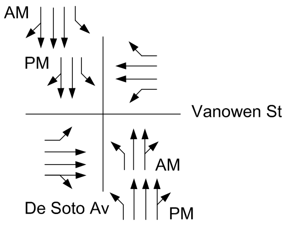
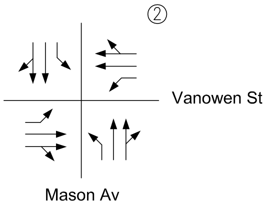
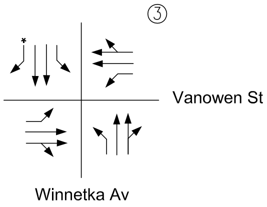
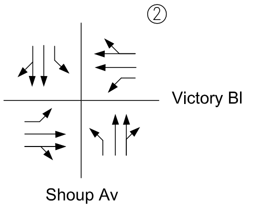
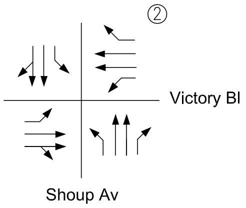
(#)	Number of critical signal phases
*	Lane not striped, but functions as indicated.

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 20, 2009 FPA
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_LaneConfigs.dwg

INTERSECTION LANE CONFIGURATIONS

APPENDIX A

	Existing (2002) Conditions	Cumulative Base & Cumulative Plus Project	Cumulative Plus Project Plus Mitigation
6. Winnetka Av & Sherman Wy		SAME AS EXISTING	NO IMPACT
7. De Soto Av & Vanowen St			NO IMPACT
8. Mason Av & Vanowen St		SAME AS EXISTING	NO IMPACT
9. Winnetka Av & Vanowen St		SAME AS EXISTING	NO IMPACT
10. Shoup Av & Victory Bl			NO IMPACT

LEGEND

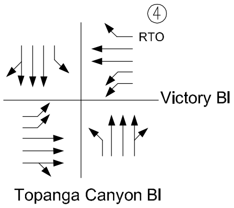
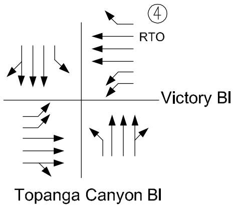
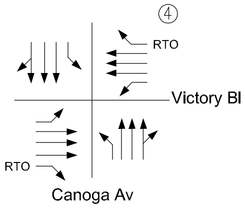
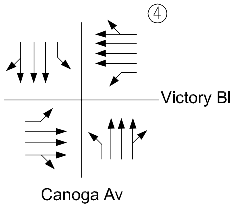
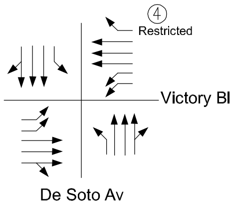
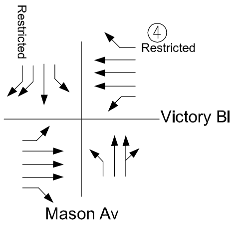
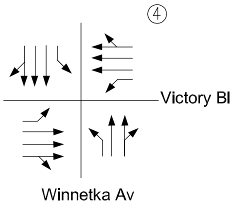
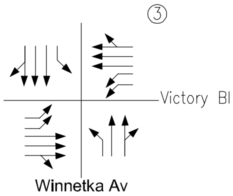
⊕	Number of critical signal phases
*	Lane not striped, but functions as indicated.
RTO	Right-turn Overlap
[b]	Third through lane due to parking restrictions during PM peak periods only, operates as right-turn lane at other times.

FEHR & PEERS
TRANSPORTATION CONSULTANTS

INTERSECTION LANE CONFIGURATIONS

APPENDIX A

Oct 20, 2009 FPA
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_LaneConfigs.dwg

	Existing (2002) Conditions	Cumulative Base & Cumulative Plus Project	Cumulative Plus Project Plus Mitigation
11. Topanga Canyon Bl & Victory Bl			NO IMPACT
12. Canoga Av & Victory Bl			NO IMPACT
13. De Soto Av & Victory Bl		SAME AS EXISTING	NO IMPACT
14. Mason Av & Victory Bl		SAME AS EXISTING	NO IMPACT
15. Winnetka Av & Victory Bl		SAME AS EXISTING	

LEGEND

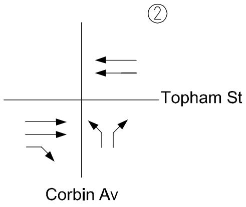
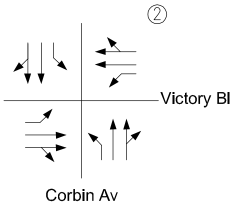
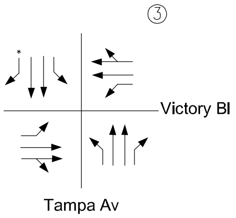
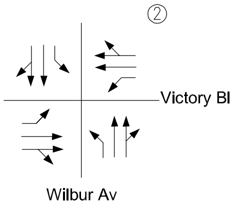
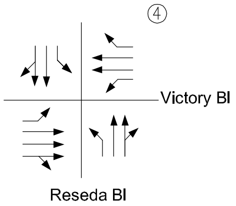
㊉	Number of critical signal phases
+++	Third through lane due to parking restrictions during PM peak periods only.
*	Lane not striped, but functions as indicated.
RTO	Right-turn Overlap
[a]	Third through lane due to parking restrictions during AM peak periods only, operates as right-turn lane at other times.
[b]	Third through lane due to parking restrictions during PM peak periods only, operates as right-turn lane at other times.
Restricetd	No right-turn on red

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Jan 08, 2010 FPA
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_LaneConfigs.dwg

INTERSECTION LANE CONFIGURATIONS

APPENDIX A

	Existing (2002) Conditions	Cumulative Base & Cumulative Plus Project	Cumulative Plus Project Plus Mitigation
16. Topham St & Victory Bl		SAME AS EXISTING	NO IMPACT
17. Corbin Av & Victory Bl		SAME AS EXISTING	NO IMPACT
18. Tampa Av & Victory Bl		SAME AS EXISTING	NO IMPACT
19. Wilbur Av & Victory Bl		SAME AS EXISTING	NO IMPACT
20. Reseda Bl & Victory Bl		SAME AS EXISTING	NO IMPACT

LEGEND

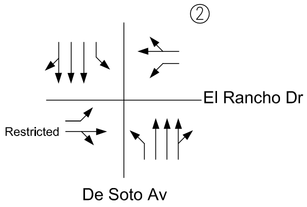
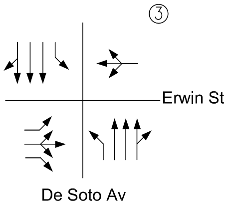
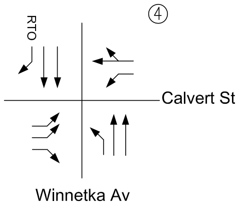
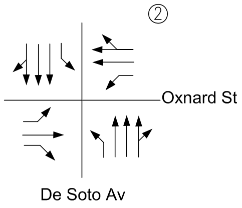
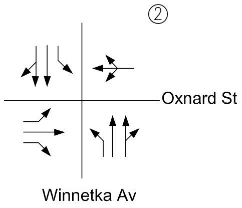
(#)	Number of critical signal phases
*	Lane not striped, but functions as indicated.
Restricetd	No right-turn on red

FEHR & PEERS
TRANSPORTATION CONSULTANTS

INTERSECTION LANE CONFIGURATIONS

APPENDIX A

Jan 08, 2010 FPA
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_LaneConfigs.dwg

	Existing (2002) Conditions	Cumulative Base & Cumulative Plus Project	Cumulative Plus Project Plus Mitigation
21. De Soto Av & El Rancho Dr		SAME AS EXISTING	NO IMPACT
22. De Soto Av & Erwin St		SAME AS EXISTING	NO IMPACT
23. Winnetka Av & Calvert St		SAME AS EXISTING	NO IMPACT
24. De Soto Av & Oxnard St		SAME AS EXISTING	NO IMPACT
25. Winnetka Av & Oxnard St		SAME AS EXISTING	NO IMPACT

LEGEND

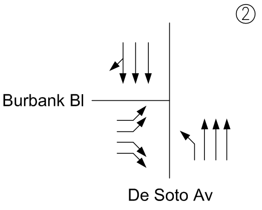
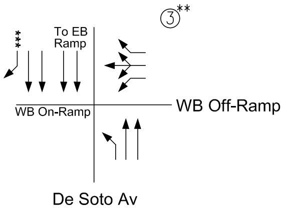
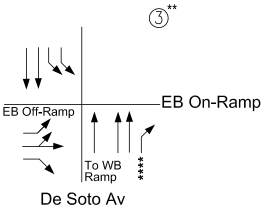
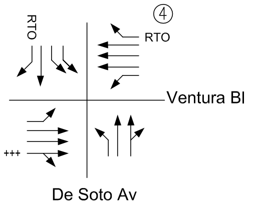
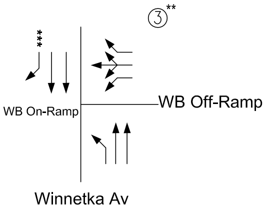
(#)	Number of critical signal phases
*	Lane not striped, but functions as indicated.
**	Traffic signals at Winnetka EB and WB ramps operate collectively as one signal.
***	No right-turn on red from 3PM - 7PM
RTO	Right-turn Overlap

FEHR & PEERS
TRANSPORTATION CONSULTANTS

INTERSECTION LANE CONFIGURATIONS

APPENDIX A

Oct 20, 2009 FPA
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_LaneConfigs.dwg

	Existing (2002) Conditions	Cumulative Base & Cumulative Plus Project	Cumulative Plus Project Plus Mitigation
26. De Soto Av & Burbank Bl		SAME AS EXISTING	NO IMPACT
27. De Soto Av & US 101 WB Ramps		SAME AS EXISTING	NO IMPACT
28. De Soto Av & US 101 EB Ramps		SAME AS EXISTING	NO IMPACT
29. De Soto Av & Ventura Bl		SAME AS EXISTING	NO IMPACT
30. Winnetka Av & US 101 WB Ramps		SAME AS EXISTING	NO IMPACT

LEGEND

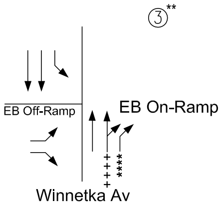
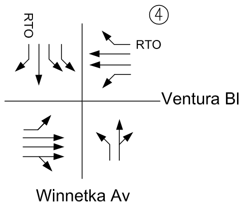
#	Number of critical signal phases
**	Traffic signals at Winnetka EB and WB ramps operate collectively as one signal.
***	No right-turn on red from 3PM - 7PM
****	No right-turn on red from 7AM - 9AM
RTO	Right-turn Overlap
+++	Third through lane due to parking restrictions during AM and PM peak periods only.
++++	Right-turn movement for this lane is for carpool only

FEHR & PEERS
TRANSPORTATION CONSULTANTS

INTERSECTION LANE CONFIGURATIONS

APPENDIX A

Oct 20, 2009 FPA
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_LaneConfigs.dwg

	Existing (2002) Conditions	Cumulative Base & Cumulative Plus Project	Cumulative Plus Project Plus Mitigation
31. Winnetka Av & US 101 EB Ramps		SAME AS EXISTING	NO IMPACT
32. Winnetka Av & Ventura Bl		SAME AS EXISTING	NO IMPACT

LEGEND

#	Number of critical signal phases
**	Traffic signals at Winnetka EB and WB ramps operate collectively as one signal.
****	No right-turn on red from 7AM - 9AM
RTO	Right-turn Overlap
++++	Right-turn movement for this lane is for carpool only

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 20, 2009 FPA
N:\Jobs\Active\OC Jobs\OC09-0135\ACAD-LA\OC09-0135_LaneConfigs.dwg

INTERSECTION LANE CONFIGURATIONS

APPENDIX A

APPENDIX B

AM AND PM PEAK HOUR INTERSECTION TURNING MOVEMENTS

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: De Soto Ave
DATE: 3/24/2009
LOCATION: City of Canoga Park

E-W STREET: Saticoy St
DAY: TUESDAY
PROJECT# 09-5108-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	16	158	17	17	233	22	23	140	14	23	169	16	848
7:15 AM	11	157	17	14	347	31	35	213	17	26	189	15	1072
7:30 AM	27	205	22	22	343	24	29	231	18	34	264	11	1230
7:45 AM	28	202	27	29	330	36	27	209	24	33	256	17	1218
8:00 AM	30	251	33	18	312	41	31	243	19	36	269	18	1301
8:15 AM	39	183	38	21	344	37	19	151	17	27	291	19	1186
8:30 AM	14	182	20	17	286	28	25	188	17	25	200	18	1020
8:45 AM	16	147	19	14	324	31	27	171	20	12	182	17	980
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	181	1485	193	152	2519	250	216	1546	146	216	1820	131	8855

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	124	841	120	90	1329	138	106	834	78	130	1080	65	4935
PEAK HR. FACTOR:		0.864			0.968			0.869			0.946		0.948

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: De Soto Ave　DATE: 3/24/2009　LOCATION: City of Canoga Park

E-W STREET: Saticoy St　DAY: TUESDAY　PROJECT# 09-5108-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	2	0	1	2	0	
4:00 PM	27	334	33	28	241	36	29	281	13	21	216	23	1282
4:15 PM	29	308	37	30	296	36	39	274	21	23	201	22	1316
4:30 PM	14	298	36	30	227	35	37	308	20	26	212	22	1265
4:45 PM	22	289	23	32	227	31	27	244	18	23	209	32	1177
5:00 PM	18	256	36	28	202	34	41	245	16	26	205	25	1132
5:15 PM	28	264	43	29	223	25	34	256	17	24	212	20	1175
5:30 PM	15	272	23	24	221	19	26	188	17	26	180	17	1028
5:45 PM	15	190	24	21	181	16	31	166	19	30	183	34	910

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	168	2211	255	222	1818	232	264	1962	141	199	1618	195	9285

PM Peak Hr Begins at: 400 PM

PEAK VOLUMES =	92	1229	129	120	991	138	132	1107	72	93	838	99	5040
PEAK HR. FACTOR:		0.920			0.863			0.898			0.975		0.957

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mason Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Saticoy St

DAY: TUESDAY

PROJECT# 09-5108-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	18	124	10	22	161	29	30	175	12	14	154	14	763
7:15 AM	20	155	12	25	267	23	34	197	15	31	205	18	1002
7:30 AM	19	213	15	26	316	23	27	206	27	31	231	17	1151
7:45 AM	36	255	37	31	281	27	33	231	30	39	258	25	1283
8:00 AM	22	175	10	28	269	22	20	225	20	20	259	19	1089
8:15 AM	19	155	15	15	269	42	25	243	11	21	229	21	1065
8:30 AM	7	94	13	22	236	31	37	205	18	13	171	14	861
8:45 AM	5	86	11	26	207	34	37	190	12	18	185	7	818
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	146	1257	123	195	2006	231	243	1672	145	187	1692	135	8032

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	96	798	77	100	1135	114	105	905	88	111	977	82	4588
PEAK HR. FACTOR:		0.740			0.924			0.934			0.908		0.894

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mason Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Saticoy St

DAY: TUESDAY

PROJECT# 09-5108-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	23	220	18	24	188	29	40	221	21	23	214	20	1041
4:15 PM	29	196	19	27	158	34	47	255	27	14	209	34	1049
4:30 PM	27	202	19	25	190	27	42	251	29	16	224	18	1070
4:45 PM	29	199	15	18	171	29	27	259	18	21	209	11	1006
5:00 PM	22	221	18	33	188	25	40	305	28	31	251	22	1184
5:15 PM	21	255	26	32	197	40	50	305	32	21	235	23	1237
5:30 PM	23	212	27	26	203	29	42	224	26	17	188	24	1041
5:45 PM	22	185	17	23	165	42	37	224	19	25	228	22	1009

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	196	1690	159	208	1460	255	325	2044	200	168	1758	174	8637

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	99	877	78	108	746	121	159	1120	107	89	919	74	4497
PEAK HR. FACTOR:		0.873			0.906			0.895			0.890		0.909

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Saticoy St

DAY: TUESDAY

PROJECT# 09-5108-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	13	125	19	27	220	20	22	145	24	12	140	21	788
7:15 AM	27	138	26	35	253	23	21	191	28	22	207	24	995
7:30 AM	38	207	67	24	281	30	30	228	38	24	218	28	1213
7:45 AM	19	186	17	33	248	31	27	180	16	21	213	33	1024
8:00 AM	24	174	16	36	289	34	22	206	24	25	248	29	1127
8:15 AM	23	198	14	30	272	25	28	205	45	22	217	35	1114
8:30 AM	18	181	18	33	231	32	29	199	25	22	163	37	988
8:45 AM	16	133	7	23	224	24	22	152	13	21	139	29	803
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	178	1342	184	241	2018	219	201	1506	213	169	1545	236	8052

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	104	765	114	123	1090	120	107	819	123	92	896	125	4478
PEAK HR. FACTOR:		0.788			0.928			0.886			0.921		0.923

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Saticoy St

DAY: TUESDAY

PROJECT# 09-5108-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	34	223	17	44	242	40	33	237	37	28	190	33	1158
4:15 PM	32	275	28	44	256	39	31	228	30	18	195	36	1212
4:30 PM	41	280	39	30	243	41	29	230	32	20	205	39	1229
4:45 PM	28	269	33	39	244	32	31	213	21	20	207	40	1177
5:00 PM	36	187	28	42	260	41	39	229	30	22	183	47	1144
5:15 PM	34	242	17	40	257	39	43	254	23	23	201	45	1218
5:30 PM	39	203	32	45	260	35	36	229	28	22	233	55	1217
5:45 PM	31	181	16	29	196	38	22	156	22	17	194	44	946

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	275	1860	210	313	1958	305	264	1776	223	170	1608	339	9301

PM Peak Hr Begins at: 400 PM

PEAK VOLUMES =	135	1047	117	157	985	152	124	908	120	86	797	148	4776
PEAK HR. FACTOR:		0.902			0.954			0.938			0.965		0.972

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: De Soto

DATE: 5/17/2007

LOCATION: City of Woodland Hills

E-W STREET: Sherman Wy

DAY: THURSDAY

PROJECT# 07-2249-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	3	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	13	348	8	30	470	37	52	454	25	38	260	30	1765
7:15 AM	28	196	24	28	332	37	9	246	16	37	286	27	1266
7:30 AM	23	137	16	18	365	37	9	170	26	44	259	24	1128
7:45 AM	14	165	37	25	319	37	18	192	15	43	280	23	1168
8:00 AM	25	153	16	32	280	40	13	169	22	29	175	31	985
8:15 AM	34	174	19	21	250	37	12	241	23	35	171	27	1044
8:30 AM	26	171	24	28	256	23	21	188	17	20	206	13	993
8:45 AM	25	193	22	21	255	37	11	153	19	42	200	17	995
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	188	1537	166	203	2527	285	145	1813	163	288	1837	192	9344

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES =	78	846	85	101	1486	148	88	1062	82	162	1085	104	5327
PEAK HR. FACTOR:		0.684			0.808			0.580			0.965		0.755

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: De Soto

DATE: 5/17/2007

LOCATION: City of Woodland Hills

E-W STREET: Sherman Wy

DAY: THURSDAY

PROJECT# 07-2249-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	3	0	1	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	25	287	43	19	164	25	27	208	29	23	167	23	1040
4:15 PM	15	337	56	23	211	36	29	247	33	34	236	25	1282
4:30 PM	29	293	58	29	183	29	48	301	31	31	225	28	1285
4:45 PM	25	386	72	26	260	47	51	427	29	46	249	34	1652
5:00 PM	22	403	71	29	195	27	35	454	56	33	241	37	1603
5:15 PM	34	448	66	20	241	33	39	436	33	42	263	26	1681
5:30 PM	30	357	60	24	230	37	42	349	23	35	221	29	1437
5:45 PM	28	342	41	19	250	41	49	366	24	46	223	27	1456
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	208	2853	467	189	1734	275	320	2788	258	290	1825	229	11436

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	111	1594	269	99	926	144	167	1666	141	156	974	126	6373
PEAK HR. FACTOR:		0.901			0.878			0.906			0.949		0.948

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mason Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Sherman Way

DAY: TUESDAY

PROJECT# 09-5108-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	3	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	5	81	10	28	177	29	13	170	14	21	171	15	734
7:15 AM	17	111	2	19	261	34	17	230	18	14	255	25	1003
7:30 AM	12	156	10	22	329	41	19	253	16	24	305	23	1210
7:45 AM	16	150	16	29	267	33	18	266	27	29	355	21	1227
8:00 AM	27	120	7	38	227	30	27	225	14	23	286	26	1050
8:15 AM	14	125	9	24	256	35	29	241	12	19	293	22	1079
8:30 AM	11	80	3	13	225	36	23	187	11	15	220	27	851
8:45 AM	9	71	6	8	203	35	22	203	5	16	248	19	845
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	111	894	63	181	1945	273	168	1775	117	161	2133	178	7999

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	69	551	42	113	1079	139	93	985	69	95	1239	92	4566
PEAK HR. FACTOR:		0.909			0.849			0.922			0.880		0.930

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mason Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Sherman Way

DAY: TUESDAY

PROJECT# 09-5108-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	3	0	1	3	0	
4:00 PM	11	181	6	12	149	25	48	302	13	12	281	22	1062
4:15 PM	19	214	16	28	143	27	41	271	9	8	277	11	1064
4:30 PM	18	201	11	22	127	31	28	286	10	18	273	28	1053
4:45 PM	14	221	23	30	171	34	27	301	9	18	273	25	1146
5:00 PM	21	182	12	20	126	38	42	300	14	17	284	17	1073
5:15 PM	18	254	16	29	171	26	38	321	12	23	240	17	1165
5:30 PM	19	213	10	27	205	37	34	247	20	21	254	25	1112
5:45 PM	24	193	14	28	172	27	31	292	7	10	270	19	1087

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	144	1659	108	196	1264	245	289	2320	94	127	2152	164	8762

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	72	870	61	106	673	135	141	1169	55	79	1051	84	4496
PEAK HR. FACTOR:		0.871			0.849			0.920			0.954		0.965

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Sherman Way

DAY: TUESDAY

PROJECT# 09-5108-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	3	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	11	115	17	25	250	13	20	157	23	26	162	16	835
7:15 AM	13	196	25	25	316	26	26	209	40	37	249	49	1211
7:30 AM	26	226	26	29	359	45	54	252	41	44	301	86	1489
7:45 AM	22	153	21	31	263	22	24	234	25	35	296	29	1155
8:00 AM	35	177	16	27	276	22	14	211	32	25	258	23	1116
8:15 AM	38	163	13	29	257	34	20	174	20	36	227	21	1032
8:30 AM	25	159	20	26	250	20	14	155	24	24	187	22	926
8:45 AM	19	120	8	24	207	21	11	126	16	16	165	22	755
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	189	1309	146	216	2178	203	183	1518	221	243	1845	268	8519

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	96	752	88	112	1214	115	118	906	138	141	1104	187	4971
PEAK HR. FACTOR:		0.842			0.832			0.837			0.831		0.835

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Sherman Way

DAY: TUESDAY

PROJECT# 09-5108-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	3	0	1	3	0	
4:00 PM	49	250	28	43	216	35	30	246	26	12	207	30	1172
4:15 PM	45	275	19	43	189	41	43	278	19	20	254	32	1258
4:30 PM	32	298	25	45	235	38	38	241	34	25	246	48	1305
4:45 PM	37	283	22	42	202	31	29	255	27	25	197	26	1176
5:00 PM	44	232	25	39	265	37	35	255	19	16	214	41	1222
5:15 PM	30	283	24	46	247	36	43	219	19	17	216	29	1209
5:30 PM	38	230	21	47	251	22	38	213	23	20	210	24	1137
5:45 PM	32	178	16	24	136	21	28	173	18	14	170	25	835

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	307	2029	180	329	1741	261	284	1880	185	149	1714	255	9314

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	158	1088	91	169	891	147	145	1029	99	86	911	147	4961
PEAK HR. FACTOR:		0.942			0.885			0.936			0.897		0.950

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: De Soto Ave
DATE: 5/17/2007
LOCATION: City of Woodland Hills

E-W STREET: Vanowen St
DAY: THURSDAY
PROJECT# 07-2249-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	11	145	15	27	225	35	30	130	18	32	156	28	852
7:15 AM	10	188	12	24	290	33	22	124	20	30	186	21	960
7:30 AM	11	205	20	25	304	50	21	201	21	40	224	30	1152
7:45 AM	12	242	25	25	311	44	15	240	15	45	320	25	1319
8:00 AM	13	224	27	35	265	30	15	256	16	54	275	22	1232
8:15 AM	10	156	26	30	311	45	20	225	15	55	224	30	1147
8:30 AM	15	157	18	20	288	40	21	188	7	60	286	25	1125
8:45 AM	10	166	15	25	298	60	25	166	9	56	251	20	1101
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	92	1483	158	211	2292	337	169	1530	121	372	1922	201	8888

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	46	827	98	115	1191	169	71	922	67	194	1043	107	4850
PEAK HR. FACTOR:		0.870			0.955			0.923			0.862		0.919

CONTROL:

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: De Soto Ave
DATE: 5/17/2007
LOCATION: City of Woodland Hills

E-W STREET: Vanowen St
DAY: THURSDAY
PROJECT# 07-2249-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	11	334	28	25	221	31	40	266	20	20	188	31	1215
4:15 PM	10	288	30	30	189	28	45	245	40	27	160	28	1120
4:30 PM	12	334	28	25	221	32	30	254	22	25	186	40	1209
4:45 PM	13	378	26	18	240	30	35	288	21	33	221	35	1338
5:00 PM	10	368	25	25	201	42	50	345	18	24	196	30	1334
5:15 PM	8	366	30	20	199	40	40	354	25	25	201	42	1350
5:30 PM	15	384	30	32	245	60	33	305	24	22	224	40	1414
5:45 PM	16	356	29	30	230	56	38	311	23	30	230	20	1369
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	95	2808	226	205	1746	319	311	2368	193	206	1606	266	10349

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	49	1474	114	107	875	198	161	1315	90	101	851	132	5467
PEAK HR. FACTOR:		0.954			0.875			0.934			0.948		0.967

CONTROL:

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mason Ave
DATE: 3/24/2009
LOCATION: City of Woodland Hills

E-W STREET: Vanowen St
DAY: TUESDAY
PROJECT# 09-5108-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	3	47	5	20	137	32	16	168	5	12	154	19	618
7:15 AM	6	57	10	20	193	46	25	175	15	19	207	24	797
7:30 AM	5	85	11	18	271	43	37	227	28	41	251	21	1038
7:45 AM	7	100	16	22	303	48	34	241	38	54	289	32	1184
8:00 AM	9	87	7	18	203	49	26	204	8	33	247	22	913
8:15 AM	8	83	11	27	214	54	24	221	4	22	263	15	946
8:30 AM	8	45	5	14	159	56	16	192	19	10	243	11	778
8:45 AM	10	45	9	7	155	65	23	179	23	16	203	12	747
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	56	549	74	146	1635	393	201	1607	140	207	1857	156	7021

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	29	355	45	85	991	194	121	893	78	150	1050	90	4081
PEAK HR. FACTOR:		0.872			0.851			0.872			0.860		0.862

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mason Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Vanowen St

DAY: TUESDAY

PROJECT# 09-5108-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	12	146	6	31	78	32	49	262	7	15	206	15	859
4:15 PM	12	147	13	31	89	43	44	303	10	17	200	19	928
4:30 PM	11	140	5	20	74	32	46	263	6	8	194	24	823
4:45 PM	13	145	16	13	115	34	64	269	4	7	205	22	907
5:00 PM	8	152	7	21	106	28	49	293	16	6	210	22	918
5:15 PM	10	181	12	30	132	32	59	300	16	14	211	27	1024
5:30 PM	8	174	11	23	144	36	45	280	14	15	231	17	998
5:45 PM	9	151	12	19	138	34	49	257	16	17	227	17	946

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	83	1236	82	188	876	271	405	2227	89	99	1684	163	7403

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	35	658	42	93	520	130	202	1130	62	52	879	83	3886
PEAK HR. FACTOR:		0.905			0.915			0.929			0.964		0.949

