Environmental Assessment 23-13

Initial Study and Mitigated Negative Declaration for Amended Use Permit 07-13 for the construction of a new Calvary Christian Center and Rezoning 23-05. Located on 12 acres, the new church will primarily consist of a 53,480 square foot single-story building that includes a 1,145-seat assembly hall, classrooms, other church related uses, playfields, and also required parking, lighting, and landscaping. This proposal reduces the size of the previously approved church on the same site. Rezoning 23-05 for the same property would delete the X_{19} Combining Zone District that currently imposes various street improvements as a part of the construction of the church. The property is located at the southeast corner of State Route 20 and El Margarita Road.

Prepared for:

City of Yuba City
1201 Civic Center Blvd.
Yuba City, CA 95993

Prepared By:

Denis Cook
Land Use Planning Consultant

and

City of Yuba City
Development Services Department

April 2026

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CITY OF YUBA CITY
Development Services Department
Planning Division
1201 Civic Center Blvd. Yuba City, CA 95993 Phone (530) 822-4700

1. Introduction

1.1. Introduction

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared to identify any potential environmental impacts in the City of Yuba City, California (City) from Amended Use Permit 13-07 (Am UP 07-13) and Rezoning 23-05 (RZ 23-05) (collectively "Project").

Am UP 07-13 proposes to construct a new Calvary Christian Center on approximately 12 acres located at the southeast corner of State Route 20 and El Margarita Road. The religious facility will consist of a 53,480 square foot single-story building that includes a 1,145-seat assembly hall, classrooms, and other church related uses. Also included are 2,500 square foot and 1,250 square foot buildings to be utilized for storage, a 3,560 square foot outdoor pavilion, and sport fields. Phase 2 will be a 23,105 square foot building for future Sunday school use. Parking will be provided for 417 vehicles. The main access will be from El Margarita Road with a secondary access from Spirit Way. All City services will be provided to the facility.

The existing Calvary Christian Center is located to the west across El Margarita Road from the Project site. The proposed Project would replace or augment the operation at its current location.

As this is an amended use permit, the original Use Permit 13-07 was similar, but the size of the facility is reduced. The updated use permit is located on the same site, but the original property was a larger 23 acres. The current 12 acre site is the western portion of the original 23 acres.

RZ 23-05 for the same property would delete the X_{19} Combining Zone District that is currently applied to the property. The X_{19} Zone District provides several criteria for new development to fund improvements to Lassen Avenue intersections with Harter Parkway, Tharp Road, and Walton Avenue. More recent changes to the citywide development impact fee program as well as the proposed use permit traffic conditions have replaced the need for this zoning.

This amended use permit is considered a Project under the California Environmental Quality Act (CEQA), as the City has discretionary authority over the Project. The Project requires discretionary review by the City of Yuba City Planning Commission.

This document utilizes the environmental document and other information contained in the previously approved Use Permit 07-13 files.

This IS/MND has been prepared in conformance with CEQA Guidelines Section 15070. The purpose of the IS/MND is to determine the potential significant impacts associated with the proposed commercial uses and provide an environmental assessment for consideration by the Planning Commission. In addition, this document is intended to provide the basis for input from public agencies, organizations, and interested members of the public.

1.2. Regulatory Information

An Initial Study (IS) is an environmental assessment document prepared by a lead agency to determine if a project may have a significant effect on the environment. In accordance with the California Code of Regulations Title 14 (Chapter 3, §15000 et seq.), commonly referred to as the CEQA Guidelines - Section 15064(a)(1) states an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant. A negative declaration may be prepared instead; if the lead agency finds that there is no substantial evidence, in light of the whole record that the project may have a significant effect on the environment. A negative declaration is a written statement describing the reasons why a proposed project, not exempt from CEQA pursuant to §15300 et seq. of Article 19 of the Guidelines, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a negative declaration shall be prepared for a project subject to CEQA when either:

a) The IS shows there is no substantial evidence, in light of the whole record before the agency, that a proposed project may have a significant effect on the environment, or

b) The IS identified potentially significant effects, but:

    a. Revisions in the Project plans or proposals made by or agreed to by the applicant before the proposed negative declaration and initial study is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and

    b. There is no substantial evidence, in light of the whole record before the agency, that the proposed Project as revised may have a significant effect on the environment. If revisions are adopted by the Lead Agency into the proposed project in accordance with the CEQA Guidelines Section 15070(b), a Mitigated Negative Declaration (MND) is prepared.

1.3. Document Format

This IS/MND contains four chapters, and technical appendices. Chapter 1, Introduction, provides an overview of the proposed Project and the CEQA environmental documentation process. Chapter 2, Project Description, provides a detailed description of proposed Project objectives and components. Chapter 3, Impact Analysis, presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible measures. If the proposed Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the proposed Project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. Chapter 4, List of Preparers, provides a list of key personnel involved in the preparation of the IS/MND.

1.4. Purpose of Document

The proposed amended use permit will undergo a public review process by the Planning Commission that, if approved, would result in the development of a religious facility on approximately 12 acres. This public review process is needed to assure that the Project will be compatible with existing or expected neighboring uses and that adequate public facilities are available to serve the Project.

This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Pub. Res. Code, Section 21000 et seq.) and the State CEQA Guidelines (Title 14 CCR §15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The initial study is a public document used by the decision-making lead agency to determine whether the Project may have a significant effect on the environment. If the lead agency finds substantial evidence that any aspect of the Project, either individually or cumulatively, may have a significant effect on the environment, regardless of whether the overall effect of the Project is adverse or beneficial, the lead agency is required to use a previously prepared EIR and supplement that EIR, or prepare a subsequent EIR to analyze at hand. If the agency finds no substantial evidence that the Project or any of its aspects may cause a significant effect on the environment, a negative declaration shall be prepared. If in the course of the analysis, it is recognized that the Project may have a significant impact on the environment, but that with specific recommended mitigation measures incorporated into the Project, these impacts shall be reduced to less than significant, a mitigated negative declaration shall be prepared.

In reviewing all of the available information for the above referenced Project, the City of Yuba City Planning Division has analyzed the potential environmental impacts created by this Project and a mitigated negative declaration has been prepared.

1.5. Intended Uses of this Document

In accordance with CEQA, a good-faith effort has been made during preparation of this IS/MND to contact affected public agencies, organizations, and persons who may have an interest in the proposed Project. In reviewing the Draft IS/MND, affected and interested parties should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the effects of the proposed Project would be avoided or mitigated.

The Draft IS/ND and associated appendices will be available for review on the City of Yuba City website at http://www.yubacity.net. The Draft IS/MND and associated appendixes also will be available for review during regular business hours at the City of Yuba City Development Services Department (1201 Civic Center Boulevard, Yuba City, California 95993). The 30-day review period will commence on April 13, 2026 and end on May 13, 2026 at the conclusion of the Planning Commission hearing.

Written comments on the Draft IS/MND should be sent to the following address:

City of Yuba City
Development Services Department
1201 Civic Center Boulevard
Yuba City, CA 95993
e-mail: developmentservices@yubacity.net
Phone: 530.822.4700

2. Project Description

2.1. Project Title

Amended Use Permit 07-13 (Am. UP 07-13), Calvary Christian Center

2.2. Lead Agency Name and Address

City of Yuba City
Development Services Department, Planning Division
1201 Civic Center Blvd.
Yuba City, CA 95993

2.3. Contact Person and Phone Number

Doug Libby, AICP
Deputy Director of Development Services
(530) 822-3231
developmentservices@yubacity.net

2.4. Project Location

The site is located at the southeast corner of State Route 20 (Colusa Highway) and El Margarita Road. Assessor's Parcel Number (APN) 63-010-141.

2.5. Project Applicant

Calvary Christian Center/Assembly of God
2620 Colusa Highway
Yuba City, CA 95993

2.6. Property Owner

Calvary Christian Center/Assembly of God
2620 Colusa Highway
Yuba City, CA 95993

2.7. General Plan Designation

Office and Office Park (O) land use designation

2.8. Specific Plan

The property is not within a specific plan area.

2.9. Zoning

The property is zoned Office Commercial Zone District combined with an X_{19} Zone District (C-O X_{19}). The C-O Zone District is, as the name implies, primarily intended for a broad range of office type uses, and related uses, such as churches with an approved use permit. The X_{19} Combining Zone District provides specific development criteria to this property. The criteria is:

To ensure the future provision for transportation needs: 1) a fair share of fees will be paid for traffic signal improvements at Walton Avenue/Lassen Blvd./Tharp Road intersection are made, 2) a fair share will be paid for the improvements cost of highway road improvements based on an AB 1600 study in effect at the time of issuance of building permits and 3) that Harter Road and Lassen Blvd. are improved to city standards and extended across this property along with El Margarita Road.

Criteria of Development

1) To mitigate the impacts from the Project on the intersection of Walton Avenue and Lassen Blvd., the developer shall contribute 45 percent of the total cost for the installation a traffic signal prior to the issuance of building permits.
2) To mitigate the impacts from the project on the intersection of Tharp Road and Lassen Blvd., the developer shall contribute 70 percent of the total cost for the installation a traffic signal prior to issuance of building permits.
3) Sufficient right-of-way shall be set aside through this property from the current terminus of Lassen Blvd. to El Margarita Road for a road connection between these points and for the southerly extension of Harter Road from the highway to the south end of this property. Improvements along these rights-of-way shall be completed as development occurs along these streets to city standards by the property developers.
4) Should artifacts or unusual amounts of some bone or shell be uncovered during the demolition or construction activity, work shall be stopped, and a qualified archeologist shall be contacted for on-site consultation. If the bone appears to be human, California law mandates that the Sutter county Coroner and the Native American Heritage Commission be contacted.

2.10. Project Description

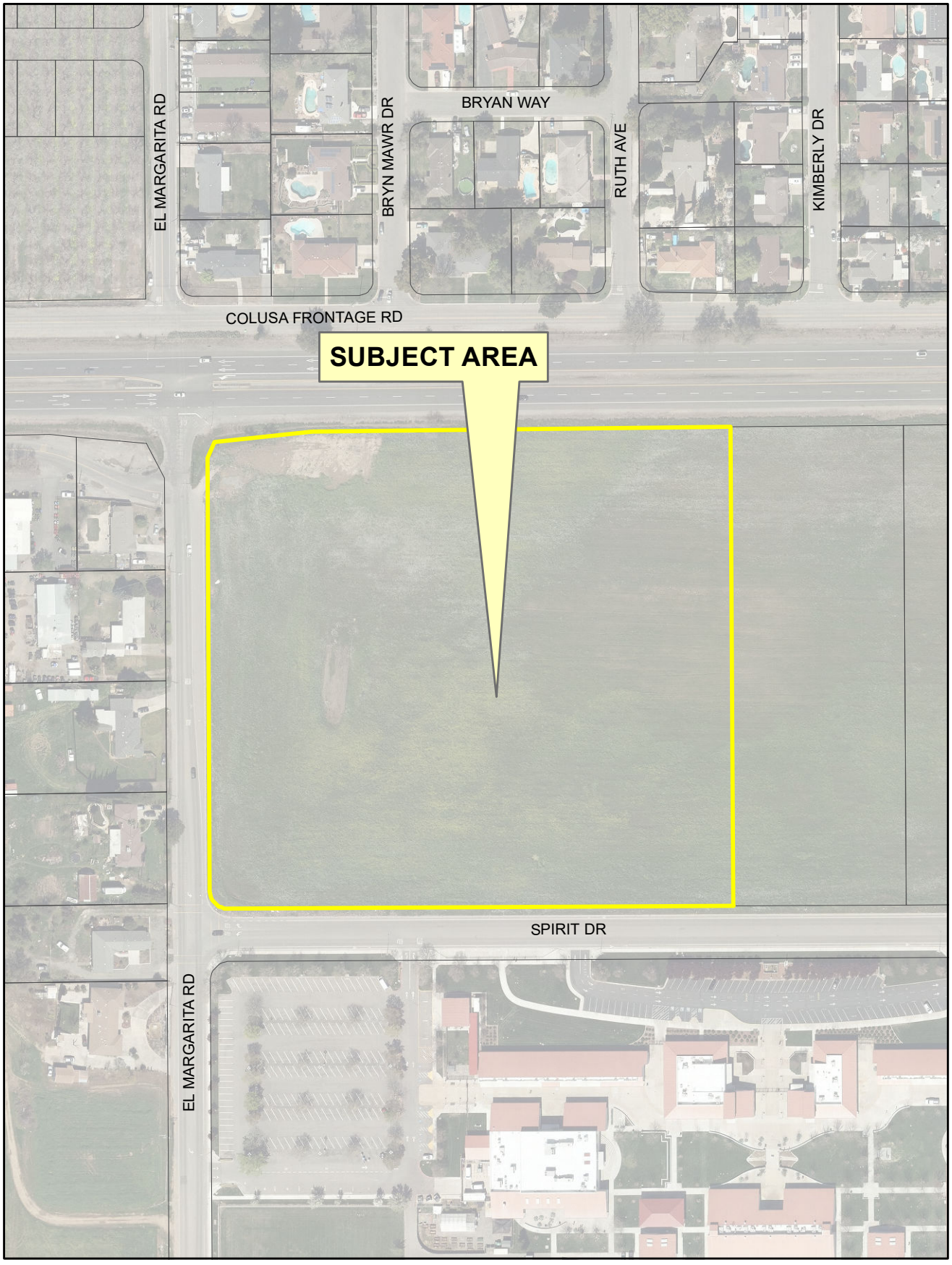
This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared to identify any potential environmental impacts in the City of Yuba City, California (City) from Amended Use Permit 13-07 (Am UP 13-07) and Rezoning 23-05 (RZ 23-05) (collectively "Project").

Amended UP 07-13 is for the construction of a new Calvary Christian Center proposed on approximately 12 acres located at the southeast corner of State Route 20 and El Margarita Road. The religious facility will consist of a 53,480 square foot single-story building that includes a 1,145-seat assembly hall, a large lobby, a smaller multiple use area, offices, a café and the eastern wing of the building dedicated as classrooms for Sunday school, preschool and related facilities. Also included are 2,500 square foot and 1,250 square foot buildings to be utilized for storage, a 3,560 square foot outdoor pavilion, and sport fields. Phase 2 will be a 23,105 square foot building for future Sunday school use. Parking will be provided for 417 vehicles. The main access will be from El Margarita Road with a secondary access from Spirit Way. All City services will be provided to the facility.

The existing Calvary Christian Center is located to the west across El Margarita Road from the Project site. The proposed Project would replace or augment the operations at its current location.

As this is an amended use permit, the original Use Permit 13-07 was similar, but its size is reduced. It was located on the same site, but the original property was a larger 23-acres. The original use permit included a larger 80,000 square foot building with a 2,084-seat sanctuary building with staff offices (Phase 1), a 16,380 square foot elementary school capable of accommodating over 300 students (Phase 2), and playground facilities, baseball diamond, and soccer fields (Phase 3). There were 612 parking spaces with the original proposal.

Rezoning 23-05 proposes to delete the X_{19} Combining Zone District. The X_{19} Combing Zone District provides several criteria for new development to fund improvements to Lassen Avenue intersections with Harter Parkway, Tharp Road, and Walton Avenue (see Section 2.9, above for specific details). More recent changes to the citywide development impact fee program as well as the proposed use permit condition(s) to signalize nearby intersections have replaced the need for this zoning (See Section 2.9, above, for specific criteria).

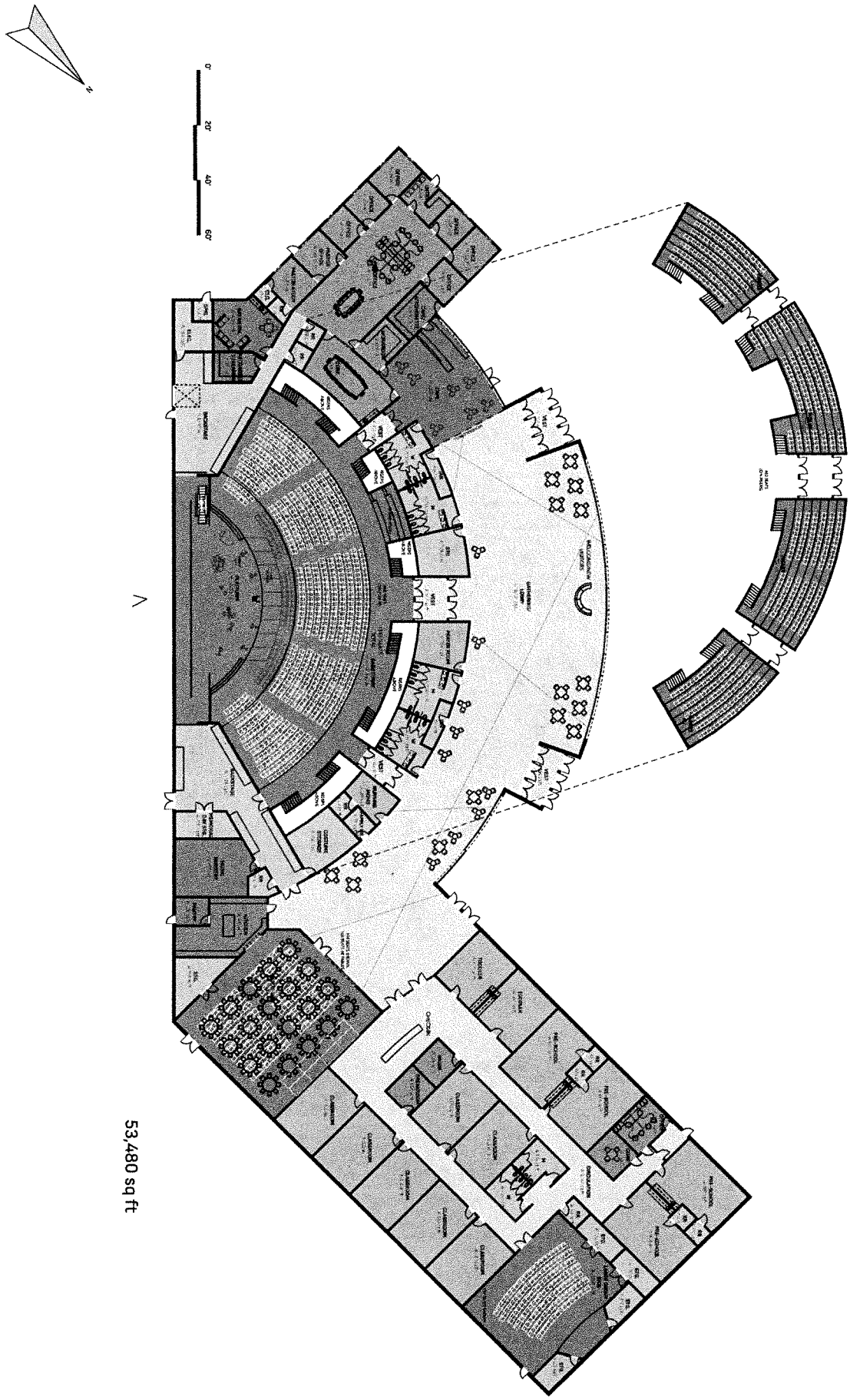


Use Permit Amendment 07-13
Southeast corner of SR 20 and El Margarita Rd

CALVARY christian center

Master Plan

HILBERS INCORPORATED | BGW ARCHITECTS



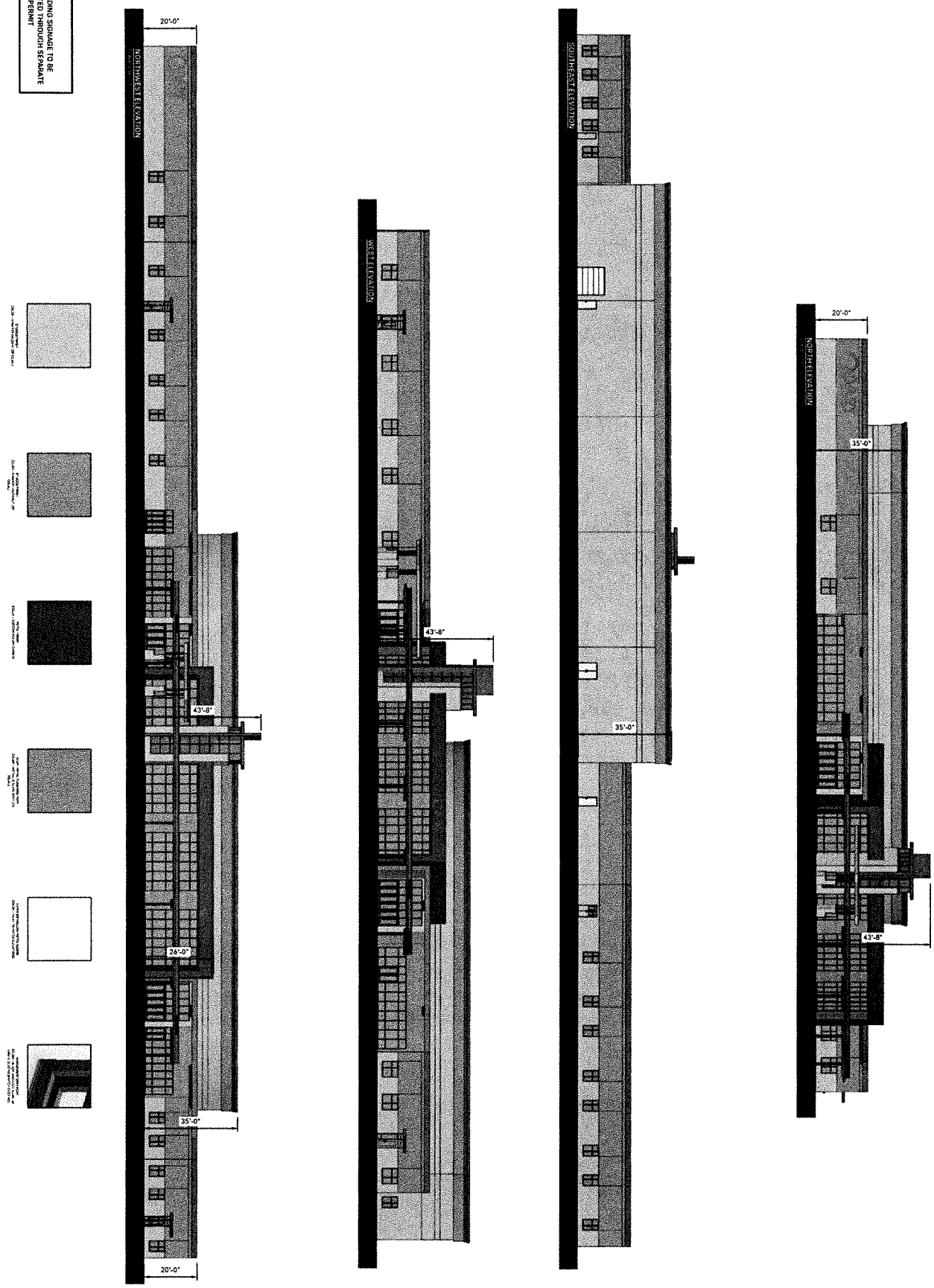
5/5/25

CALVARY christian center

Floor Plan – Proposed Worship Facility

HILBERS INCORPORATED | BGW ARCHITECTS

NOTE:
ALL BUILDING SIGNAGE TO BE SUBMITTED THROUGH SEPARATE REVIEW/PERMIT

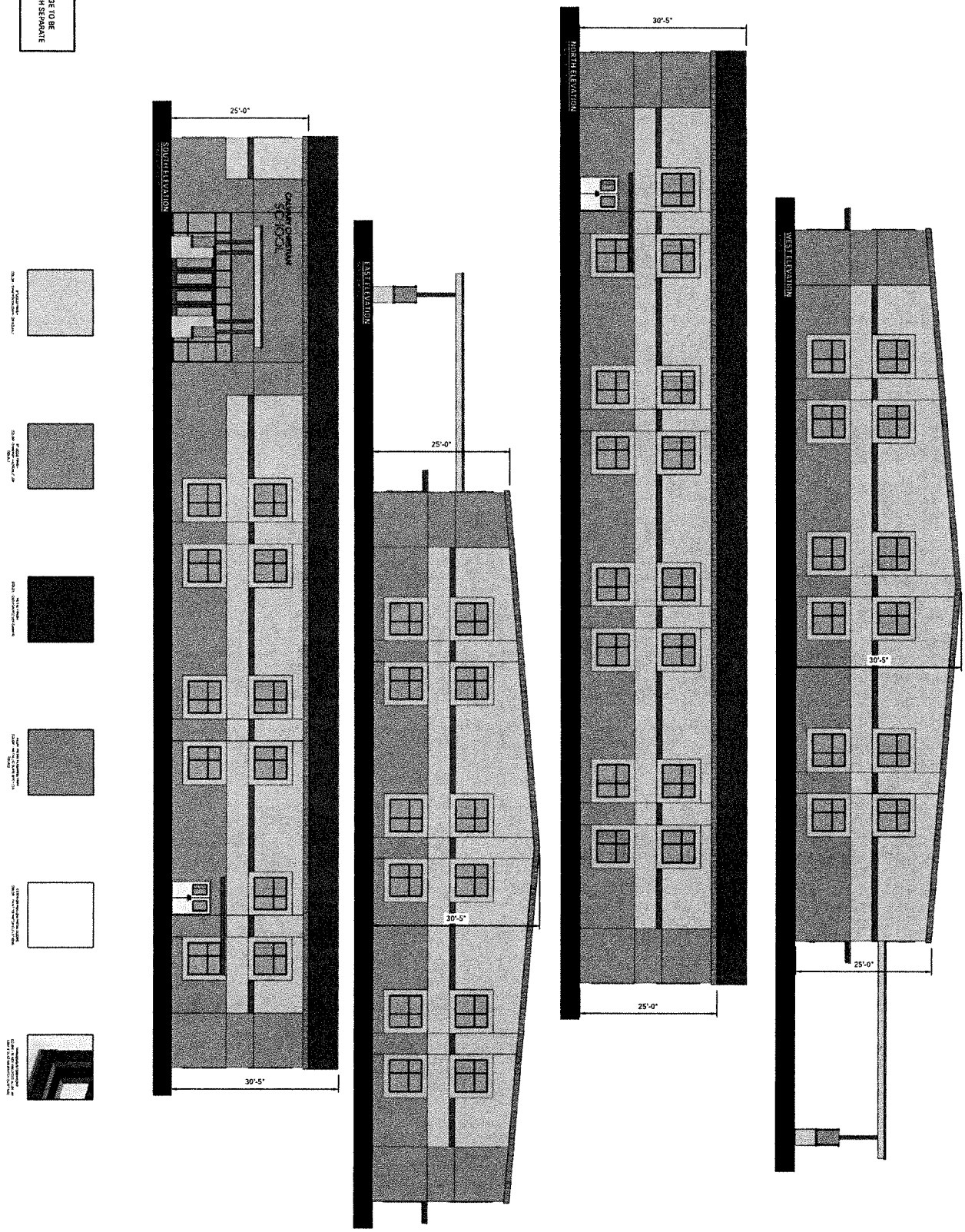


CALVARY christian center

Elevations

HILBERS INCORPORATED | BGW ARCHITECTS

NOTE:
ALL BUILDING SIGNAGE TO BE SUBMITTED THROUGH SEPARATE REVIEW/PERMIT



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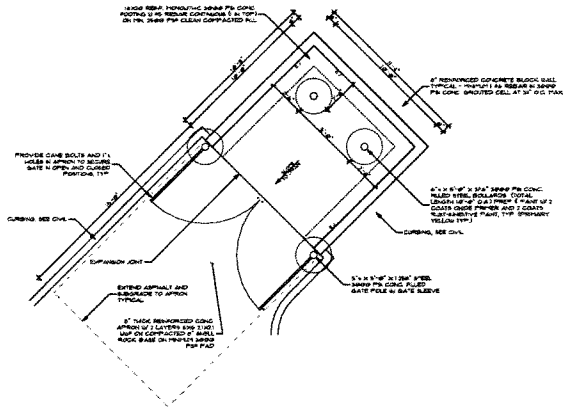
Elevations – Future Expansion

CALVARY christian center

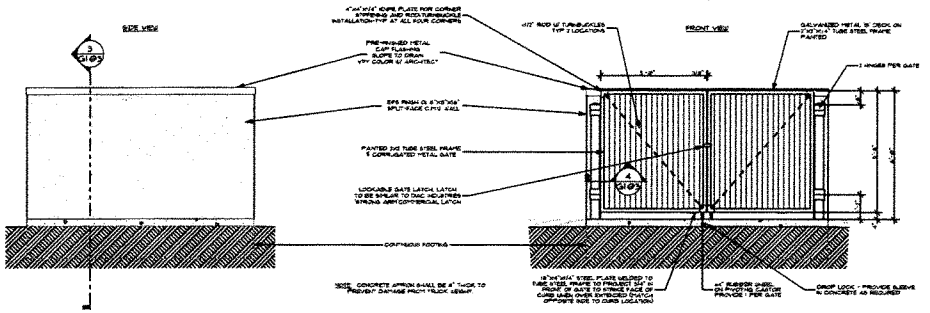
HILBERS INCORPORATED | BGW ARCHITECTS

ENCLOSURE WALLS - MASONRY WITH EIFS/STUCCO TO MATCH MAIN BUILDING

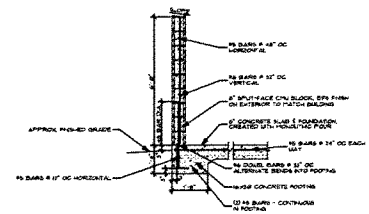
GATE CONSTRUCTION - STURDY METAL FRAME GATE WITH FLUTED METAL DECKING. PROVIDE GATE STOPS (CANE BOLTS) TO SECURE GATES WHEN IN THE OPEN POSITION. PROVIDE PADLOCK TABS ON ALL GATES.



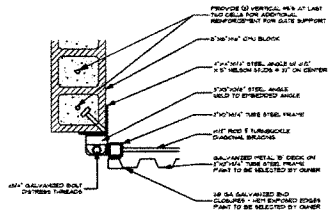
1 TRASH ENCLOSURE PLAN
SCALE: 1/4" = 1'-0"



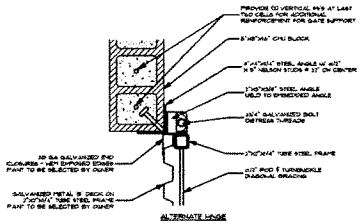
2 TRASH ELEVATIONS
SCALE: 3/8" = 1'-0"