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Vanowen St

DAY: TUESDAY

PROJECT# 09-5108-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	10	106	13	18	242	17	14	144	21	24	156	18	783
7:15 AM	13	145	19	27	267	19	17	171	21	29	212	30	970
7:30 AM	16	143	15	26	359	33	23	191	22	26	246	37	1137
7:45 AM	31	175	21	31	260	31	20	198	26	18	278	18	1107
8:00 AM	25	170	35	27	285	33	9	178	15	33	215	20	1045
8:15 AM	14	164	26	24	280	36	13	209	18	36	238	17	1075
8:30 AM	17	115	13	22	275	27	19	176	22	36	184	12	918
8:45 AM	18	140	12	32	240	22	14	174	28	29	218	11	938
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	144	1158	154	207	2208	218	129	1441	173	231	1747	163	7973

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	86	652	97	108	1184	133	65	776	81	113	977	92	4364
PEAK HR. FACTOR:		0.908			0.852			0.945			0.941		0.960

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave DATE: 3/24/2009 LOCATION: City of Woodland Hills

E-W STREET: Vanowen St DAY: TUESDAY PROJECT# 09-5108-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	25	306	25	27	207	20	31	231	14	16	183	28	1113
4:15 PM	25	286	19	26	184	18	32	230	18	20	178	26	1062
4:30 PM	23	291	20	29	238	24	30	224	25	18	182	27	1131
4:45 PM	20	231	15	23	182	17	32	227	24	23	179	26	999
5:00 PM	24	268	23	23	188	14	22	238	20	19	207	31	1077
5:15 PM	21	276	21	37	210	23	35	289	15	18	224	36	1205
5:30 PM	25	273	24	27	213	24	26	246	18	24	199	19	1118
5:45 PM	22	264	27	30	242	28	31	258	26	25	257	22	1232

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	185	2195	174	222	1664	168	239	1943	160	163	1609	215	8937

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	92	1081	95	117	853	89	114	1031	79	86	887	108	4632
PEAK HR. FACTOR:		0.984			0.883			0.903			0.889		0.940

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shoup Ave
DATE: 5/22/2007
LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd
DAY: TUESDAY
PROJECT# 07-2249-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	8	112	12	23	217	12	11	123	32	17	102	11	680
7:15 AM	12	136	12	30	234	14	15	134	36	26	112	11	772
7:30 AM	21	155	15	27	303	24	20	224	40	23	196	18	1066
7:45 AM	26	200	5	35	322	15	33	212	82	25	195	21	1171
8:00 AM	29	194	17	34	329	15	21	252	72	25	164	25	1177
8:15 AM	21	141	9	29	291	17	21	187	61	26	153	13	969
8:30 AM	20	141	17	30	251	20	17	176	47	32	112	13	876
8:45 AM	31	153	16	27	226	16	14	164	59	35	124	15	880
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	168	1232	103	235	2173	133	152	1472	429	209	1158	127	7591

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	97	690	46	125	1245	71	95	875	255	99	708	77	4383
PEAK HR. FACTOR:		0.868			0.953			0.888			0.917		0.931

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shoup Ave

DATE: 5/22/2007

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: TUESDAY

PROJECT# 07-2249-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	50	260	27	24	143	32	31	221	39	21	205	45	1098
4:15 PM	50	262	22	20	139	37	30	186	21	24	240	37	1068
4:30 PM	62	312	33	10	136	22	35	151	36	14	228	40	1079
4:45 PM	46	297	23	32	156	16	20	195	38	19	205	35	1082
5:00 PM	45	338	28	23	167	27	34	189	29	26	234	40	1180
5:15 PM	47	370	31	21	192	26	19	218	28	23	227	40	1242
5:30 PM	49	327	25	28	174	20	25	209	29	20	202	39	1147
5:45 PM	42	285	20	27	133	15	26	184	40	17	205	31	1025
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	391	2451	209	185	1240	195	220	1553	260	164	1746	307	8921

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	187	1332	107	104	689	89	98	811	124	88	868	154	4651
PEAK HR. FACTOR:		0.907			0.923			0.975			0.925		0.936

CONTROL: Signalized

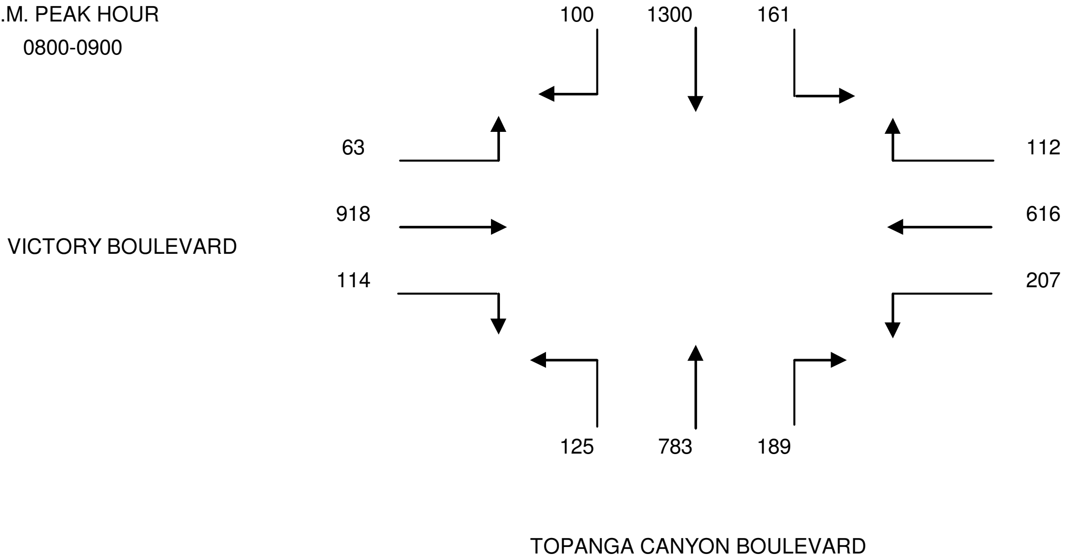
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: CRAIN AND ASSOCIATES
PROJECT: WESTFIELD WEST VALLEY II
DATE: THURSDAY, MAY 24, 2007
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION N/S TOPANGA CANYON BOULEVARD
E/W VICTORY BOULEVARD
FILE NUMBER: 18-AM CAR

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
700-715	15	320	42	16	104	30	26	168	10	13	157	17
715-730	17	336	37	15	121	43	39	202	17	21	173	20
730-745	22	359	52	20	148	63	38	221	19	25	200	21
745-800	24	330	43	30	169	48	58	201	24	29	237	14
800-815	17	311	30	26	149	46	46	188	25	32	246	18
815-830	25	348	36	33	180	55	46	195	30	26	214	14
830-845	29	317	43	20	131	43	45	186	36	24	243	15
845-900	29	324	52	33	156	63	52	214	34	32	215	16

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
700-800	78	1345	174	81	542	184	161	792	70	88	767	72	4354
715-815	80	1336	162	91	587	200	181	812	85	107	856	73	4570
730-830	88	1348	161	109	646	212	188	805	98	112	897	67	4731
745-845	95	1306	152	109	629	192	195	770	115	111	940	61	4675
800-900	100	1300	161	112	616	207	189	783	125	114	918	63	4688

A.M. PEAK HOUR
0800-0900



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

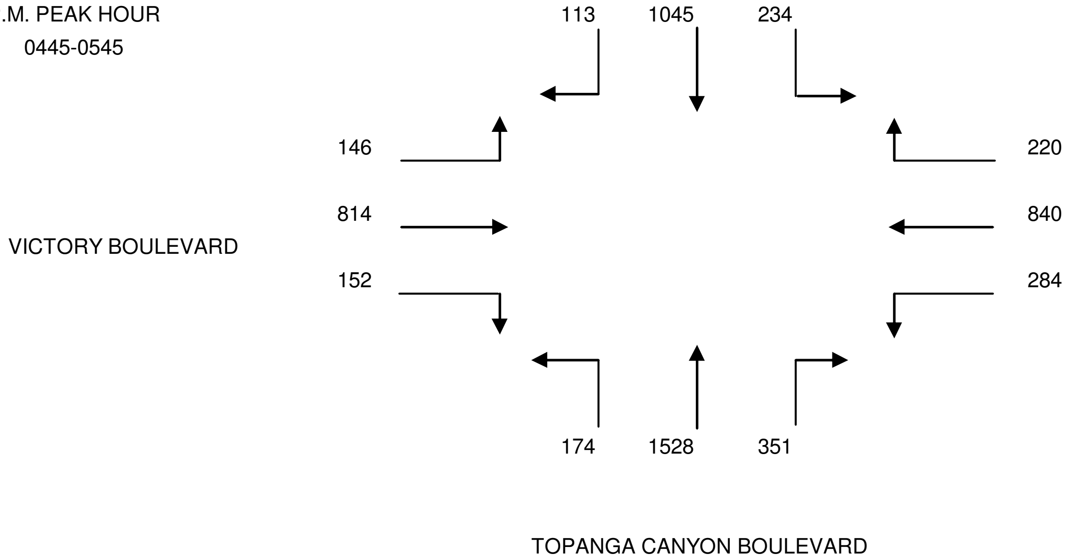
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: CRAIN AND ASSOCIATES
PROJECT: WESTFIELD WEST VALLEY II
DATE: THURSDAY, MAY 24, 2007
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION N/S TOPANGA CANYON BOULEVARD
E/W VICTORY BOULEVARD
FILE NUMBER: 18-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
400-415	37	261	59	65	196	79	72	360	34	51	192	39
415-430	36	236	41	54	191	64	81	325	45	49	219	40
430-445	29	242	48	45	201	71	98	352	45	51	205	40
445-500	39	250	74	78	229	85	99	369	42	49	204	38
500-515	21	288	47	44	203	70	83	399	34	33	196	37
515-530	27	250	44	60	210	64	78	361	42	37	223	36
530-545	26	257	69	38	198	65	91	399	56	33	191	35
545-600	30	237	58	65	243	85	69	349	36	36	208	45

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
400-500	141	989	222	242	817	299	350	1406	166	200	820	157	5809
415-515	125	1016	210	221	824	290	361	1445	166	182	824	155	5819
430-530	116	1030	213	227	843	290	358	1481	163	170	828	151	5870
445-545	113	1045	234	220	840	284	351	1528	174	152	814	146	5901
500-600	104	1032	218	207	854	284	321	1508	168	139	818	153	5806

P.M. PEAK HOUR
0445-0545



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

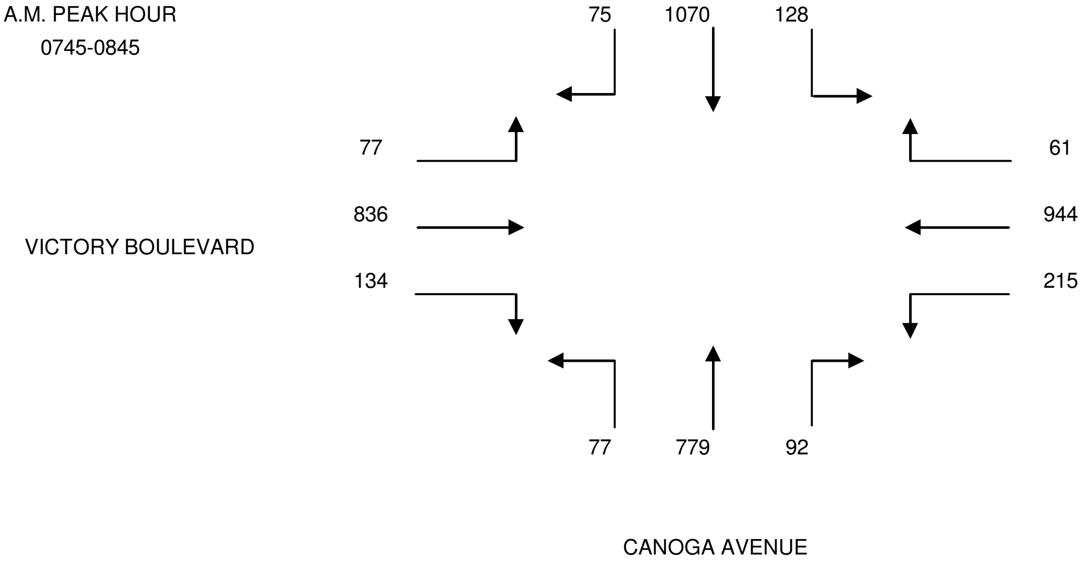
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: CRAIN AND ASSOCIATES
PROJECT: WESTFIELD WEST VALLEY II
DATE: THURSDAY, MAY 24, 2007
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION N/S CANOGA AVENUE
E/W VICTORY BOULEVARD
FILE NUMBER: 21-AM CAR

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
700-715	12	228	8	10	158	47	15	177	7	15	172	10
715-730	13	239	12	17	186	53	14	203	10	20	168	12
730-745	14	243	12	19	211	69	16	195	15	26	188	17
745-800	19	257	20	17	251	65	20	213	16	24	206	12
800-815	21	246	37	13	245	50	25	192	13	39	231	22
815-830	16	273	35	16	225	48	24	201	19	39	198	18
830-845	19	294	36	15	223	52	23	173	29	32	201	25
845-900	20	241	25	24	223	46	35	166	19	29	199	16

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
700-800	58	967	52	63	806	234	65	788	48	85	734	51	3951
715-815	67	985	81	66	893	237	75	803	54	109	793	63	4226
730-830	70	1019	104	65	932	232	85	801	63	128	823	69	4391
745-845	75	1070	128	61	944	215	92	779	77	134	836	77	4488
800-900	76	1054	133	68	916	196	107	732	80	139	829	81	4411

A.M. PEAK HOUR
0745-0845



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

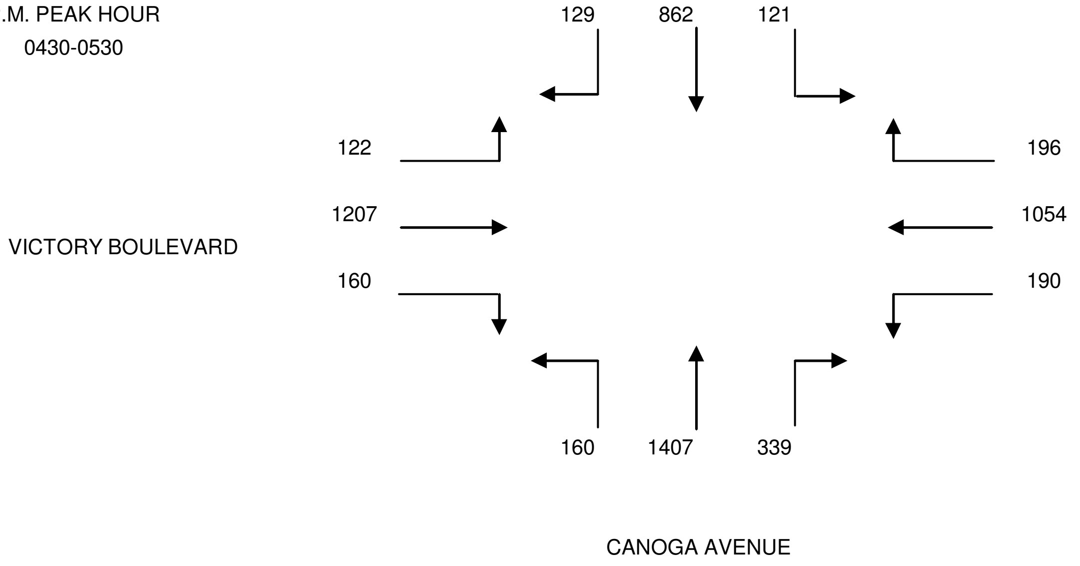
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: CRAIN AND ASSOCIATES
PROJECT: WESTFIELD WEST VALLEY II
DATE: THURSDAY, MAY 24, 2007
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION N/S CANOGA AVENUE
E/W VICTORY BOULEVARD
FILE NUMBER: 21-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
400-415	35	193	24	45	256	50	80	301	53	59	289	38
415-430	35	211	20	37	244	57	68	278	37	41	301	26
430-445	33	200	24	54	272	46	87	355	32	42	274	28
445-500	27	227	36	45	233	56	77	344	38	47	316	37
500-515	39	196	34	43	278	46	94	361	48	36	314	30
515-530	30	239	27	54	271	42	81	347	42	35	303	27
530-545	29	223	21	56	278	64	73	308	37	35	287	24
545-600	27	256	30	42	255	51	74	342	46	47	272	35

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
400-500	130	831	104	181	1005	209	312	1278	160	189	1180	129	5708
415-515	134	834	114	179	1027	205	326	1338	155	166	1205	121	5804
430-530	129	862	121	196	1054	190	339	1407	160	160	1207	122	5947
445-545	125	885	118	198	1060	208	325	1360	165	153	1220	118	5935
500-600	125	914	112	195	1082	203	322	1358	173	153	1176	116	5929

P.M. PEAK HOUR
0430-0530



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: De Soto Ave

DATE: 5/17/2007

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: THURSDAY

PROJECT# 07-2249-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	11	160	20	31	201	35	15	145	8	112	256	40	1034
7:15 AM	10	156	25	30	331	35	20	120	6	120	245	33	1131
7:30 AM	13	211	40	25	320	33	15	186	7	125	302	35	1312
7:45 AM	15	201	42	20	325	42	17	242	11	130	320	20	1385
8:00 AM	20	160	25	18	311	55	18	260	15	105	344	21	1352
8:15 AM	11	156	30	15	305	40	20	256	13	112	305	18	1281
8:30 AM	15	142	24	16	321	45	21	225	10	130	331	15	1295
8:45 AM	15	156	29	15	288	40	25	160	8	108	277	18	1139
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	110	1342	235	170	2402	325	151	1594	78	942	2380	200	9929

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	59	728	137	78	1261	170	70	944	46	472	1271	94	5330
PEAK HR. FACTOR:		0.875			0.975			0.904			0.977		0.962

CONTROL:

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: De Soto Ave DATE: 5/17/2007 LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd DAY: THURSDAY PROJECT# 07-2249-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	22	261	90	18	188	45	90	401	30	71	255	21	1492
4:15 PM	25	277	99	24	178	50	88	388	33	67	260	40	1529
4:30 PM	21	275	90	30	160	35	86	356	32	60	267	34	1446
4:45 PM	15	254	98	25	199	33	90	423	40	55	288	33	1553
5:00 PM	16	287	100	22	211	50	100	442	22	40	224	30	1544
5:15 PM	18	288	105	30	186	45	105	456	28	65	256	23	1605
5:30 PM	17	301	112	25	190	44	112	404	30	60	245	24	1564
5:45 PM	21	256	89	20	178	50	89	388	35	56	299	20	1501
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	155	2199	783	194	1490	352	760	3258	250	474	2094	225	12234

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	66	1130	415	102	786	172	407	1725	120	220	1013	110	6266
PEAK HR. FACTOR:		0.937			0.936			0.956			0.893		0.976

CONTROL:

WILTEC

Phone: (626) 564-1944   Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

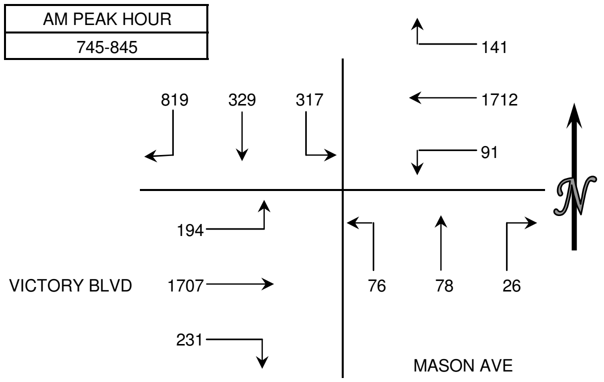
CLIENT: FEHR AND PEERS
PROJECT: WEST SAN FERNANDO VALLEY TRAFFIC COUNTS
DATE: WEDNESDAY OCTOBER 17,2007
PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
INTERSECTION: N/S MASON AVE
E/W VICTORY BLVD
CITY: WOODLAND HILLS

15 MIN COUNTS **7:00 AM TO 9:00 AM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-715	141	22	60	16	231	2	0	5	0	17	282	25	801
715-730	163	40	99	19	299	15	1	5	1	25	330	19	1016
730-745	160	111	93	24	349	16	6	11	7	55	372	20	1224
745-800	253	139	124	42	417	34	9	29	25	98	424	53	1647
800-815	171	88	74	33	366	27	7	20	16	55	428	75	1360
815-830	186	58	60	23	453	12	2	19	14	41	440	35	1343
830-845	209	44	59	43	476	18	8	10	21	37	415	31	1371
845-900	170	54	51	43	441	8	6	23	17	34	355	33	1235

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
700-800	717	312	376	101	1296	67	16	50	33	195	1408	117	4688
715-815	747	378	390	118	1431	92	23	65	49	233	1554	167	5247
730-830	770	396	351	122	1585	89	24	79	62	249	1664	183	5574
745-845	819	329	317	141	1712	91	26	78	76	231	1707	194	5721
800-900	736	244	244	142	1736	65	23	72	68	167	1638	174	5309

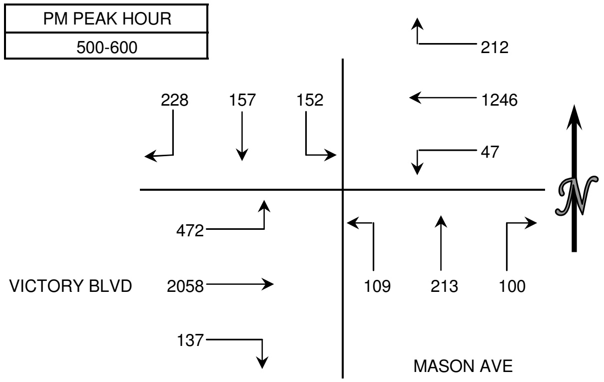


15 MIN COUNTS **4:00 PM TO 6:00 PM**

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-415	63	18	42	59	251	4	26	59	32	25	448	81	1108
415-430	44	13	32	49	251	3	20	48	18	16	450	74	1018
430-445	62	19	35	45	263	6	15	54	18	15	457	79	1068
445-500	43	23	31	44	253	12	21	32	21	13	499	119	1111
500-515	53	22	38	49	268	5	16	40	24	20	467	100	1102
515-530	62	37	37	54	321	13	28	50	31	30	578	128	1369
530-545	54	41	39	54	309	15	26	58	25	42	480	105	1248
545-600	59	57	38	55	348	14	30	65	29	45	533	139	1412

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	212	73	140	197	1018	25	82	193	89	69	1854	353	4305
415-515	202	77	136	187	1035	26	72	174	81	64	1873	372	4299
430-530	220	101	141	192	1105	36	80	176	94	78	2001	426	4650
445-545	212	123	145	201	1151	45	91	180	101	105	2024	452	4830
500-600	228	157	152	212	1246	47	100	213	109	137	2058	472	5131



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave DATE: 3/24/2009 LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd DAY: TUESDAY PROJECT# 09-5108-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2.5	.5	1	3	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	16	92	19	23	235	23	8	170	35	33	158	35	847
7:15 AM	23	150	38	33	271	43	9	284	42	25	297	8	1223
7:30 AM	25	187	54	40	275	43	7	233	64	117	411	10	1466
7:45 AM	25	194	41	56	273	75	16	340	59	90	437	15	1621
8:00 AM	49	233	53	57	243	62	18	297	57	51	333	27	1480
8:15 AM	22	171	40	64	244	45	19	320	46	54	274	14	1313
8:30 AM	24	146	43	38	202	50	8	262	37	44	297	15	1166
8:45 AM	25	124	18	38	241	41	15	220	32	36	279	14	1083
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	209	1297	306	349	1984	382	100	2126	372	450	2486	138	10199

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	121	785	188	217	1035	225	60	1190	226	312	1455	66	5880
PEAK HR. FACTOR:		0.816			0.914			0.889			0.845		0.907

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: TUESDAY

PROJECT# 09-5108-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2.5	.5	1	3	0	1	3	0	
4:00 PM	40	260	28	41	189	27	63	359	37	27	255	30	1356
4:15 PM	23	229	23	33	154	33	67	414	38	38	285	34	1371
4:30 PM	38	244	35	34	194	29	60	357	46	24	284	37	1382
4:45 PM	36	242	38	46	188	30	56	366	50	25	334	36	1447
5:00 PM	42	251	37	51	205	29	45	338	41	41	277	30	1387
5:15 PM	47	225	31	41	167	37	43	315	66	39	303	41	1355
5:30 PM	48	238	40	36	195	55	59	281	66	42	286	23	1369
5:45 PM	48	193	26	30	159	65	42	234	58	59	306	21	1241

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	322	1882	258	312	1451	305	435	2664	402	295	2330	252	10908

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	139	966	133	164	741	121	228	1475	175	128	1180	137	5587
PEAK HR. FACTOR:		0.938			0.900			0.905			0.915		0.965

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Topham St

DATE: 9/15/2009

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: TUESDAY

PROJECT# 09-5290-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	0	2	1	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	27		0					351	59		234		671
7:15 AM	53		1					337	96		399		886
7:30 AM	84		0					270	103		483		940
7:45 AM	121		1					301	128		531		1082
8:00 AM	106		3					258	101		469		937
8:15 AM	47		1					308	92		416		864
8:30 AM	37		6					211	55		303		612
8:45 AM	43		0					241	61		332		677
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	518	0	12	0	0	0	0	2277	695	0	3167	0	6669

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	364	0	5	0	0	0	0	1166	428	0	1882	0	3845
PEAK HR. FACTOR:		0.756			0.000			0.920			0.886		0.888

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Topham St

DATE: 9/15/2009

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: TUESDAY

PROJECT# 09-5290-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	0	2	1	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	47		2					349	61		244		703
4:15 PM	50		0					395	89		245		779
4:30 PM	51		4					324	69		229		677
4:45 PM	48		1					358	69		274		750
5:00 PM	64		1					402	80		278		825
5:15 PM	82		2					387	86		300		857
5:30 PM	89		1					389	84		348		911
5:45 PM	65		2					384	87		365		903
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	496	0	13	0	0	0	0	2988	625	0	2283	0	6405

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	300	0	6	0	0	0	0	1562	337	0	1291	0	3496
PEAK HR. FACTOR:		0.850			0.000			0.985			0.884		0.959

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Corbin Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: TUESDAY

PROJECT# 09-5108-009

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	3	35	19	50	122	39	10	179	3	14	190	26	690
7:15 AM	3	87	18	52	183	64	12	230	2	23	299	39	1012
7:30 AM	10	160	21	41	209	64	14	252	1	60	459	30	1321
7:45 AM	10	126	24	41	221	93	14	249	5	43	446	31	1303
8:00 AM	13	171	24	38	179	82	27	236	6	34	326	53	1189
8:15 AM	2	132	21	43	175	70	38	250	3	30	286	40	1090
8:30 AM	7	101	11	58	179	44	23	239	4	21	287	32	1006
8:45 AM	5	63	11	40	158	54	16	176	4	17	278	28	850
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	53	875	149	363	1426	510	154	1811	28	242	2571	279	8461

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	35	589	90	163	784	309	93	987	15	167	1517	154	4903
PEAK HR. FACTOR:		0.858			0.885			0.941			0.837		0.928

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Corbin Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: TUESDAY

PROJECT# 09-5108-009

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	4	152	35	37	104	18	48	355	4	15	245	69	1086
4:15 PM	5	172	24	23	121	22	31	341	5	15	249	75	1083
4:30 PM	7	120	26	34	110	22	29	315	3	17	256	82	1021
4:45 PM	10	178	44	34	113	27	35	294	9	17	251	59	1071
5:00 PM	10	205	35	36	93	34	47	356	3	13	278	85	1195
5:15 PM	6	210	41	20	123	38	39	349	9	22	319	88	1264
5:30 PM	10	222	36	29	99	37	24	336	9	21	322	77	1222
5:45 PM	8	174	22	39	116	42	35	279	8	24	327	95	1169

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	60	1433	263	252	879	240	288	2625	50	144	2247	630	9111

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	34	811	134	124	431	151	145	1320	29	80	1246	345	4850
PEAK HR. FACTOR:		0.913			0.896			0.920			0.937		0.959

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Tampa Ave
DATE: 3/26/2009
LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd
DAY: THURSDAY
PROJECT# 09-5108-010

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	15	106	16	42	226	16	4	210	13	18	181	19	866
7:15 AM	21	120	20	62	291	39	21	294	8	23	302	18	1219
7:30 AM	18	177	26	71	306	69	8	386	9	19	425	23	1537
7:45 AM	32	157	23	66	276	60	11	318	16	16	369	31	1375
8:00 AM	26	192	23	55	288	49	15	281	10	20	317	15	1291
8:15 AM	16	164	35	69	268	47	22	325	8	25	303	18	1300
8:30 AM	16	138	33	58	188	31	16	320	8	24	299	26	1157
8:45 AM	16	181	37	44	187	26	10	202	10	27	268	27	1035
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	160	1235	213	467	2030	337	107	2336	82	172	2464	177	9780

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	92	690	107	261	1138	225	56	1310	43	80	1414	87	5503
PEAK HR. FACTOR:		0.922			0.910			0.874			0.846		0.895

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Tampa Ave

DATE: 3/26/2009

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: THURSDAY

PROJECT# 09-5108-010

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	2	0	1	2	0	
4:00 PM	25	227	19	35	151	20	27	302	13	16	273	45	1153
4:15 PM	42	209	28	45	134	34	28	284	18	14	233	41	1110
4:30 PM	47	244	28	49	141	27	32	289	7	20	292	46	1222
4:45 PM	35	250	27	46	149	25	19	331	14	16	264	43	1219
5:00 PM	36	299	30	52	156	30	30	433	12	16	307	51	1452
5:15 PM	40	316	22	37	165	24	23	440	6	13	365	53	1504
5:30 PM	50	247	29	57	162	34	23	356	8	19	396	58	1439
5:45 PM	38	259	27	47	136	40	28	367	12	10	319	30	1313

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	313	2051	210	368	1194	234	210	2802	90	124	2449	367	10412

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	164	1121	108	193	619	128	104	1596	38	58	1387	192	5708
PEAK HR. FACTOR:		0.921			0.929			0.915			0.865		0.949

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Wilbur Ave   DATE: 3/25/2009   LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd   DAY: WEDNESDAY   PROJECT# 09-5108-011

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	8	54	10	48	179	27	6	272	6	6	191	21	828
7:15 AM	6	97	18	53	235	37	10	367	27	16	273	22	1161
7:30 AM	18	145	20	38	334	38	17	386	26	17	442	16	1497
7:45 AM	17	171	23	36	348	52	15	369	36	19	389	46	1521
8:00 AM	25	151	32	34	245	31	16	389	26	21	389	21	1380
8:15 AM	19	105	17	32	195	34	20	335	17	26	274	17	1091
8:30 AM	8	83	11	48	164	21	16	322	20	16	272	27	1008
8:45 AM	11	69	7	39	171	30	10	302	23	22	286	17	987
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	112	875	138	328	1871	270	110	2742	181	143	2516	187	9473

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	66	564	93	161	1162	158	58	1511	115	73	1493	105	5559
PEAK HR. FACTOR:		0.857			0.849			0.977			0.879		0.914

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Wilbur Ave

DATE: 3/25/2009

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: WEDNESDAY

PROJECT# 09-5108-011

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	30	148	24	35	101	19	39	344	21	8	251	40	1060
4:15 PM	31	141	22	22	85	26	26	367	20	11	308	42	1101
4:30 PM	28	139	18	34	85	13	37	344	19	14	253	41	1025
4:45 PM	28	156	19	29	117	17	38	395	15	14	340	39	1207
5:00 PM	43	184	26	24	114	29	26	397	24	14	291	48	1220
5:15 PM	30	229	25	26	156	22	27	399	12	13	352	58	1349
5:30 PM	37	192	18	22	123	29	37	423	17	19	360	60	1337
5:45 PM	29	177	16	30	126	46	28	357	11	6	323	40	1189

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	256	1366	168	222	907	201	258	3026	139	99	2478	368	9488

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	138	761	88	101	510	97	128	1614	68	60	1343	205	5113
PEAK HR. FACTOR:		0.869			0.868			0.949			0.916		0.948

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Reseda Blvd

DATE: 3/26/2009

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: THURSDAY

PROJECT# 09-5108-012

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	3	0	1	2	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	14	110	18	19	195	11	12	256	16	18	183	17	869
7:15 AM	13	156	23	19	246	21	15	413	18	25	326	20	1295
7:30 AM	14	205	40	29	287	57	24	435	19	22	413	19	1564
7:45 AM	23	205	31	28	230	59	29	444	17	24	363	38	1491
8:00 AM	20	167	24	27	237	31	34	375	14	21	272	31	1253
8:15 AM	19	137	18	21	205	31	31	404	18	28	313	18	1243
8:30 AM	16	159	30	27	242	29	19	374	22	24	282	15	1239
8:45 AM	18	164	16	26	156	26	18	283	25	32	267	28	1059
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	137	1303	200	196	1798	265	182	2984	149	194	2419	186	10013

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	70	733	118	103	1000	168	102	1667	68	92	1374	108	5603
PEAK HR. FACTOR:		0.889			0.852			0.937			0.867		0.896

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Reseda Blvd

DATE: 3/26/2009

LOCATION: City of Woodland Hills

E-W STREET: Victory Blvd

DAY: THURSDAY

PROJECT# 09-5108-012

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	3	0	1	2	1	
4:00 PM	25	258	22	24	200	43	37	312	33	18	255	32	1259
4:15 PM	23	247	40	32	183	39	41	371	27	24	269	34	1330
4:30 PM	29	254	32	27	218	46	33	345	32	22	290	31	1359
4:45 PM	33	247	22	24	184	46	38	331	18	14	224	28	1209
5:00 PM	25	269	27	24	196	41	34	391	23	29	321	40	1420
5:15 PM	31	291	26	24	201	37	31	423	31	20	347	35	1497
5:30 PM	29	295	27	19	229	52	38	344	23	26	363	50	1495
5:45 PM	30	211	31	22	174	31	29	349	30	22	291	31	1251

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	225	2072	227	196	1585	335	281	2866	217	175	2360	281	10820

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	115	1066	111	89	800	161	132	1507	107	97	1322	156	5663
PEAK HR. FACTOR:		0.920			0.875			0.900			0.897		0.946

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: De Soto Ave

DATE: 11/6/2008

LOCATION: City of Woodland Hills

E-W STREET: El Rancho Dr

DAY: THURSDAY

PROJECT# 08-5115-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	1	1	3	1	1	1	1	1	0	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	221	13	5	357	0	0		0	1		4	602
7:15 AM	0	343	18	5	531	0	0		1	0		4	902
7:30 AM	1	397	27	11	552	0	1		0	1		6	996
7:45 AM	0	467	53	18	656	0	0		0	5		7	1206
8:00 AM	1	379	29	10	543	0	1		1	7		11	982
8:15 AM	0	280	19	3	583	0	0		1	5		5	896
8:30 AM	0	235	16	7	488	1	1		0	4		3	755
8:45 AM	4	244	19	11	523	0	0		2	4		4	811
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	7	2566	194	70	4233	1	3	0	5	27	0	44	7150

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	2	1586	127	44	2282	0	2	0	2	13	0	28	4086
PEAK HR. FACTOR:		0.825			0.863			0.500			0.569		0.847

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: De Soto Ave

DATE: 11/6/2008

LOCATION: City of Woodland Hills

E-W STREET: El Rancho Dr

DAY: THURSDAY

PROJECT# 08-5115-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	1	1	3	1	1	1	1	1	0	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	1	472	14	6	276	1	1		0	21		7	799
4:15 PM	1	418	12	2	294	1	1		0	11		1	741
4:30 PM	1	439	13	0	299	1	1		1	10		2	767
4:45 PM	0	498	21	0	293	0	1		1	9		4	827
5:00 PM	1	508	39	1	293	0	0		0	13		1	856
5:15 PM	3	460	47	4	318	0	0		2	4		1	839
5:30 PM	2	464	49	4	290	1	2		2	9		4	827
5:45 PM	1	432	58	5	331	0	0		2	9		1	839
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	10	3691	253	22	2394	4	6	0	8	86	0	21	6495

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	7	1864	193	14	1232	1	2	0	6	35	0	7	3361
PEAK HR. FACTOR:		0.942			0.928			0.500			0.750		0.982

CONTROL: Signalized

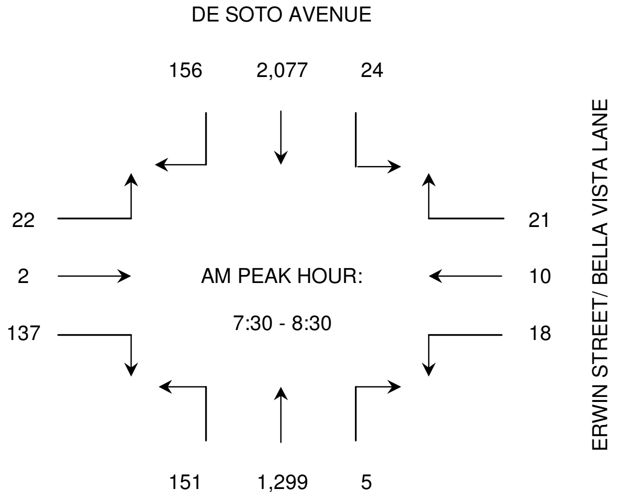
VEHICLE TURNING MOVEMENT COUNT SUMMARY

N/S STREET: DE SOTO AVENUE **E/W STREET:** ERWIN STREET/ BELLA VISTA LANE

PERIOD: AM PEAK HOUR **DATE:** TUESDAY June 5, 2007

15-MINUTE	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
TOTALS	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 - 7:15	6	0	10	10	0	12	42	141	2	3	421	45	692
7:15 - 7:30	2	2	7	6	0	20	32	321	2	2	391	39	824
7:30 - 7:45	3	3	6	9	0	27	28	330	1	3	536	31	977
7:45 - 8:00	4	1	6	4	0	32	35	328	1	3	485	44	943
8:00 - 8:15	5	2	4	4	0	36	40	319	1	8	470	42	931
8:15 - 8:30	6	4	5	5	2	42	48	322	2	10	586	39	1,071
8:30 - 8:45	2	2	4	12	0	36	57	176	0	3	464	36	792
8:45 - 9:00	3	3	3	8	0	40	51	202	1	2	490	31	834

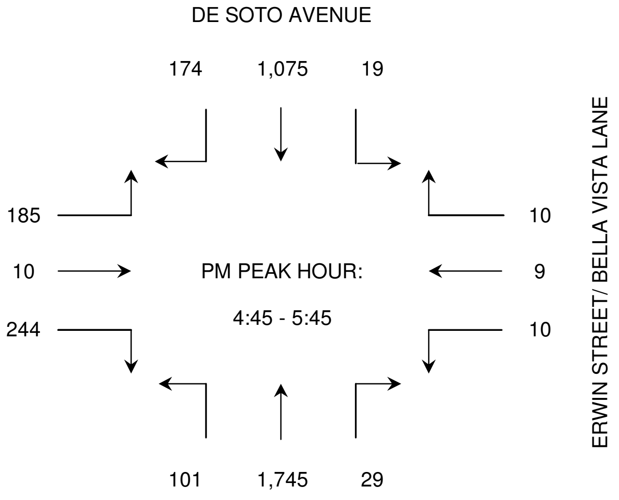
1-HOUR	WESTBOUND						NORTHBOUND			SOUTHBOUND			
TOTALS	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 - 8:00	15	6	29	29	0	91	137	1,120	6	11	1,833	159	3,436
7:15 - 8:15	14	8	23	23	0	115	135	1,298	5	16	1,882	156	3,675
7:30 - 8:30	18	10	21	22	2	137	151	1,299	5	24	2,077	156	3,922 *
7:45 - 8:45	17	9	19	25	2	146	180	1,145	4	24	2,005	161	3,737
8:00 - 9:00	16	11	16	29	2	154	196	1,019	4	23	2,010	148	3,628



PERIOD: PM PEAK HOUR **DATE:** TUESDAY June 5, 2007

15-MINUTE	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
TOTALS	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 - 4:15	1	0	1	40	1	54	30	427	5	4	273	37	873
4:15 - 4:30	2	0	1	46	3	51	29	408	5	3	365	46	959
4:30 - 4:45	1	1	2	39	2	50	40	358	6	4	254	31	788
4:45 - 5:00	3	3	2	48	0	53	28	465	10	6	264	45	927
5:00 - 5:15	2	1	3	49	6	74	15	382	7	3	271	46	859
5:15 - 5:30	2	3	3	56	3	61	30	477	7	5	225	44	916
5:30 - 5:45	3	2	2	32	1	56	28	421	5	5	315	39	909
5:45 - 6:00	3	3	3	25	2	37	29	428	5	6	279	32	852

1-HOUR	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
TOTALS	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 - 5:00	7	4	6	173	6	208	127	1,658	26	17	1,156	159	3,547
4:15 - 5:15	8	5	8	182	11	228	112	1,613	28	16	1,154	168	3,533
4:30 - 5:30	8	8	10	192	11	238	113	1,682	30	18	1,014	166	3,490
4:45 - 5:45	10	9	10	185	10	244	101	1,745	29	19	1,075	174	3,611 *
5:00 - 6:00	10	9	11	162	12	228	102	1,708	24	19	1,090	161	3,536



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 11/6/2008

LOCATION: City of Woodland Hills

E-W STREET: Calvert St/Brahma Dr

DAY: THURSDAY

PROJECT# 08-5115-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	2	1	2	0	1	1	0.5	0.5	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	15	141	0	2	324	13	1		4	1	0	0	501
7:15 AM	21	203	0	0	339	22	9		4	5	2	3	608
7:30 AM	40	230	1	3	337	46	11		9	13	8	11	709
7:45 AM	69	288	0	1	287	65	17		18	14	7	21	787
8:00 AM	54	268	2	0	218	49	10		12	17	5	29	664
8:15 AM	38	186	1	1	263	22	10		6	5	1	10	543
8:30 AM	22	205	0	1	221	19	8		2	9	2	3	492
8:45 AM	30	221	0	2	231	23	8		12	3	4	5	539
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	289	1742	4	10	2220	259	74	0	67	67	29	82	4843

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	184	989	3	4	1181	182	47	0	43	49	22	64	2768
PEAK HR. FACTOR:		0.824			0.885			0.643			0.662		0.879

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 11/6/2008

LOCATION: City of Woodland Hills

E-W STREET: Calvert St/Brahma Dr

DAY: THURSDAY

PROJECT# 08-5115-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	2	1	2	0	1	1	0.5	0.5	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	13	305	0	3	203	25	26		27	11	3	5	621
4:15 PM	15	287	3	0	213	22	29		25	10	0	7	611
4:30 PM	16	320	0	4	198	26	35		16	6	0	4	625
4:45 PM	17	309	0	3	212	20	34		22	5	1	10	633
5:00 PM	23	315	0	0	203	19	43		36	3	1	4	647
5:15 PM	39	304	0	3	198	33	34		30	4	2	3	650
5:30 PM	32	254	0	4	209	37	29		27	11	2	7	612
5:45 PM	52	295	0	2	185	46	20		17	7	1	5	630
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	207	2389	3	19	1621	228	250	0	200	57	10	45	5029

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	95	1248	0	10	811	98	146	0	104	18	4	21	2555
PEAK HR. FACTOR:		0.979			0.978			0.791			0.672		0.983

CONTROL: Signalized

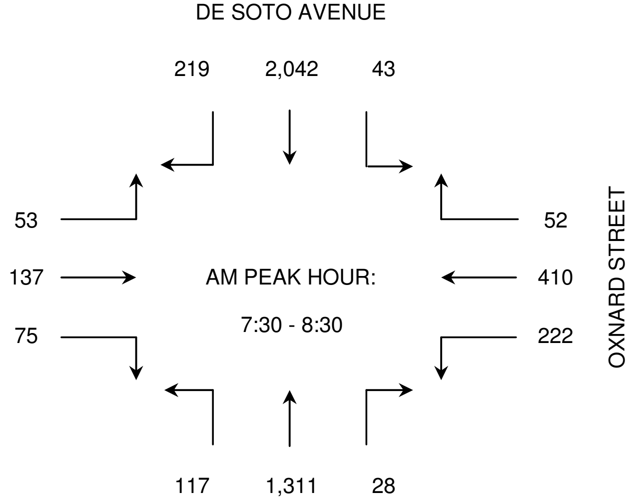
VEHICLE TURNING MOVEMENT COUNT SUMMARY

N/S STREET: DE SOTO AVENUE **E/W STREET:** OXNARD STREET

PERIOD: AM PEAK HOUR **DATE:** WEDNESDAY June 6, 2007

15-MINUTE TOTALS	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 - 7:15	29	29	1	12	22	24	37	315	6	3	526	16	1,020
7:15 - 7:30	24	24	7	9	10	11	15	206	6	5	383	35	735
7:30 - 7:45	43	76	16	12	32	17	22	326	8	8	497	42	1,099
7:45 - 8:00	63	111	14	14	45	18	35	315	10	10	504	54	1,193
8:00 - 8:15	67	110	11	14	31	19	32	341	6	13	465	77	1,186
8:15 - 8:30	49	113	11	13	29	21	28	329	4	12	576	46	1,231
8:30 - 8:45	53	96	12	12	26	26	15	282	5	10	459	53	1,049
8:45 - 9:00	37	87	14	12	21	24	6	228	6	6	486	39	966

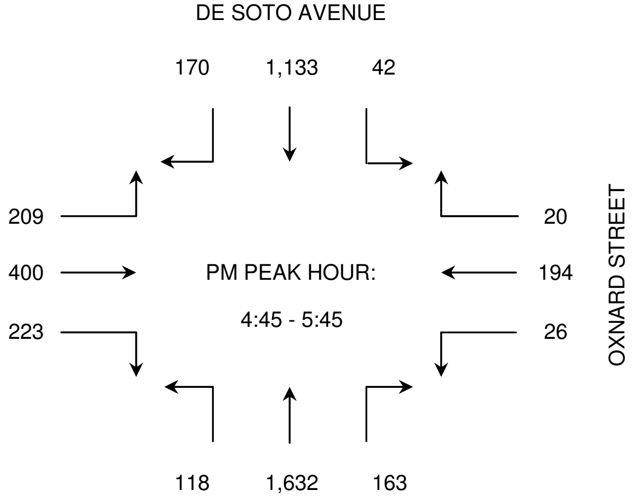
1-HOUR TOTALS	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 - 8:00	159	240	38	47	109	70	109	1,162	30	26	1,910	147	4,047
7:15 - 8:15	197	321	48	49	118	65	104	1,188	30	36	1,849	208	4,213
7:30 - 8:30	222	410	52	53	137	75	117	1,311	28	43	2,042	219	4,709 *
7:45 - 8:45	232	430	48	53	131	84	110	1,267	25	45	2,004	230	4,659
8:00 - 9:00	206	406	48	51	107	90	81	1,180	21	41	1,986	215	4,432



PERIOD: PM PEAK HOUR **DATE:** WEDNESDAY June 6, 2007

15-MINUTE TOTALS	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 - 4:15	8	30	3	72	92	61	45	369	42	12	314	48	1,096
4:15 - 4:30	9	31	3	60	82	45	10	367	49	10	245	27	938
4:30 - 4:45	10	45	5	34	82	40	19	360	27	9	256	42	929
4:45 - 5:00	7	56	5	40	90	49	22	449	33	8	289	39	1,087
5:00 - 5:15	7	48	4	50	110	63	35	351	45	10	303	47	1,073
5:15 - 5:30	6	51	5	60	99	52	26	445	39	10	242	40	1,075
5:30 - 5:45	6	39	6	59	101	59	35	387	46	14	299	44	1,095
5:45 - 6:00	8	56	5	45	114	46	27	299	30	16	241	46	933

1-HOUR TOTALS	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 - 5:00	34	162	16	206	346	195	96	1,545	151	39	1,104	156	4,050
4:15 - 5:15	33	180	17	184	364	197	86	1,527	154	37	1,093	155	4,027
4:30 - 5:30	30	200	19	184	381	204	102	1,605	144	37	1,090	168	4,164
4:45 - 5:45	26	194	20	209	400	223	118	1,632	163	42	1,133	170	4,330 *
5:00 - 6:00	27	194	20	214	424	220	123	1,482	160	50	1,085	177	4,176



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Oxnard St

DAY: TUESDAY

PROJECT# 09-5108-013

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	1	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	4	105	5	1	307	21	15	14	11	5	20	2	510
7:15 AM	4	225	6	3	336	32	26	22	18	14	27	2	715
7:30 AM	15	305	8	4	350	68	29	62	21	12	62	2	938
7:45 AM	11	241	20	13	373	54	43	107	18	10	74	9	973
8:00 AM	19	293	11	11	308	64	47	74	8	19	74	2	930
8:15 AM	5	234	8	5	284	43	30	32	10	7	49	1	708
8:30 AM	12	162	8	3	277	31	19	27	10	6	27	2	584
8:45 AM	16	180	3	4	292	39	13	23	14	6	33	1	624
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	86	1745	69	44	2527	352	222	361	110	79	366	21	5982

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	49	1064	45	31	1367	218	145	265	65	55	237	15	3556
PEAK HR. FACTOR:		0.883			0.918			0.707			0.808		0.914

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: Oxnard St

DAY: TUESDAY

PROJECT# 09-5108-013

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	1	0	1	0	
4:00 PM	23	273	13	3	250	24	48	89	15	8	12	3	761
4:15 PM	14	272	14	7	258	18	25	61	16	4	8	0	697
4:30 PM	17	318	18	5	251	24	56	111	15	5	12	7	839
4:45 PM	22	297	8	7	224	24	32	111	16	2	5	1	749
5:00 PM	30	324	10	10	225	28	51	113	15	2	22	7	837
5:15 PM	20	241	23	9	209	27	29	113	10	2	19	3	705
5:30 PM	23	284	20	10	251	23	34	94	14	5	23	5	786
5:45 PM	18	301	7	4	221	17	27	77	6	5	14	7	704

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	167	2310	113	55	1889	185	302	769	107	33	115	33	6078

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	89	1180	59	31	909	103	168	448	56	11	58	18	3130
PEAK HR. FACTOR:		0.912			0.931			0.923			0.702		0.933

CONTROL: Signalized

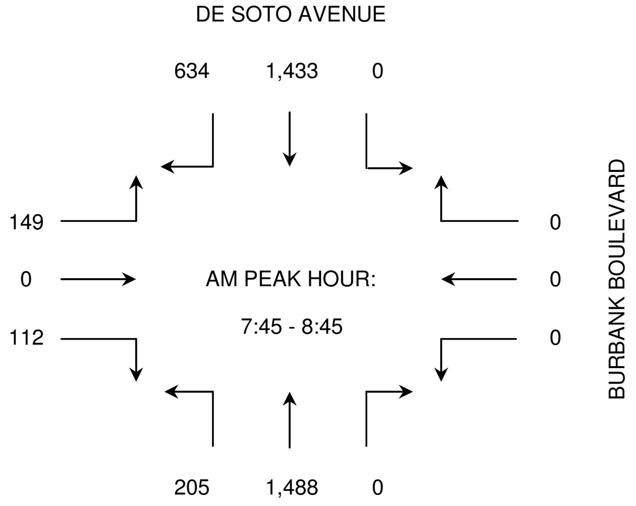
VEHICLE TURNING MOVEMENT COUNT SUMMARY

N/S STREET: DE SOTO AVENUE **E/W STREET:** BURBANK BOULEVARD

PERIOD: AM PEAK HOUR **DATE:** TURSDAY June 7, 2007

15-MINUTE TOTALS	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	13	0	18	40	235	0	0	279	127	712
7:15 - 7:30	0	0	0	20	0	26	40	273	0	0	377	120	856
7:30 - 7:45	0	0	0	31	0	39	34	324	0	0	420	115	963
7:45 - 8:00	0	0	0	41	0	35	34	401	0	0	416	148	1,075
8:00 - 8:15	0	0	0	36	0	25	60	398	0	0	320	157	996
8:15 - 8:30	0	0	0	38	0	30	60	339	0	0	342	162	971
8:30 - 8:45	0	0	0	34	0	22	51	350	0	0	355	167	979
8:45 - 9:00	0	0	0	34	0	25	57	343	0	0	317	128	904

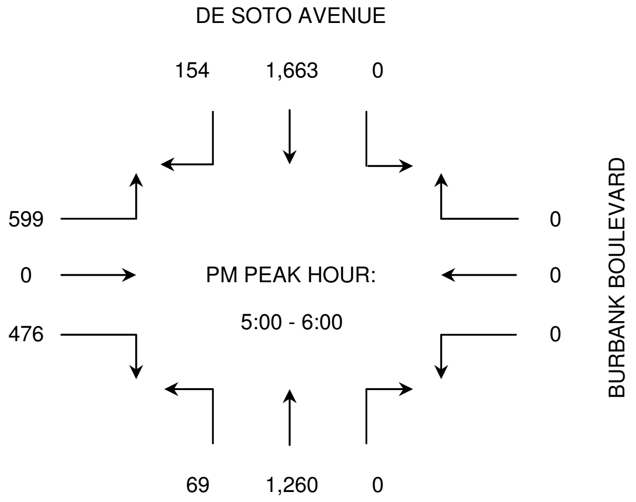
1-HOUR TOTALS	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 8:00	0	0	0	105	0	118	148	1,233	0	0	1,492	510	3,606
7:15 - 8:15	0	0	0	128	0	125	168	1,396	0	0	1,533	540	3,890
7:30 - 8:30	0	0	0	146	0	129	188	1,462	0	0	1,498	582	4,005
7:45 - 8:45	0	0	0	149	0	112	205	1,488	0	0	1,433	634	4,021 *
8:00 - 9:00	0	0	0	142	0	102	228	1,430	0	0	1,334	614	3,850



PERIOD: PM PEAK HOUR **DATE:** TURSDAY June 7, 2007

15-MINUTE TOTALS	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 - 4:15	0	0	0	126	0	99	18	327	0	0	342	44	956
4:15 - 4:30	0	0	0	124	0	107	22	322	0	0	342	43	960
4:30 - 4:45	0	0	0	141	0	105	21	345	0	0	339	31	982
4:45 - 5:00	0	0	0	133	0	106	20	232	0	0	322	35	848
5:00 - 5:15	0	0	0	175	0	116	14	314	0	0	401	38	1,058
5:15 - 5:30	0	0	0	155	0	125	25	326	0	0	418	47	1,096
5:30 - 5:45	0	0	0	149	0	133	13	328	0	0	419	38	1,080
5:45 - 6:00	0	0	0	120	0	102	17	292	0	0	425	31	987

1-HOUR TOTALS	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 - 5:00	0	0	0	524	0	417	81	1,226	0	0	1,345	153	3,746
4:15 - 5:15	0	0	0	573	0	434	77	1,213	0	0	1,404	147	3,848
4:30 - 5:30	0	0	0	604	0	452	80	1,217	0	0	1,480	151	3,984
4:45 - 5:45	0	0	0	612	0	480	72	1,200	0	0	1,560	158	4,082
5:00 - 6:00	0	0	0	599	0	476	69	1,260	0	0	1,663	154	4,221 *



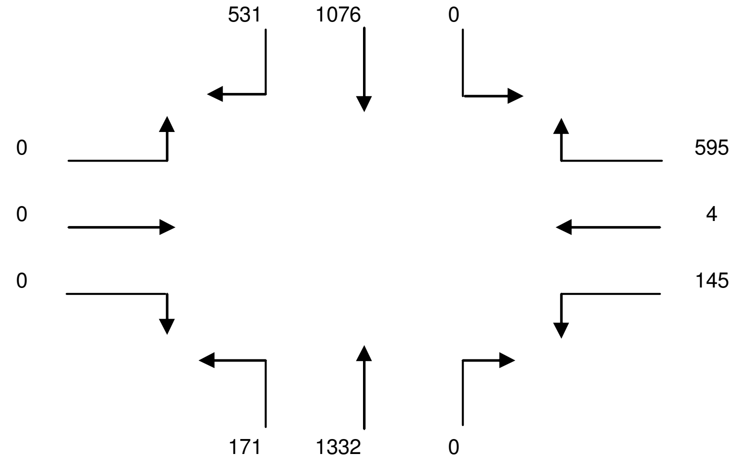
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT:		CRAIN & ASSOCIATES
PROJECT:		WESTFIELD WEST VALLEY II
DATE:		TUESDAY, JUNE 19, 2007
PERIOD:		07:00 AM TO 09:00 AM
INTERSECTION	N/S	DE SOTO AVENUE
	E/W	US - 101 WB ON - OFF RAMP
FILE NUMBER:		44-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
700-715	114	208	0	171	0	24	0	185	15	0	0	0
715-730	106	269	0	148	0	34	0	263	26	0	0	0
730-745	183	284	0	142	2	36	0	337	41	0	0	0
745-800	131	263	0	156	0	33	0	330	53	0	0	0
800-815	112	287	0	144	0	46	0	341	44	0	0	0
815-830	105	242	0	153	2	30	0	324	33	0	0	0
830-845	126	212	0	144	0	55	0	297	27	0	0	0
845-900	104	199	0	167	1	44	0	250	21	0	0	0