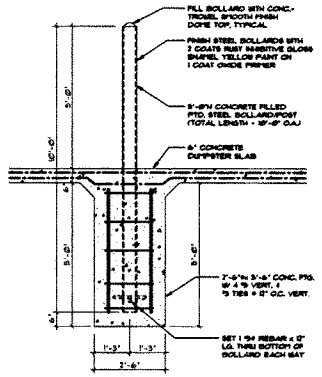


3 TRASH ENCLOSURE SECTION
SCALE: 3/8" = 1'-0"



4 TRASH ENCLOSURE GATE DETAIL
SCALE: 1 1/2" = 1'-0"





5 TYPICAL BOLLARD DETAIL

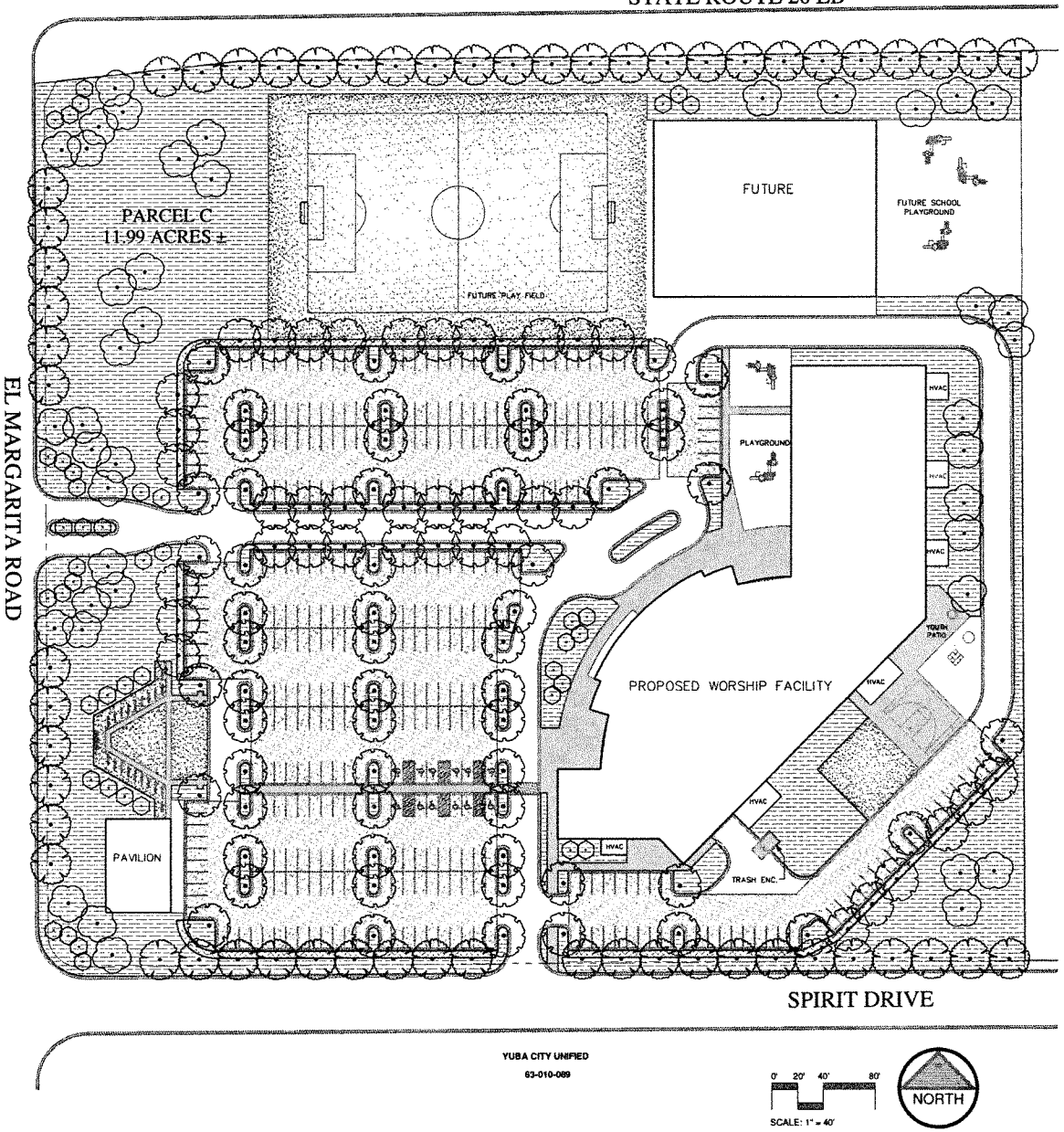
BGW ARCHITECTS

HILBERS

Trash Enclosure Details

CALVARY CHRISTIAN CENTER

5/5/25



CONCEPT PLANT SCHEDULE

SYMBOL	BOTANICAL NAME / COMMON NAME	SIZE / WATER USE
	PARKING LOT SHADE TREES (MUCH AS):	
	CELTIS SINENSIS / CHINESE HACKBERRY	15 GAL, MEDIUM
	KOELREUTERIA BIPINNATA / CHINESE FLAME TREE	15 GAL, MEDIUM
	MAGNOLIA GRANDIFLORA / SOUTHERN MAGNOLIA	15 GAL, MEDIUM
	PISTACIA CHINENSIS 'KEITH DAVEY' / KEITH DAVEY CHINESE PISTACHE	15 GAL, LOW
	PLATANUS ACERIFOLIA 'COLUMBIA' / COLUMBIA LONDON PLANE TREE	15 GAL, MEDIUM
	STREET TREES (MUCH AS):	
	ACER RUBRUM 'OCTOBER GLORY' / OCTOBER GLORY RED MAPLE	15 GAL, MEDIUM
	GINKGO BILOBA 'AUTUMN GOLD' / AUTUMN GOLD MAIDENHAIR TREE	15 GAL, MEDIUM
	NYSSA SYLVATICA / TUPELO	15 GAL, MEDIUM
	ZELKOVA SERRATA 'GREEN VILLAGE' / GREEN VILLAGE JAPANESE ZELKOVA	15 GAL, MEDIUM
	ACCENT TREES (MUCH AS):	
	CERCIS CANADENSIS 'FOREST PANSY' / FOREST PANSY EASTERN REDBUD	15 GAL, MEDIUM
	CORNUS FLORIDA 'RUBRA' / RED FLOWERING DOGWOOD	15 GAL, MEDIUM
	LAGERSTROEMIA X 'TUSCARORA' / TUSCARORA CRAPE MYRTLE	15 GAL, LOW
	MAGNOLIA GRANDIFLORA 'ST. MARY' / ST. MARY SOUTHERN MAGNOLIA	15 GAL, MEDIUM
	PRUNUS CERASIFERA 'KRAUTER VESUVIUS' / PURPLE LEAF PLUM	15 GAL, MEDIUM
	SECONDARY TREES (MUCH AS):	
	CEDRUS ATLANTICA 'GLAUCA' / BLUE ATLAS CEDAR	15 GAL, LOW
	QUERCUS ILEX / HOLLY OAK	15 GAL, LOW
	SAPIUM SEBIFERUM / CHINESE TALLOW TREE	15 GAL, MEDIUM
	TILIA CORDATA 'GREENSPIRE' / GREENSPIRE LITTLELEAF LINDEN	15 GAL, MEDIUM
	PARKING LOT SCREENING AREA (PLANTS SUCH AS):	
	ARCTOSTAPHYLOS DENSIFLORA 'HOWARD MCMINN' / HOWARD MCMINN MANZANITA	5 GAL, LOW
	CISTUS X PURPUREUS / ORCHID ROCKROSE	5 GAL, LOW
	EUONYMUS JAPONICUS 'ALBO-MARGINATUS' / GOLDEN EUONYMUS	5 GAL, LOW
	GREVILLEA X 'NOELLII' / GREVILLEA	5 GAL, LOW
	MYRTUS COMMUNIS 'COMPACTA' / DWARF MYRTLE	5 GAL, LOW
	SHRUBS & GROUND COVER AREA (PLANTS SUCH AS):	
	CALLISTEMON VIMINALIS 'LITTLE JOHN' / LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL, LOW
	COTONEASTER DAMMERI 'LOWFAST' / LOWFAST BEARBERRY COTONEASTER	1 GAL, LOW
	COTONEASTER LACTEUS / RED CLUSTERBERRY COTONEASTER	5 GAL, LOW
	DIANELLA REVOLUTA 'LITTLE REV' / LITTLE REV FLAX LILY	1 GAL, LOW
	DIETES VEGETA / AFRICAN IRIS	5 GAL, LOW
	DODONAEA VISCOSA 'PURPUREA' / PURPLE HOPSEED BUSH	5 GAL, LOW
	EUONYMUS JAPONICUS 'GREEN SPIRE' / GREEN SPIRE EUONYMUS	5 GAL, LOW
	JUNIPERUS HORIZONTALIS 'BLUE ACRES' / BLUE ACRES CREEPING JUNIPER	1 GAL, LOW
	KNIPHOFIA UVARIA 'FLAMENCO' / FLAMENCO RED HOT POKER	1 GAL, LOW
	LEYMUS CONDENSATUS 'CANYON PRINCE' / NATIVE BLUE RYE	1 GAL, LOW
	MACFADYENA UNGUIS-CATI / YELLOW TRUMPET VINE	5 GAL, LOW
	MUHLENBERGIA CAPILLARIS 'REGAL MIST' / REGAL MIST MUHLY	1 GAL, LOW
	MYOPORUM PARVIFOLIUM 'PINK' / TRAILING MYOPORUM	1 GAL, LOW
	MYRTUS COMMUNIS 'COMPACTA' / DWARF MYRTLE	5 GAL, LOW
	NANDINA DOMESTICA 'COMPACTA' / DWARF HEAVENLY BAMBOO	5 GAL, LOW
	NANDINA DOMESTICA 'FIRE POWER' / FIREPOWER NANDINA	5 GAL, LOW
	NASSELLA TENUISSIMA / TEXAS NEEDLE GRASS	1 GAL, LOW
	PENNISETUM SETACEUM 'EATON CANYON' / EATON CANYON FOUNTAIN GRASS	1 GAL, LOW
	PHORMIUM TENAX 'APRICOT QUEEN' / NEW ZEALAND FLAX	5 GAL, LOW
	PHORMIUM TENAX 'ATROPURPUREUM COMPACTUM' / PURPLE NEW ZEALAND FLAX	5 GAL, LOW
	PHORMIUM TENAX 'YELLOW WAVE' / NEW ZEALAND FLAX	5 GAL, LOW
	RHAPHIOLEPIS UMBELLATA 'MINOR' / DWARF YEDDA HAWTHORNE STANDARD	5 GAL, LOW
	ROSA X RADTKOPANIC / PINK DOUBLE KNOCK OUT ROSE	5 GAL, LOW
	ROSMARINUS OFFICINALIS 'HUNTINGTON CARPET' / HUNTINGTON CARPET ROSEMARY	1 GAL, LOW
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE' / TUSCAN BLUE ROSEMARY	5 GAL, LOW
	VERBENA PERUVIANA 'RED' / RED PERUVIAN VERBENA	1 GAL, LOW
	XYLOSMA CONGESTUM 'COMPACTA' / COMPACT XYLOSMA	5 GAL, LOW
	LAWN AREA	
	LAWN / LAWN	-, HIGH

NOTE:
PLANT WATER USE VALUES ARE PER THE "WATER USE CLASSIFICATION OF LANDSCAPE SPECIES" (WUCOLS)

DELTA DATE REVISIONS

CONCEPTUAL LANDSCAPE PLAN

CALVARY CHRISTIAN CENTER
YUBA CITY, CA

Steven Design Group Landscape Architects
1360 Valley Vista Drive, Suite 200
Diamond Bar, CA 91765
(909) 598-7446 FAX (909) 598-8844
www.stevendesigngroup.com

DRAWN
MM
CAD FILE NAME
PRELIM
DATE
7/21/25
SCALE
1"=40'
JOB NO.
C-109-25
SHEET
L1
OF 2 SHEETS

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PARKING LOT SHADE CALCULATION

TREE NUMBER AND SIZE TREE NAME	QUANTITY @ FULL (100%) F		QUANTITY @ 3/4 (75%) TQ		QUANTITY @ 1/2 (50%) H		QUANTITY @ 1/4 (25%) Q		TOTAL SQ. FT.
1 - 30' PLUS SPREAD (PARKING & STREET TREES)	28 x (962) = 26,936	+	10 x (722) = 7,220	+	71 x (481) = 34,151	+	0 x (240) = 0	=	68,307
2 - 25' TO 30' SPREAD (TREE TYPE)	0 x (706) = 0	+	0 x (530) = 0	+	0 x (354) = 0	+	0 x (177) = 0	=	0
3 - 20' TO 25' SPREAD (TREE TYPE)	0 x (491) = 0	+	0 x (368) = 0	+	0 x (246) = 0	+	0 x (123) = 0	=	0
4 - 15' TO 20' SPREAD (TREE TYPE)	0 x (314) = 0	+	0 x (236) = 0	+	0 x (157) = 0	+	0 x (79) = 0	=	0
							CALCULATED TOTAL TREE SHADE:		68,307

REQUIRED TOTAL

AREA OF PAVING (SHADED ON PLAN)	124,719	SQ. FT. OF SHADED AREA ON PLAN
AREA REQUIRED TO BE SHADED	124,719	SQ. FT. x 50% = **62,359.5**
CALCULATED SHADE PROVIDED	68,307	SQ. FT.
PERCENT SHADE PROVIDED	55	%

CONCEPTUAL DESIGN WATER EFFICIENT LANDSCAPE WORKSHEET

REFERENCE EVAPOTRANSPIRATION (ETO): 46.7

HYDROZONE # PLANTING DESCRIPTION	PLANT FACTOR (PF)	IRRIGATION METHOD	IRRIGATION EFFICIENCY (IE)	ETAF (PF/IE)	LANDSCAPE AREA (SQ. FT.)	ETAF x AREA	ESTIMATED TOTAL WATER USE (ETWU) IN GALLONS/YEAR
REGULAR LANDSCAPE AREAS							
MED. W.U.	0.5	DRIP	0.81	0.62	2,360	1,463	42,368
LOW W.U.	0.2	DRIP	0.81	0.25	184,595	46,149	1,336,191
				TOTALS:	186,955	47,612	
SPECIAL LANDSCAPE AREAS							
RECREATION AREA				1.00	62,550	62,550	1,811,073
				TOTALS:	62,550	62,550	
					p	ETWU TOTAL:	3,189,629
					MAXIMUM APPLIED WATER ALLOWANCE (MAWA):		4,246,965

MAXIMUM APPLIED WATER ALLOWANCE (MAWA)

WHERE MAWA = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

MAWA: (46.7) (0.62) [(0.45 x 186,955) + (0.55 x 62,550)] = 4,246,965 GALLONS PER YEAR

ETAF CALCULATIONS

REGULAR LANDSCAPE AREAS

TOTAL ETAF x AREA	47,612
TOTAL AREA	186,955
AVERAGE ETAF	0.25

ALL LANDSCAPE AREAS

TOTAL ETAF x AREA	110,162
TOTAL AREA	249,505
AVERAGE ETAF	0.44

NOTE:
AVERAGE ETAF FOR REGULAR LANDSCAPE AREAS IS 0.45 OR BELOW FOR NON-RESIDENTIAL AREAS

CONCEPTUAL LANDSCAPE PLAN NOTES

1. THIS CONCEPTUAL LANDSCAPE DESIGN IS BASED ON THE PRELIMINARY MASTER PLAN BY BGM ARCHITECTS. DURING THE CONSTRUCTION DRAWINGS PHASE, COORDINATION WITH CHANGES TO THE SITE PLAN FROM ARCHITECTURAL AND ENGINEERING IMPROVEMENTS, INCLUDING SITE UTILITIES, MAY CAUSE CHANGES TO THE LANDSCAPE AREAS AND REQUIRE CHANGES TO THIS PROPOSED DESIGN.
2. LANDSCAPE CONSTRUCTION IRRIGATION AND PLANTING PLANS SHALL CONFORM TO YUBA CITY'S MUNICIPAL CODES AND WATER EFFICIENT LANDSCAPE ORDINANCE, THE STATE OF CALIFORNIA MODEL WATER EFFICIENT LANDSCAPE ORDINANCE, AND THE PROPERTY OWNER'S NEEDS.
3. CONSTRUCTION DOCUMENTS SHALL BE SUBMITTED AFTER APPROVAL OF THE CONCEPTUAL LANDSCAPE PLAN.
4. ALL PLANTING AREAS SHALL BE IRRIGATED WITH A FULLY AUTOMATED IRRIGATION SYSTEM DESIGNED DURING THE CONSTRUCTION DOCUMENTS PHASE. DRIP IRRIGATION SHALL BE USED TO THE EXTENT APPROPRIATE.
5. PLANTS WITH SIMILAR WATER NEEDS SHALL BE GROUPED WITHIN HYDROZONES CONTROLLED BY SEPARATE IRRIGATION VALVES PER THE IRRIGATION PLAN DEVELOPED DURING THE CONSTRUCTION DOCUMENTS PHASE.
6. PLANTING BED SOIL SHALL BE AMENDED TO CORRECT IN-PLACE SOIL DEFICIENCIES TO SUPPORT THE NEEDS OF THE SPECIFIED PLANTS PER THE SOIL'S REPORT PROVIDED FOR DURING THE CONSTRUCTION DOCUMENTS PHASE.
7. ALL SHRUB BEDS SHALL HAVE A THREE-INCH LAYER OF BARK MULCH DRESSING.
8. REFER TO THE ARCHITECTURAL PLANS FOR BUILDING, PAVING, UTILITIES, AND SITE IMPROVEMENTS.