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
700-800	534	1024	0	617	2	127	0	1115	135	0	0	0	3554
715-815	532	1103	0	590	2	149	0	1271	164	0	0	0	3811
730-830	531	1076	0	595	4	145	0	1332	171	0	0	0	3854
745-845	474	1004	0	597	2	164	0	1292	157	0	0	0	3690
800-900	447	940	0	608	3	175	0	1212	125	0	0	0	3510

A.M. PEAK HOUR
0730-0830



US - 101 WB ON - OFF RAMP

DE SOTO AVENUE

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

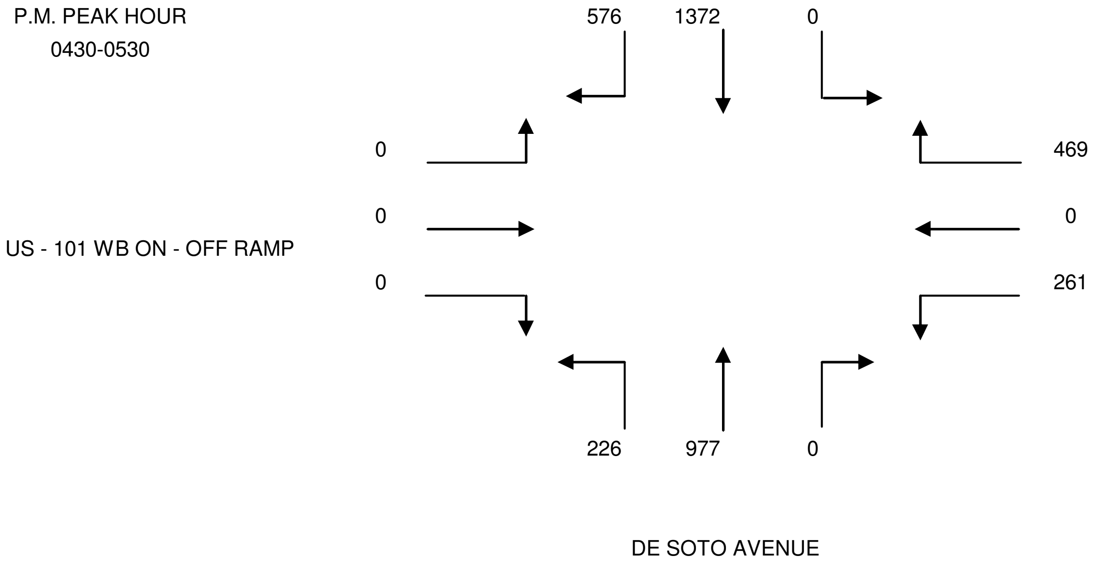
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: CRAIN & ASSOCIATES
PROJECT: WESTFIELD WEST VALLEY II
DATE: TUESDAY, JUNE 19, 2007
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION N/S DE SOTO AVENUE
E/W US - 101 WB ON - OFF RAMP
FILE NUMBER: 44-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
400-415	106	279	0	130	0	59	0	216	50	0	0	0
415-430	145	309	0	112	0	69	0	230	61	0	0	0
430-445	127	354	0	129	0	68	0	231	53	0	0	0
445-500	170	350	0	110	0	52	0	227	65	0	0	0
500-515	149	319	0	113	0	68	0	250	55	0	0	0
515-530	130	349	0	117	0	73	0	269	53	0	0	0
530-545	125	306	0	99	0	59	0	244	45	0	0	0
545-600	85	300	0	83	0	60	0	222	41	0	0	0

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
400-500	548	1292	0	481	0	248	0	904	229	0	0	0	3702
415-515	591	1332	0	464	0	257	0	938	234	0	0	0	3816
430-530	576	1372	0	469	0	261	0	977	226	0	0	0	3881
445-545	574	1324	0	439	0	252	0	990	218	0	0	0	3797
500-600	489	1274	0	412	0	260	0	985	194	0	0	0	3614

P.M. PEAK HOUR
0430-0530



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

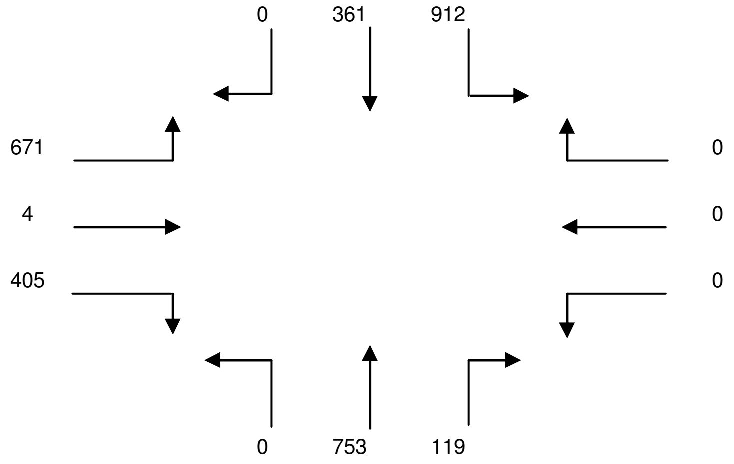
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT:		CRAIN & ASSOCIATES
PROJECT:		WESTFIELD WEST VALLEY II
DATE:		TUESDAY, JUNE 19, 2007
PERIOD:		07:00 AM TO 09:00 AM
INTERSECTION	N/S	DE SOTO AVENUE
	E/W	US - 101 EB ON - OFF RAMP
FILE NUMBER:		45-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
700-715	0	88	106	0	0	0	24	105	0	57	2	108
715-730	0	106	191	0	0	0	20	153	0	98	3	143
730-745	0	80	235	0	0	0	24	203	0	80	0	165
745-800	0	87	267	0	0	0	34	191	0	115	0	197
800-815	0	88	219	0	0	0	41	206	0	112	1	166
815-830	0	63	169	0	0	0	28	189	0	83	0	172
830-845	0	86	206	0	0	0	36	158	0	80	0	161
845-900	0	77	190	0	0	0	32	140	0	57	0	134

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
700-800	0	361	799	0	0	0	102	652	0	350	5	613	2882
715-815	0	361	912	0	0	0	119	753	0	405	4	671	3225
730-830	0	318	890	0	0	0	127	789	0	390	1	700	3215
745-845	0	324	861	0	0	0	139	744	0	390	1	696	3155
800-900	0	314	784	0	0	0	137	693	0	332	1	633	2894

A.M. PEAK HOUR
0715-0815



US - 101 EB ON - OFF RAMP

DE SOTO AVENUE

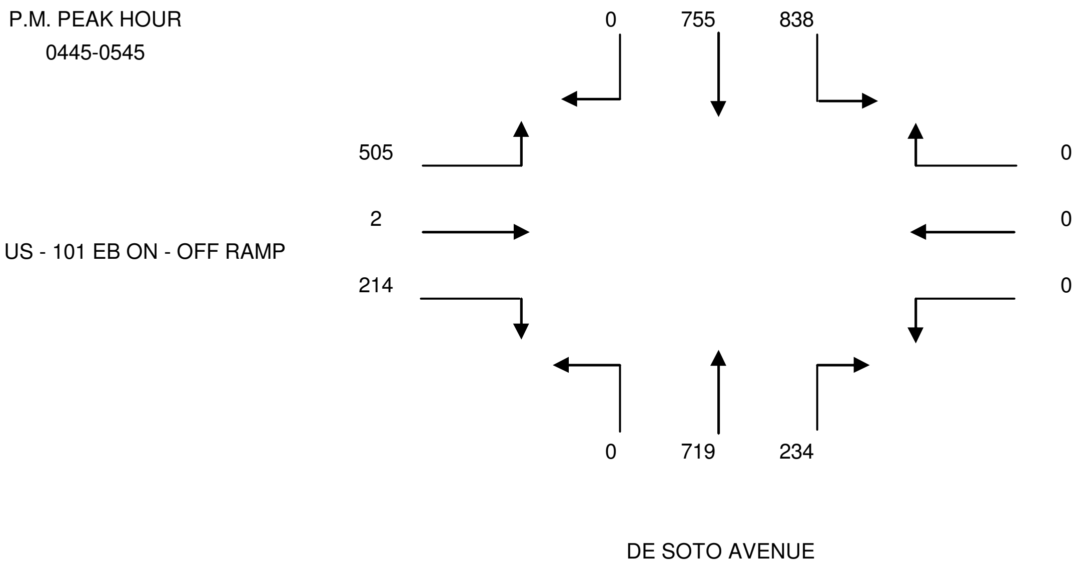
THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: CRAIN & ASSOCIATES
PROJECT: WESTFIELD WEST VALLEY II
DATE: TUESDAY, JUNE 19, 2007
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION N/S DE SOTO AVENUE
E/W US - 101 EB ON - OFF RAMP
FILE NUMBER: 45-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
400-415	0	187	153	0	0	0	36	143	0	42	1	134
415-430	0	209	189	0	0	0	56	183	0	35	1	116
430-445	0	211	200	0	0	0	54	150	0	46	0	118
445-500	0	171	238	0	0	0	74	183	0	46	0	122
500-515	0	179	200	0	0	0	45	199	0	57	2	123
515-530	0	191	222	0	0	0	62	187	0	50	0	131
530-545	0	214	178	0	0	0	53	150	0	61	0	129
545-600	0	187	175	0	0	0	63	130	0	50	1	142

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
400-500	0	778	780	0	0	0	220	659	0	169	2	490	3098
415-515	0	770	827	0	0	0	229	715	0	184	3	479	3207
430-530	0	752	860	0	0	0	235	719	0	199	2	494	3261
445-545	0	755	838	0	0	0	234	719	0	214	2	505	3267
500-600	0	771	775	0	0	0	223	666	0	218	3	525	3181



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

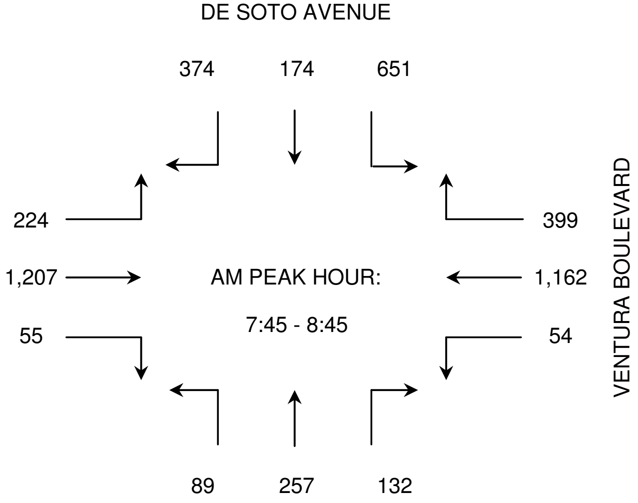
VEHICLE TURNING MOVEMENT COUNT SUMMARY

N/S STREET: DE SOTO AVENUE **E/W STREET:** VENTURA BOULEVARD

PERIOD: AM PEAK HOUR **DATE:** TURSDAY June 7, 2007

15-MINUTE	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
TOTALS	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 - 7:15	10	112	35	41	141	5	7	28	10	54	42	59	544
7:15 - 7:30	17	163	63	44	211	9	13	42	18	102	31	64	777
7:30 - 7:45	19	226	114	54	268	16	11	50	21	125	59	74	1,037
7:45 - 8:00	14	245	125	64	365	12	38	79	42	176	58	75	1,293
8:00 - 8:15	12	293	122	58	272	17	23	91	40	180	44	107	1,259
8:15 - 8:30	14	317	83	46	307	10	13	43	26	151	37	86	1,133
8:30 - 8:45	14	307	69	56	263	16	15	44	24	144	35	106	1,093
8:45 - 9:00	11	230	77	28	206	20	20	47	27	160	51	117	994

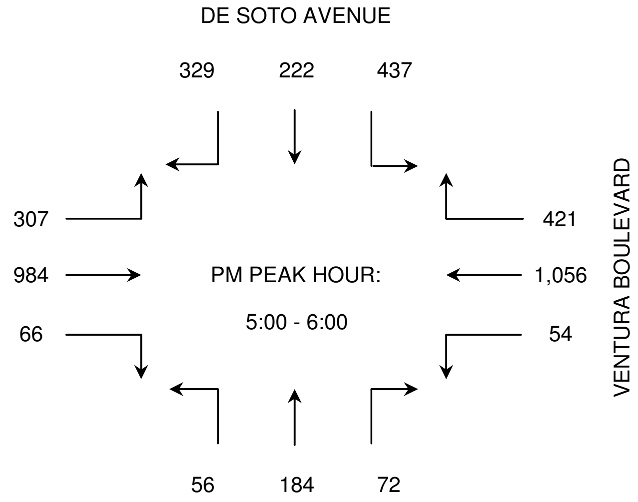
1-HOUR	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
TOTALS	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 - 8:00	60	746	337	203	985	42	69	199	91	457	190	272	3,651
7:15 - 8:15	62	927	424	220	1,116	54	85	262	121	583	192	320	4,366
7:30 - 8:30	59	1,081	444	222	1,212	55	85	263	129	632	198	342	4,722
7:45 - 8:45	54	1,162	399	224	1,207	55	89	257	132	651	174	374	4,778 *
8:00 - 9:00	51	1,147	351	188	1,048	63	71	225	117	635	167	416	4,479



PERIOD: PM PEAK HOUR **DATE:** TURSDAY June 7, 2007

15-MINUTE	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
TOTALS	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 - 4:15	8	243	80	72	252	14	11	50	14	125	47	79	995
4:15 - 4:30	17	225	86	55	271	9	13	58	19	155	41	109	1,058
4:30 - 4:45	11	221	91	60	221	15	23	48	26	106	47	60	929
4:45 - 5:00	12	230	93	65	236	16	15	59	21	105	34	77	963
5:00 - 5:15	11	245	113	87	250	16	16	50	18	110	43	65	1,024
5:15 - 5:30	19	269	103	82	280	19	12	44	18	110	56	67	1,079
5:30 - 5:45	15	277	112	77	255	14	16	49	15	113	60	101	1,104
5:45 - 6:00	9	265	93	61	199	17	12	41	21	104	63	96	981

1-HOUR	WESTBOUND			EASTBOUND			NORTHBOUND			SOUTHBOUND			
TOTALS	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 - 5:00	48	919	350	252	980	54	62	215	80	491	169	325	3,945
4:15 - 5:15	51	921	383	267	978	56	67	215	84	476	165	311	3,974
4:30 - 5:30	53	965	400	294	987	66	66	201	83	431	180	269	3,995
4:45 - 5:45	57	1,021	421	311	1,021	65	59	202	72	438	193	310	4,170
5:00 - 6:00	54	1,056	421	307	984	66	56	184	72	437	222	329	4,188 *



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: US-101 WB Ramps

DAY: TUESDAY

PROJECT# 09-5108-014

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	2	1	0	0	0	1.3	.3	1.3	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	20	64			201	101				52	0	61	499
7:15 AM	24	141			252	102				63	0	96	678
7:30 AM	43	214			248	127				78	0	145	855
7:45 AM	32	243			275	95				127	1	136	909
8:00 AM	44	218			230	116				71	1	135	815
8:15 AM	35	143			189	100				77	1	131	676
8:30 AM	24	153			188	114				66	1	97	643
8:45 AM	35	119			211	91				73	7	99	635
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	257	1295	0	0	1794	846	0	0	0	607	11	900	5710

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	143	816	0	0	1005	440	0	0	0	339	2	512	3257
PEAK HR. FACTOR:		0.872			0.963			0.000			0.808		0.896

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: US-101 WB Ramps

DAY: TUESDAY

PROJECT# 09-5108-014

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	2	1	0	0	0	1.3	.3	1.3	
4:00 PM	53	192			202	63				61	0	143	714
4:15 PM	44	170			208	83				77	1	135	718
4:30 PM	50	205			161	72				72	11	134	705
4:45 PM	48	204			204	63				85	0	113	717
5:00 PM	36	203			125	36				52	3	76	531
5:15 PM	52	226			206	77				62	0	132	755
5:30 PM	57	242			192	79				79	0	179	828
5:45 PM	43	191			184	55				69	0	168	710

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	383	1633	0	0	1482	528	0	0	0	557	15	1080	5678

PM Peak Hr Begins at: 400 PM

PEAK VOLUMES =	195	771	0	0	775	281	0	0	0	295	12	525	2854
PEAK HR. FACTOR:		0.947			0.907			0.000			0.959		0.994

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave

DATE: 3/24/2009

LOCATION: City of Woodland Hills

E-W STREET: US-101 EB Ramps

DAY: TUESDAY

PROJECT# 09-5108-015

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	1	2	0	1	0	1	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		41	42	144	111		45		57				440
7:15 AM		80	47	129	184		83		65				588
7:30 AM		151	31	87	241		107		55				672
7:45 AM		168	53	108	291		105		45				770
8:00 AM		187	62	128	175		79		52				683
8:15 AM		94	34	101	163		81		63				536
8:30 AM		79	48	86	171		100		66				550
8:45 AM		99	54	101	179		54		49				536
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	899	371	884	1515	0	654	0	452	0	0	0	4775

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	0	586	193	452	891	0	374	0	217	0	0	0	2713
PEAK HR. FACTOR:		0.782			0.841			0.912			0.000		0.881

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Winnetka Ave DATE: 3/24/2009 LOCATION: City of Woodland Hills

E-W STREET: Ventura Blvd DAY: TUESDAY PROJECT# 09-5108-016

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	2	1	1	1	3	0	1	2	1	
4:00 PM	23	93	13	65	55	64	72	203	18	18	162	62	848
4:15 PM	19	70	7	77	63	61	62	210	27	9	192	55	852
4:30 PM	22	84	7	71	85	57	65	223	18	15	184	67	898
4:45 PM	25	88	14	60	78	59	64	184	26	17	191	54	860
5:00 PM	24	86	12	78	68	37	84	211	23	18	143	59	843
5:15 PM	24	86	9	64	66	61	62	229	28	22	197	74	922
5:30 PM	32	128	12	74	104	46	74	221	34	16	200	71	1012
5:45 PM	15	78	6	55	93	51	70	207	15	28	164	85	867

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	184	713	80	544	612	436	553	1688	189	143	1433	527	7102

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	95	378	39	271	331	195	290	868	100	84	704	289	3644
PEAK HR. FACTOR:		0.744			0.890			0.956			0.919		0.900

CONTROL: Signalized

APPENDIX C

INTERSECTION LEVEL OF SERVICE WORKSHEETS

EXISTING (2009) CONDITIONS

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Saticoy St **I/S No:** 1

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	124	841	120	90	1329	138	130	1080	65	106	834	78
AMBIENT												
RELATED												
PROJECT												
TOTAL	124	841	120	90	1329	138	130	1080	65	106	834	78

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	489	90
EastBound	456	106
WestBound	573	130
NorthBound	481	124

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{124 + 489 + 573 + 106}{1375} = 0.940$$

LOS = E

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Saticoy St **I/S No:** 2

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	96	798	77	100	1135	114	111	977	82	105	905	88
AMBIENT												
RELATED												
PROJECT												
TOTAL	96	798	77	100	1135	114	111	977	82	105	905	88

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	1		1		1		
LANE WB	1		1		1		
LANE EB	1		1		1		

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 625
B: 100

EastBound
A: 497
B: 105

↑

WestBound
A: 530
B: 111

NorthBound
A: 438
B: 96

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{96 + 625 + 530 + 105}{1500} = 0.904$$

LOS = E

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave   W/E: Saticoy St   I/S No: 3

AM/PM: **AM**   Comments: Existing

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	104	765	114	123	1090	120	92	896	125	107	819	123
AMBIENT												
RELATED												
PROJECT												
TOTAL	104	765	114	123	1090	120	92	896	125	107	819	123

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		2			1		1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 545
B: 123

EastBound
A: 471
B: 107

WestBound
A: 511
B: 92

NorthBound
A: 440
B: 104

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{104 + 545 + 511 + 107}{1500} = 0.845$$

LOS = D

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave
W/E: Sherman Way
I/S No: 4
AM/PM: AM
Comments: Existing
COUNT DATE:
STUDY DATE:
GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	80	863	87	103	1515	151	166	1106	106	90	1083	84
AMBIENT												
RELATED												
PROJECT												
TOTAL	80	863	87	103	1515	151	166	1106	106	90	1083	84

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 555
B: 103

EastBound
A: 389
B: 90

WestBound
A: 404
B: 166

NorthBound
A: 475
B: 80

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)
West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{80 + 555 + 166 + 389}{1425} = 0.835$$

LOS = D

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Sherman Way **I/S No:** 5

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	69	551	42	113	1079	139	95	1239	92	93	985	69
AMBIENT												
RELATED												
PROJECT												
TOTAL	69	551	42	113	1079	139	95	1239	92	93	985	69

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 609
B: 113

EastBound
A: 351
B: 93

WestBound
A: 444
B: 95

NorthBound
A: 297
B: 69

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{69 + 609 + 444 + 93}{1500} = 0.810$$

LOS = D

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave

W/E: Sherman Way

I/S No: 6

AM/PM: AM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	96	752	88	112	1214	115	141	1104	187	118	906	138
AMBIENT												
RELATED												
PROJECT												
TOTAL	96	752	88	112	1214	115	141	1104	187	118	906	138

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2			1	
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 607
B: 112

EastBound
A: 348
B: 118

WestBound
A: 430
B: 141

NorthBound
A: 420
B: 96

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{96 + 607 + 430 + 118}{1375} = 0.910$$

LOS = E

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Vanowen St **I/S No:** 7

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	47	843	100	118	1214	173	198	1064	110	73	940	69
AMBIENT												
RELATED												
PROJECT												
TOTAL	47	843	100	118	1214	173	198	1064	110	73	940	69

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	1		2		1		
LANE WB	1		2			1	
LANE EB	1		2			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 462
B: 118

EastBound
A: 470
B: 73

WestBound
A: 532
B: 198

NorthBound
A: 472
B: 47

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{472 + 118 + 198 + 470}{1375} = 0.915$$

LOS = E

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Vanowen St **I/S No:** 8

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	29	355	45	85	991	194	150	1050	90	121	893	78
AMBIENT												
RELATED												
PROJECT												
TOTAL	29	355	45	85	991	194	150	1050	90	121	893	78

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 593
B: 85

EastBound
A: 486
B: 121

WestBound
A: 570
B: 150

NorthBound
A: 200
B: 29

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{29 + 593 + 570 + 121}{1500} = 0.875$$

LOS = D

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Vanowen St **I/S No:** 9

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	86	652	97	108	1184	133	113	977	92	65	776	81
AMBIENT												
RELATED												
PROJECT												
TOTAL	86	652	97	108	1184	133	113	977	92	65	776	81

		↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	NORTHBOUND	1		1		1		
	SOUTHBOUND	1		1		1		
	WESTBOUND	1		1		1		
	EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 659
B: 108

EastBound
A: 429
B: 65

WestBound
A: 535
B: 113

NorthBound
A: 375
B: 86

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{86 + 659 + 535 + 65}{1425} = 0.944$$

LOS = E

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Shoup Ave **W/E:** Victory Bl **I/S No:** 10

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	99	704	47	128	1269	73	101	722	79	97	892	260
AMBIENT												
RELATED												
PROJECT												
TOTAL	99	704	47	128	1269	73	101	722	79	97	892	260

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 671
B: 128

EastBound
A: 576
B: 97

WestBound
A: 401
B: 101

NorthBound
A: 376
B: 99

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{99 + 671 + 101 + 576}{1500} = 0.965$$

LOS = E

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Topanga Canyon Bl **W/E:** Victory Bl **I/S No:** 11

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	128	799	193	165	1325	102	211	628	115	65	936	117
AMBIENT												
RELATED												
PROJECT												
TOTAL	128	799	193	165	1325	102	211	628	115	65	936	117

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		2		1		
LANE SB	1		2		1		
LANE WB	2		2			1	
LANE EB	2		2		1		

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 476
B: 165

EastBound
A: 351
B: 36

WestBound
A: 314
B: 116

NorthBound
A: 331
B: 128

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{128 + 476 + 116 + 351}{1375} = 0.779$$

LOS = C

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Canoga Ave **W/E:** Victory Bl **I/S No:** 12

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	79	794	94	131	1091	77	220	963	63	79	853	137
AMBIENT												
RELATED												
PROJECT												
TOTAL	79	794	94	131	1091	77	220	963	63	79	853	137

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2		1		
SOUTHBOUND	1		2		1		
WESTBOUND	1		3			1	
EASTBOUND	1		3			1	

SIGNAL

	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Prot-Fix	OLA
EASTBOUND	Prot-Fix	OLA

Critical Movements Diagram

	A	B
SouthBound	389	131
EastBound	284	79
WestBound	321	220
NorthBound	296	79

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{79 + 389 + 220 + 284}{1375} = 0.707$$

LOS = C

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave
W/E: Victory Bl
I/S No: 13
AM/PM: AM
Comments: Existing
COUNT DATE:
STUDY DATE:
GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	61	742	140	80	1286	174	482	1296	96	72	963	47
AMBIENT												
RELATED												
PROJECT												
TOTAL	61	742	140	80	1286	174	482	1296	96	72	963	47

LANE	1		2		1			1		2		1			2		3			1		2		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 487
B: 80

EastBound
A: 337
B: 40

WestBound
A: 432
B: 265

NorthBound
A: 294
B: 61

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{61 + 487 + 265 + 337}{1375} = 0.836$$

LOS = D

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Victory Bl **I/S No:** 14

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	56	60	30	342	305	610	131	1389	106	179	1304	188
AMBIENT												
RELATED												
PROJECT												
TOTAL	56	60	30	342	305	610	131	1389	106	179	1304	188

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1		
	1		1			2	
	1		3			1	
	1		3			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 336
B: 342

EastBound
A: 435
B: 179

WestBound
A: 463
B: 131

NorthBound
A: 45
B: 56

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{56 + 336 + 463 + 179}{1375} = 0.752$$

LOS = C

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Victory Bl **I/S No:** 15

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	121	785	188	217	1035	225	312	1455	66	60	1190	226
AMBIENT												
RELATED												
PROJECT												
TOTAL	121	785	188	217	1035	225	312	1455	66	60	1190	226

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 420
B: 217

EastBound
A: 472
B: 60

↑

WestBound
A: 507
B: 312

NorthBound
A: 487
B: 121

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{487 + 217 + 312 + 472}{1375} = 1.082$$

LOS = F

Developed by Chun Wong, 12/94

EXAM

January 29, 2010 ,Friday 01:14:20 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Topham St **W/E:** Victory Bl **I/S No:** 16

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	364	0	5	0	0	0	0	1882	0	0	1166	428
AMBIENT												
RELATED												
PROJECT												
TOTAL	364	0	5	0	0	0	0	1882	0	0	1166	428

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1					1	
LANE SOUTHBOUND							
LANE WESTBOUND			2				
LANE EASTBOUND			2			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Prot-Fix	Auto	Perm	Auto	Perm	OLA

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	583	0
WestBound	941	0
NorthBound	5	364

↑

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{364 + 0 + 941 + 0}{1425} = 0.916$$

LOS = E

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Corbin Ave

W/E: Victory Bl

I/S No: 17

AM/PM: AM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	35	589	90	163	784	309	167	1517	154	93	987	15
AMBIENT												
RELATED												
PROJECT												
TOTAL	35	589	90	163	784	309	167	1517	154	93	987	15

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 547
B: 163

EastBound
A: 501
B: 93

WestBound
A: 836
B: 167

NorthBound
A: 340
B: 35

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{35 + 547 + 836 + 93}{1500} = 1.007$$

LOS = F

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Tampa Ave

W/E: Victory Bl

I/S No: 18

AM/PM: AM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	92	690	107	261	1138	225	80	1414	87	56	1310	43
AMBIENT												
RELATED												
PROJECT												
TOTAL	92	690	107	261	1138	225	80	1414	87	56	1310	43

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2			1	
LANE SOUTHBOUND	1		2			1	
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 569
B: 261

EastBound
A: 677
B: 56

↑

WestBound
A: 751
B: 80

NorthBound
A: 345
B: 92

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{92 + 569 + 751 + 56}{1425} = 1.030$$

LOS = F

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Wilbur Ave

W/E: Victory Bl

I/S No: 19

AM/PM: AM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	66	564	93	161	1162	158	73	1493	105	58	1511	115
AMBIENT												
RELATED												
PROJECT												
TOTAL	66	564	93	161	1162	158	73	1493	105	58	1511	115

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 660
B: 161

EastBound
A: 813
B: 58

WestBound
A: 799
B: 73

NorthBound
A: 329
B: 66

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{66 + 660 + 73 + 813}{1500} = 1.075$$