OWNERSHIP OF DOCUMENTS: THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICES, IS THE PROPERTY OF SIERRA DESIGN GROUP, AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF SIERRA DESIGN GROUP

DELTA DATE REVISIONS

CONCEPTUAL LANDSCAPE PLAN NOTES

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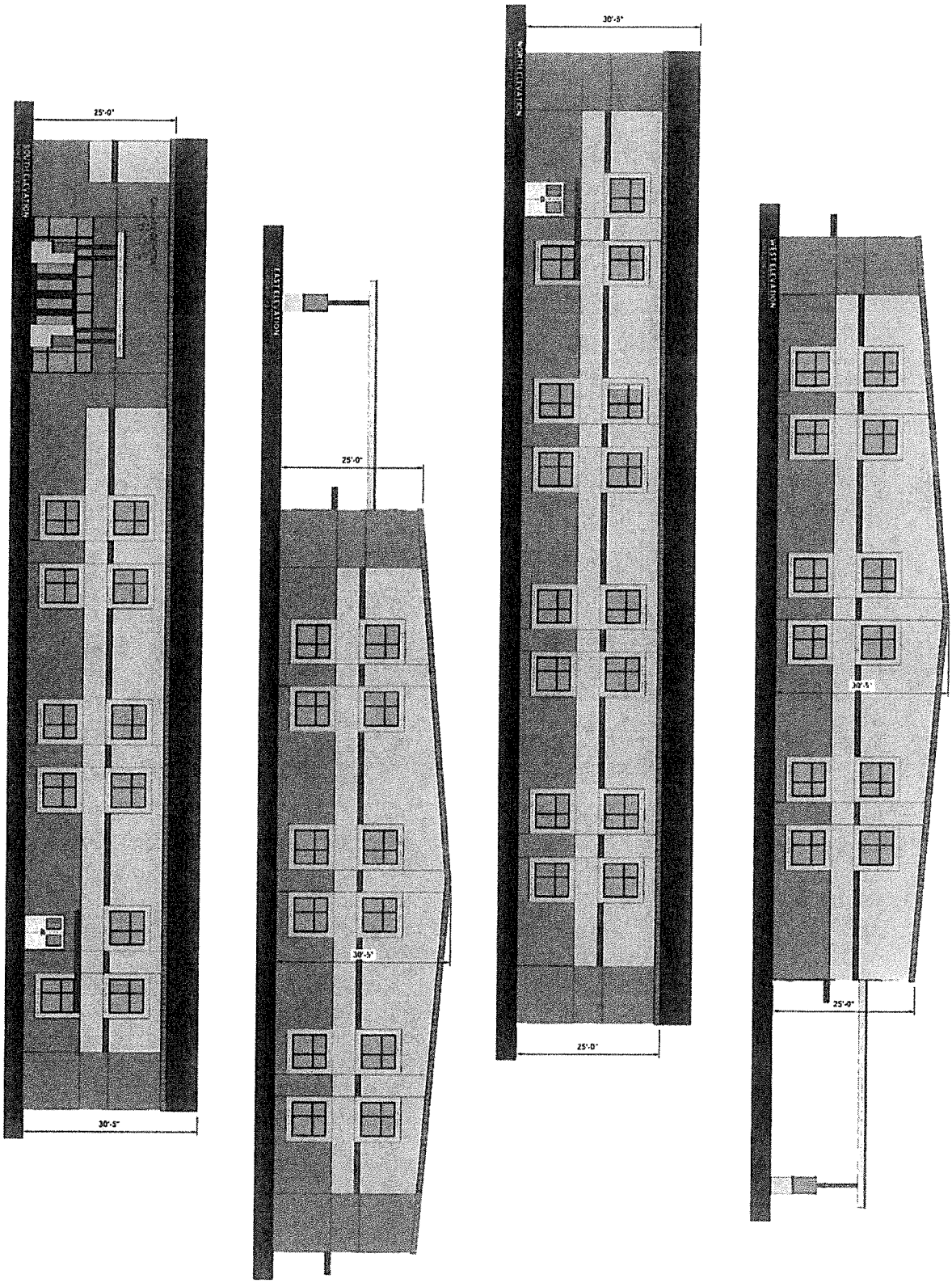
10/12/23

CALVARY CHURCH

Master Plan Alternate

HILBERS INCORPORATED

BGW ARCHITECTS



CALVARY christian center

Elevations - Future Expansion

HILBERS INCORPORATED

BGW ARCHITECTS

2.11. Surrounding Land Uses and Setting

Setting: The approximately 12-acre flat property is vacant, with no trees or other distinguishing features. It is located in a primarily non-residential area except for several single-family residences located across El Margarita Road. River Valley High School is located to the south across Spirit Way, a The hazardous materials associated with the proposal would be from construction of the facility including those materials associated with grading and construction equipment. This typically includes solvents, oil, and fuel. Provided that these materials are legally and properly used and stored, the proposed Project will not create a significant hazard to the public or the environment. Assuming proper and legal disposal of those wastes there should not be a significant impact from hazardous materials. On an ongoing operational basis, it is unlikely that a religious facility would generate noticeable quantity of hazardous materials other than fertilizers and various landscaping sprays. Assuming proper use and storage of those materials, the potential for significant impacts from these materials is less than significant. Ad an auto dealership is located to the east.

Table 1: Bordering Uses	
North:	State Route 20 (Colusa Highway).
South:	River Valley High School.
East:	A vacant commercially zoned parcel with an auto dealership next to that.
West:	Four single family residences across El Margarita Road facing the Project site (Two of them are proposed to be rezoned for general commercial uses.

2.12. Other Public Agencies Whose Approval May be Required.

- Feather River Air Quality Management District, Dust Control Plan, Indirect Source Review.
- Central Valley Regional Water Quality Control Board.
- Caltrans

2.13. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

All geographically relevant Native American tribes were timely notified of the Project, and consultation was not requested.

2.14. Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this Project, as indicated by the checklist and subsequent discussion on the following pages.

	Aesthetics		Agriculture & Forestry Resources		Air Quality
	Biological Resources		Cultural Resources		Energy
X	Geology/Soils	X	Greenhouse Gas Emissions		Hazzard & Hazardous Materials
	Hydrology/Water Quality		Land Use Planning		Mineral Resources
	Noise		Population/Housing		Public Services
	Recreation		Transportation	X	Tribal Cultural Resources
	Utilities/Service Systems		Wildfire		Mandatory Findings of Significance

Determination: On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that, although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that, although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Doug Libby
Signature

April 13, 2026
Date

Doug Libby, AICP, Deputy Director of Development Services

2.15. Evaluation of Environmental Impacts:

A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

"Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described below, may be cross referenced). A Mitigated Negative Declaration also requires preparation and adoption of a Mitigation Monitoring and Reporting Program (MMRP)

Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. In this case, a brief discussion should identify the following:

Earlier Analysis Used. Identify and state where they are available for review.

Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they addressed site-specific conditions for the project.

Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts. Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

3. Environmental Checklist and Impact Evaluation

The following section presents the initial study checklist recommended by the California Environmental Quality Act (CEQA; Appendix G) to determine potential impacts of a project. Explanations of all answers are provided following each question, as necessary.

3.1. Aesthetics

Table 3-1: Aesthetics				
Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In nonurbanized areas substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.			X	
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	

3.1.1. Environmental Setting/Affected Environment

Background views are generally considered to be long-range views in excess of 3 to 5 miles from a vantage point. Background views surrounding the Project site are limited due to the flat nature of the site and the surrounding urban landscape. Overall, the vast majority of Sutter County is relatively flat, with the Sutter Buttes being the exception. The Sutter Buttes, located several miles northwest of the Project site, are visibly prominent throughout Yuba City and Sutter County. The Sutter Buttes comprise the long-range views to the northwest and are visible from the much of the City, except in areas where trees or intervening structures block views of the mountain range.

The City's General Plan, more specifically the Community Design Element "establishes policies to ensure the creation of public and private improvements that will maintain and enhance the image, livability, and aesthetics of Yuba City in the years to come."

The following principles and policies are applicable:

- Maintain the identity of Yuba City as a small-town community, commercial hub, and residential community, surrounded by agricultural land and convey, through land uses and design amenities, Yuba City's character and place in the Sacramento Valley.

- Recognizing the livability and beauty of peer communities with highly designed visual landscapes, commit to a focus on the visual landscape of Yuba City.
- Maintain, develop, and enhance connections between existing and planned neighborhoods.
- Create and build upon a structured open space and parks network, centered on two large urban parks and the Feather River Corridor.
- Strive for lush, landscaped public areas marked by extensive tree plantings.
- Design commercial and industrial centers to be visually appealing, to serve both pedestrians and automobiles, and to integrate into the adjacent urban fabric.

In addition to the City's General Plan, the City provides Design Guidelines. The goal of the City's design guidelines is to ensure the highest quality of building design: designs that are aesthetically pleasing; designs that are compatible with the surroundings in terms of scale, mass, detailing, and building patterns; designs that accommodate the pedestrian, automobile, bicycle, and transit circulation; and designs that consider public safety, public interaction, and historic resources. The design guidelines apply to this development.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on aesthetics as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.1.2. Federal Regulatory Setting

Federal regulations relating to aesthetics include Organic Administration Act (1897), Multiple Use – Sustained Yield Act (1960), Wilderness Act (1964), Federal Lands Policy and Management Act (1976), Wild and Scenic Rivers Act. The proposed Project is not subject to these regulations since there are no federally designated lands or rivers in the vicinity.

3.1.3. State Regulatory Setting

The California State Scenic Highway Program was created by the California Legislature in 1963 to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. A scenic corridor is the land generally adjacent to and visible from the highway. A scenic corridor is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. The corridor protection program does not preclude development but seeks to encourage quality development that does not degrade the scenic value of the corridor. Jurisdictional boundaries of the nominating agency are also considered. The agency must also adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program. County and city roads can also become part of the Scenic Highway System. To receive official designation, the county

or city must follow the same process required for official designation of state scenic highways. There are no designated state or local scenic highways in the vicinity of the Project site.

California Building Code Title 24 Outdoor Lighting Standards: The requirements vary according to which "Lighting Zone" the equipment is in. The Standards contain lighting power allowances for newly installed equipment and specific alterations that are dependent on which Lighting Zone the project is located in. Existing outdoor lighting systems are not required to meet these lighting power allowances. However, alterations that increase the connected load, or replace more than 50 percent of the existing luminaires, for each outdoor lighting application that is regulated by the Standards, must meet the lighting power allowances for newly installed equipment.

An important part of the Standards is to base the lighting power that is allowed on how bright the surrounding conditions are. The eyes adapt to darker surrounding conditions, and less light is needed to properly see; when the surrounding conditions get brighter, more light is needed to see. The least power is allowed in Lighting Zone 1 and increasingly more power is allowed in Lighting Zones 2, 3, and 4. By default, government designated parks, recreation areas and wildlife preserves are Lighting Zone 1; rural areas are Lighting Zone 2; and urban areas are Lighting Zone 3. Lighting Zone 4 is a special use district that may be adopted by a local government. The proposed Project is located in an urban area which is within Lighting Zone 3.

3.1.4. Impact Assessment/Environmental Consequences:

a) Have a substantial adverse effect on a scenic vista?

There are no designated scenic areas within the City, so there would be no impacts on a designated scenic area.

Once the religious facility is completed, the primary background view from the SR 20 passersby will be of River Valley High School, an auto dealership and potential other commercial use(s) that may be developed on the neighboring vacant property. From an aesthetics standpoint, the Project is within an urbanizing area and is evaluated as such. As required by the City adopted Design Guidelines, this facility would appear as nice as any office facility that could otherwise be constructed on this property. Also, the landscaping associated with the Project will further soften the view. Therefore, the aesthetic impact on the background views from this Project is considered to be less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The site is unremarkable in that it is flat with no topographic features, rock outcroppings, large heritage type trees or buildings. Therefore, damage to the scenic resources associated with development of this property is less than significant.

c) In nonurbanized areas substantially degrade the existing visual character of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point. If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.

The site is within the urbanized area. The landscaping, parking, and outdoor lighting must meet all City standards, and the design of the buildings must meet all City design criteria. As such there will

not be any additional impacts on the visual character of the area due to non-compliance with any City regulations or standards.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

The property is within the urban area where exterior lighting is already prevalent. The property is visible from State Route 20 (Colusa Highway) with urban level lighting all along the route. This Project, with outdoor parking lot lighting will generate lighting that is typically expected, and not any brighter than the nearby high school parking area and likely less than the nearby auto dealerships. There are several residences across El Margarita Road, but Project lighting is not expected to generate any lighting that is greater than already exists in the vicinity. As such, the impacts from light or glare is considered to be less than significant.

3.2. Agricultural and Forestry Resources

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

Table 3-2: Agricultural and Forestry Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

3.2.1. Environmental Setting/Affected Environment

Sutter County is located within the northern portion of California's Central Valley in the area known as the Sacramento Valley. It contains some of the richest soils in the State. These soils, combined with abundant surface and subsurface water supplies and a long, warm growing season, make Sutter County's agricultural resources very productive. Sutter County is one of California's leading agricultural counties, with 83 percent of the County's total land acreage currently being used for agricultural purposes. However, while Sutter County provides rich agricultural opportunities, the subject site is within an urban area and has been designated for urban uses for many years.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on agriculture or forestry resources as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.2.2. Federal Regulatory Setting

Farmland Protection Policy Act: The Natural Resources Conservation Service (NRCS), a federal agency within the U.S. Department of Agriculture (USDA), is the agency primarily responsible for implementation of the Farmland Protection Policy Act (FPPA). The FPPA was enacted after the 1981 Congressional report, Compact Cities: Energy-Saving Strategies for the Eighties indicated that a great deal of urban sprawl was the result of programs funded by the federal government. The purpose of the FPPA is to minimize federal programs' contribution to the conversion of farmland to non-agricultural uses by ensuring that federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. Federal agencies are required to develop and review their policies and procures to implement the FPPA every two years (USDA-NRCS, 2011).

2014 Farm Bill: The Agricultural Act of 2014 (the Act), also known as the 2014 Farm Bill, was signed by President Obama on Feb. 7, 2014. The Act repeals certain programs, continues some programs with modifications, and authorizes several new programs administered by the Farm Service Agency (FSA). Most of these programs are authorized and funded through 2018.

The Farm Bill builds on historic economic gains in rural America over the past five years, while achieving meaningful reform and billions of dollars in savings for the taxpayer. It allows USDA to continue record accomplishments on behalf of the American people, while providing new opportunity and creating jobs across rural America. Additionally, it enables the USDA to further expand markets for agricultural products at home and abroad, strengthen conservation efforts, create new opportunities for local and regional food systems and grow the bio-based economy. It provides a dependable safety net for America's farmers, ranchers and growers and maintains important agricultural research, and ensure access to safe and nutritious food for all Americans.

Forestry Resources: Federal regulations regarding forestry resources are not relevant to the proposed Project because no forestry resources exist on the Project site or in the vicinity.

3.2.3. State Regulatory Setting

California Environmental Quality Act (CEQA) Definition of Agricultural Lands: Public Resources Code Section 21060.1 defines "agricultural land" for the purposes of assessing environmental impacts using the Farmland Mapping & Monitoring Program (FMMP). The FMMP was established in 1982 to assess

the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California.

California Department of Conservation, Division of Land Resource Protection: The California Department of Conservation (DOC) applies the NRCS soil classifications to identify agricultural lands, and these agricultural designations are used in planning for the present and future of California's agricultural land resources. Pursuant to the DOC's FMMP, these designated agricultural lands are included in the Important Farmland Maps (IFM) used in planning for the present and future of California's agricultural land resources. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications.

The list below provides a comprehensive description of all the categories mapped by the DOC. Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland is referred to as Farmland.

- *Prime Farmland.* Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- *Farmland of Statewide Importance.* Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- *Unique Farmland.* Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- *Farmland of Local Importance.* Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- *Grazing Land.* Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
- *Urban and Built-up Land.* Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- *Other Land.* Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation Act (Williamson Act): The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is promulgated in California Government Code Section 51200-51297.4, and therefore is applicable only to specific land parcels within the State of California. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Private land within locally designated agricultural preserve areas is eligible for enrollment under Williamson Act contracts. However, an agricultural preserve must consist of no less than 100 acres. In order to meet this requirement two or more parcels may be combined if they are contiguous, or if they are in common ownership.

The Williamson Act program is administered by the Department of Conservation (DOC), in conjunction with local governments, which administer the individual contract arrangements with landowners. The landowner commits the parcel to a 10-year period, or a 20-year period for property restricted by a Farmland Security Zone Contract, wherein no conversion out of agricultural use is permitted. Each year the contract automatically renews unless a notice of non-renewal or cancellation is filed. In return, the land is taxed at a rate based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. An application for immediate cancellation can also be requested by the landowner, provided that the proposed immediate cancellation application is consistent with the cancellation criteria stated in the California Land Conservation Act and those adopted by the affected county or city. Non-renewal or immediate cancellation does not change the zoning of the property. Participation in the Williamson Act program is dependent on county adoption and implementation of the program and is voluntary for landowners.

Farmland Security Zone Act: The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy. Farmland Security Zone Act contracts are sometimes referred to as "Super Williamson Act Contracts." Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone classification automatically renews each year for an additional 20 years. In return for a further 35% reduction in the taxable value of land and growing improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into nonagricultural uses.

Forestry Resources: State regulations regarding forestry resources are not relevant to the proposed Project because no forestry resources exist on the project site or in the vicinity.

3.2.4. Impact Assessment/Environmental Consequences:

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?

The approximately 12-acre vacant site is located on land that the 2018 Department of Conservation Important Farmland Map for Sutter County identifies as "Grazing Land." The Project site is not considered to be Prime Farmland, Farmland of Statewide Importance, or Unique Farmland.