LOS = F

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Reseda Bl

W/E: Victory Bl

I/S No: 20

AM/PM: **AM**

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	70	733	118	103	1000	168	92	1374	108	102	1667	68
AMBIENT												
RELATED												
PROJECT												
TOTAL	70	733	118	103	1000	168	92	1374	108	102	1667	68

	↰	↰⇧	⇧	↰⇧↱	⇧↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		2			1	
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 584
B: 103

EastBound
A: 578
B: 102

WestBound
A: 687
B: 92

NorthBound
A: 426
B: 70

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{70 + 584 + 687 + 102}{1375} = 1.049$$

LOS = F

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** El Rancho Dr **I/S No:** 21

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	2	1586	127	44	2282	0	13	0	28	2	0	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	1586	127	44	2282	0	13	0	28	2	0	2

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2		1			1		2		1			1				1			1				1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	<none>

Critical Movements Diagram

SouthBound
A: 761
B: 44

EastBound
A: 2
B: 2

WestBound
A: 28
B: 13

NorthBound
A: 571
B: 2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{2 + 761 + 28 + 2}{1500} = 0.529$$

LOS = A

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Erwin St **I/S No:** 22

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	151	1299	5	24	2077	156	18	10	21	22	2	137
AMBIENT												
RELATED												
PROJECT												
TOTAL	151	1299	5	24	2077	156	18	10	21	22	2	137

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND				1			
LANE EASTBOUND	1			1		1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound
A: 744
B: 24

EastBound
A: 70
B: 22

WestBound
A: 49
B: 18

NorthBound
A: 435
B: 151

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{151 + 744 + 49 + 70}{1425} = 0.712$$

LOS = C

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Brahma Dr/Calvert St **I/S No:** 23

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	184	989	0	4	1181	182	49	22	64	47	0	43
AMBIENT												
RELATED												
PROJECT												
TOTAL	184	989	0	4	1181	182	49	22	64	47	0	43

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2				
LANE SOUTHBOUND			2			1	
LANE WESTBOUND	1				1		
LANE EASTBOUND	2					1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	OLA	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound
A: 591
B: 0

EastBound
A: 0
B: 26

WestBound
A: 86
B: 49

NorthBound
A: 495
B: 184

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{184 + 591 + 86 + 26}{1375} = 0.645$$

LOS = B

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Oxnard St **I/S No:** 24

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	120	1337	29	44	2082	224	227	418	53	55	140	77
AMBIENT												
RELATED												
PROJECT												
TOTAL	120	1337	29	44	2082	224	227	418	53	55	140	77

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 769
B: 44

EastBound
A: 140
B: 55

WestBound
A: 236
B: 227

NorthBound
A: 455
B: 120

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{120 + 769 + 227 + 140}{1500} = 0.837$$

LOS = D

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Oxnard St **I/S No:** 25

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	49	1064	45	31	1367	218	55	237	15	145	265	65
AMBIENT												
RELATED												
PROJECT												
TOTAL	49	1064	45	31	1367	218	55	237	15	145	265	65

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1						1				1		1			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 793
B: 31

EastBound
A: 265
B: 145

WestBound
A: 307
B: 55

NorthBound
A: 555
B: 49

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{49 + 793 + 307 + 145}{1500} = 0.863$$

LOS = D

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: Burbank Bl

I/S No: 26

AM/PM: AM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	209	1517	0	0	1461	647	0	0	0	152	0	115
AMBIENT												
RELATED												
PROJECT												
TOTAL	209	1517	0	0	1461	647	0	0	0	152	0	115

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		3							2		1										2					2	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	<none>	Perm	Auto			Split	Auto

Critical Movements Diagram

SouthBound
A: 703
B: 0

EastBound
A: 63
B: 84

WestBound
A: 0
B: 0

NorthBound
A: 506
B: 209

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{209 + 703 + 0 + 84}{1500} = 0.664$$

LOS = B

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: 101 WB Ramps

I/S No: 27

AM/PM: AM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	175	1358	0	0	1097	542	148	5	607	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	175	1358	0	0	1097	542	148	5	607	0	0	0

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2				
LANE SOUTHBOUND			4			1	
LANE WESTBOUND	1			1		1	
LANE EASTBOUND							

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix		Perm	Auto	Split	Auto		

Critical Movements Diagram

	A	B
SouthBound	542	0
EastBound	0	0
WestBound	306	148
NorthBound	679	175

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{175 + 542 + 306 + 0}{1425} = 0.718$$

LOS = C

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: 101 EB Ramps

I/S No: 28

AM/PM: AM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	768	122	930	368	0	0	0	0	684	5	413
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	768	122	930	368	0	0	0	0	684	5	413

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND			3			1	
SOUTHBOUND	2		2				
WESTBOUND							
EASTBOUND	1	1				1	

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	<none>
SOUTHBOUND	Prot-Fix	<none>
WESTBOUND		
EASTBOUND	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	184	512
EastBound	413	345
WestBound	0	0
NorthBound	256	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{256 + 512 + 0 + 413}{1425} = 0.829$$

LOS = D

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Ventura Bl **I/S No:** 29

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	91	262	135	664	178	382	56	1185	407	229	1231	57
AMBIENT												
RELATED												
PROJECT												
TOTAL	91	262	135	664	178	382	56	1185	407	229	1231	57

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	2		1			1	
LANE WB	1		3			1	
LANE EB	1		2		1		

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 178
B: 365

EastBound
A: 429
B: 229

↑

WestBound
A: 395
B: 56

NorthBound
A: 199
B: 91

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{199 + 365 + 395 + 229}{1375} = 0.864$$

LOS = D

Developed by Chun Wong, 12/94

EXAM

CalcaDB

January 28, 2010 ,Thursday 12:31:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** 101 WB Ramps **I/S No:** 30

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	143	816	0	0	1005	440	339	2	512	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	143	816	0	0	1005	440	339	2	512	0	0	0

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2				
SOUTHBOUND			2			1	
WESTBOUND	1			1		1	
EASTBOUND							

SIGNAL

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	Auto	Split	Auto		

Critical Movements Diagram

SouthBound
A: 503
B: 0

EastBound
A: 0
B: 0

WestBound
A: 284
B: 284

NorthBound
A: 408
B: 143

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{143 + 503 + 284 + 0}{1425} = 0.653$$

LOS = B

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** 101 EB Ramps **I/S No:** 31

AM/PM: AM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	586	193	452	891	0	0	0	0	374	0	217
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	586	193	452	891	0	0	0	0	374	0	217

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND			1		1	1	
SOUTHBOUND	1		2				
WESTBOUND							
EASTBOUND	1					1	

SIGNAL

	Phasing	RTOR
NORTHBOUND	Perm	<none>
SOUTHBOUND	Prot-Fix	<none>
WESTBOUND		
EASTBOUND	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	446	452
EastBound	217	374
WestBound	0	0
NorthBound	293	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{293 + 452 + 0 + 374}{1425} = 0.785$$

LOS = C

Developed by Chun Wong, 12/94

EXAM

January 28, 2010 ,Thursday 12:31:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave W/E: Ventura Bl I/S No: 32

AM/PM: AM Comments: Existing

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	84	309	32	313	389	308	76	731	211	259	1291	74
AMBIENT												
RELATED												
PROJECT												
TOTAL	84	309	32	313	389	308	76	731	211	259	1291	74

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1				1			2		1			1		1		2			1		1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 389
B: 172

EastBound
A: 455
B: 259

WestBound
A: 366
B: 76

NorthBound
A: 341
B: 84

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{341 \quad + \quad 389 \quad + \quad 366 \quad + \quad 259}{1375} = 0.985$$

LOS = E

Developed by Chun Wong, 12/94

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: Saticoy St

I/S No: 1

AM/PM: PM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	92	1229	129	120	991	138	93	838	99	132	1107	72
AMBIENT												
RELATED												
PROJECT												
TOTAL	92	1229	129	120	991	138	93	838	99	132	1107	72

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2		1		
SOUTHBOUND	1		1		1		
WESTBOUND	1		1		1		
EASTBOUND	1		1		1		

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 565
B: 120

EastBound
A: 590
B: 132

WestBound
A: 469
B: 93

NorthBound
A: 453
B: 92

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{92 + 565 + 93 + 590}{1375} = 0.975$$

LOS = E

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Saticoy St **I/S No:** 2

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	99	877	78	108	746	121	89	919	74	159	1120	107
AMBIENT												
RELATED												
PROJECT												
TOTAL	99	877	78	108	746	121	89	919	74	159	1120	107

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 434
B: 108

EastBound
A: 614
B: 159

WestBound
A: 497
B: 89

NorthBound
A: 478
B: 99

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{478 + 108 + 89 + 614}{1500} = 0.859$$

LOS = D

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Saticoy St **I/S No:** 3

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	135	1047	117	157	985	152	86	797	148	124	908	120
AMBIENT												
RELATED												
PROJECT												
TOTAL	135	1047	117	157	985	152	86	797	148	124	908	120

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		1		1		
SOUTHBOUND	1		2			1	
WESTBOUND	1		1		1		
EASTBOUND	1		1		1		

SIGNAL

	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	493	157
EastBound	514	124
WestBound	473	86
NorthBound	582	135

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{582 + 157 + 86 + 514}{1500} = 0.893$$

LOS = D

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Sherman Way **I/S No:** 4

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	114	1625	275	101	944	147	159	993	129	171	1699	144
AMBIENT												
RELATED												
PROJECT												
TOTAL	114	1625	275	101	944	147	159	993	129	171	1699	144

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2		1			1		1		1			1		2		1			1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 546
B: 101

EastBound
A: 614
B: 171

WestBound
A: 374
B: 159

NorthBound
A: 633
B: 114

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{633 + 101 + 159 + 614}{1425} = 1.058$$

LOS = F

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave

W/E: Sherman Way

I/S No: 5

AM/PM: PM

Comments: Existing

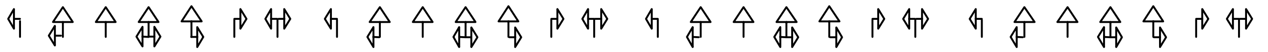
COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	72	870	61	106	673	135	79	1051	84	141	1169	55
AMBIENT												
RELATED												
PROJECT												
TOTAL	72	870	61	106	673	135	79	1051	84	141	1169	55



	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1		1		1			1		1		1			1		2		1			1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 404
B: 106

EastBound
A: 408
B: 141

WestBound
A: 378
B: 79

NorthBound
A: 466
B: 72

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{466 + 106 + 378 + 141}{1500} = 0.727$$

LOS = C

Developed by Chun Wong, 12/94

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Sherman Way **I/S No:** 6

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	158	1088	91	169	891	147	86	911	147	145	1029	99
AMBIENT												
RELATED												
PROJECT												
TOTAL	158	1088	91	169	891	147	86	911	147	145	1029	99

LANE	1		1		1		
	1		2			1	
	1		2		1		
	1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 446
B: 169

EastBound
A: 376
B: 145

WestBound
A: 353
B: 86

NorthBound
A: 590
B: 158

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{590 + 169 + 353 + 145}{1375} = 0.914$$

LOS = E

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Vanowen St **I/S No:** 7

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	50	1503	117	110	892	202	103	868	135	165	1341	92
AMBIENT												
RELATED												
PROJECT												
TOTAL	50	1503	117	110	892	202	103	868	135	165	1341	92

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2		1			1		1		1			1		2			1		1		2			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound
A: 547
B: 110

EastBound
A: 671
B: 165

WestBound
A: 434
B: 103

NorthBound
A: 540
B: 50

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{540 + 110 + 103 + 671}{1375} = 1.036$$

LOS = F

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Vanowen St **I/S No:** 8

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	35	658	42	93	520	130	52	879	83	202	1130	62
AMBIENT												
RELATED												
PROJECT												
TOTAL	35	658	42	93	520	130	52	879	83	202	1130	62

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	1		1		1		
LANE WB	1		1		1		
LANE EB	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 325
B: 93

EastBound
A: 596
B: 202

↑

WestBound
A: 481
B: 52

NorthBound
A: 350
B: 35

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{350 + 93 + 481 + 202}{1500} = 0.751$$

LOS = C

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Vanowen St **I/S No:** 9

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	92	1081	95	117	853	89	86	887	108	114	1031	79
AMBIENT												
RELATED												
PROJECT												
TOTAL	92	1081	95	117	853	89	86	887	108	114	1031	79

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 471
B: 117

EastBound
A: 555
B: 114

WestBound
A: 498
B: 86

NorthBound
A: 588
B: 92

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{588 + 117 + 86 + 555}{1425} = 0.945$$

LOS = E

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Shoup Ave **W/E:** Victory Bl **I/S No:** 10

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	191	1358	110	106	703	91	90	885	157	100	827	127
AMBIENT												
RELATED												
PROJECT												
TOTAL	191	1358	110	106	703	91	90	885	157	100	827	127

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 397
B: 106

EastBound
A: 477
B: 100

WestBound
A: 521
B: 90

NorthBound
A: 734
B: 191

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{734 + 106 + 521 + 100}{1500} = 0.974$$

LOS = E

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Topanga Canyon Bl

W/E: Victory Bl

I/S No: 11

AM/PM: PM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	178	1558	358	239	1066	116	290	857	225	149	830	155
AMBIENT												
RELATED												
PROJECT												
TOTAL	178	1558	358	239	1066	116	290	857	225	149	830	155

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	2		2			1	
LANE EASTBOUND	2		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 394
B: 239

EastBound
A: 328
B: 82

WestBound
A: 429
B: 160

NorthBound
A: 639
B: 178

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{639 + 239 + 429 + 82}{1375} = 1.010$$

LOS = F

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Canoga Ave **W/E:** Victory Bl **I/S No:** 12

AM/PM: PM **Comments:** Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	164	1435	346	124	879	132	194	1075	200	125	1231	164
AMBIENT												
RELATED												
PROJECT												
TOTAL	164	1435	346	124	879	132	194	1075	200	125	1231	164

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		3			1	
LANE EASTBOUND	1		3			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

	A:	B:
SouthBound	337	124
EastBound	410	125
WestBound	358	194
NorthBound	594	164

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{594 + 124 + 194 + 410}{1375} = 0.961$$

LOS = E

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: Victory Bl

I/S No: 13

AM/PM: PM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	68	1152	423	104	802	176	225	1033	113	415	1759	123
AMBIENT												
RELATED												
PROJECT												
TOTAL	68	1152	423	104	802	176	225	1033	113	415	1759	123

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	2		3			1	
LANE EASTBOUND	2		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 326
B: 104

EastBound
A: 627
B: 228

WestBound
A: 344
B: 124

NorthBound
A: 525
B: 68

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{525 + 104 + 124 + 627}{1375} = 1.004$$

LOS = F

Developed by Chun Wong, 12/94

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Victory Bl **I/S No:** 14

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	99	172	81	152	154	228	42	1059	176	356	1702	131
AMBIENT												
RELATED												
PROJECT												
TOTAL	99	172	81	152	154	228	42	1059	176	356	1702	131

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		1		1		
SOUTHBOUND	1		1			2	
WESTBOUND	1		3			1	
EASTBOUND	1		3			1	

SIGNAL

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	154	152
EastBound	567	356
WestBound	353	42
NorthBound	127	99

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{127 + 152 + 353 + 356}{1375} = 0.719$$

LOS = C

Developed by Chun Wong, 12/94

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave

W/E: Victory Bl

I/S No: 15

AM/PM: **PM**

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	139	966	133	164	741	121	128	1180	137	228	1475	175
AMBIENT												
RELATED												
PROJECT												
TOTAL	139	966	133	164	741	121	128	1180	137	228	1475	175

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 287
B: 164

EastBound
A: 550
B: 228

WestBound
A: 439
B: 128

NorthBound
A: 550
B: 139

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{550 + 164 + 128 + 550}{1375} = 1.012$$

LOS = F

Developed by Chun Wong, 12/94

EXPM

January 29, 2010 ,Friday 01:14:52 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Topham St **W/E:** Victory Bl **I/S No:** 16

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	300	0	6	0	0	0	0	1291	0	0	1562	337
AMBIENT												
RELATED												
PROJECT												
TOTAL	300	0	6	0	0	0	0	1291	0	0	1562	337

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1					1		0	0	0	0	0	0	0			2							2			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Prot-Fix	Auto	Perm	Auto	Perm	OLA

Critical Movements Diagram

SouthBound
A: 0
B: 0

EastBound
A: 781
B: 0

WestBound
A: 646
B: 0

NorthBound
A: 6
B: 300

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{300 + 0 + 0 + 781}{1425} = 0.759$$

LOS = C

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Corbin Ave **W/E:** Victory Bl **I/S No:** 17

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	34	811	134	124	431	151	80	1246	345	145	1320	29
AMBIENT												
RELATED												
PROJECT												
TOTAL	34	811	134	124	431	151	80	1246	345	145	1320	29

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	291	675	796	473
B:	124	145	80	34

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{473 + 124 + 796 + 145}{1500} = 1.025$$

LOS = F

Developed by Chun Wong, 12/94

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Tampa Ave

W/E: Victory Bl

I/S No: 18

AM/PM: PM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	164	1121	108	193	619	128	58	1387	192	104	1596	38
AMBIENT												
RELATED												
PROJECT												
TOTAL	164	1121	108	193	619	128	58	1387	192	104	1596	38

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2			1	
LANE SOUTHBOUND	1		2			1	
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 310
B: 193

EastBound
A: 817
B: 104

↑

WestBound
A: 790
B: 58

NorthBound
A: 561
B: 164

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{561 + 193 + 790 + 104}{1425} = 1.156$$

LOS = F

Developed by Chun Wong, 12/94

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Wilbur Ave **W/E:** Victory Bl **I/S No:** 19

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	138	761	88	101	510	97	60	1343	205	128	1614	68
AMBIENT												
RELATED												
PROJECT												
TOTAL	138	761	88	101	510	97	60	1343	205	128	1614	68

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	304	101
EastBound	841	128
WestBound	774	60
NorthBound	425	138

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{425 + 101 + 774 + 128}{1500} = 0.952$$

LOS = E

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Reseda Bl W/E: Victory Bl I/S No: 20

AM/PM: PM Comments: Existing

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	115	1066	111	89	800	161	97	1322	156	132	1507	107
AMBIENT												
RELATED												
PROJECT												
TOTAL	115	1066	111	89	800	161	97	1322	156	132	1507	107

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		2			1	
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 481
B: 89

EastBound
A: 538
B: 132

WestBound
A: 661
B: 97

NorthBound
A: 589
B: 115

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{589 + 89 + 661 + 132}{1375} = 1.070$$

LOS = F

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: El Rancho Dr

I/S No: 21

AM/PM: PM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	7	1864	193	14	1232	1	35	0	7	2	0	6
AMBIENT												
RELATED												
PROJECT												
TOTAL	7	1864	193	14	1232	1	35	0	7	2	0	6

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2		1			1		2		1			1				1			1				1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	<none>

Critical Movements Diagram

SouthBound
A: 411
B: 14

EastBound
A: 6
B: 2

↑

WestBound
A: 7
B: 35

NorthBound
A: 686
B: 7

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{686 + 14 + 35 + 6}{1500} = 0.494$$

LOS = A

Developed by Chun Wong, 12/94

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Erwin St **I/S No:** 22

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	101	1745	29	19	1075	174	10	9	10	185	10	244
AMBIENT												
RELATED												
PROJECT												
TOTAL	101	1745	29	19	1075	174	10	9	10	185	10	244

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2		1		
SOUTHBOUND	1		2		1		
WESTBOUND				1			
EASTBOUND	1			1		1	

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Split	Auto
EASTBOUND	Split	Auto

Critical Movements Diagram

SouthBound
A: 416
B: 19

EastBound
A: 146
B: 146

↑

WestBound
A: 29
B: 10

NorthBound
A: 591
B: 101

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{591 + 19 + 29 + 146}{1425} = 0.551$$

LOS = A

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Brahma Dr/Calvert St **I/S No:** 23

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	95	1248	0	10	811	98	18	4	21	146	0	104
AMBIENT												
RELATED												
PROJECT												
TOTAL	95	1248	0	10	811	98	18	4	21	146	0	104

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2				
SOUTHBOUND			2			1	
WESTBOUND	1				1		
EASTBOUND	2					1	

SIGNAL	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
Phasing	Prot-Fix	Perm	Split	Split
RTOR	<none>	OLA	Auto	Auto

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	406	56	25	624
B:	0	80	18	95

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{624 + 0 + 25 + 80}{1375} = 0.530$$

LOS = A

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Oxnard St **I/S No:** 24

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	121	1664	167	43	1155	174	27	198	21	214	408	228
AMBIENT												
RELATED												
PROJECT												
TOTAL	121	1664	167	43	1155	174	27	198	21	214	408	228

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 443
B: 43

EastBound
A: 408
B: 214

WestBound
A: 110
B: 27

NorthBound
A: 610
B: 121

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{610 + 43 + 27 + 408}{1500} = 0.725$$

LOS = C

Developed by Chun Wong, 12/94

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave W/E: Oxnard St I/S No: 25

AM/PM: **PM** Comments: Existing

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	89	1180	59	31	909	103	11	58	18	168	448	56
AMBIENT												
RELATED												
PROJECT												
TOTAL	89	1180	59	31	909	103	11	58	18	168	448	56

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND				1			
LANE EASTBOUND	1		1			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 506
B: 31

EastBound
A: 448
B: 168

WestBound
A: 87
B: 11

NorthBound
A: 620
B: 89

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{620 + 31 + 11 + 448}{1500} = 0.740$$

LOS = C

Developed by Chun Wong, 12/94

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave
W/E: Burbank Bl
I/S No: 26
AM/PM: PM
Comments: Existing
COUNT DATE:
STUDY DATE:
GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	71	1285	0	0	1695	157	0	0	0	611	0	486
AMBIENT												
RELATED												
PROJECT												
TOTAL	71	1285	0	0	1695	157	0	0	0	611	0	486

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		3				
LANE SOUTHBOUND			2		1		
LANE WESTBOUND							
LANE EASTBOUND	2					2	

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Perm	<none>	Perm	Auto			Split	Auto

Critical Movements Diagram

SouthBound
A: 617
B: 0

EastBound
A: 267
B: 336

WestBound
A: 0
B: 0

NorthBound
A: 428
B: 71

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{71 + 617 + 0 + 336}{1500} = 0.683$$

LOS = B

Developed by Chun Wong, 12/94

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: 101 WB Ramps

I/S No: 27

AM/PM: PM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	231	996	0	0	1399	588	267	0	479	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	231	996	0	0	1399	588	267	0	479	0	0	0

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2				
SOUTHBOUND			4			1	
WESTBOUND	1			1		1	
EASTBOUND							

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Fix	
SOUTHBOUND	Perm	<none>
WESTBOUND	Split	Auto
EASTBOUND		

Critical Movements Diagram

SouthBound
A: 588
B: 0

EastBound
A: 0
B: 0

WestBound
A: 249
B: 249

NorthBound
A: 498
B: 231

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{231 + 588 + 249 + 0}{1425} = 0.749$$

LOS = C

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: 101 EB Ramps

I/S No: 28

AM/PM: PM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	733	239	855	770	0	0	0	0	515	3	219
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	733	239	855	770	0	0	0	0	515	3	219

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND			3			1	
LANE SOUTHBOUND	2		2				
LANE WESTBOUND							
LANE EASTBOUND	1	1				1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	<none>			Split	Auto

Critical Movements Diagram

SouthBound
A: 385
B: 470

EastBound
A: 259
B: 259

WestBound
A: 0
B: 0

NorthBound
A: 244
B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{244 + 470 + 0 + 259}{1425} = 0.683$$

LOS = B

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Ventura Bl **I/S No:** 29

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	58	188	74	446	227	336	56	1077	430	313	1003	68
AMBIENT												
RELATED												
PROJECT												
TOTAL	58	188	74	446	227	336	56	1077	430	313	1003	68

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	2		1			1	
LANE WESTBOUND	1		3			1	
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	227	245
EastBound	357	313
WestBound	359	56
NorthBound	131	58

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{131 + 245 + 359 + 313}{1375} = 0.762$$

LOS = C

Developed by Chun Wong, 12/94

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave

W/E: 101 WB Ramps

I/S No: 30

AM/PM: PM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	195	771	0	0	775	281	295	12	525	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	195	771	0	0	775	281	295	12	525	0	0	0

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2				
LANE SOUTHBOUND			2			1	
LANE WESTBOUND	1			1		1	
LANE EASTBOUND							

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	<none>	Split	Auto		

Critical Movements Diagram

	A	B
SouthBound	388	0
EastBound	0	0
WestBound	277	277
NorthBound	386	195

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{195 + 388 + 277 + 0}{1425} = 0.604$$

LOS = B

Developed by Chun Wong, 12/94

EXPM

CalcaDB

January 28, 2010 ,Thursday 12:32:25 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** 101 EB Ramps **I/S No:** 31

AM/PM: PM **Comments:** Existing

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	667	260	350	652	0	0	0	0	407	0	188
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	667	260	350	652	0	0	0	0	407	0	188

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND			1		1	1	
SOUTHBOUND	1		2				
WESTBOUND							
EASTBOUND	1					1	

SIGNAL

	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Prot-Fix	<none>
WESTBOUND		
EASTBOUND	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	326	350
EastBound	188	407
WestBound	0	0
NorthBound	334	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{334 + 350 + 0 + 407}{1425} = 0.766$$

LOS = C

Developed by Chun Wong, 12/94

EXPM

January 28, 2010 ,Thursday 12:32:25 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave

W/E: Ventura Bl

I/S No: 32

AM/PM: PM

Comments: Existing

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	95	378	39	271	331	195	84	704	289	290	868	100
AMBIENT												
RELATED												
PROJECT												
TOTAL	95	378	39	271	331	195	84	704	289	290	868	100

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1				1		
LANE SB	2		1			1	
LANE WB	1		2			1	
LANE EB	1		2		1		

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 331
B: 149

EastBound
A: 323
B: 290

WestBound
A: 352
B: 84

NorthBound
A: 417
B: 95

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{417 + 331 + 352 + 290}{1375} = 1.011$$

LOS = F

Developed by Chun Wong, 12/94

CUMULATIVE BASE (2015) CONDITIONS

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: Saticoy St

I/S No: 1

AM/PM: AM

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	134	949	130	95	1426	146	142	1148	69	112	879	87
AMBIENT												
RELATED												
PROJECT												
TOTAL	134	949	130	95	1426	146	142	1148	69	112	879	87

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		2		1			1		1		1			1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 524
B: 95

EastBound
A: 483
B: 112

WestBound
A: 609
B: 142

NorthBound
A: 540
B: 134

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{134 + 524 + 609 + 112}{1375} = 1.003$$

LOS = F

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Saticoy St **I/S No:** 2

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	100	844	82	112	1185	121	118	1044	92	111	965	85
AMBIENT												
RELATED												
PROJECT												
TOTAL	100	844	82	112	1185	121	118	1044	92	111	965	85

LANE

NORTHBOUND	1		1		1		
SOUTHBOUND	1		1		1		
WESTBOUND	1		1		1		
EASTBOUND	1		1		1		

SIGNAL

	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	Auto

Critical Movements Diagram

SouthBound
A: 653
B: 112

EastBound
A: 525
B: 111

WestBound
A: 568
B: 118

NorthBound
A: 463
B: 100

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{100 + 653 + 568 + 111}{1500} = 0.955$$

LOS = E

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Saticoy St **I/S No:** 3

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	109	817	119	130	1148	133	90	960	133	118	877	127
AMBIENT												
RELATED												
PROJECT												
TOTAL	109	817	119	130	1148	133	90	960	133	118	877	127

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	1		2			1	
LANE WB	1		1		1		
LANE EB	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 574
B: 130

EastBound
A: 502
B: 118

WestBound
A: 547
B: 90

NorthBound
A: 468
B: 109

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{109 + 574 + 547 + 118}{1500} = 0.899$$

LOS = D

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Sherman Way **I/S No:** 4

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	85	970	104	112	1617	167	183	1188	116	102	1152	89
AMBIENT												
RELATED												
PROJECT												
TOTAL	85	970	104	112	1617	167	183	1188	116	102	1152	89

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	1		2		1		
LANE WB	1		2		1		
LANE EB	1		2		1		

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	595	112
EastBound	414	102
WestBound	435	183
NorthBound	537	85

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{85 + 595 + 183 + 414}{1425} = 0.896$$

LOS = D

CBAM

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Sherman Way **I/S No:** 5

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	71	580	44	120	1118	147	98	1341	98	99	1071	65
AMBIENT												
RELATED												
PROJECT												
TOTAL	71	580	44	120	1118	147	98	1341	98	99	1071	65

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	1		1		1		
LANE WB	1		2		1		
LANE EB	1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 633
B: 120