The site is within the Yuba City urban area. As such it was designated years ago for urban uses. The City and Sutter County General Plans identify this area for urban development, as compared to the vast majority of Sutter County for which agricultural land is protected from urban growth (this was identified in the EIR's for both the 2040 Yuba City General Plan and Sutter County General Plan).

Further, because the property is small from a standpoint of being utilized as grazing land and has been designated for urban uses on all sides, it is unlikely that the property could be economically utilized for agriculture. The 2004 EIR for the City General Plan made overriding considerations for significant impacts on agricultural lands. Therefore, this facility will not create any impacts in regard to the loss of agricultural land.

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

The proposed Project site is currently zoned for urban type uses and is not under a Williamson Act contract. There will therefore be no impact related to a Williamson Act contract. See discussion above under item 3.2.4.a.

c) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4256), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

The Project is located in the Sacramento Valley in a relatively flat area that was likely at one time utilized for agriculture but designated years ago for urban use. There is no timberland located on the Project site or within the vicinity of the Project. There will be no impact on existing zoning of forestland, and the proposed Project will not cause the rezoning of any forestlands.

d) Result in the loss of forestland or conversion of forest land to non-forest use?

There is no forested land on the Project site or within the vicinity of the Project; therefore, there will be no impact on forest land.

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

The proposed Project is within an area already served by City services and developed with other commercial and public uses. There are no forestlands on the Project site or in the vicinity. No properties within the area are under a Williamson Act contract. Therefore, there will be no impacts on agricultural lands from this proposal and there are no impacts of forest lands.

3.3. 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.

Table 3-3: Air Quality				
Would the project?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) 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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?			X	

3.3.1. Environmental Setting/Affected Environment

Yuba City is located within the Sacramento Valley Air Basin (SVAB), which consists of the northern half of the Central Valley and approximates the drainage basin for the Sacramento River and its tributaries. The SVAB is bounded on the west by the Coast Range, on the north by the Cascade Range, on the east by the Sierra Nevada, and on the south by the San Joaquin Valley Air Basin. The intervening terrain is flat, and approximately 70 feet above sea level. The SVAB consists of the counties of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba and portions of Placer and Solano Counties.

Hot dry summers and mild rainy winters characterize the Mediterranean climate of the Sacramento Valley. The climate of the SVAB is dominated by the strength and position of the semi-permanent high-pressure cell over the Pacific Ocean north of Hawaii. In summer, when the high-pressure cell is strongest and farthest north, temperatures are high and humidity is low, although the incursion of the sea breeze into the Central Valley helps moderate the summer heat. In winter, when the high-pressure cell is weakest and farthest south, conditions are characterized by occasional rainstorms interspersed with stagnant and sometimes foggy weather. Throughout the year, daily temperatures may range from summer highs often exceeding 100 degrees Fahrenheit and winter lows occasionally below freezing. Average annual rainfall is about 20 inches with snowfall being very rare. The prevailing winds are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north.

In addition to prevailing wind patterns that control the rate of dispersion of local pollutant emissions, the region experiences two types of inversions that affect the vertical depth of the atmosphere through which pollutants can be mixed. In the warmer months in the SVAB (May through October), sinking air forms a "lid" over the region. These subsidence inversions contribute to summer

photochemical smog problems by confining pollution to a shallow layer near the ground. These warmer months are characterized by stagnant morning air or light winds with the delta sea breeze arriving in the afternoon out of the southwest. Usually, the evening breeze transports the airborne pollutants to the north and out of the SVAB. During about half of the day from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of violating federal or State standards. The Schultz Eddy normally dissipates around noon when the Delta sea breeze begins. In the second type of inversion, the mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants in the valley. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The air near the ground cools by radiative processes, while the air aloft remains warm. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. These inversions typically occur during winter nights and can cause localized air pollution "hot spots" near emission sources because of poor dispersion. The surface concentrations of pollutants are highest when these conditions are combined with smoke from agricultural burning or when temperature inversions trap cool air and pollutants near the ground. Although these subsidence and radiative inversions are present throughout much of the year, they are much less dominant during spring and fall, and the air quality during these seasons is generally good."

Local Climate: The climate of Sutter County is subject to hot dry summers and mild rainy winters, which characterize the Mediterranean climate of the SVAB. Summer temperatures average approximately 90 degrees Fahrenheit during the day and 50 degrees Fahrenheit at night. Winter daytime temperatures average in the low 50s and nighttime temperatures are mainly in the upper 30s. During summer, prevailing winds are from the south. This is primarily because of the north-south orientation of the valley and the location of the Carquinez Straits, a sea-level gap in the coast range that is southwest of Sutter County.

Criteria Air Pollutants: Criteria air pollutants are a group of pollutants for which federal or State regulatory agencies have adopted ambient air quality standards. Criteria air pollutants are classified in each air basin, county, or in some cases, within a specific urbanized area. The classification is determined by comparing actual monitoring data with State and federal standards. If a pollutant concentration is lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "non-attainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified."

Ambient Air Quality Standards: Both the federal and state government have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect public health. The federal and state ambient air quality standards have been set at levels whose concentrations could be generally harmful to human health and welfare and to protect the most sensitive persons from experiencing health impacts with a margin of safety. Applicable ambient air quality standards are identified later in this section. The air pollutants for which federal and State standards have been promulgated, and which are most relevant to air quality planning and regulation in the air basins include ozone, carbon monoxide, nitrogen oxides, suspended particulate matter, sulfur dioxide, and lead. In addition, toxic air contaminants are of concern in Sutter County. Each of these pollutants is briefly described below.

Ozone (O3): is a gas that is formed when reactive organic gases (ROGs) and nitrogen oxides (NOX), both byproducts of internal combustion engine exhaust and other processes undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

Carbon Monoxide (CO): is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the SVAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Nitrogen Oxides (NOX): is the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Many of the nitrogen oxides are colorless and odorless. However, one common pollutant, nitrogen dioxide (NO2) along with particles in the air can often be seen as a reddish-brown layer over many urban areas. Nitrogen oxides form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NOX are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels.

Nitrogen oxides can also be formed naturally.

Respirable Particulate Matter (PM10) and Fine Particulate Matter (PM2.5): consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter. Some sources of suspended particulate matter, like pollen and windstorms, occur naturally. However, in populated areas, most fine suspended particulate matter is caused by road dust, diesel soot, and combustion products, abrasion of tires and brakes, and construction activities.

Sulfur Dioxide (SO2): is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of the burning of high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries.

Lead: occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead. Since the use of leaded gasoline is no longer permitted for on-road motor vehicles, lead is not a pollutant of concern in the SVAB.

Toxic Air Contaminants (TACs): are known to be highly hazardous to health, even in small quantities. TACs are airborne substances capable of causing short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects (i.e., injury or illness). TACs can be emitted from a variety of common sources, including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations.

TAC impacts are assessed using a maximum individual cancer risk (MICR) that estimates the probability of a potential maximally exposed individual (MEI) contracting cancer as a result of sustained exposure to toxic air contaminants over a constant period of 24 hours per day for 70 years for residential receptor locations. The CARB and local air districts have determined that any stationary source posing an incremental cancer risk to the general population (above background risk levels) equal to or greater than 10 people out of 1 million to be excessive. For stationary sources, if the incremental risk of exposure to project-related TAC emissions meets or exceeds the threshold of 10 excess cancer cases per 1 million people, the CARB and local air district require the installation of best available control technology (BACT) or maximum available control technology (MACT) to reduce the risk threshold. To assess risk from ambient air concentrations, the CARB has conducted studies to

determine the total cancer inhalation risk to individuals due to outdoor toxic pollutant levels. The CARB has conducted studies to determine the total cancer inhalation risk to individuals due to outdoor toxic pollutant levels. According to the map prepared by the CARB showing the estimated inhalation cancer risk for TACs in the State of California, Sutter County has an existing estimated risk that is between 50 and 500 cancer cases per 1 million people. A significant portion of Sutter County is within the 100 to 250 cancer cases per 1 million people range. There is a higher risk around Yuba City where the cancer risk is as high as 500 cases per 1 million people. There are only very small portions of the County where the cancer risk is between 50 and 100 cases. This represents the lifetime risk that between 50 and 500 people in 1 million may contract cancer from inhalation of toxic compounds at current ambient concentrations under an MEI scenario.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on air quality as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.3.2. Federal Regulatory Setting

Clean Air Act: The federal Clean Air Act of 1970 (as amended in 1990) required the U.S. Environmental Protection Agency (EPA) to develop standards for pollutants considered harmful to public health or the environment. Two types of National Ambient Air Quality Standards (NAAQS) were established. Primary standards protect public health, while secondary standards protect public welfare, by including protection against decreased visibility, and damage to animals, crops, landscaping and vegetation, or buildings. NAAQS have been established for six "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), ozone (O3), particulate matter (PM10 and PM2.5), and lead (Pb).

3.3.3. State Regulatory Setting

California Air Resources Board: The California Air Resources Board (CARB) is the state agency responsible for implementing the federal and state Clean Air Acts. CARB has established California Ambient Air Quality Standards (CAAQS), which include all criteria pollutants established by the NAAQS, but with additional regulations for Visibility Reducing Particles, sulfates, hydrogen sulfide (H2S), and vinyl chloride. The proposed Project is located within the Sacramento Valley Air Basin, which includes Butte, Colusa, Glenn, Tehama, Shasta, Yolo, Sacramento, Yuba Sutter and portions of Placer, El Dorado and Solano counties. Air basins are classified as attainment, nonattainment, or unclassified. The FRAQMD is comprised Sutter and Yuba Counties. Attainment is achieved when monitored ambient air quality data is in compliance with the standards for a specified pollutant. Non-compliance with an established standard will result in a nonattainment designation and an unclassified designation indicates insufficient data is available to determine compliance for that pollutant.

California Clean Air Act: The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO2, and NO2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any

planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

CARB Portable Equipment Registration Program: This program was designed to allow owners and operators of portable engines and other common construction or farming equipment to register their equipment under a statewide program so they may operate it statewide without the need to obtain a permit from the local air district.

U.S. EPA/CARB Off-Road Mobile Sources Emission Reduction Program: The California Clean Air Act (CCAA) requires CARB to achieve a maximum degree of emissions reductions from off-road mobile sources to attain State Ambient Air Quality Standards (SAAQS); off- road mobile sources include most construction equipment. Tier 1 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996. These standards, along with ongoing rulemaking, address emissions of nitrogen oxides (NOX) and toxic particulate matter from diesel engines. CARB is currently developing a control measure to reduce diesel PM and NOX emissions from existing off-road diesel equipment throughout the state.

California Global Warming Solutions Act: Established in 2006, Assembly Bill 32 (AB 32) requires that California's GHG emissions be reduced to 1990 levels by the year 2020. This will be implemented through a statewide cap on GHG emissions, which will be phased in beginning in 2012. AB 32 requires CARB to develop regulations and a mandatory reporting system to monitor global warming emissions level.

3.3.4. Regional Regulatory Setting

Feather River Air Quality Management District (FRAQMD): The FRAQMD is a bi-county district formed in 1991 to administer local, state, and federal air quality management programs for Yuba and Sutter Counties within the Sacramento Valley Air Basin. The goal of the FRAQMD is to improve air quality in the region through monitoring, evaluation, education and implementing control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations and by supporting and implementing measures to reduce emissions from motor vehicles.

The FRAQMD adopted its Indirect Source Review guidelines document for assessment and mitigation of air quality impacts under CEQA in 1998. The guide contains criteria and thresholds for determining whether a project may have a significant adverse impact on air quality, and methods available to mitigate impacts on air quality. FRAQMD updated its Indirect Source Review Guidelines to reflect the most recent methods recommended to evaluate air quality impacts and mitigation measures for land use development projects in June 2010. This analysis uses guidance and thresholds of significance from the 2010 FRAQMD Indirect Source Review Guidelines to evaluate the proposed project's air quality impacts.

According to FRAQMD's 2010 Indirect Source Review Guidelines, a project would be considered to have a significant impact on air quality if it would:

- Generate daily construction or operational emissions that would exceed 25 pounds per day for reactive organic gases (ROG), 25 pounds per day for oxides of nitrogen (NOX), or 80 pounds per day for PM10; or generate annual construction or operational emissions of ROG or NOX that exceed 4.5 tons per year.

Northern Sacramento Valley Planning Area 2015 Air Quality Attainment Plan: As specified in the California Clean Air Act of 1988 (CCAA), Chapters 1568-1588, it is the responsibility of each air district

in California to attain and maintain the state's ambient air quality standards. The CCAA requires that an Attainment Plan be developed by all nonattainment districts for O3, CO, SOx, and NOx that are either receptors or contributors of transported air pollutants. The purpose of the Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan (TAQAP) is to comply with the requirements of the CCAA as implemented through the California Health and Safety Code. Districts in the NSVPA are required to update the Plan every three years. The TAQAP is formatted to reflect the 1990 baseline emissions year with a planning horizon of 2020. The Health and Safety Code, sections 40910 and 40913, require the Districts to achieve state standards by the earliest practicable date to protect the public health, particularly that of children, the elderly, and people with respiratory illness.

Health and Safety Code Section 41503(b): Requires that control measures for the same emission sources are uniform throughout the planning area to the extent that is feasible. To meet this requirement, the NSVPA has coordinated the development of an Attainment Plan and has set up a specific rule adoption protocol. The protocol was established by the Technical Advisory Committee of the Sacramento Valley Basin-wide Air Pollution Control Council and the Sacramento Valley Air Quality Engineering and Enforcement Professionals, which allow the Districts in the Basin to act and work as a united group with the CARB as well as with industry in the rule adoption process. Section 40912 of the Health and Safety Code states that each District responsible for, or affected by, air pollutant transport shall provide for attainment and maintenance of the state and federal standards in both upwind and downwind Districts. This section also states that each downwind District's Plan shall contain sufficient measures to reduce emissions originating in each District to below levels which violate state ambient air quality standards, assuming the absence of transport contribution

Construction Generated Emissions of Criteria Air Pollutants: The District recommends the following best management practices:

- Implement the Fugitive Dust Control Plan.
- Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0,
- Visible Emissions limitations (40 percent opacity or Ringelmann 2.0).
- The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation.
- Limiting idling time to 5 minutes – saves fuel and reduces emissions.
- Utilize existing power sources or clean fuel generators rather than temporary power generators.
- Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
- Portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, may require California Air Resources Board (ARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultations with the ARB or the District to determine registration and permitting requirements prior to equipment operation at the site.

3.3.5. Impact Assessment/Environmental Consequences:

a) Conflict with or obstruct implementation of the applicable air quality plan?

If approved, constructing the church facility will involve site grading, construction of the infrastructure, and construction of the church and its related buildings and facilities. This activity would temporarily create both equipment exhaust and fugitive dust from the site grading. There will also be ongoing air quality impacts from the auto use generated by vehicle traffic generated by the church. The Feather River Air Quality Management District (FRAQMD) adopted "*Indirect Source Review Guidelines"* (Guidelines) sets standards for what are typically acceptable threshold levels of pollutants for a project's operational phase and construction phase. The thresholds are provided in Table 3, below. If the Project generates any of these pollutants in excess of the numbers provided, the impact is considered significant if without further mitigation.

Table 3: FRAQMD Thresholds of Significance

Project Phase	Nitrogen Oxides (NOx)	Reactive Organic Gases (ROG)	Particulate Matter
Operational	25 lbs./day	25 lbs./day	80 lbs./day
Construction	25 lbs./day multiplied by proj. length, not to exceed 4.5 tons/yr.*	25 lbs./day multiplied by proj. length, not to exceed 4.5 tons/yr.*	80 lbs./day

*NOx and ROG construction emissions may be averaged over the life of the Project, not to exceed 4.5 tons/yr.

FRAQMD's Indirect Source Review Guidelines provides Screening Criteria that estimates project sizes that would be expected to exceed the operational thresholds provided above. Per the Screening Criteria provided in Table 5-1 of the Guidelines, the proposed church will not exceed the FRAQMD adopted operational threshold criteria of 125,000 square feet. As such, the Project impacts on air quality are considered to be less than significant.

b) 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 which exceed quantitative thresholds for ozone precursors)?

As discussed in a) above the proposed church would generate criteria pollutants during its construction and from ongoing vehicle traffic generated by the new development that are lower than what is considered to be significant to the extent that further mitigations are needed beyond what FRAQMD standards provide.

c) Expose sensitive receptors to substantial pollutant concentrations?