EastBound
A: 379
B: 99

WestBound
A: 480
B: 98

NorthBound
A: 312
B: 71

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{71 + 633 + 480 + 99}{1500} = 0.855$$

LOS = D

Developed by Chun Wong, 12/94

CBAM

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Sherman Way **I/S No:** 6

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	114	800	92	119	1267	122	146	1190	198	125	980	157
AMBIENT												
RELATED												
PROJECT												
TOTAL	114	800	92	119	1267	122	146	1190	198	125	980	157

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2			1	
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	634	119
EastBound	379	125
WestBound	463	146
NorthBound	446	114

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{114 + 634 + 463 + 125}{1375} = 0.972$$

LOS = E

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: Vanowen St

I/S No: 7

AM/PM: AM

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	54	955	106	125	1299	186	210	1139	117	83	1003	82
AMBIENT												
RELATED												
PROJECT												
TOTAL	54	955	106	125	1299	186	210	1139	117	83	1003	82

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		2			1	
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 495
B: 125

EastBound
A: 362
B: 83

↑

WestBound
A: 570
B: 210

NorthBound
A: 531
B: 54

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{531 + 125 + 570 + 83}{1375} = 0.952$$

LOS = E

Developed by Chun Wong, 12/94

CBAM

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Vanowen St **I/S No:** 8

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	30	368	47	93	1010	206	156	1125	97	128	959	78
AMBIENT												
RELATED												
PROJECT												
TOTAL	30	368	47	93	1010	206	156	1125	97	128	959	78

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	608	519	611	208
B:	93	128	156	30

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{30 + 608 + 611 + 128}{1500} = 0.918$$

LOS = E

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Vanowen St **I/S No:** 9

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	91	697	105	122	1235	141	117	1049	106	69	837	86
AMBIENT												
RELATED												
PROJECT												
TOTAL	91	697	105	122	1235	141	117	1049	106	69	837	86

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	1		1		1		
LANE WB	1		1		1		
LANE EB	1		1		1		

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 688
B: 122

EastBound
A: 462
B: 69

WestBound
A: 578
B: 117

NorthBound
A: 401
B: 91

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{91 + 688 + 578 + 69}{1425} = 1.001$$

LOS = F

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Shoup Ave **W/E:** Victory Bl **I/S No:** 10

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	110	749	50	133	1351	77	107	813	83	103	984	283
AMBIENT												
RELATED												
PROJECT												
TOTAL	110	749	50	133	1351	77	107	813	83	103	984	283

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2			1		1		1		1			1		2			1		1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 714
B: 133

EastBound
A: 634
B: 103

WestBound
A: 407
B: 107

NorthBound
A: 375
B: 110

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{110 + 714 + 107 + 634}{1500} = 1.043$$

LOS = F

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Topanga Canyon Bl **W/E:** Victory Bl **I/S No:** 11

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

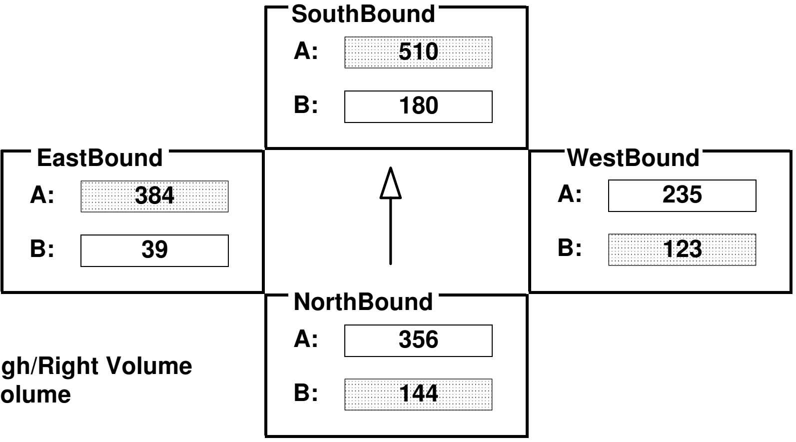
Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	144	869	200	180	1422	108	223	705	126	70	1007	144
AMBIENT												
RELATED												
PROJECT												
TOTAL	144	869	200	180	1422	108	223	705	126	70	1007	144

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2		1		
SOUTHBOUND	1		2		1		
WESTBOUND	2		3			1	
EASTBOUND	2		2		1		

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Prot-Fix	OLA
EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram



SouthBound
A: 510
B: 180

EastBound
A: 384
B: 39

WestBound
A: 235
B: 123

NorthBound
A: 356
B: 144

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{144 + 510 + 123 + 384}{1375} = 0.844$$

LOS = D

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Canoga Ave **W/E:** Victory Bl **I/S No:** 12

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	134	873	118	131	1207	98	239	1064	65	92	898	163
AMBIENT												
RELATED												
PROJECT												
TOTAL	134	873	118	131	1207	98	239	1064	65	92	898	163

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		2		1		
LANE SB	1		2		1		
LANE WB	1		3		1		
LANE EB	1		3			1	

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	435	299	282	330
B:	131	92	239	134

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{134 + 435 + 239 + 299}{1375} = 0.805$$

LOS = D

Developed by Chun Wong, 12/94

CBAM

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: Victory Bl

I/S No: 13

AM/PM: AM

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	70	844	165	80	1386	187	515	1406	101	85	1027	46
AMBIENT												
RELATED												
PROJECT												
TOTAL	70	844	165	80	1386	187	515	1406	101	85	1027	46

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	2		3			1	
LANE EASTBOUND	2		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 524
B: 80

EastBound
A: 358
B: 47

↑

WestBound
A: 469
B: 283

NorthBound
A: 336
B: 70

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{70 + 524 + 283 + 358}{1375} = 0.898$$

LOS = D

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Victory Bl **I/S No:** 14

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	51	54	25	360	275	647	93	1514	111	190	1437	161
AMBIENT												
RELATED												
PROJECT												
TOTAL	51	54	25	360	275	647	93	1514	111	190	1437	161

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1		1		1			1		1			2		1		3			1		1		3			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 356
B: 360

EastBound
A: 479
B: 190

WestBound
A: 505
B: 93

NorthBound
A: 40
B: 51

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{51 + 356 + 505 + 190}{1375} = 0.801$$

LOS = D

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Victory Bl **I/S No:** 15

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	109	841	199	230	1077	234	317	1562	70	63	1309	235
AMBIENT												
RELATED												
PROJECT												
TOTAL	109	841	199	230	1077	234	317	1562	70	63	1309	235

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		1		1		
SOUTHBOUND	1		2		1		
WESTBOUND	1		2		1		
EASTBOUND	1		2		1		

SIGNAL

	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Prot-Fix	Auto
EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 437
B: 230

EastBound
A: 515
B: 63

WestBound
A: 544
B: 317

NorthBound
A: 520
B: 109

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{520 + 230 + 317 + 515}{1375} = 1.151$$

LOS = F

Developed by Chun Wong, 12/94

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Topham St **W/E:** Victory Bl **I/S No:** 16

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	373	0	5	0	0	0	0	2015	0	0	1288	451
AMBIENT												
RELATED												
PROJECT												
TOTAL	373	0	5	0	0	0	0	2015	0	0	1288	451

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1					1	
LANE SOUTHBOUND							
LANE WESTBOUND			2				
LANE EASTBOUND			2			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	<none>	Perm	<none>	Perm	OLA

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	644	0
WestBound	1008	0
NorthBound	5	373

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{373 + 0 + 1008 + 0}{1425} = 0.969$$

LOS = E

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Corbin Ave **W/E:** Victory Bl **I/S No:** 17

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	37	627	97	173	833	323	178	1633	163	98	1099	16
AMBIENT												
RELATED												
PROJECT												
TOTAL	37	627	97	173	833	323	178	1633	163	98	1099	16

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 578
B: 173

EastBound
A: 558
B: 98

WestBound
A: 898
B: 178

NorthBound
A: 362
B: 37

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{37 + 578 + 898 + 98}{1500} = 1.074$$

LOS = F

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Tampa Ave **W/E:** Victory Bl **I/S No:** 18

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	98	733	113	277	1208	234	85	1531	92	58	1445	46
AMBIENT												
RELATED												
PROJECT												
TOTAL	98	733	113	277	1208	234	85	1531	92	58	1445	46

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2			1	
LANE SOUTHBOUND	1		2			1	
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	604	277
EastBound	746	58
WestBound	812	85
NorthBound	367	98

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{98 + 604 + 812 + 58}{1425} = 1.103$$

LOS = F

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Wilbur Ave

W/E: Victory Bl

I/S No: 19

AM/PM: **AM**

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	78	606	101	173	1239	167	78	1607	112	61	1651	129
AMBIENT												
RELATED												
PROJECT												
TOTAL	78	606	101	173	1239	167	78	1607	112	61	1651	129

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 703
B: 173

EastBound
A: 890
B: 61

WestBound
A: 860
B: 78

NorthBound
A: 354
B: 78

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{78 + 703 + 78 + 890}{1500} = 1.166$$

LOS = F

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Reseda Bl

W/E: Victory Bl

I/S No: 20

AM/PM: AM

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	76	788	125	109	1068	176	98	1492	114	110	1822	73
AMBIENT												
RELATED												
PROJECT												
TOTAL	76	788	125	109	1068	176	98	1492	114	110	1822	73

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		2			1	
LANE EASTBOUND	1		2		1		

	Phasing	RTOR
SIGNAL NORTHBOUND	Prot-Fix	Auto
SIGNAL SOUTHBOUND	Prot-Fix	Auto
SIGNAL WESTBOUND	Prot-Fix	Auto
SIGNAL EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 622
B: 109

EastBound
A: 632
B: 110

WestBound
A: 746
B: 98

NorthBound
A: 457
B: 76

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{76 + 622 + 746 + 110}{1375} = 1.130$$

LOS = F

CBAM January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** El Rancho Dr **I/S No:** 21

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	2	1762	108	31	2458	0	9	0	27	2	0	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	1762	108	31	2458	0	9	0	27	2	0	2

LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1				1		
LANE EASTBOUND	1				1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	<none>

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	819	2	27	623
B:	31	2	9	2

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{2 + 819 + 27 + 2}{1500} = 0.567$$

LOS = A

Developed by Chun Wong, 12/94

CBAM

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Erwin St **I/S No:** 22

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	172	1376	7	30	2223	173	31	23	46	54	4	178
AMBIENT												
RELATED												
PROJECT												
TOTAL	172	1376	7	30	2223	173	31	23	46	54	4	178

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1			1		1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	799	30
EastBound	91	54
WestBound	46	31
NorthBound	461	172

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{172 + 799 + 46 + 91}{1425} = 0.778$$

LOS = C

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Brahma Dr/Calvert St **I/S No:** 23

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	155	1051	0	4	1267	139	52	23	68	39	0	38
AMBIENT												
RELATED												
PROJECT												
TOTAL	155	1051	0	4	1267	139	52	23	68	39	0	38

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2				
LANE SOUTHBOUND			2			1	
LANE WESTBOUND	1				1		
LANE EASTBOUND	2					1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	OLA	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound
A: 634
B: 0

EastBound
A: 0
B: 21

WestBound
A: 91
B: 52

NorthBound
A: 526
B: 155

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{155 + 634 + 91 + 21}{1375} = 0.655$$

LOS = B

CBAM

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave
W/E: Oxnard St
I/S No: 24

AM/PM: AM
Comments: Cumulative Base

COUNT DATE:
STUDY DATE:
GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	127	1429	31	54	2267	238	241	466	62	57	166	82
AMBIENT												
RELATED												
PROJECT												
TOTAL	127	1429	31	54	2267	238	241	466	62	57	166	82

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
SOUTHBOUND	1		2		1		
WESTBOUND	1		1		1		
EASTBOUND	1		1			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 835
B: 54

EastBound
A: 166
B: 57

WestBound
A: 264
B: 241

NorthBound
A: 487
B: 127

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{127 + 835 + 241 + 166}{1500} = 0.913$$

LOS = E

Developed by Chun Wong, 12/94

CBAM

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave

W/E: Oxnard St

I/S No: 25

AM/PM: AM

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	52	1096	48	32	1456	230	58	260	13	151	287	69
AMBIENT												
RELATED												
PROJECT												
TOTAL	52	1096	48	32	1456	230	58	260	13	151	287	69

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND				1			
LANE EASTBOUND	1		1			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 843
B: 32

EastBound
A: 287
B: 151

WestBound
A: 331
B: 58

NorthBound
A: 572
B: 52

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{52 + 843 + 331 + 151}{1500} = 0.918$$

LOS = E

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Burbank Bl **I/S No:** 26

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	242	1617	0	0	1605	690	0	0	0	164	0	129
AMBIENT												
RELATED												
PROJECT												
TOTAL	242	1617	0	0	1605	690	0	0	0	164	0	129

LANE	1		3							2		1											2					2	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	<none>	Perm	Auto			Split	Auto

Critical Movements Diagram

SouthBound
A: 765
B: 0

EastBound
A: 71
B: 90

WestBound
A: 0
B: 0

NorthBound
A: 539
B: 242

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{242 + 765 + 0 + 90}{1500} = 0.731$$

LOS = C

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: 101 WB Ramps

I/S No: 27

AM/PM: AM

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	192	1469	0	0	1213	598	157	5	647	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	192	1469	0	0	1213	598	157	5	647	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2							4			1		1			1		1								

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix		Perm	Auto	Split	Auto		

Critical Movements Diagram

SouthBound
A: 598
B: 0

EastBound
A: 0
B: 0

WestBound
A: 326
B: 157

NorthBound
A: 735
B: 192

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{192 + 598 + 326 + 0}{1425} = 0.783$$

LOS = C

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** 101 EB Ramps **I/S No:** 28

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	848	129	1006	419	0	0	0	0	728	5	439
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	848	129	1006	419	0	0	0	0	728	5	439

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE			3			1		2		2												1	1				1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	<none>	Prot-Fix	<none>			Split	Auto

Critical Movements Diagram

SouthBound
A: 210
B: 553

EastBound
A: 439
B: 367

WestBound
A: 0
B: 0

NorthBound
A: 283
B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{283 + 553 + 0 + 439}{1425} = 0.895$$

LOS = D

Developed by Chun Wong, 12/94

CBAM

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave W/E: Ventura Bl I/S No: 29

AM/PM: AM Comments: Cumulative Base

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	103	283	146	708	205	415	67	1276	450	252	1323	67
AMBIENT												
RELATED												
PROJECT												
TOTAL	103	283	146	708	205	415	67	1276	450	252	1323	67

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	2		1			1	
LANE WESTBOUND	1		3			1	
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 205
B: 389

EastBound
A: 463
B: 252

WestBound
A: 425
B: 67

NorthBound
A: 215
B: 103

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{215 + 389 + 425 + 252}{1375} = 0.932$$

LOS = E

Developed by Chun Wong, 12/94

CBAM

January 28, 2010 ,Thursday 12:33:46 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** 101 WB Ramps **I/S No:** 30

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	152	865	0	0	1065	466	360	2	505	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	152	865	0	0	1065	466	360	2	505	0	0	0

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2				
LANE SOUTHBOUND			2			1	
LANE WESTBOUND	1			1		1	
LANE EASTBOUND							

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Prot-Fix	<none>	Perm	Auto	Split	Auto		

Critical Movements Diagram

SouthBound
A: 533
B: 0

EastBound
A: 0
B: 0

↑

WestBound
A: 289
B: 289

NorthBound
A: 433
B: 152

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{152 + 533 + 289 + 0}{1425} = 0.684$$

LOS = B

Developed by Chun Wong, 12/94

CBAM

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** 101 EB Ramps **I/S No:** 31

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	621	211	474	950	0	0	0	0	396	0	230
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	621	211	474	950	0	0	0	0	396	0	230

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND			1		1	1	
LANE SOUTHBOUND	1		2				
LANE WESTBOUND							
LANE EASTBOUND	1					1	

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Perm	<none>	Prot-Fix	<none>			Split	Auto

Critical Movements Diagram

SouthBound
A: 475
B: 474

EastBound
A: 230
B: 396

WestBound
A: 0
B: 0

NorthBound
A: 311
B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{311 + 474 + 0 + 396}{1425} = 0.829$$

LOS = D

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:33:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Ventura Bl **I/S No:** 32

AM/PM: AM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	90	328	36	335	412	329	82	792	218	288	1393	84
AMBIENT												
RELATED												
PROJECT												
TOTAL	90	328	36	335	412	329	82	792	218	288	1393	84

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1				1		
LANE SOUTHBOUND	2		1			1	
LANE WESTBOUND	1		2			1	
LANE EASTBOUND	1		2		1		

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Split	Auto	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	412	184
EastBound	492	288
WestBound	396	82
NorthBound	364	90

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{364 + 412 + 396 + 288}{1375} = 1.062$$

LOS = F

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Saticoy St **I/S No:** 1

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	101	1333	140	127	1099	146	101	886	105	140	1169	78
AMBIENT												
RELATED												
PROJECT												
TOTAL	101	1333	140	127	1099	146	101	886	105	140	1169	78

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		2		1		
LANE SB	1		1		1		
LANE WB	1		1		1		
LANE EB	1		1		1		

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	623	127
EastBound	624	140
WestBound	496	101
NorthBound	491	101

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{101 + 623 + 101 + 624}{1375} = 1.054$$

LOS = F

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave

W/E: Saticoy St

I/S No: 2

AM/PM: PM

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	101	923	83	116	782	128	94	978	81	169	1191	109
AMBIENT												
RELATED												
PROJECT												
TOTAL	101	923	83	116	782	128	94	978	81	169	1191	109

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 455
B: 116

EastBound
A: 650
B: 169

WestBound
A: 530
B: 94

NorthBound
A: 503
B: 101

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{503 + 116 + 94 + 650}{1500} = 0.909$$

LOS = E

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Saticoy St **I/S No:** 3

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	142	1111	120	166	1046	163	87	850	157	134	968	126
AMBIENT												
RELATED												
PROJECT												
TOTAL	142	1111	120	166	1046	163	87	850	157	134	968	126

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2			1	
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 523
B: 166

EastBound
A: 547
B: 134

↑

WestBound
A: 504
B: 87

NorthBound
A: 616
B: 142

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{616 + 166 + 504 + 134}{1500} = 0.947$$

LOS = E

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Sherman Way **I/S No:** 4

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	121	1749	297	110	1046	162	178	1062	139	186	1815	153
AMBIENT												
RELATED												
PROJECT												
TOTAL	121	1749	297	110	1046	162	178	1062	139	186	1815	153

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		2		1		
LANE SB	1		1		1		
LANE WB	1		2		1		
LANE EB	1		2		1		

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 604
B: 110

EastBound
A: 656
B: 186

WestBound
A: 400
B: 178

NorthBound
A: 682
B: 121

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{682 + 110 + 178 + 656}{1425} = 1.141$$

LOS = F

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Sherman Way **I/S No:** 5

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	72	911	64	112	700	143	83	1139	89	149	1265	54
AMBIENT												
RELATED												
PROJECT												
TOTAL	72	911	64	112	700	143	83	1139	89	149	1265	54

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 422
B: 112

EastBound
A: 440
B: 149

WestBound
A: 409
B: 83

NorthBound
A: 488
B: 72

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{488 + 112 + 409 + 149}{1500} = 0.772$$

LOS = C

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Sherman Way **I/S No:** 6

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	172	1148	95	179	939	156	90	986	156	154	1114	111
AMBIENT												
RELATED												
PROJECT												
TOTAL	172	1148	95	179	939	156	90	986	156	154	1114	111

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		1		1		
SOUTHBOUND	1		2			1	
WESTBOUND	1		2		1		
EASTBOUND	1		2		1		

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Prot-Fix	Auto
EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 470
B: 179

EastBound
A: 408
B: 154

WestBound
A: 381
B: 90

NorthBound
A: 622
B: 172

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{622 + 179 + 381 + 154}{1375} = 0.972$$

LOS = E

Developed by Chun Wong, 12/94

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Vanowen St **I/S No:** 7

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	62	1618	124	117	992	220	109	929	143	179	1432	104
AMBIENT												
RELATED												
PROJECT												
TOTAL	62	1618	124	117	992	220	109	929	143	179	1432	104

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2		1		
SOUTHBOUND	1		1		1		
WESTBOUND	1		2			1	
EASTBOUND	1		2		1		

SIGNAL

	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Prot-Fix	Auto
EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	606	117
EastBound	512	179
WestBound	465	109
NorthBound	581	62

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{581 + 117 + 465 + 179}{1375} = 0.976$$

LOS = E

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Vanowen St **I/S No:** 8

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	34	678	44	102	529	138	54	944	91	214	1212	63
AMBIENT												
RELATED												
PROJECT												
TOTAL	34	678	44	102	529	138	54	944	91	214	1212	63

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 334
B: 102

EastBound
A: 638
B: 214

WestBound
A: 518
B: 54

NorthBound
A: 361
B: 34

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{361 + 102 + 518 + 214}{1500} = 0.797$$

LOS = C

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave

W/E: Vanowen St

I/S No: 9

AM/PM: PM

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	98	1139	101	130	897	94	91	955	120	121	1110	84
AMBIENT												
RELATED												
PROJECT												
TOTAL	98	1139	101	130	897	94	91	955	120	121	1110	84

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 496
B: 130

EastBound
A: 597
B: 121

WestBound
A: 538
B: 91

NorthBound
A: 620
B: 98

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{620 + 130 + 91 + 597}{1425} = 1.009$$

LOS = F

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Shoup Ave **W/E:** Victory Bl **I/S No:** 10

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	203	1445	117	111	749	96	95	998	165	106	932	136
AMBIENT												
RELATED												
PROJECT												
TOTAL	203	1445	117	111	749	96	95	998	165	106	932	136

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2			1	
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		2			1	
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 423
B: 111

EastBound
A: 534
B: 106

WestBound
A: 499
B: 95

NorthBound
A: 723
B: 203

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{723 + 111 + 95 + 534}{1500} = 0.975$$

LOS = E

Developed by Chun Wong, 12/94

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Topanga Canyon Bl **W/E:** Victory Bl **I/S No:** 11

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	216	1677	376	262	1161	127	304	936	252	160	913	183
AMBIENT												
RELATED												
PROJECT												
TOTAL	216	1677	376	262	1161	127	304	936	252	160	913	183

LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	2		3			1	
LANE EASTBOUND	2		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 429
B: 262

EastBound
A: 365
B: 88

WestBound
A: 312
B: 167

NorthBound
A: 684
B: 216

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{684 + 262 + 167 + 365}{1375} = 1.075$$

LOS = F

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Canoga Ave

W/E: Victory Bl

I/S No: 12

AM/PM: PM

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	210	1569	384	127	966	152	231	1157	208	151	1336	230
AMBIENT												
RELATED												
PROJECT												
TOTAL	210	1569	384	127	966	152	231	1157	208	151	1336	230

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2		1			1		2		1			1		3		1			1		3			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound
A: 373
B: 127

EastBound
A: 445
B: 151

WestBound
A: 341
B: 231

NorthBound
A: 651
B: 210

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{651 + 127 + 231 + 445}{1375} = 1.057$$

LOS = F

Developed by Chun Wong, 12/94

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Victory Bl **I/S No:** 13

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	72	1252	457	107	896	197	256	1128	117	446	1896	133
AMBIENT												
RELATED												
PROJECT												
TOTAL	72	1252	457	107	896	197	256	1128	117	446	1896	133

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1		2		1			1		2		1			2		3			1		2		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 364
B: 107

EastBound
A: 676
B: 245

WestBound
A: 376
B: 141

NorthBound
A: 570
B: 72

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{570 + 107 + 141 + 676}{1375} = 1.087$$

LOS = F

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Victory Bl **I/S No:** 14

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	87	159	70	160	136	242	20	1187	186	377	1862	118
AMBIENT												
RELATED												
PROJECT												
TOTAL	87	159	70	160	136	242	20	1187	186	377	1862	118

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1			2	
LANE WESTBOUND	1		3			1	
LANE EASTBOUND	1		3			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	136	621	396	115
B:	160	377	20	87

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{115 + 160 + 396 + 377}{1375} = 0.762$$

LOS = C

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Victory Bl **I/S No:** 15

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	135	1019	134	174	780	125	127	1305	145	239	1612	174
AMBIENT												
RELATED												
PROJECT												
TOTAL	135	1019	134	174	780	125	127	1305	145	239	1612	174

LANE	1		1		1			1		2		1			1		2		1			1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 302
B: 174

EastBound
A: 595
B: 239

WestBound
A: 483
B: 127

NorthBound
A: 577
B: 135

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{577 + 174 + 127 + 595}{1375} = 1.071$$

LOS = F

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Topham St **W/E:** Victory Bl **I/S No:** 16

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	311	0	6	0	0	0	0	1420	0	0	1704	351
AMBIENT												
RELATED												
PROJECT												
TOTAL	311	0	6	0	0	0	0	1420	0	0	1704	351

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1					1	
LANE SOUTHBOUND	0	0	0	0	0	0	0
LANE WESTBOUND			2				
LANE EASTBOUND			2			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	Auto	Perm	<none>	Perm	OLA

Critical Movements Diagram

SouthBound
A: 0
B: 0

EastBound
A: 852
B: 0

WestBound
A: 710
B: 0

NorthBound
A: 6
B: 311

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{311 + 0 + 0 + 852}{1425} = 0.816$$

LOS = D

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Corbin Ave **W/E:** Victory Bl **I/S No:** 17

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	36	867	144	131	464	157	87	1376	366	151	1449	31
AMBIENT												
RELATED												
PROJECT												
TOTAL	36	867	144	131	464	157	87	1376	366	151	1449	31

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 311
B: 131

EastBound
A: 740
B: 151

WestBound
A: 871
B: 87

NorthBound
A: 506
B: 36

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{506 + 131 + 871 + 151}{1500} = 1.106$$

LOS = F

Developed by Chun Wong, 12/94

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Tampa Ave **W/E:** Victory Bl **I/S No:** 18

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	174	1191	114	205	658	133	61	1530	204	107	1747	40
AMBIENT												
RELATED												
PROJECT												
TOTAL	174	1191	114	205	658	133	61	1530	204	107	1747	40

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2			1	
LANE SOUTHBOUND	1		2			1	
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 329
B: 205

EastBound
A: 894
B: 107

↑

WestBound
A: 867
B: 61

NorthBound
A: 596
B: 174

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{596 + 205 + 867 + 107}{1425} = 1.246$$

LOS = F

CBPM January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Wilbur Ave **W/E:** Victory Bl **I/S No:** 19

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	149	810	95	109	545	103	66	1481	219	136	1762	76
AMBIENT												
RELATED												
PROJECT												
TOTAL	149	810	95	109	545	103	66	1481	219	136	1762	76

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	324	109
EastBound	919	136
WestBound	850	66
NorthBound	453	149

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{453 + 109 + 850 + 136}{1500} = 1.032$$

LOS = F

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Reseda Bl **W/E:** Victory Bl **I/S No:** 20

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	124	1135	118	94	854	172	103	1462	165	141	1652	115
AMBIENT												
RELATED												
PROJECT												
TOTAL	124	1135	118	94	854	172	103	1462	165	141	1652	115

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		1		1		
SOUTHBOUND	1		1		1		
WESTBOUND	1		2			1	
EASTBOUND	1		2		1		

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Prot-Fix	Auto
EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	513	94
EastBound	589	141
WestBound	731	103
NorthBound	627	124

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{627 + 94 + 731 + 141}{1375} = 1.159$$

LOS = F

Developed by Chun Wong, 12/94

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave
W/E: El Rancho Dr
I/S No: 21
AM/PM: PM
Comments: Cumulative Base
COUNT DATE:
STUDY DATE:
GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	7	2024	190	6	1380	1	24	0	-1	2	0	6
AMBIENT												
RELATED												
PROJECT												
TOTAL	7	2024	190	6	1380	1	24	0	-1	2	0	6

LANE	1		2		1			1		2		1			1				1			1				1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	<none>

Critical Movements Diagram

SouthBound
A: 460
B: 6

EastBound
A: 6
B: 2

WestBound
A: 0
B: 24

NorthBound
A: 738
B: 7

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{738 + 6 + 24 + 6}{1500} = 0.516$$

LOS = A

Developed by Chun Wong, 12/94

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Erwin St **I/S No:** 22

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	143	1854	43	44	1147	215	17	16	23	213	23	283
AMBIENT												
RELATED												
PROJECT												
TOTAL	143	1854	43	44	1147	215	17	16	23	213	23	283

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1			1		1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	454	44
EastBound	173	173
WestBound	23	17
NorthBound	632	143

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{632 + 44 + 23 + 173}{1425} = 0.612$$