The FRAQMD defines sensitive receptors as: facilities that house or attract children, the elderly, and people with illnesses, or others who are especially sensitive to the effects of air pollutants. FRAQMD states that if a project is located within 1,000 feet of a sensitive receptor location, the impact of diesel particulate matter shall be evaluated. According to the FRAQMD's Indirect Source Review Guidelines,

"Construction activity can result in emissions of particulate matter from the diesel exhaust (diesel PM) of construction equipment.

River Valley High School, located immediately south of the Project site, and Faith Christian Elementary School are within one-quarter mile, and are considered sensitive receptors. Since site construction is temporary, and FRAQMD did not comment on the Project, the high school students would not be exposed to substantial amounts of diesel particulate matter. Therefore, any exposure of students to pollutant concentrations would be less than significant.

c) Result in other emissions such as those leading to odors adversely affecting a substantial number of people?

Construction and ongoing use of a religious facility typically does not generate objectionable odors. As such, the impact of the Project towards creating local offensive odors would be less than significant.

3.4. Biological Resources

Table 3.4: Biological Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			X	
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?			X	
c) Have a substantial adverse effect on states or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

3.4.1. Environmental Setting/Affected Environment

The approximately 12 acre site is level, vacant, and within the Yuba City urbanized area. The property is surrounded by a range of uses. This includes SR 20 to the north, River Valley High School on the south, single-family residences to the west across El Margarita Road, and vacant commercial property to the east. There are no riparian areas or known critical habitat areas on-site or in the vicinity.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on biological resources as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.4.2. Federal & State Regulatory Setting

Threatened and Endangered Species: State and federal "endangered species" legislation has provided California Department of Fish & Wildlife (CDFW) and United States Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal endangered species acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as "species of special status." Permits may be required from both the CDFW and USFWS if activities associated with a proposed project will result in the "take" of a listed species. "Take" is defined by the state of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

Migratory Birds: State and federal laws also protect most birds. The Federal Migratory Bird Treaty Act (16U.S.C., scc. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Birds of Prey: Birds of prey are also protected in California under provisions of the California Fish and Game Code, Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFW.

Wetlands and Other Jurisdictional Waters: Natural drainage channels and adjacent wetlands may be considered "Waters of the United States" subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts.

Waters of the U.S. generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters, which are subject to the ebb and flow of the tide.
- All interstate waters including interstate wetlands.
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce.
- All impoundments of waters otherwise defined as waters of the United States under the definition.
- Tributaries of waters identified in the bulleted items above.

As determined by the United States Supreme Court in its 2001 Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated Carabell/Rapanos decision, the U.S. Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable, and therefore, jurisdictional water.

The USACE regulates the filling or grading of Waters of the U.S. under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high-water marks" on opposing channel banks. All activities that involve the discharge of dredge or fill material into Waters of the U.S. are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet state water quality standards.

CEQA Guidelines Section 15380: Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specific criteria that define "endangered" and "rare" as specified in CEQA Guidelines section 15380(b).

3.4.3. Local Regulatory Setting

The General Plan provides the following policies for the protection of biological resources within the project area:

8.4-G-1 Protect special status species, in accordance with State regulatory requirements.

8.4-G-2 Protect and enhance the natural habitat features of the Feather River and new open space corridors within and around the urban growth area.

8.4-G-3 Preserve and enhance heritage oaks in the Planning Area.

8.4-G-4 Where appropriate, incorporate natural wildlife habitat features into public landscapes, parks, and other public facilities

8.4-I-1 Require protection of sensitive habitat area and special status species in new development site designs in the following order: 1) avoidance; 2) onsite mitigation; 3) offsite mitigation. Require assessments of biological resources prior to approval of any development within 300 feet of any creeks, sensitive habitat areas, or areas of potential sensitive status species.

8.4-I-2 Require preservation of oak trees and other native trees that are of a significant size, by requiring site designs to incorporate these trees to the maximum extent feasible.

8.4-I-3 Require to the extent feasible, use of drought tolerant plants in landscaping for new development, including private and public projects.

3.4.4. Impact Assessment/Environmental Consequences:

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.

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?

A review of the site identified no trees on the property and there are no wetland areas or creek corridors or areas that appear to be sensitive habitat areas. The site is several miles from the Feather River. Per the 2004 EIR prepared for the General Plan update, there were no known special status species identified within by the General Plan in the vicinity. Therefore, the impact on biological resources would be less than significant.

c) Have a substantial adverse effect on states or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No wetlands or federal jurisdictional waters of the U.S. are present within the proposed Project area or general vicinity. There would be no impact on any wetland areas or waterways.

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

The proposed Project would not disturb any waterways, as the nearest waterway is the Feather River, being several miles to the east. Therefore, migratory fish would not be affected. Nor are there any trees proposed to be removed that could be potential nesting habitat for raptors and migratory birds that may choose to nest in the vicinity of the Project. As such there will be no impacts on fish habitat and any impacts on wildlife would be less than significant.

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

No trees or other known biological resources that would be protected by local policies or ordinances remain on the Project site. Therefore, there would be no impacts on biological resources caused by this Project.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or any other approved local, regional, or state habitat conservation plans in the vicinity of this Project.

3.5. Cultural Resources

Table 3.5: Cultural Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.				X
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to § 15064.5.		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

3.5.1. Federal Regulatory Setting

National Historic Preservation Act of 1966 (as amended), Section 106: The significance of cultural resources is evaluated under the criteria for inclusion in the National Register of Historic Places (NRHP), authorized under the National Historic Preservation Act of 1966, as amended. The criteria defined in 36 CFR 60.4 are as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- That are associated with events that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of persons significant in our past; or
- That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- That have yielded, or may be likely to yield, information important to prehistory or history.

Sites listed or eligible for listing on the NRHP are considered to be historic properties. Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP.

3.5.2. State Regulatory Setting

CEQA requires consideration of project impacts on archaeological or historical sites deemed to be "historical resources." Under CEQA, a substantial adverse change in the significant qualities of a historical resource is considered a significant effect on the environment. For the purposes of CEQA, a "historical resource" is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (Title 14 CCR §15064.5[a][1]-[3]). Historical resources may include, but are not limited to, "any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC §5020.1[j]).

The eligibility criteria for the California Register are the definitive criteria for assessing the significance of historical resources for the purposes of CEQA (Office of Historic Preservation). Generally, a resource is considered "historically significant" if it meets one or more of the following criteria for listing on the California Register:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Is associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1[c])

In addition, the resource must retain integrity. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association (CCR Title 14, § 4852(c)).

Historical resources may include, but are not limited to, "any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC §5020.1[j]).

California Health and Safety Code Section 7050.5: Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on cultural resources as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.5.3. Native American Consultation

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts on "tribal cultural resources" separately from archaeological resources (PRC § 21074; 21083.09). AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC § 21080.3.1, 21080.3.2, 21082.3).

In response to AB 52, the City supplied the following Native American tribes with a Project description and map of the proposed Project area and a request for comments:

- United Auburn Indian Community of the Auburn Rancheria
- Yocha Dehe Wintun Nation

- Estom Yomeka Maidu Tribe of the Enterprise Rancheria
- Mechoopda Indian Tribe
- Pakan'yani Maidu of Strawberry Valley
- Mooretown Rancheria of Maidu Indians
- Ione Band of Miwok Indians

Additional detail on tribal comments is provided in Section 3.18, Tribal Cultural Resources.

3.5.4. Impact Assessment/Environmental Consequences:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.

There are no existing structures on the property, and the property has been plowed many times for agricultural and weed control purposes. As such, the potential for significant impacts on any historical resources, directly or indirectly, are less than significant.

b) Cause a substantial adverse change in the significance of an archeological resource pursuant to § 15064.5.

c) Disturb any human remains, including those interred outside of formal cemeteries?

The approximately 12-acre property is vacant. The site was cleared many years ago and utilized for agriculture. No formal cemeteries or other places of human internment are known to exist on the proposed Project site. However, there still remains the potential for previously unknown sub-surface resources to be present. In order to avoid potential impacts to unknown remains, the mitigation measure provided in Section 3.18 is provided to ensure impacts are less than significant.

3.6. Energy

Table 3-6: Energy

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

3.6.1 State Regulatory Setting

California has implemented numerous energy efficiency and conservation programs that have resulted in substantial energy savings. The State has adopted comprehensive energy efficiency standards as part of its Building Standards Code, California Codes of Regulations, Title 24. In 2009, the California Building Standards Commission adopted a voluntary Green Building Standards Code, also known as CALGreen, which became mandatory in 2011. Both Title 24 and CALGreen are implemented by the City of Yuba City in conjunction with its processing of building permits.

CALGreen sets forth mandatory measures, applicable to new residential and nonresidential structures as well as additions and alterations, on water efficiency and conservation, building material conservation, interior environmental quality, and energy efficiency. California has adopted a Renewables Portfolio Standard, which requires electricity retailers in the state to generate 33% of electricity they sell from renewable energy sources (i.e., solar, wind, geothermal, hydroelectric from small generators, etc.) by the end of 2020. In 2018, SB 100 was signed into law, which increases the electricity generation requirement from renewable sources to 60% by 2030 and requires all the state's electricity to come from carbon-free resources by 2045.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on energy usage as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.6.2. Impact Assessment/Environmental Consequences

a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

Project construction would involve fuel consumption and use of other non-renewable resources. Construction equipment used for such improvements typically runs on diesel fuel or gasoline. The same fuels typically are used for vehicles that transport equipment and workers to and from a construction site. However, construction-related fuel consumption would be finite, short-term, and consistent with construction activities of a similar character. This energy use would not be considered wasteful, inefficient, or unnecessary.

Electricity may be used for equipment operation during construction activities. It is expected that more electrical construction equipment would be used in the future, as it would generate fewer air pollutant and GHG emissions. This electrical consumption would be consistent with construction activities of a similar character; therefore, the use of electricity in construction activities would not be considered wasteful, inefficient, or unnecessary, especially since fossil fuel consumption would be reduced. Moreover, under California's Renewables Portfolio Standard, a greater share of electricity would be provided from renewable energy sources over time, so less fossil fuel consumption to generate electricity would occur.

The Project would be required to comply with CALGreen and with the building energy efficiency standards of California Code of Regulations Title 24, Part 6 in effect at the time of Project approval. Compliance with these standards would reduce energy consumption associated with Project operations, although reductions from compliance cannot be readily quantified. Overall, Project construction would typically not consume energy resources in a manner considered wasteful, inefficient, or unnecessary.

Project impacts related to energy consumption are considered less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Development that could result from this Project would be required to be consistent with applicable state and local plans to increase energy efficiency. Thus, the Project's impacts would be less than significant.

3.7. Geology and Soils

Table 3.7: Geology and Soils				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly create 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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geological 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?				X
d) Be located on expansive soil, as defined in the California Building Code creating substantial direct or indirect risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resources or site or unique geologic feature?		X		

3.7.1 Environmental Setting/Affected Environment

Topography and Geology: According to the Sutter County General Plan, Sutter County is located in the flat surface of the Great Valley geomorphic province of California. The Great Valley is an alluvial plain approximately 50 miles wide and 400 miles long in the central portion of California. The Great Valley's northern portion is the Sacramento Valley, drained by the Sacramento River, and its southern portion is the San Joaquin Valley, drained by the San Joaquin River. The geology of the Great Valley is typified by thick sequences of alluvial sediments derived primarily from erosion of the mountains of the Sierra Nevada to the east, and to a lesser extent, erosion of the Klamath Mountains and Cascade Range to the north. These sediments were transported downstream and subsequently laid down as a river channel, floodplain deposits, and alluvial fans.

Seismic Hazards: Earthquakes are due to a sudden slip of plates along a fault. Seismic shaking is typically the greatest cause of losses to structures during earthquakes. Earthquakes can cause structural damage, injury, and loss of life, as well as damage to infrastructure networks such as water, power, gas, communication, and transportation lines. Other damage-causing effects of earthquakes include surface rupture, fissuring, settlement, and permanent horizontal and vertical shifting of the ground. Secondary impacts can include landslides, seiches, liquefaction, and dam failure.

Seismicity: Although all of California is typically regarded as seismically active, the Central Valley region does not commonly experience strong ground shaking resulting from earthquakes along known and previously unknown active faults. Though no active earthquake faults are known to exist in Yuba City, active faults in the region could generate ground motion felt within the County. Numerous earthquakes of magnitude 5.0 or greater on the Richter scale have occurred on regional faults, primarily those within the San Andreas Fault System in the region. There are several potentially active faults underlying the Sutter Buttes, which are associated with deep-seated volcanism.

The faults identified in Sutter County include the Quaternary Faults, located in the northern section of the County within the Sutter Buttes, and the Pre-Quaternary Fault, located in the southeast of the City, just east of where Highway 70 enters into the County. Both Faults are listed as non-active faults but have the potential for seismic activity.

Ground Shaking: As stated in the Sutter County Multi-Hazard Mitigation Plan, although the County has felt ground shaking from earthquakes with epicenters located elsewhere, no major earthquakes or earthquake related damage has been recorded within the County. Based on historic data and known active or potentially active faults in the region, parts of Sutter County have the potential to experience low to moderate ground shaking. The intensity of ground shaking at any specific site depends on the characteristics of the earthquake, the distance from the earthquake fault, and on the local geologic and soils conditions. Fault zone maps are used to identify where such hazards are more likely to occur based on analyses of faults, soils, topography, groundwater, and the potential for earthquake shaking sufficiently strong to trigger landslide and liquefaction.

Liquefaction: Liquefaction, which can occur in earthquakes with strong ground shaking, is mostly found in areas with sandy soil or fill and a high-water table located 50 feet or less below the ground surface. Liquefaction can cause damage to property with the ground below structures liquefying making the structure unstable causing sinking or other major structural damage. Evidence of liquefaction may be observed in "sand boils," which are expulsions of sand and water from below the surface due to increased pressure below the surface.

Liquefaction during an earthquake requires strong shaking and is not likely to occur in the city due to the relatively low occurrence of seismic activity in the area; however, the clean sandy layers

paralleling the Sacramento River, Feather River, and Bear River have lower soil densities and high overall water table are potentially a higher risk area if major seismic activity were to occur. Areas of bedrock, including the Sutter Buttes have high density compacted soils and contain no liquefaction potential, although localized areas of valley fill alluvium can have moderate to high liquefaction potential.

Landslides: Landslides are downward and outward movements of slope forming materials which may be rock, soil, artificial fill, or combinations of such materials. The size of landslides varies from those containing less than a cubic yard of material to massive ones containing millions of cubic yards. Large landslides may move down slope for hundreds of yards or even several miles. A landslide may move rapidly or so slow that a change of position can be noted only over a period of weeks or years. A similar, but much slower movement is called creep. The susceptibility of a given area to landslides depends on a great many variables. With the exception of the Sutter Buttes, Yuba City is located in a landslide-free zone due to the flat topography. The Sutter Buttes are considered to be in a low landslide hazard zone as shown in Bulletin 198 by the California Division of Mines and Geology.

Soil Erosion: Erosion is a two-step process by which soils and rocks are broken down or fragmented and then transported. The breakdown processes include mechanical abrasion, dissolution, and weathering. Erosion occurs naturally in most systems but is often accelerated by human activities that disturb soil and vegetation. The rate at which erosion occurs is largely a function of climate, soil cover, slope conditions, and inherent soil properties such as texture and structure. Water is the dominant agent of erosion and is responsible for most of the breakdown processes as well as most of the transport processes that result in erosion. Wind may also be an important erosion agent. The rate of erosion depends on many variables including the soil or rock texture and composition, soil permeability, slope, extent of vegetative cover, and precipitation amounts and patterns. Erosion increases with increasing slope, increasing precipitation, and decreasing vegetative cover. Erosion can be extremely high in areas where vegetation has been removed by fire, construction, or cultivation. High rates of erosion may have several negative impacts including degradation and loss of agricultural land, degradation of streams and other water habitats, and rapid silting of reservoirs.

Subsidence: Subsidence is the sinking of a large area of ground surface in which the material is displaced vertically downward, with little or no horizontal movement. Subsidence is usually a direct result of groundwater, oil, or gas withdrawal. These activities are common in several areas of California, including parts of the Sacramento Valley and in large areas of the San Joaquin Valley. Subsidence is a greater hazard in areas where subsurface geology includes compressible layers of silt and clay. Subsidence due to groundwater withdrawal generally affects larger areas and presents a more serious hazard than does subsidence due to oil and gas withdrawal. In portions of the San Joaquin Valley, subsidence has exceeded 20 feet over the past 50 years. In the Sacramento Valley, preliminary studies suggest that much smaller levels of subsidence, up to two feet may have occurred. In most of the valley, elevation data are inadequate to determine positively if subsidence has occurred. However, groundwater withdrawal in the Sacramento Valley has been increasing and groundwater levels have declined in some areas. The amount of subsidence caused by groundwater withdrawal depends on several factors, including: (1) the extent of water level decline, (2) the thickness and depth of the water bearing strata tapped, (3) the thickness and compressibility of silt-clay layers within the vertical sections where groundwater withdrawal is occurring, (4) the duration of maintained groundwater level decline, (5) the number and magnitude of water withdrawals in a given area, and (6) the general geology and geologic structure of the groundwater basin. The damaging effects of subsidence include gradient changes in roads, streams, canals, drains, sewers, and dikes. Many such systems are constructed with slight gradients and may be significantly damaged

by even small elevation changes. Other effects include damage to water wells resulting from sediment compaction and increased likelihood of flooding of low-lying areas.

Expansive Soils: Expansive soils are prone to change in volume due to the presence of moisture. Soft clay soils have the tendency to increase in volume when moisture is present and shrink when it is dry (shrink/swell). Swelling soils contain high percentages of certain kinds of clay particles that are capable of absorbing large quantities of water, expanding up to 10 percent or more as the clay becomes wet. The force of expansion is capable of exerting pressure on foundations, slabs, and other confining structures.

Soils: The Natural Resources Conservation Service (NRCS, formerly the Soil Conservation Service) has mapped over 40 individual soil units in the county. The predominant soil series in the county are the Capay, Clear Lake, Conejo, Oswald, and Olashes soils, which account for over 60 percent of the total land area. The remaining soil units each account for smaller percentages the total land area. The Capay and Clear Lake soils are generally present in the western and southern parts of the county. The Conejo soils occur in the eastern part closer to the incorporated areas of the county. Oswald and Olashes soils are located in the central portion of the county extending north to south, with scattered areas along the southeastern edge of the county. Soil descriptions for the principal soil units in the county are provided below. These descriptions, which were developed by the NRCS, are for native, undisturbed soils and are primarily associated with agricultural suitability. Soil characteristics may vary considerably from the mapped locations and descriptions due to development and other uses. Geotechnical studies are required to identify actual engineering properties of soils at specific locations to determine whether there are specific soil characteristics that could affect foundations, drainage, infrastructure, or other structural features.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact from geological events as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.7.2 Federal Regulatory Setting

Historic Sites Act of 1935: This Act became law on August 21, 1935 (49 Stat. 666; 16 U.S.C. 461-467) and has been amended eight times. This Act establishes as a national policy to preserve for public use historic sites, buildings, and objects, including geologic formations.

National Earthquake Hazards Reduction Program: The National Earthquake Hazards Reduction Program (NEHRP), which was first authorized by Congress in 1977, coordinates the earthquake-related activities of the Federal Government. The goal of NEHRP is to mitigate earthquake losses in the United States through basic and directed research and implementation activities in the fields of earthquake science and engineering. Under NEHRP, FEMA is responsible for developing effective earthquake risk reduction tools and promoting their implementation, as well as supporting the development of disaster-resistant building codes and standards. FEMA's NEHRP activities are led by the FEMA Headquarters (HQ), Federal Insurance and Mitigation Administration, Risk Reduction Division, Building Science Branch, in strong partnership with other FEMA HQ Directorates, and in coordination with the FEMA Regions, the States, the earthquake consortia, and other public and private partners.

3.7.3 State Regulatory Setting

California Alquist-Priolo Earthquake Fault Zoning Act: The Alquist-Priolo Earthquake Fault Zoning Act (originally enacted in 1972 and renamed in 1994) is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The statute prohibits the location of most types of structures intended for human occupancy across the traces of active faults and regulates construction in the corridors along active faults.

California Seismic Hazards Mapping Act: The Seismic Hazards Mapping Act is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Earthquake Fault Zoning Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including ground shaking, liquefaction, and seismically induced landslides. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones.

Uniform Building Code: The California Code of Regulations (CCR) Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The California Building Code incorporates by reference the Uniform Building Code with necessary California amendments. The Uniform Building Code is a widely adopted model building code in the United States published by the International Conference of Building Officials. About one-third of the text within the California Building Code has been tailored for California earthquake conditions.

Paleontological Resources: Paleontological resources are the fossilized remains of plants and animals and associated deposits. The Society of Vertebrate Paleontology has identified vertebrate fossils, their taphonomic and associated environmental indicators, and fossiliferous deposits as significant nonrenewable paleontological resources. Botanical and invertebrate fossils and assemblages may also be considered significant resources. CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) Section 15126.4 (a)(1)). California Public Resources Code Section 5097.5 (see above) also applies to paleontological resources.

3.7.4 Impact Assessment/Environmental Consequences:

a. Directly or indirectly create 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.

According to the 2040 Yuba City General Plan, no active earthquake faults are known to exist in Sutter County, although active faults in the region could produce ground motion in Yuba City (Dyett & Bhatia, 2004). The closest known fault zone is the Bear Mountain Fault Zone, located approximately 20 miles northeast of Yuba City (California Geological Survey [CGS], 2015). Potentially active faults do exist in the Sutter Buttes, but those faults are considered small and have not exhibited activity in recent history. Because the distance from the City to the closest known active fault zone is large, the

potential for exposure of people or structures to substantial adverse effects from fault rupture is low. Considering that the Building Code incorporates construction standards for minimizing earthquake damage to buildings, and the low potential for a significant earthquake activity in the vicinity, the potential for adverse impacts from an earthquake is less than significant.

ii. Strong seismic ground shaking?

In the event of a major regional earthquake, fault rupture or seismic ground shaking could potentially injure people and cause collapse or structural damage to existing and proposed structures. Ground shaking could potentially expose people and property to seismic-related hazards, including localized liquefaction and ground failure. However, all new structures are required to adhere to current California Building Code standards. These standards require adequate design, construction, and maintenance of structures to prevent exposure of people and structures to major geologic hazards. General Plan Implementing Policies 9.2-I-1 through 9.2-I-8 and the building codes reduce the potential impacts to less than significant.

iii. Seismic-related ground failure, including liquefaction?

The proposed Project is not located within a liquefaction zone according to the California Department of Conservation's California Geologic Survey regulatory maps. Regardless, all new structures are required to adhere to current California Building Code standards. These standards require adequate design, construction, and maintenance of structures to prevent exposure of people and structures to major geologic hazards. Therefore, the potential impact from ground failure is less than significant.

iv. Landslides?

According to the 2004 Environmental Impact Report prepared for the General Plan update, due to the flat topography, erosion, landslides, and mudflows are not considered to be a significant risk in the City limits or within the City's Sphere of Influence.

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

Development of the property would result in approximately 12 acres being disturbed during site grading. Even though the area is relatively flat, during site grading a large storm could result in the loss of topsoil into the City/Sutter County drainage system. However, as part of the grading and construction of the Project area, the applicant will be required to follow Best Management Practices (BMP's) and provide erosion control measures to minimize soil runoff during the construction process. Therefore, impacts from soil erosion are less than significant.

c) Be located on a geological 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?

The site is flat so is not subject to landslides, and there are not known sites within this portion of the City with unstable soils.

d) Be located on expansive soil, as defined in the California Building Code creating substantial direct or indirect risks to life or property?

The extreme southwest corner of the Yuba City Sphere of Influence is the only known area with expansive soils. The Project area is not located within that area and therefore will not be impacted by the presence of expansive soils.

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

The new religious facility will be connected to the City's wastewater collection and treatment system. No new septic systems will be utilized. As such, there will be no new impacts from septic systems.

f) *Directly or indirectly destroy a unique paleontological resources or site or unique geologic feature?*

Due to prior ground disturbances from the numerous times the site has been graded, it is unlikely that any paleontological resources exist on the site. However, the mitigation measure provided below shall apply if any paleontological resources are discovered during the site preparation process. With application of this mitigation any impacts on paleontological resources will be less than significant.

3.7.5 Paleontological Mitigation Measure

Paleontological Mitigation Measure 1: Mitigation Measure # 1 shall be placed as a note on the Demolition and Grading Plans. If paleontological resources are found, the construction manager shall halt all activity and immediately contact the Development Services Department @ 530-822-4700.

Mitigation shall be conducted as follows:

1. Identify and evaluate paleontological resources by intense field survey in the vicinity that potential paleontological resource was found, as determined by the paleontologist;
2. Assess effects on identified sites;
3. Consult with the institutional/academic paleontologists conducting research investigations within the geological formations that are slated to be impacted;
4. Obtain comments from the researchers;
5. Comply with researchers' recommendations to address any significant adverse effects were determined by the City to be feasible.

In considering any suggested mitigation proposed by a consulting paleontologist, the City's Community Development Department Staff shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, Specific or General Plan policies and land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for paleontological resources is carried out.

3.8. Greenhouse Gas Emissions

Table 3.8: Greenhouse Gas Emissions				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?		X		

3.8.1 Federal Regulatory Setting

The United States Environmental Protection Agency (USEPA) Mandatory Reporting Rule (40 CFR Part 98), which became effective December 29, 2009, requires that all facilities that emit more than 25,000 metric tons CO2-equivalent per year beginning in 2010, report their emissions on an annual basis. On May 13, 2010, the USEPA issued a final rule that established an approach to addressing GHG emissions from stationary sources under the Clean Air Act (CAA) permitting programs. The final rule set thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration and title V Operating Permit programs are required for new and existing industrial facilities.

In addition, the Supreme Court decision in Massachusetts v. EPA (Supreme Court Case 05-1120) found that the USEPA has the authority to list GHGs as pollutants and to regulate emissions of greenhouse gases (GHG) under the CAA. On April 17, 2009, the USEPA found that CO2, CH4, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride may contribute to air pollution and may endanger public health and welfare. This finding may result in the USEPA regulating GHG emissions; however, to date the USEPA has not proposed regulations based on this finding.

3.8.2 State & Local Regulatory Setting

The City's Resource Efficiency Plan as designed under the premise that the City, and the community it represents, is uniquely capable of addressing emissions associated with sources under the City's jurisdiction and that the City's emission reduction efforts should coordinate with the state strategies of reducing emissions in order to accomplish these reductions in an efficient and cost-effective manner. The City developed this document with the following purposes in mind:

- Local Control: The Yuba City Efficiency Plan allows the City to identify strategies to reduce resource consumption, costs, and GHG emissions in all economic sectors in a way that maintains local control over the issues and fits the character of the community. It also may position the City for funding to implement programs tied to climate goals.
- Energy and Resource Efficiency: The Efficiency Plan identifies opportunities for the City to increase energy efficiency and lower GHG emissions in a manner that is most feasible within the community. Reducing energy consumption through increasing the efficiency of energy

technologies, reducing energy use, and using renewable sources of energy are effective ways to reduce GHG emissions. Energy efficiency also provides opportunities for cost-savings.

- Improved Public Health: Many of the GHG reduction strategies identified in the Efficiency Plan also have local public health benefits. Benefits include local air quality improvements; creating a more active community through implementing resource-efficient living practices; and reducing health risks, such as heat stroke, that would be otherwise elevated by climate change impacts such as increased extreme heat days.

Demonstrating Consistency with State GHG Reduction Goals—A GHG reduction plan may be used as GHG mitigation in a General Plan to demonstrate that the City is aligned with State goals for reducing GHG emissions to a level considered less than cumulatively considerable.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on greenhouse gas emissions as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.8.3 Impact Assessment/Environmental Consequences:

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

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

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, similar to a greenhouse. The accumulation of GHGs has been implicated as a driving force for Global Climate Change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the climate caused by natural fluctuations and the impact of human activities that alter the composition of the global atmosphere. Both natural processes and human activities emit GHGs. Global Climate Change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the speed of global warming and the extent of the impacts attributable to human activities, the vast majority of the scientific community now agrees that there is a direct link between increased emission of GHGs and long-term global temperature. Potential global warming impacts in California may include, but are not limited to, loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. GHG impacts are considered to be exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA).

The proposed construction of the religious facility will create GHG emissions due to the use of motorized construction equipment. Once completed, vehicle traffic generated by auto use will contribute GHG gases. Due to the small size of the Project, it is not expected to create significant greenhouse gas emissions. However, on a cumulative scale, possible reasonable reductions could be applied to the Project in order to further minimize those impacts. Specifically addressing this proposal, the City's Resource Efficiency Plan addresses greenhouse gas concerns and provides a description of greenhouse gas reduction measures. A mitigation measure is included that requires

the Project incorporate the relevant greenhouse gas reduction measures. With this mitigation the impacts from greenhouse gases will be less than significant.

3.8.4 Greenhouse Gas Mitigation Measure

Greenhouse Gas Mitigation Measure 1: The site grading process shall comply with the GHG Reduction Measures provided in the adopted Yuba City Resource Efficiency Plan.

3.9. Hazards and Hazardous Materials

Table 3.9: Hazards and Hazardous Materials				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site, which 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?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two 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?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.				X

3.9.1 Federal Regulatory Setting

U.S. Environmental Protection Agency (USEPA): The USEPA was established in 1970 to consolidate in one agency a variety of federal research, monitoring, standard setting, and enforcement activities to ensure environmental protection. USEPA's mission is to protect human health and to safeguard the

natural environment — air, water, and land — upon which life depends. USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, USEPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act: The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the USEPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act: The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law (U.S. Code Title 42, Chapter 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the National Contingency Plan (NCP). The NCP (Title 40, Code of Federal Regulation [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List (NPL). CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Clean Water Act/SPCC Rule: The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq., formerly the Federal Water Pollution Control Act of 1972), was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. As part of the Clean Water Act, the U.S. EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the CFR, Part 112 (Title 40 CFR, Part 112) which is often referred to as the "SPCC rule" because the regulations describe the requirements for facilities to prepare, amend and implement Spill Prevention, Control, and

Countermeasure (SPCC) Plans: A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the "Navigable Waters" of the United States.

Other federal regulations overseen by the U.S. EPA relevant to hazardous materials and environmental contamination include Title 40, CFR, Chapter 1, Subchapter D – Water Programs and Subchapter I – Solid Wastes. Title 40, CFR, Chapter 1, Subchapter D, Parts 116 and 117 designate hazardous substances under the Federal Water Pollution Control Act: Title 40, CFR, Part 116 sets forth a determination of the reportable quantity for each substance that is designated as hazardous. Title 40, CFR, Part 117 applies to quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

The NFPA 70®: National Electrical Code® is adopted in all 50 states. Any electrical work associated with the proposed Project is required to comply with the standards set forth in this code. Several federal regulations govern hazards as they are related to transportation issues. They include:

Title 49, CFR, Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.

49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

3.9.2 State Regulatory Setting

California Environmental Protection Agency (CalEPA): The California Environmental Protection Agency (CalEPA) was created in 1991 by Governor's Executive Order. The six boards, departments, and office were placed under the CalEPA umbrella to create a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of State resources. The mission of CalEPA is to restore, protect, and enhance the environment to ensure public health, environmental quality, and economic vitality under Title 22 of the California Code of Regulations (CCR).

Department of Toxic Substances Control (DTSC): DTSC is a department of Cal/EPA and is the primary agency in California that regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Government Code Section 65962.5 (commonly referred to as the Cortese List) includes DTSC listed hazardous waste facilities and sites, DHS lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks and which have had a discharge of hazardous wastes or materials into the water or groundwater and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.

Unified Program: The Unified Program (codified CCR Title 27, Division 1, Subdivision 4, Chapter 1, Sections 15100- 15620) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs:

- Hazardous Waste Generator (HWG) program and Hazardous Waste On-site Treatment activities;
- Aboveground Storage Tank (AST) program Spill Prevention Control and Countermeasure Plan requirements;
- Underground Storage Tank (UST) program;
- Hazardous Materials Release Response Plans and Inventory (HMRRP) program;
- California Accidental Release Prevention (CalARP) program;
- Hazardous Materials Management Plans and Hazardous Materials Inventory Statement (HMMP/HMIS) requirements.

The Secretary of CalEPA is directly responsible for coordinating the administration of the Unified Program. The Unified Program requires all counties to apply to the CalEPA Secretary for the certification of a local unified program agency. Qualified cities are also permitted to apply for certification. The local Certified Unified Program Agency (CUPA) is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six program elements in the county. Most CUPAs have been established as a function of a local environmental health or fire department.

Hazardous Waste Management Program: The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement, and Unified Program activities in accordance with California Health and Safety Code Section 25135 et seq. The main focus of HWMP is to ensure the safe storage, treatment, transportation, and disposal of hazardous wastes.

State Water Resources Control Board (SWRCB): The State Water Resources Control Board (SWRCB) was created by the California legislature in 1967. The mission of SWRCB is to ensure the highest reasonable quality for waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The joint authority of water allocation and water quality protection enables SWRCB to provide comprehensive protection for California's waters.