LOS = B

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Brahma Dr/Calvert St **I/S No:** 23

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	79	1323	0	11	864	74	19	4	22	130	0	91
AMBIENT												
RELATED												
PROJECT												
TOTAL	79	1323	0	11	864	74	19	4	22	130	0	91

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		2				
LANE SB			2			1	
LANE WB	1				1		
LANE EB	2					1	

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	<none>	Perm	OLA	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound
A: 432
B: 0

EastBound
A: 51
B: 72

WestBound
A: 26
B: 19

NorthBound
A: 662
B: 79

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{662 + 0 + 26 + 72}{1375} = 0.553$$

LOS = A

Developed by Chun Wong, 12/94

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Oxnard St **I/S No:** 24

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	128	1817	177	49	1261	184	29	222	25	227	444	242
AMBIENT												
RELATED												
PROJECT												
TOTAL	128	1817	177	49	1261	184	29	222	25	227	444	242

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 482
B: 49

EastBound
A: 444
B: 227

WestBound
A: 124
B: 29

NorthBound
A: 665
B: 128

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{665 + 49 + 29 + 444}{1500} = 0.791$$

LOS = C

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Oxnard St **I/S No:** 25

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	94	1232	63	32	952	108	12	63	18	177	478	59
AMBIENT												
RELATED												
PROJECT												
TOTAL	94	1232	63	32	952	108	12	63	18	177	478	59

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND				1			
LANE EASTBOUND	1		1			1	

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 530
B: 32

EastBound
A: 478
B: 177

WestBound
A: 93
B: 12

NorthBound
A: 648
B: 94

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{648 + 32 + 12 + 478}{1500} = 0.780$$

LOS = C

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Burbank Bl **I/S No:** 26

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	88	1413	0	0	1832	168	0	0	0	649	0	535
AMBIENT												
RELATED												
PROJECT												
TOTAL	88	1413	0	0	1832	168	0	0	0	649	0	535

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1		3							2		1										2					2	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	<none>	Perm	Auto			Split	Auto

Critical Movements Diagram

	A	B
SouthBound	667	0
EastBound	294	357
WestBound	0	0
NorthBound	471	88

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{88 + 667 + 0 + 357}{1500} = 0.741$$

LOS = C

Developed by Chun Wong, 12/94

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** 101 WB Ramps **I/S No:** 27

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

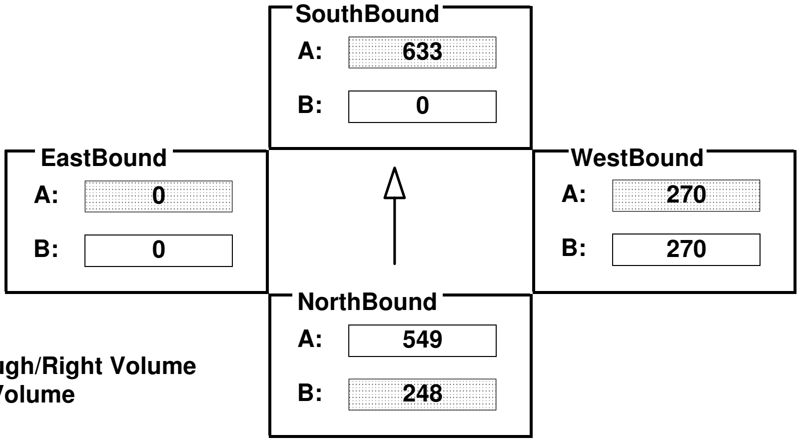
Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	248	1098	0	0	1521	633	283	0	527	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	248	1098	0	0	1521	633	283	0	527	0	0	0

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2							4			1		1			1		1								

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix		Perm	<none>	Split	Auto		

Critical Movements Diagram



SouthBound
A: 633
B: 0

EastBound
A: 0
B: 0

WestBound
A: 270
B: 270

NorthBound
A: 549
B: 248

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{248 + 633 + 270 + 0}{1425} = 0.808$$

LOS = D

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** 101 EB Ramps **I/S No:** 28

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	805	253	917	841	0	0	0	0	564	3	237
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	805	253	917	841	0	0	0	0	564	3	237

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND			3			1	
LANE SOUTHBOUND	2		2				
LANE WESTBOUND							
LANE EASTBOUND	1	1				1	

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Perm	Auto	Prot-Fix	<none>			Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	421	504
EastBound	284	284
WestBound	0	0
NorthBound	268	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{268 + 504 + 0 + 284}{1425} = 0.741$$

LOS = C

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Ventura Bl **I/S No:** 29

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	66	213	88	489	250	361	66	1162	465	337	1084	76
AMBIENT												
RELATED												
PROJECT												
TOTAL	66	213	88	489	250	361	66	1162	465	337	1084	76

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	2		1			1	
LANE WESTBOUND	1		3			1	
LANE EASTBOUND	1		2		1		

SIGNAL	Phasing	RTOR
NORTHBOUND	Split	Auto
SOUTHBOUND	Split	OLA
WESTBOUND	Perm	OLA
EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 250
B: 269

EastBound
A: 387
B: 337

WestBound
A: 387
B: 66

NorthBound
A: 151
B: 66

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{151 + 269 + 387 + 337}{1375} = 0.832$$

LOS = D

Developed by Chun Wong, 12/94

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** 101 WB Ramps **I/S No:** 30

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	207	825	0	0	816	298	318	13	534	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	207	825	0	0	816	298	318	13	534	0	0	0

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2							2			1		1			1		1								

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	<none>	Split	Auto		

Critical Movements Diagram

SouthBound
A: 408
B: 0

EastBound
A: 0
B: 0

WestBound
A: 288
B: 288

NorthBound
A: 413
B: 207

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{207 + 408 + 288 + 0}{1425} = 0.634$$

LOS = B

Developed by Chun Wong, 12/94

CBPM

CalcaDB

January 28, 2010 ,Thursday 12:33:59 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave

W/E: 101 EB Ramps

I/S No: 31

AM/PM: **PM**

Comments: Cumulative Base

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	715	279	353	708	0	0	0	0	431	0	199
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	715	279	353	708	0	0	0	0	431	0	199

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE			1		1	1		1		2												1					1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	<none>			Split	Auto

Critical Movements Diagram

SouthBound
A: 354
B: 353

EastBound
A: 199
B: 431

WestBound
A: 0
B: 0

NorthBound
A: 358
B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{358 + 353 + 0 + 431}{1425} = 0.801$$

LOS = D

Developed by Chun Wong, 12/94

CBPM

January 28, 2010 ,Thursday 12:33:59 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Ventura Bl **I/S No:** 32

AM/PM: PM **Comments:** Cumulative Base

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	106	401	46	294	351	218	93	779	310	313	950	109
AMBIENT												
RELATED												
PROJECT												
TOTAL	106	401	46	294	351	218	93	779	310	313	950	109

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1				1		
SOUTHBOUND	2		1			1	
WESTBOUND	1		2			1	
EASTBOUND	1		2		1		

SIGNAL

	Phasing	RTOR
NORTHBOUND	Split	Auto
SOUTHBOUND	Split	OLA
WESTBOUND	Perm	OLA
EASTBOUND	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 351
B: 162

EastBound
A: 353
B: 313

WestBound
A: 390
B: 93

NorthBound
A: 447
B: 106

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{447 + 351 + 390 + 313}{1375} = 1.092$$

LOS = F

CUMULATIVE PLUS PROJECT (2015) CONDITIONS

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Saticoy St **I/S No:** 1

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	134	950	130	95	1435	146	142	1149	69	112	888	87
AMBIENT												
RELATED												
PROJECT												
TOTAL	134	950	130	95	1435	146	142	1149	69	112	888	87

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 527
B: 95

EastBound
A: 488
B: 112

WestBound
A: 609
B: 142

NorthBound
A: 540
B: 134

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{134 + 527 + 609 + 112}{1375} = 1.005$$

LOS = F

Developed by Chun Wong, 12/94

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Saticoy St **I/S No:** 2

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	102	847	82	112	1201	121	118	1045	92	111	967	91
AMBIENT												
RELATED												
PROJECT												
TOTAL	102	847	82	112	1201	121	118	1045	92	111	967	91

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		1		1		
SOUTHBOUND	1		1		1		
WESTBOUND	1		1		1		
EASTBOUND	1		1		1		

SIGNAL	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 661
B: 112

EastBound
A: 529
B: 111

↑

WestBound
A: 569
B: 118

NorthBound
A: 465
B: 102

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{102 + 661 + 569 + 111}{1500} = 0.962$$

LOS = E

Developed by Chun Wong, 12/94

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Saticoy St **I/S No:** 3

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	110	818	121	130	1157	133	96	960	133	118	877	129
AMBIENT												
RELATED												
PROJECT												
TOTAL	110	818	121	130	1157	133	96	960	133	118	877	129

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		2			1		1		1		1			1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	579	130
EastBound	503	118
WestBound	547	96
NorthBound	470	110

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{110 + 579 + 547 + 118}{1500} = 0.903$$

LOS = E

Developed by Chun Wong, 12/94

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Sherman Way **I/S No:** 4

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	85	972	104	112	1627	167	183	1190	116	102	1158	89
AMBIENT												
RELATED												
PROJECT												
TOTAL	85	972	104	112	1627	167	183	1190	116	102	1158	89

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 598
B: 112

EastBound
A: 416
B: 102

WestBound
A: 435
B: 183

NorthBound
A: 538
B: 85

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{85 + 598 + 183 + 416}{1425} = 0.900$$

LOS = D

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Sherman Way **I/S No:** 5

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	73	585	45	120	1140	147	100	1341	98	99	1071	71
AMBIENT												
RELATED												
PROJECT												
TOTAL	73	585	45	120	1140	147	100	1341	98	99	1071	71

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 644
B: 120

EastBound
A: 381
B: 99

WestBound
A: 480
B: 100

NorthBound
A: 315
B: 73

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{73 + 644 + 480 + 99}{1500} = 0.864$$

LOS = D

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Sherman Way **I/S No:** 6

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	114	804	93	119	1285	122	148	1192	198	125	981	157
AMBIENT												
RELATED												
PROJECT												
TOTAL	114	804	93	119	1285	122	148	1192	198	125	981	157

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2			1	
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 643
B: 119

EastBound
A: 379
B: 125

↑

WestBound
A: 463
B: 148

NorthBound
A: 449
B: 114

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{114 + 643 + 463 + 125}{1375} = 0.978$$

LOS = E

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Vanowen St **I/S No:** 7

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	54	957	106	125	1311	186	210	1140	117	83	1007	82
AMBIENT												
RELATED												
PROJECT												
TOTAL	54	957	106	125	1311	186	210	1140	117	83	1007	82

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		2			1	
LANE EASTBOUND	1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	499	125
EastBound	363	83
WestBound	570	210
NorthBound	532	54

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{532 \quad + \quad 125 \quad + \quad 570 \quad + \quad 83}{1375} = 0.953$$

LOS = E

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Vanowen St **I/S No:** 8

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

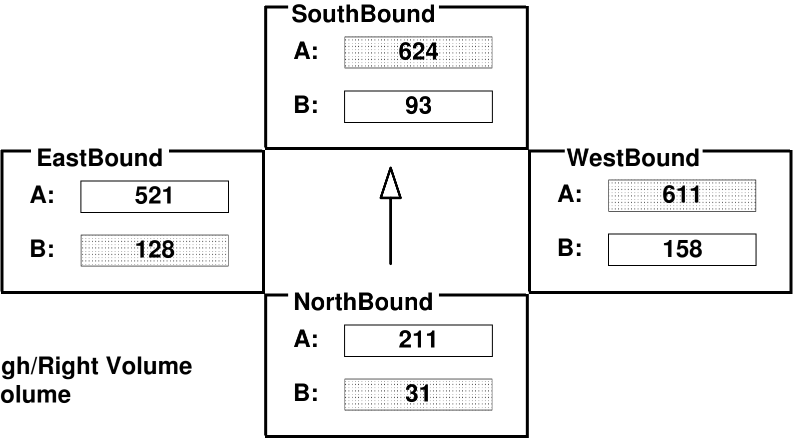
Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	31	374	48	93	1041	206	158	1125	97	128	959	82
AMBIENT												
RELATED												
PROJECT												
TOTAL	31	374	48	93	1041	206	158	1125	97	128	959	82

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram



SouthBound
A: 624
B: 93

EastBound
A: 521
B: 128

WestBound
A: 611
B: 158

NorthBound
A: 211
B: 31

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{31 + 624 + 611 + 128}{1500} = 0.929$$

LOS = E

Developed by Chun Wong, 12/94

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave W/E: Vanowen St I/S No: 9

AM/PM: **AM** Comments: Cumulative Plus Project

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	91	702	106	122	1256	141	121	1049	106	69	837	86
AMBIENT												
RELATED												
PROJECT												
TOTAL	91	702	106	122	1256	141	121	1049	106	69	837	86

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 699
B: 122

EastBound
A: 462
B: 69

WestBound
A: 578
B: 121

NorthBound
A: 404
B: 91

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{91 + 699 + 578 + 69}{1425} = 1.008$$

LOS = F

Developed by Chun Wong, 12/94

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Shoup Ave

W/E: Victory Bl

I/S No: 10

AM/PM: AM

Comments: Cumulative Plus Project

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	110	749	50	135	1351	77	107	815	84	103	996	283
AMBIENT												
RELATED												
PROJECT												
TOTAL	110	749	50	135	1351	77	107	815	84	103	996	283

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2			1	
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		2			1	
LANE EASTBOUND	1		1		1		

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 714
B: 135

EastBound
A: 640
B: 103

↑

WestBound
A: 408
B: 107

NorthBound
A: 375
B: 110

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{110 + 714 + 107 + 640}{1500} = 1.047$$

LOS = F

Developed by Chun Wong, 12/94

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Topanga Canyon Bl **W/E:** Victory Bl **I/S No:** 11

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	144	869	204	186	1422	108	224	708	128	70	1022	144
AMBIENT												
RELATED												
PROJECT												
TOTAL	144	869	204	186	1422	108	224	708	128	70	1022	144

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2		1		
SOUTHBOUND	1		2		1		
WESTBOUND	2		3			1	
EASTBOUND	2		2		1		

SIGNAL

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 510
B: 186

EastBound
A: 389
B: 39

WestBound
A: 236
B: 123

NorthBound
A: 358
B: 144

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{144 + 510 + 123 + 389}{1375} = 0.848$$

LOS = D

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Canoga Ave **W/E:** Victory Bl **I/S No:** 12

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	134	873	118	137	1207	98	239	1069	67	92	923	163
AMBIENT												
RELATED												
PROJECT												
TOTAL	134	873	118	137	1207	98	239	1069	67	92	923	163

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		3		1		
LANE EASTBOUND	1		3			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound
A: 435
B: 137

EastBound
A: 308
B: 92

WestBound
A: 284
B: 239

NorthBound
A: 330
B: 134

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{134 + 435 + 239 + 308}{1375} = 0.812$$

LOS = D

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Victory Bl **I/S No:** 13

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	71	845	165	84	1395	187	515	1411	102	85	1054	50
AMBIENT												
RELATED												
PROJECT												
TOTAL	71	845	165	84	1395	187	515	1411	102	85	1054	50

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	2		3			1	
LANE EASTBOUND	2		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 527
B: 84

EastBound
A: 368
B: 47

WestBound
A: 470
B: 283

NorthBound
A: 337
B: 71

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{71 + 527 + 283 + 368}{1375} = 0.908$$

LOS = E

Developed by Chun Wong, 12/94

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave

W/E: Victory Bl

I/S No: 14

AM/PM: AM

Comments: Cumulative Plus Project

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	57	62	30	362	312	647	128	1515	112	190	1439	190
AMBIENT												
RELATED												
PROJECT												
TOTAL	57	62	30	362	312	647	128	1515	112	190	1439	190

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1			2	
LANE WESTBOUND	1		3			1	
LANE EASTBOUND	1		3			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	356	362
EastBound	480	190
WestBound	505	128
NorthBound	46	57

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{57 + 356 + 505 + 190}{1375} = 0.806$$

LOS = D

Developed by Chun Wong, 12/94

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Victory Bl **I/S No:** 15

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	127	846	202	230	1099	238	332	1577	70	64	1312	243
AMBIENT												
RELATED												
PROJECT												
TOTAL	127	846	202	230	1099	238	332	1577	70	64	1312	243

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE (NORTHBOUND)	1		1		1		
LANE (SOUTHBOUND)	1		2		1		
LANE (WESTBOUND)	1		2		1		
LANE (EASTBOUND)	1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 446
B: 230

EastBound
A: 518
B: 64

↑

WestBound
A: 549
B: 332

NorthBound
A: 524
B: 127

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{524 + 230 + 332 + 518}{1375} = 1.167$$

LOS = F

Developed by Chun Wong, 12/94

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Topham St
W/E: Victory Bl
I/S No: 16
AM/PM: AM
Comments: Cumulative Plus Project
COUNT DATE:
STUDY DATE:
GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	383	0	5	0	0	0	0	2033	0	0	1292	453
AMBIENT												
RELATED												
PROJECT												
TOTAL	383	0	5	0	0	0	0	2033	0	0	1292	453

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1					1	
LANE SOUTHBOUND							
LANE WESTBOUND			2				
LANE EASTBOUND			2			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	Auto	Perm	<none>	Perm	OLA

Critical Movements Diagram

SouthBound
A: 0
B: 0

EastBound
A: 646
B: 0

WestBound
A: 1017
B: 0

NorthBound
A: 5
B: 383

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{383 + 0 + 1017 + 0}{1425} = 0.982$$

LOS = E

Developed by Chun Wong, 12/94

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Corbin Ave
W/E: Victory Bl
I/S No: 17

AM/PM: AM
Comments: Cumulative Plus Project

COUNT DATE:
STUDY DATE:
GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	37	627	97	173	833	327	178	1648	163	99	1102	16
AMBIENT												
RELATED												
PROJECT												
TOTAL	37	627	97	173	833	327	178	1648	163	99	1102	16

	NB							SB							WB							EB						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 580
B: 173

EastBound
A: 559
B: 99

WestBound
A: 906
B: 178

NorthBound
A: 362
B: 37

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{37 + 580 + 906 + 99}{1500} = 1.081$$

LOS = F

Developed by Chun Wong, 12/94

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Tampa Ave **W/E:** Victory Bl **I/S No:** 18

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	98	733	113	277	1208	238	85	1541	92	59	1447	46
AMBIENT												
RELATED												
PROJECT												
TOTAL	98	733	113	277	1208	238	85	1541	92	59	1447	46

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2			1	
LANE SOUTHBOUND	1		2			1	
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 604
B: 277

EastBound
A: 747
B: 59

WestBound
A: 817
B: 85

NorthBound
A: 367
B: 98

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{98 + 604 + 817 + 59}{1425} = 1.107$$

LOS = F

Developed by Chun Wong, 12/94

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Wilbur Ave **W/E:** Victory Bl **I/S No:** 19

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	78	606	101	173	1239	167	78	1617	112	61	1653	129
AMBIENT												
RELATED												
PROJECT												
TOTAL	78	606	101	173	1239	167	78	1617	112	61	1653	129

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 703
B: 173

EastBound
A: 891
B: 61

WestBound
A: 865
B: 78

NorthBound
A: 354
B: 78

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{78 + 703 + 78 + 891}{1500} = 1.167$$

LOS = F

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Reseda Bl
W/E: Victory Bl
I/S No: 20
AM/PM: AM
Comments: Cumulative Plus Project
COUNT DATE:
STUDY DATE:
GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	76	788	125	109	1068	180	98	1498	114	111	1824	73
AMBIENT												
RELATED												
PROJECT												
TOTAL	76	788	125	109	1068	180	98	1498	114	111	1824	73

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE (Northbound)	1		1		1		
LANE (Southbound)	1		1		1		
LANE (Westbound)	1		2			1	
LANE (Eastbound)	1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	624	109
EastBound	632	111
WestBound	749	98
NorthBound	457	76

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{76 + 624 + 749 + 111}{1375} = 1.135$$

LOS = F

Developed by Chun Wong, 12/94

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** El Rancho Dr **I/S No:** 21

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

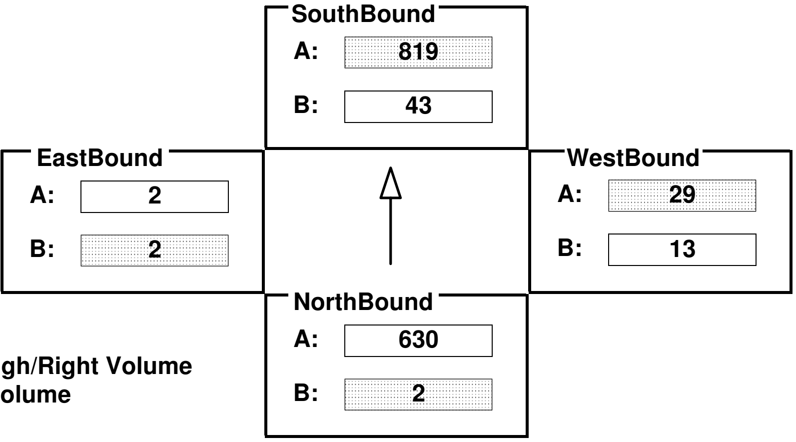
Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	2	1762	129	43	2458	0	13	0	29	2	0	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	1762	129	43	2458	0	13	0	29	2	0	2

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2		1			1		2		1			1				1			1				1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	<none>

Critical Movements Diagram



SouthBound
A: 819
B: 43

EastBound
A: 2
B: 2

WestBound
A: 29
B: 13

NorthBound
A: 630
B: 2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{2 \quad + \quad 819 \quad + \quad 29 \quad + \quad 2}{1500} = 0.568$$

LOS = A

Developed by Chun Wong, 12/94

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: Erwin St

I/S No: 22

AM/PM: AM

Comments: Cumulative Plus Project

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	172	1397	7	30	2227	173	31	23	46	54	4	178
AMBIENT												
RELATED												
PROJECT												
TOTAL	172	1397	7	30	2227	173	31	23	46	54	4	178

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1			1		1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	800	30
EastBound	91	54
WestBound	46	31
NorthBound	468	172

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{172 + 800 + 46 + 91}{1425} = 0.778$$

LOS = C

Developed by Chun Wong, 12/94

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Brahma Dr/Calvert St **I/S No:** 23

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	186	1067	0	4	1270	181	52	23	68	47	0	44
AMBIENT												
RELATED												
PROJECT												
TOTAL	186	1067	0	4	1270	181	52	23	68	47	0	44

LANE	1		2							2			1		1				1			2					1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	OLA	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound
A: 635
B: 0

EastBound
A: 0
B: 26

WestBound
A: 91
B: 52

NorthBound
A: 534
B: 186

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{186 + 635 + 91 + 26}{1375} = 0.682$$

LOS = B

Developed by Chun Wong, 12/94

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Oxnard St **I/S No:** 24

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	127	1447	31	54	2271	239	241	467	62	59	168	82
AMBIENT												
RELATED												
PROJECT												
TOTAL	127	1447	31	54	2271	239	241	467	62	59	168	82

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 837
B: 54

EastBound
A: 168
B: 59

WestBound
A: 265
B: 241

NorthBound
A: 493
B: 127

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{127 + 837 + 241 + 168}{1500} = 0.915$$

LOS = E

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave
W/E: Oxnard St
I/S No: 25
AM/PM: AM
Comments: Cumulative Plus Project
COUNT DATE:
STUDY DATE:
GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	52	1139	48	33	1465	231	58	260	15	153	287	69
AMBIENT												
RELATED												
PROJECT												
TOTAL	52	1139	48	33	1465	231	58	260	15	153	287	69

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND				1			
LANE EASTBOUND	1		1			1	

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 848
B: 33

EastBound
A: 287
B: 153

WestBound
A: 333
B: 58

NorthBound
A: 594
B: 52

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{52 + 848 + 333 + 153}{1500} = 0.924$$

LOS = E

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Burbank Bl **I/S No:** 26

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	242	1633	0	0	1608	691	0	0	0	166	0	129
AMBIENT												
RELATED												
PROJECT												
TOTAL	242	1633	0	0	1608	691	0	0	0	166	0	129

LANE	1		3							2		1										2					2	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	<none>	Perm	Auto			Split	Auto

Critical Movements Diagram

SouthBound
A: 766
B: 0

EastBound
A: 71
B: 91

WestBound
A: 0
B: 0

NorthBound
A: 544
B: 242

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{242 + 766 + 0 + 91}{1500} = 0.733$$

LOS = C

Developed by Chun Wong, 12/94

CPAM

January 28, 2010 ,Thursday 12:34:15 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: 101 WB Ramps

I/S No: 27

AM/PM: AM

Comments: Cumulative Plus Project

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	192	1481	0	0	1215	600	157	5	651	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	192	1481	0	0	1215	600	157	5	651	0	0	0

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2				
SOUTHBOUND			4			1	
WESTBOUND	1			1		1	
EASTBOUND							

SIGNAL

	Phasing	RTOR
NORTHBOUND	Prot-Fix	
SOUTHBOUND	Perm	Auto
WESTBOUND	Split	Auto
EASTBOUND		

Critical Movements Diagram

SouthBound
A: 600
B: 0

EastBound
A: 0
B: 0

WestBound
A: 328
B: 157

NorthBound
A: 741
B: 192

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{192 + 600 + 328 + 0}{1425} = 0.786$$

LOS = C

Developed by Chun Wong, 12/94

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** 101 EB Ramps **I/S No:** 28

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	854	129	1007	421	0	0	0	0	734	5	439
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	854	129	1007	421	0	0	0	0	734	5	439

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND			3			1	
LANE SOUTHBOUND	2		2				
LANE WESTBOUND							
LANE EASTBOUND	1	1				1	

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Perm	<none>	Prot-Fix	<none>			Split	Auto

Critical Movements Diagram

SouthBound
A: 211
B: 554

EastBound
A: 439
B: 370

↑

WestBound
A: 0
B: 0

NorthBound
A: 285
B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{285 + 554 + 0 + 439}{1425} = 0.897$$

LOS = D

Developed by Chun Wong, 12/94

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Ventura Bl **I/S No:** 29

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	103	287	146	708	206	416	67	1276	450	254	1323	67
AMBIENT												
RELATED												
PROJECT												
TOTAL	103	287	146	708	206	416	67	1276	450	254	1323	67

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	2		1			1	
LANE WESTBOUND	1		3			1	
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	206	389
EastBound	463	254
WestBound	425	67
NorthBound	217	103

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{217 + 389 + 425 + 254}{1375} = 0.935$$

LOS = E

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** 101 WB Ramps **I/S No:** 30

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	152	875	0	0	1074	466	360	2	538	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	152	875	0	0	1074	466	360	2	538	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2							2			1		1			1		1								

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	Auto	Split	Auto		

Critical Movements Diagram

SouthBound
A: 537
B: 0

EastBound
A: 0
B: 0

WestBound
A: 300
B: 300

NorthBound
A: 438
B: 152

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{152 + 537 + 300 + 0}{1425} = 0.694$$

LOS = B

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** 101 EB Ramps **I/S No:** 31

AM/PM: AM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	631	211	481	952	0	0	0	0	396	0	230
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	631	211	481	952	0	0	0	0	396	0	230

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE (NB)			1		1	1	
LANE (SB)	1		2				
LANE (WB)							
LANE (EB)	1					1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	<none>	Prot-Fix	<none>			Split	Auto

Critical Movements Diagram

SouthBound
A: 476
B: 481

EastBound
A: 230
B: 396

WestBound
A: 0
B: 0

NorthBound
A: 316
B: 0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{316 + 481 + 0 + 396}{1425} = 0.837$$

LOS = D

Developed by Chun Wong, 12/94

CPAM

CalcaDB

January 28, 2010 ,Thursday 12:34:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave

W/E: Ventura Bl

I/S No: 32

AM/PM: AM

Comments: Cumulative Plus Project

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	90	328	36	337	412	329	82	792	228	288	1393	84
AMBIENT												
RELATED												
PROJECT												
TOTAL	90	328	36	337	412	329	82	792	228	288	1393	84

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1				1		
LANE SOUTHBOUND	2		1			1	
LANE WESTBOUND	1		2			1	
LANE EASTBOUND	1		2		1		

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Split	Auto	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 412
B: 185

EastBound
A: 492
B: 288

WestBound
A: 396
B: 82

NorthBound
A: 364
B: 90

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{364 + 412 + 396 + 288}{1375} = 1.062$$

LOS = F

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Saticoy St **I/S No:** 1

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	101	1337	140	127	1104	146	101	890	105	140	1174	78
AMBIENT												
RELATED												
PROJECT												
TOTAL	101	1337	140	127	1104	146	101	890	105	140	1174	78

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 625
B: 127

EastBound
A: 626
B: 140

WestBound
A: 498
B: 101

NorthBound
A: 492
B: 101

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{101 + 625 + 101 + 626}{1375} = 1.057$$

LOS = F

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Saticoy St **I/S No:** 2

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	104	931	83	116	791	128	94	979	81	169	1192	112
AMBIENT												
RELATED												
PROJECT												
TOTAL	104	931	83	116	791	128	94	979	81	169	1192	112

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 460
B: 116

EastBound
A: 652
B: 169

↑

WestBound
A: 530
B: 94

NorthBound
A: 507
B: 104

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{507 + 116 + 94 + 652}{1500} = 0.913$$

LOS = E

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Saticoy St **I/S No:** 3

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	143	1115	123	166	1051	163	90	850	157	134	968	127
AMBIENT												
RELATED												
PROJECT												
TOTAL	143	1115	123	166	1051	163	90	850	157	134	968	127

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		2			1		1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 526
B: 166

EastBound
A: 548
B: 134

WestBound
A: 504
B: 90

NorthBound
A: 619
B: 143

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{619 + 166 + 90 + 548}{1500} = 0.949$$

LOS = E

Developed by Chun Wong, 12/94

CPPM

January 28, 2010 ,Thursday 12:34:30 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Sherman Way **I/S No:** 4

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	121	1754	297	110	1051	162	178	1065	139	186	1818	153
AMBIENT												
RELATED												
PROJECT												
TOTAL	121	1754	297	110	1051	162	178	1065	139	186	1818	153

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		2		1		
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 607
B: 110

EastBound
A: 657
B: 186

WestBound
A: 401
B: 178

NorthBound
A: 684
B: 121

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{684 + 110 + 178 + 657}{1425} = 1.143$$

LOS = F

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave

W/E: Sherman Way

I/S No: 5

AM/PM: PM

Comments: Cumulative Plus Project

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	75	922	65	112	712	143	84	1139	89	149	1265	57
AMBIENT												
RELATED												
PROJECT												
TOTAL	75	922	65	112	712	143	84	1139	89	149	1265	57

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		2		1			1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 428
B: 112

EastBound
A: 441
B: 149

WestBound
A: 409
B: 84

NorthBound
A: 494
B: 75

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{494 + 112 + 409 + 149}{1500} = 0.776$$

LOS = C

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Sherman Way **I/S No:** 6

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	172	1156	96	179	949	156	91	987	156	154	1115	111
AMBIENT												
RELATED												
PROJECT												
TOTAL	172	1156	96	179	949	156	91	987	156	154	1115	111

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	1		2			1	
LANE WB	1		2		1		
LANE EB	1		2		1		

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 475
B: 179

EastBound
A: 409
B: 154

WestBound
A: 381
B: 91

NorthBound
A: 626
B: 172

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{626 + 179 + 381 + 154}{1375} = 0.975$$

LOS = E

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Vanowen St **I/S No:** 7

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	62	1624	124	117	999	220	109	931	143	179	1434	104
AMBIENT												
RELATED												
PROJECT												
TOTAL	62	1624	124	117	999	220	109	931	143	179	1434	104

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE (NORTHBOUND)	1		2		1		
LANE (SOUTHBOUND)	1		1		1		
LANE (WESTBOUND)	1		2			1	
LANE (EASTBOUND)	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 610
B: 117

EastBound
A: 513
B: 179

WestBound
A: 466
B: 109

NorthBound
A: 583
B: 62

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{583 + 117 + 466 + 179}{1375} = 0.978$$

LOS = E

Developed by Chun Wong, 12/94

CPPM

January 28, 2010 ,Thursday 12:34:30 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave

W/E: Vanowen St

I/S No: 8

AM/PM: PM

Comments: Cumulative Plus Project

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	36	693	45	102	546	138	55	944	91	214	1212	65
AMBIENT												
RELATED												
PROJECT												
TOTAL	36	693	45	102	546	138	55	944	91	214	1212	65

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 342
B: 102

EastBound
A: 639
B: 214

WestBound
A: 518
B: 55

NorthBound
A: 369
B: 36

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{369 + 102 + 518 + 214}{1500} = 0.802$$

LOS = D

Developed by Chun Wong, 12/94

CPPM

January 28, 2010 ,Thursday 12:34:30 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave
W/E: Vanowen St
I/S No: 9

AM/PM: PM
Comments: Cumulative Plus Project

COUNT DATE:
STUDY DATE:
GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	98	1149	103	130	908	94	93	955	120	121	1110	84
AMBIENT												
RELATED												
PROJECT												
TOTAL	98	1149	103	130	908	94	93	955	120	121	1110	84

	NB							SB							WB							EB						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 501
B: 130

EastBound
A: 597
B: 121

WestBound
A: 538
B: 93

NorthBound
A: 626
B: 98

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{626 + 130 + 93 + 597}{1425} = 1.015$$

LOS = F

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Shoup Ave **W/E:** Victory Bl **I/S No:** 10

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	203	1445	117	112	749	96	95	1004	166	106	939	136
AMBIENT												
RELATED												
PROJECT												
TOTAL	203	1445	117	112	749	96	95	1004	166	106	939	136

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		2			1		1		1		1			1		2			1		1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 423
B: 112

EastBound
A: 538
B: 106

WestBound
A: 502
B: 95

NorthBound
A: 723
B: 203

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{723 + 112 + 95 + 538}{1500} = 0.979$$

LOS = E

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Topanga Canyon Bl **W/E:** Victory Bl **I/S No:** 11

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	216	1677	378	265	1161	127	306	943	255	160	921	183
AMBIENT												
RELATED												
PROJECT												
TOTAL	216	1677	378	265	1161	127	306	943	255	160	921	183

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
SOUTHBOUND	1		2		1		
WESTBOUND	2		3			1	
EASTBOUND	2		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	429	265
EastBound	368	88
WestBound	314	168
NorthBound	685	216

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{685 + 265 + 168 + 368}{1375} = 1.081$$

LOS = F

Developed by Chun Wong, 12/94

CPPM

January 28, 2010 ,Thursday 12:34:30 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Canoga Ave **W/E:** Victory Bl **I/S No:** 12

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

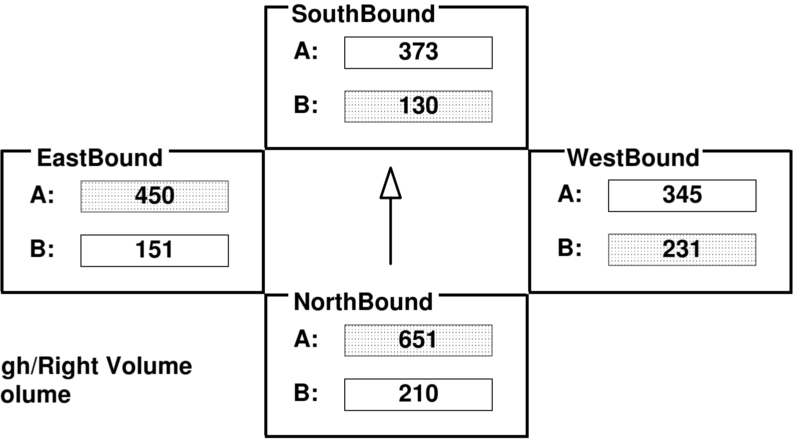
Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	210	1569	384	130	966	152	231	1169	211	151	1350	230
AMBIENT												
RELATED												
PROJECT												
TOTAL	210	1569	384	130	966	152	231	1169	211	151	1350	230

LANE	1		2		1			1		2		1			1		3		1			1		3			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram



SouthBound
A: 373
B: 130

EastBound
A: 450
B: 151

WestBound
A: 345
B: 231

NorthBound
A: 651
B: 210

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{651 + 130 + 231 + 450}{1375} = 1.063$$

LOS = F

Developed by Chun Wong, 12/94

CPPM

January 28, 2010 ,Thursday 12:34:30 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Victory Bl **I/S No:** 13

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	74	1256	457	109	901	197	256	1140	119	446	1910	135
AMBIENT												
RELATED												
PROJECT												
TOTAL	74	1256	457	109	901	197	256	1140	119	446	1910	135

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	2		3			1	
LANE EASTBOUND	2		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 366
B: 109

EastBound
A: 682
B: 245

WestBound
A: 380
B: 141

NorthBound
A: 571
B: 74

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{571 + 109 + 141 + 682}{1375} = 1.093$$

LOS = F

Developed by Chun Wong, 12/94

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Mason Ave **W/E:** Victory Bl **I/S No:** 14

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	101	177	82	161	157	242	39	1188	187	377	1863	134
AMBIENT												
RELATED												
PROJECT												
TOTAL	101	177	82	161	157	242	39	1188	187	377	1863	134

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
SOUTHBOUND	1		1			2	
WESTBOUND	1		3			1	
EASTBOUND	1		3			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	<none>	Prot-Fix	<none>	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	157	161
EastBound	621	377
WestBound	396	39
NorthBound	130	101

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{130 + 161 + 396 + 377}{1375} = 0.774$$

LOS = C

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S:	Winnetka Ave	W/E:	Victory Bl	I/S No:	15
AM/PM:	PM	Comments:	Cumulative Plus Project		
COUNT DATE:		STUDY DATE:		GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	146	1030	141	174	792	127	135	1313	145	241	1619	184
AMBIENT												
RELATED												
PROJECT												
TOTAL	146	1030	141	174	792	127	135	1313	145	241	1619	184

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		1		1		
SOUTHBOUND	1		2		1		
WESTBOUND	1		2		1		
EASTBOUND	1		2		1		

SIGNAL	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	306	174
EastBound	601	241
WestBound	486	135
NorthBound	586	146

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{586 + 174 + 135 + 601}{1375} = 1.088$$

LOS = F

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Topham St **W/E:** Victory Bl **I/S No:** 16

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	316	0	6	0	0	0	0	1430	0	0	1712	356
AMBIENT												
RELATED												
PROJECT												
TOTAL	316	0	6	0	0	0	0	1430	0	0	1712	356

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1					1	
LANE SOUTHBOUND							
LANE WESTBOUND			2				
LANE EASTBOUND			2			1	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	Auto	Perm	<none>	Perm	OLA

Critical Movements Diagram

	A:	B:
SouthBound	0	0
EastBound	856	0
WestBound	715	0
NorthBound	6	316

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{316 + 0 + 0 + 856}{1425} = 0.822$$

LOS = D

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Corbin Ave **W/E:** Victory Bl **I/S No:** 17

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	36	867	144	131	464	159	87	1384	366	153	1456	31
AMBIENT												
RELATED												
PROJECT												
TOTAL	36	867	144	131	464	159	87	1384	366	153	1456	31

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1		1		1			1		1		1			1		1		1			1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 312
B: 131

EastBound
A: 744
B: 153

WestBound
A: 875
B: 87

NorthBound
A: 506
B: 36

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{506 + 131 + 875 + 153}{1500} = 1.110$$

LOS = F

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Tampa Ave **W/E:** Victory Bl **I/S No:** 18

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	174	1191	114	205	658	135	61	1535	204	109	1752	40
AMBIENT												
RELATED												
PROJECT												
TOTAL	174	1191	114	205	658	135	61	1535	204	109	1752	40

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE (NB)	1		2			1	
LANE (SB)	1		2			1	
LANE (WB)	1		1		1		
LANE (EB)	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	329	205
EastBound	896	109
WestBound	870	61
NorthBound	596	174

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{596 + 205 + 870 + 109}{1425} = 1.249$$

LOS = F

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Wilbur Ave **W/E:** Victory Bl **I/S No:** 19

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	149	810	95	109	545	103	66	1486	219	136	1767	76
AMBIENT												
RELATED												
PROJECT												
TOTAL	149	810	95	109	545	103	66	1486	219	136	1767	76

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	1		1		1		
LANE WB	1		1		1		
LANE EB	1		1		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 324
B: 109

EastBound
A: 922
B: 136

WestBound
A: 853
B: 66

NorthBound
A: 453
B: 149

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{453 + 109 + 853 + 136}{1500} = 1.034$$

LOS = F

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Reseda Bl

W/E: Victory Bl

I/S No: 20

AM/PM: PM

Comments: Cumulative Plus Project

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	124	1135	118	94	854	174	103	1465	165	143	1655	115
AMBIENT												
RELATED												
PROJECT												
TOTAL	124	1135	118	94	854	174	103	1465	165	143	1655	115

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		1		1		
LANE SB	1		1		1		
LANE WB	1		2			1	
LANE EB	1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 514
B: 94

EastBound
A: 590
B: 143

WestBound
A: 733
B: 103

NorthBound
A: 627
B: 124

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{627 + 94 + 733 + 143}{1375} = 1.161$$

LOS = F

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave

W/E: El Rancho Dr

I/S No: 21

AM/PM: PM

Comments: Cumulative Plus Project

COUNT DATE:

STUDY DATE:

GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	7	2024	202	13	1380	1	34	0	5	2	0	6
AMBIENT												
RELATED												
PROJECT												
TOTAL	7	2024	202	13	1380	1	34	0	5	2	0	6

LANE

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND	1		2		1		
SOUTHBOUND	1		2		1		
WESTBOUND	1				1		
EASTBOUND	1				1		

SIGNAL

	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	<none>

Critical Movements Diagram

	A:	B:
SouthBound	460	13
EastBound	6	2
WestBound	5	34
NorthBound	742	7

↑

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{742 + 13 + 34 + 6}{1500} = 0.530$$

LOS = A

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Erwin St **I/S No:** 22

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	143	1866	43	44	1157	215	17	16	23	213	23	283
AMBIENT												
RELATED												
PROJECT												
TOTAL	143	1866	43	44	1157	215	17	16	23	213	23	283

	NB ↰	NB ↰↑	NB ↑	NB ↰↑↱	NB ↑↱	NB ↱	NB ↰↱	SB ↰	SB ↰↑	SB ↑	SB ↰↑↱	SB ↑↱	SB ↱	SB ↰↱	WB ↰	WB ↰↑	WB ↑	WB ↰↑↱	WB ↑↱	WB ↱	WB ↰↱	EB ↰	EB ↰↑	EB ↑	EB ↰↑↱	EB ↑↱	EB ↱	EB ↰↱
LANE	1		2		1			1		2		1			1		1			1		1			1		1	

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound
A: 457
B: 44

EastBound
A: 173
B: 173

WestBound
A: 23
B: 17

NorthBound
A: 636
B: 143

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{636 + 44 + 23 + 173}{1425} = 0.615$$

LOS = B

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Brahma Dr/Calvert St **I/S No:** 23

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	96	1332	0	11	872	97	19	4	22	149	0	106
AMBIENT												
RELATED												
PROJECT												
TOTAL	96	1332	0	11	872	97	19	4	22	149	0	106

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2				
LANE SOUTHBOUND			2			1	
LANE WESTBOUND	1				1		
LANE EASTBOUND	2					1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	OLA	Split	Auto	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	436	0
EastBound	58	82
WestBound	26	19
NorthBound	666	96

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{666 + 0 + 26 + 82}{1375} = 0.563$$

LOS = A

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Oxnard St **I/S No:** 24

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	128	1827	177	49	1269	185	29	223	25	228	445	242
AMBIENT												
RELATED												
PROJECT												
TOTAL	128	1827	177	49	1269	185	29	223	25	228	445	242

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		2		1		
LANE SOUTHBOUND	1		2		1		
LANE WESTBOUND	1		1		1		
LANE EASTBOUND	1		1			1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	485	49
EastBound	445	228
WestBound	124	29
NorthBound	668	128

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{668 + 49 + 29 + 445}{1500} = 0.794$$

LOS = C

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Oxnard St **I/S No:** 25

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	94	1256	63	33	972	109	12	63	19	178	478	59
AMBIENT												
RELATED												
PROJECT												
TOTAL	94	1256	63	33	972	109	12	63	19	178	478	59

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	1		1		1		
LANE WESTBOUND				1			
LANE EASTBOUND	1		1			1	

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound
A: 541
B: 33

EastBound
A: 478
B: 178

WestBound
A: 94
B: 12

NorthBound
A: 660
B: 94

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{660 + 33 + 12 + 478}{1500} = 0.789$$

LOS = C

Developed by Chun Wong, 12/94

CPPM

January 28, 2010 ,Thursday 12:34:30 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Burbank Bl **I/S No:** 26

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	88	1422	0	0	1840	169	0	0	0	650	0	535
AMBIENT												
RELATED												
PROJECT												
TOTAL	88	1422	0	0	1840	169	0	0	0	650	0	535

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1		3							2		1										2					2	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	<none>	Perm	Auto			Split	Auto

Critical Movements Diagram

SouthBound
A: 670
B: 0

EastBound
A: 294
B: 358

WestBound
A: 0
B: 0

NorthBound
A: 474
B: 88

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{88 + 670 + 0 + 358}{1500} = 0.744$$

LOS = C

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** 101 WB Ramps **I/S No:** 27

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	248	1105	0	0	1526	636	283	0	529	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	248	1105	0	0	1526	636	283	0	529	0	0	0

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NB	1		2				
LANE SB			4			1	
LANE WB	1			1		1	
LANE EB							

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix		Perm	<none>	Split	Auto		

Critical Movements Diagram

SouthBound
A: 636
B: 0

EastBound
A: 0
B: 0

WestBound
A: 271
B: 271

NorthBound
A: 553
B: 248

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{248 + 636 + 271 + 0}{1425} = 0.811$$

LOS = D

Developed by Chun Wong, 12/94

CPPM

January 28, 2010 ,Thursday 12:34:30 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** 101 EB Ramps **I/S No:** 28

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	808	253	919	844	0	0	0	0	567	3	237
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	808	253	919	844	0	0	0	0	567	3	237

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND			3			1	
LANE SOUTHBOUND	2		2				
LANE WESTBOUND							
LANE EASTBOUND	1	1				1	

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	<none>			Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	422	505
EastBound	285	285
WestBound	0	0
NorthBound	269	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{269 + 505 + 0 + 285}{1425} = 0.743$$

LOS = C

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: De Soto Ave **W/E:** Ventura Bl **I/S No:** 29

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	66	215	88	489	252	362	66	1162	465	338	1084	76
AMBIENT												
RELATED												
PROJECT												
TOTAL	66	215	88	489	252	362	66	1162	465	338	1084	76

	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE NORTHBOUND	1		1		1		
LANE SOUTHBOUND	2		1			1	
LANE WESTBOUND	1		3			1	
LANE EASTBOUND	1		2		1		

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	252	269
EastBound	387	338
WestBound	387	66
NorthBound	152	66

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{152 + 269 + 387 + 338}{1375} = 0.833$$

LOS = D

Developed by Chun Wong, 12/94

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** 101 WB Ramps **I/S No:** 30

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	207	830	0	0	836	298	318	13	552	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	207	830	0	0	836	298	318	13	552	0	0	0

LANE	1		2							2			1		1			1		1								

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	<none>	Perm	<none>	Split	Auto		

Critical Movements Diagram

SouthBound
A: 418
B: 0

EastBound
A: 0
B: 0

WestBound
A: 294
B: 294

NorthBound
A: 415
B: 207

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{207 + 418 + 294 + 0}{1425} = 0.645$$

LOS = B

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** 101 EB Ramps **I/S No:** 31

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	720	279	368	713	0	0	0	0	431	0	199
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	720	279	368	713	0	0	0	0	431	0	199

LANE	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
NORTHBOUND			1		1	1	
SOUTHBOUND	1		2				
WESTBOUND							
EASTBOUND	1					1	

SIGNAL	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
Phasing	Perm	Prot-Fix		Split
RTOR	Auto	<none>		Auto

Critical Movements Diagram

	A	B
SouthBound	357	368
EastBound	199	431
WestBound	0	0
NorthBound	360	0

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{360 + 368 + 0 + 431}{1425} = 0.813$$

LOS = D

CPPM

CalcaDB

January 28, 2010 ,Thursday 12:34:30 PM

INTERSECTION DATA SUMMARY SHEET

N/S: Winnetka Ave **W/E:** Ventura Bl **I/S No:** 32

AM/PM: PM **Comments:** Cumulative Plus Project

COUNT DATE: **STUDY DATE:** **GROWTH FACTOR:**

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	106	401	46	299	351	218	93	779	315	313	950	109
AMBIENT												
RELATED												
PROJECT												
TOTAL	106	401	46	299	351	218	93	779	315	313	950	109

		NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱	↰	↰↑	↑	↰↑↱	↑↱	↱	↰↱
LANE	1				1			2		1			1		1		2			1		1		2		1		

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	OLA	Perm	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound
A: 351
B: 164

EastBound
A: 353
B: 313

↑

WestBound
A: 390
B: 93

NorthBound
A: 447
B: 106

A = Adjusted Through/Right Volume
B = Adjusted Left Volume
* = ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{447 + 351 + 390 + 313}{1375} = 1.092$$

LOS = F

Developed by Chun Wong, 12/94

APPENDIX D

PIERCE COLLEGE PARKING UTILIZATION SUVEY DATA BY PARKING LOT AND TIME OF DAY

4/29/2009

PIERCE COLLEGE PARKING UTILIZATION

AREA	NUMBER	TYPE	CURB/LOT/ ETC.	Inventory	TIME OF DAY																							
					8AM		9AM		10AM		11AM		12PM		1PM		2PM		3PM		4PM		5PM		6PM		7PM	
					Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ
A	8	Student	Lot	681	94		149		210		218		221		196		169		90		52		69		122		127	
		Faculty	Lot	14	5		5		6		10		10		7		5		4		5		1		2		2	
		H/C	Lot	11	1		1		1		1		1		2		3		1		1		1		1		1	
		Bus	Lot	13	0		0		0		0		0		0		0		0		0		0		0		0	
	9	Student	Lot	150	1		2		4		1		1		1		2		0		1		1		2		2	
		H/C	Lot	6	0		0		0		0		0		0		0		0		0		0		0		0	
		Bus	Lot	3	0		0		0		0		0		0		0		0		0		0		0		0	
	10	Student	90 Degree Street	41	10		10		10		10		10		11		12		5		6		10		10		10	
		H/C	90 Degree Street	7	0		0		0		0		0		2		1		1		1		0		0		0	
	11	Student	Curb	18	10		17		20		24		27		12		9		7		14		16		6		8	
	12	General	Curb	112	12		16		25		21		24		19		11		8		5		10		18		23	
	13	Student	Curb	27	11		10		9		9		8		9		7		5		6		10		12		13	
TOTAL AREA A				1,083																								
	7	Student	Lot	1,127	816		901		993		1,109		1,115		811		677		657		659		680		724		930	
		Faculty	Lot	151	57		71		84		92		87		74		69		57		49		43		45		45	
		Faculty Carpool	Lot	8	0		0		0		0		0		0		0		1		1		1		1		0	
		20-minute Faculty	Lot	4	3		4		4		4		4		2		2		2		1		4		1		0	
		H/C	Lot	31	10		11		11		18		13		9		7		9		9		10		11		14	
		Temporary H/C	Lot	14	6		6		7		6		6		5		3		4		4		0		2		4	
		Child Development Parking	Lot	14	11		9		9		5		5		5		5		3		6		8		5		0	
	14	Faculty	Curb	12	7		1		11		11		11		12		12		11		9		10		10		11	
	15	Faculty	Curb	23	11		13		17		19		19		17		19		19		19		19		19		17	

4/29/2009

PIERCE COLLEGE PARKING UTILIZATION

AREA	NUMBER	TYPE	CURB/LOT/ ETC.	Inventory	TIME OF DAY																							
					8AM		9AM		10AM		11AM		12PM		1PM		2PM		3PM		4PM		5PM		6PM		7PM	
					Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ
B		H/C	Curb	1	0		0		0		1		1		0		0		0		0		0		1		1	
	16	Faculty	Small Lot	2	2		2		2		2		2		2		1		1		1		2		2		2	
	17	Faculty	Small Lot	4	2		4		4		4		4		4		4		3		3		3		4		4	
		H/C	Small Lot	2	1		1		1		2		2		2		1		1		1		1		1		1	
	18	Faculty	Small Lot	45	39		46		46		45		41		35		31		30		27		25		23		21	
		30-Minute	Lot	1	0		0		0		1		0		0		0		0		0		0		0		0	
		Non-Marked	Lot	7	7		7		7		7		7		5		5		3		1		1		1		2	
		Grass Spaces	Lot	6	0		3		3		5		5		4		4		3		1		1		1		0	
		H/C	Lot	6	0		1		1		1		3		5		5		3		0		0		1		1	
	19	Faculty (south of Building 8340 (Pace Honors))	Lot	6	4		7		7		4		4		2		2		4		4		3		3		4	
	20	Faculty	South of South Gym	3	3		3		3		3		3		4		4		3		2		2		2		3	
		Unmarked	South of South Gym	5	4		4		4		5		5		5		5		5		5		5		5		2	
		H/C	South of South Gym	1	0		1		1		1		1		0		0		0		0		0		0		0	
	21	Faculty	Lot	33	9		11		11		15		15		17		21		19		16		17		20		24	
		H/C	Lot	1	1		1		0		0		0		1		1		1		0		0		0		1	
	22	Faculty	Curb	6	6		6		5		5		6		6		6		7		7		6		5		9	
		H/C	Curb	2	1		1		2		2		2		1		1		0		0		0		0		0	
	23	General	Curb	114	86		105		111		106		101		87		79		83		86		99		111		104	
TOTAL AREA B				1,629																								
	4	Student	Lot	411	127		149		252		258		264		235		180		133		104		95		98		125	
	5	Faculty	Lot	68	17		23		28		30		33		26		23		19		17		13		5		7	

PIERCE COLLEGE PARKING UTILIZATION

4/29/2009

AREA	NUMBER	TYPE	CURB/LOT/ ETC.	Inventory	TIME OF DAY																							
					8AM		9AM		10AM		11AM		12PM		1PM		2PM		3PM		4PM		5PM		6PM		7PM	
					Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ
C	24	Student	Curb/Lot	79	31		33		37		39		27		24		13		6		5		12		18		26	
	25	Student	Dirt Lot	187	43		58		115		126		133		138		123		79		69		110		116		127	
		Faculty	Dirt Lot	21	0		2		7		9		10		11		10		9		6		7		11		8	
		H/C	Dirt Lot	7	0		0		0		1		3		4		3		1		2		2		2		2	
	26	Student	Curb	20	8		15		17		21		25		18		20		9		7		6		4		8	
TOTAL AREA C				793																								
D	1A	Student	Lot	272	241		270		272		272		272		265		264		269		266		261		260		272	
		30-minute	Lot	26	7		10		15		21		25		17		13		19		16		15		15		20	
		H/C	Lot	8	4		6		6		7		7		6		6		7		6		7		4		4	
		Motorcycle	Lot	16	0		3		3		3		3		4		4		4		2		2		2		4	
		Reserved Sheriff	Lot	8	2		2		3		3		3		4		4		4		5		4		4		2	
		Reserved Pierce College Van	Lot	6	0		0		0		0		0		4		4		4		3		3		3		3	
	1B	Faculty	Lot	170	84		107		115		131		134		139		145		139		113		89		77		56	
		Faculty Carpool	Lot	6	0		1		2		2		2		3		3		3		3		2		2		2	
		H/C	Lot	6	0		1		2		2		2		1		1		0		0		1		2		1	
	2	Student	Lot	33	17		23		23		28		30		33		33		30		29		21		14		26	
		Faculty	Lot	5	0		1		1		1		1		1		1		2		3		1		0		2	
		H/C	Lot	2	0		0		0		0		0		0		0		0		0		0		0		0	
		Dirt	Lot	20	4		9		9		14		16		16		18		18		15		11		4		11	
	3	Student	Lot	45	31		45		45		45		45		41		38		33		21		20		17		39	
	27	General	Lot	15	6		6		7		7		7		5		5		4		2		2		2		2	
		H/C	Lot	1	0		0		0		0		0		0		0		0		0		0		0		0	

PIERCE COLLEGE PARKING UTILIZATION

4/29/2009

AREA	NUMBER	TYPE	CURB/LOT/ ETC.	Inventory	TIME OF DAY																							
					8AM		9AM		10AM		11AM		12PM		1PM		2PM		3PM		4PM		5PM		6PM		7PM	
					Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ	Occ	%Occ
	28	General	Curb	21	27		32		43		43		31		39		41		43		45		45		45		39	
	29	Faculty	Curb	4	2		2		2		3		3		3		3		3		3		3		2		1	
		H/C	Curb	3	1		1		1		1		1		1		1		1		1		1		0		0	
TOTAL AREA D				667																								
TOTAL				4,172																								