California Department of Industrial Relations – Division of Occupational Safety and Health (Cal OSHA): In California, every employer has a legal obligation to provide and maintain a safe and healthful workplace for employees, according to the California Occupational Safety and Health Act of 1973 (per Title 8 of the CCR). The Division of Occupational Safety and Health (Cal/OSHA) program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues. Cal/OSHA regulations are administered through Title 8 of the CCR. The regulations require all manufacturers or importers to assess the hazards of substances that they produce or import and all employers to provide information to their employees about the hazardous substances to which they may be exposed.

California Fire Code: The California Fire Code is Part 9 of the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. The California Fire Code incorporates the Uniform Fire Code with necessary California amendments. This Code prescribes regulations consistent with nationally recognized good practice for the safeguarding to a reasonable degree of life and property from the hazards of fire explosion, and dangerous conditions arising from the storage, handling and use of hazardous materials and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or premises and provisions to assist emergency response personnel.

3.9.3 Local Regulatory Setting

Sutter County Airport Comprehensive Land Use Plan: The SCACLUP was adopted in April 1994 by the Sacramento Area Council of Governments (SACOG). SACOG is the designated Airport Land Use Commission (ALUC) for Sacramento, Sutter, Yolo, and Yuba Counties under the provisions of the California Public Utilities Code, Chapter 4, Article 3.5, Section 21670.1 Airport Land Use Commission Law. The purpose of the ALUC law is to (1) protect public health, safety, and welfare through the adoption of land use standards that minimize the public's exposure to safety hazards and excessive levels of noise, and (2) Prevent the encroachment of incompatible land uses around public-use airports, thereby preserving the utilities of these airports into the future.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact from hazards or hazardous material generation as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.9.4 Impact Assessment/Environmental Consequences:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The hazardous materials associated with the proposal would be from construction of the facility including those materials associated with grading and construction equipment. This typically includes solvents, oil, and fuel. Provided that these materials are legally and properly used and stored, the proposed Project will not create a significant hazard to the public or the environment. Assuming proper and legal disposal of those wastes there should not be a significant impact from hazardous materials. On an ongoing operational basis, it is unlikely that a religious facility would generate noticeable quantity of hazardous materials other than fertilizers and various landscaping sprays. Assuming proper use and storage of those materials, the potential for significant impacts from these materials is less than significant.

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?

See a), above.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

River Valley High School is across the street from the Project and Faith Christian Elementary School is within one-quarter mile to the west. Construction that would result from development of the religious facility would generate construction equipment emissions. However, the time for operating equipment on the Project site is short. Assuming proper use of the fuels, solvents, and oil for the grading and paving equipment, there should not be any significant impacts to school students. Similarly for ongoing hazardous waste discussed above, assuming proper and legal use and disposal, the impacts to the schools will be less than significant.

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

The property is not on any listings of sites that are contaminated by hazardous materials. Further, there are no known facilities previously on the property that may have contained hazardous materials. Therefore, the potential impacts from known hazardous materials are less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two 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?

The Project is not located within the Sutter County Airport Comprehensive Land Use Plan, nor is it within two miles of a public use airport.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Yuba City Fire Department and Police Department serve this area. Neither agency has expressed concern over impacts the Project may have on any emergency response plans. Accordingly, there will be no significant impacts on emergency response or evacuations plans.

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

The Project site is located in the Yuba City urban area, and the Yuba City urban area is surrounded by irrigated agricultural lands. There are no wildlands on the site or in the immediate vicinity. Accordingly, the potential for any significant impacts from potential wildland fires will be less than significant.

3.10. Hydrology and Water Quality

Table 3.10: Hydrology and Water Quality				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impeded sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site?			X	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?			X	
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
iv. impede or redirect flood flows?				X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

3.10.1 Federal Regulatory Setting

Clean Water Act: The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

Federal Emergency Management Agency (FEMA) Flood Zones: The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To

facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes. Flood hazard areas identified on the Flood.

Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded).

3.10.2 State Regulatory Setting

State Water Resources Control Board: The State Water Resources Control Board (SWRCB) is the agency with jurisdiction over water quality issues in the State of California. The WRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the California Water Code), which establishes the legal framework for water quality control activities by the SWRCB. The intent of the Porter- Cologne Act is to regulate factors which may affect the quality of waters of the State to attain the highest quality which is reasonable, considering a full range of demands and values. Much of the implementation of the SWRCB's responsibilities is delegated to its nine Regional Boards. The Project site is located within the Central Valley Regional Water Quality Control board.

Central Valley Regional Water Quality Control Board (CVRWQCB): administers the NPDES storm water-permitting program in the Central Valley region. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). Additionally, CVRWQCB is responsible for issuing Waste Discharge Requirements Orders under California Water Code Section 13260, Article 4, Waste Discharge Requirements.

State Department of Water Resources: California Water Code (Sections 10004 et seq.) requires that the State Department of Water Resources update the State Water Plan every five years. The 2013 update is the most current review and included (but is not limited to) the following conclusions:

- The total number of wells completed in California between 1977 and 2010 is approximately 432,469 and ranges from a high of 108,346 wells for the Sacramento River Hydrologic Region to a low of 4,069 wells for the North Lahontan Hydrologic Region.
- Based on the June 2014 California Statewide Groundwater Elevation Monitoring (CASGEM) basin prioritization for California's 515 groundwater basins, 43 basins are identified as high priority, 84 basins as medium priority, 27 basins as low priority, and the remaining 361 basins as very low priority.
- The 127 basins designated as high or medium priority account for 96 percent of the average annual statewide groundwater use and 88 percent of the 2010 population overlying the groundwater basin area.
- Depth-to-groundwater contours were developed for the unconfined aquifer system in the Central Valley. In the Sacramento Valley, the spring 2010 groundwater depths range from

less than 10 feet below ground surface (bgs) to approximately 50 feet bgs, with local areas showing maximum depths of as much as 160 feet bgs.

- The most prevalent groundwater contaminants affecting California's community drinking water wells are arsenic, nitrate, gross alpha activity, and perchlorate.

California Government Code 65302 (d): The General Plan must contain a Conservation Element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, river and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. That portion of the conservation element including waters shall be developed in coordination with any County-wide water agency and with all district and city agencies which have developed, served, controlled, or conserved water for any purpose for the County or city for which the plan is prepared. Coordination shall include the discussion and evaluation of any water supply and demand information described in Section 65352.5 if that information has been submitted by the water agency to the city or County. The Conservation Element may also cover:

- The reclamation of land and waters.
- Prevention and control of the pollution of streams and other waters.
- Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.
- Prevention, control, and correction of the erosion of soils, beaches, and shores.
- Protection of watersheds.
- The location, quantity, and quality of the rock, sand, and gravel resources.
- Flood control.

Sustainable Groundwater Management Act: On September 16, 2014, Governor Edmund G. Brown Jr. signed historic legislation to strengthen local management and monitoring of groundwater basins most critical to the state's water needs. The three bills, SB 1168 (Pavley) SB 1319 (Pavley) and AB 1739 (Dickinson) together makeup the Sustainable Groundwater Management Act. The Sustainable Groundwater Management Act comprehensively reforms groundwater management in California. The intent of the Act is to place management at the local level, although the state may intervene to manage basins when local agencies fail to take appropriate responsibility. The Act provides authority for local agency management of groundwater and requires creation of groundwater sustainability agencies and implementation of plans to achieve groundwater sustainability within basins of high and medium priority.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on hydrology or water quality as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.10.3 Impact Assessment/Environmental Consequences:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Most of the City's public water supply comes from the Feather River. The water is pumped from the river to the Water Treatment Plant located in northern Yuba City. The plant also sometimes utilizes a groundwater well in addition to surface water supplies due to recent drought conditions. Since the

religious facility will only receive water through the City system, it is unlikely that the Project could impact the water quality in the City system.

Wastewater generated by the Project will flow into the City wastewater treatment facility, which is in compliance with all state water discharge standards. The wastewater from the Project is not expected to generate any unique type of waste that would cause the system to become out of compliance with state standards.

All storm water runoff associated with the project will drain into the Live Oak Canal and ultimately into the Feather River. The water quality of the stormwater runoff is addressed through General Plan Implementing Policies 8.5-I-1 through 8.5-I-10 which require a wide range of developer and City actions involving coordination with the State Regional Water Quality Control Board, protecting waterways, and following Yuba City's adopted Best Management Practices for new construction.

With the level of oversight on the City's water supply, and enforcement of Best Management Practices at construction sites, there will not be significant impacts on the City's water and waste-water systems or storm water drainage system from the proposed religious facility.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impeded sustainable groundwater management of the basin?

The proposed religious facility will be served by the City's water system. While consumption of City water will increase with the Project, very little groundwater will be utilized as the City primarily utilizes surface water supplies in its system.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site?

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

There will be increased stormwater drainage caused by new impermeable surfaces within the Project area, which will ultimately drain into the Feather River. The Project will be required to construct the local collection facilities and pay the appropriate fees to the Sutter County Water Agency for its fair share of improvements and expansion to the existing drainage system that it will be connected too. Also, as noted above, all new construction must involve use of Best Management Practices. Assuming all required standards are met the impacts from additional storm water drainage from the site are expected to be less than significant.

iv) impede or redirect flood flows?

According to the Federal Emergency Management Agency this portion of the City is outside of the 100-year flood plain. This is due to the existing levee system that contains seasonally high-water flows from the nearby Feather River from flooding areas outside of the levee system. Additional construction within the City that is outside of the levee system does not impact the levee system

and therefore does not increase, impede, or otherwise have any effect on the highwater flows within the levee system. Therefore, there is no significant impact on the high-water flows within the Feather River levee system.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

According to the Federal Emergency Management Agency, this portion of the City is outside of the 100-year flood plain. The City is not close to the ocean or any large lakes so a seiche is unlikely to happen in or near the City. The City is located inland from the Pacific Ocean, so people or structures in the City would not be exposed to inundation by tsunami. Mudflows and landslides are unlikely to happen due to the relatively flat topography within the Project area. Thus, it is unlikely that the Project site would be subject to inundation by a seiche, tsunami, mudflow or landslide. Therefore, there is not a potential for significant impacts from any of these types of events.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Regarding impacts on a groundwater management plan, the City primarily utilizes surface water, so any impact on groundwater would be less than significant. Regarding water quality, as noted in Part a) above, all new construction is required to utilize Best Management Practices. Assuming all adopted standards are met, water quality of runoff water from this development will not create any significant impacts. The City primarily utilizes surface water for its water source so there will be no significant impacts on groundwater.

3.11. Land Use and Planning

Table 3:11: Land Use and Planning					
Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Physically divide an established community?			X	
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

3.11.1 Environmental Setting/Affected Environment

The proposed religious facility is located within an area with a mix of uses. To the east is an auto dealership and potentially more commercial development on the abutting property. The high school is to the south and several single-family residences are to the west, across El Margarita Road. The proposed religious facility is typically a low intensity use that would be expected to be compatible with all of the neighboring uses.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on land use planning as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.11.2 Federal Regulatory Setting

There are no federal or state regulations pertaining to land use and planning relevant to the proposed Project.

3.11.3 Local Regulatory Setting

Yuba City General Plan Land Use Element: The Land Use Element of the General Plan establishes guidance for the ultimate pattern of growth in the City's Sphere of Influence. It provides direction regarding how lands are to be used, where growth will occur, the density/intensity and physical form of that growth, and key design considerations.

3.11.4 Impact Assessment/Environmental Consequences:

a) Physically divide an established community?

This Project will not physically divide an established community as the site is within a non-residential area except there are several residences on the east side of El Margarita Road. It also abuts State Route 20, a regional state highway. As such, the development of the property will not divide any community. Therefore the impacts of this proposal on dividing the community will be less than significant.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed Project is consistent with the General Plan's Office and Office Park land use designation that is applied to the property, and with the C-O Zone District, provided a use permit is first secured. The Project also meets all of the land use and development standards of the C-O Zone District and, prior to the issuance of building permits, must be determined to be incompliance with the design standards of the Yuba City Design Guidelines. Since there are not conflicts with the General Plan or Zoning Regulations, the impacts for conflicts with any plans or programs is less than significant.

3.12. Mineral Resources

Table 3-12: Mineral Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X
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?				X

3.12.1 Federal Regulatory Setting

There are no federal regulations pertaining to mineral resources relevant to the proposed Project.

3.12.2 State Regulatory Setting

California Surface Mining and Reclamation Act of 1975: Enacted by the State Legislature in 1975, the Surface Mining and Reclamation Act (SMARA), Public Resources Code Section 2710 et seq., insures a continuing supply of mineral resources for the State. The act also creates surface mining and reclamation policy to assure that:

- Production and conservation of minerals is encouraged;
- Environmental effects are prevented or minimized;
- Consideration is given to recreational activities, watersheds, wildlife, range and forage, and aesthetic enjoyment;
- Mined lands are reclaimed to a useable condition once mining is completed; and
- Hazards to public safety both now and in the future are eliminated.

Areas in the State (city or county) that do not have their own regulations for mining and reclamation activities rely on the Department of Conservation, Division of Mines and Geology, Office of Mine Reclamation to enforce this law. SMARA contains provisions for the inventory of mineral lands in the State of California.

The State Geologist, in accordance with the State Board's Guidelines for Classification and Designation of Mineral Lands, must classify Mineral Resource Zones (MRZ) as designated below:

- MRZ-1. Areas where available geologic information indicates that there is minimal likelihood of significant resources.
- MRZ-2. Areas underlain by mineral deposits where geologic data indicate that significant mineral deposits are located or likely to be located.

- MRZ-3. Areas where mineral deposits are found but the significance of the deposits cannot be evaluated without further exploration.
- MRZ-4. Areas where there is not enough information to assess the zone. These are areas that have unknown mineral resource significance.

SMARA only covers mining activities that impact or disturb the surface of the land. Deep mining (tunnel) or petroleum and gas production is not covered by SMARA.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on mineral resources as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.12.3 Impact Assessment/Environmental Consequences:

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?

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?

The property contains no known mineral resources and there is little opportunity for mineral resource extraction. The Yuba City General Plan does not recognize any mineral resource zone within the City limits, and no mineral extraction facilities currently exist within the City. Additionally, the site has nearby residential uses, which generally is considered incompatible with mineral extraction facilities. As such the Project will not have an impact on mineral resources.

3.13. Noise

Table 3.13: Noise

Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive ground borne vibration or ground borne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two 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?				X

3.13.1 Environmental Setting/Affected Environment for Noise

Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no noise generated as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.13.2 Environmental Setting/Affected Environment for Groundbourne Vibration

Vibration is the periodic oscillation of a medium or object. Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground borne vibrations may be described by amplitude and frequency. Vibration amplitudes are usually expressed in peak particle velocity (PPV), or root mean squared (RMS), as in RMS vibration velocity. The PPV and RMS (VbA) vibration velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal and is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings.

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. As it takes some time for the human body to respond to vibration signals, it is more prudent to use vibration velocity when measuring human response. The typical background vibration velocity level in residential areas is approximately 50 VdB. Groundborne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels.

Typical outdoor sources of perceptible ground borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random, or continuous. The approximate threshold of vibration perception is 65 VdB, while 85 VdB is the vibration acceptable only if there are an infrequent number of events per day.

3.13.3 Federal Regulatory Setting

Federal Vibration Policies: The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to ground-borne vibration levels of 90 VdB without experiencing structural damage. The FTA has identified the human annoyance response to vibration levels as 75 VdB.

3.13.4 State Regulatory Setting

California Noise Control Act: The California Noise Control Act was enacted in 1973 (Health and Safety Code §46010 et seq.), and states that the Office of Noise Control (ONC) should provide assistance to local communities in developing local noise control programs. It also indicates that ONC staff would work with the Department of Resources Office of Planning and Research (OPR) to provide guidance for the preparation of the required noise elements in city and county General Plans, pursuant to Government Code § 65302(f). California Government Code § 65302(f) requires city and county general plans to include a noise element. The purpose of a noise element is to guide future development to enhance future land use compatibility.

Title 24 – Sound Transmission Control: Title 24 of the California Code of Regulations (CCR) codifies Sound Transmission Control requirements, which establishes uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings. Specifically, Title 24 states that interior noise levels attributable to exterior sources shall not exceed 45 dBA CNEL in any habitable room of new dwellings Title 24, Part 2 requires an acoustical report that demonstrates the achievements of the required 45 dBA CNEL. Dwellings are designed so that interior noise levels will meet this standard for at least ten years from the time of building permit application.

3.13.5 Local Regulatory Setting

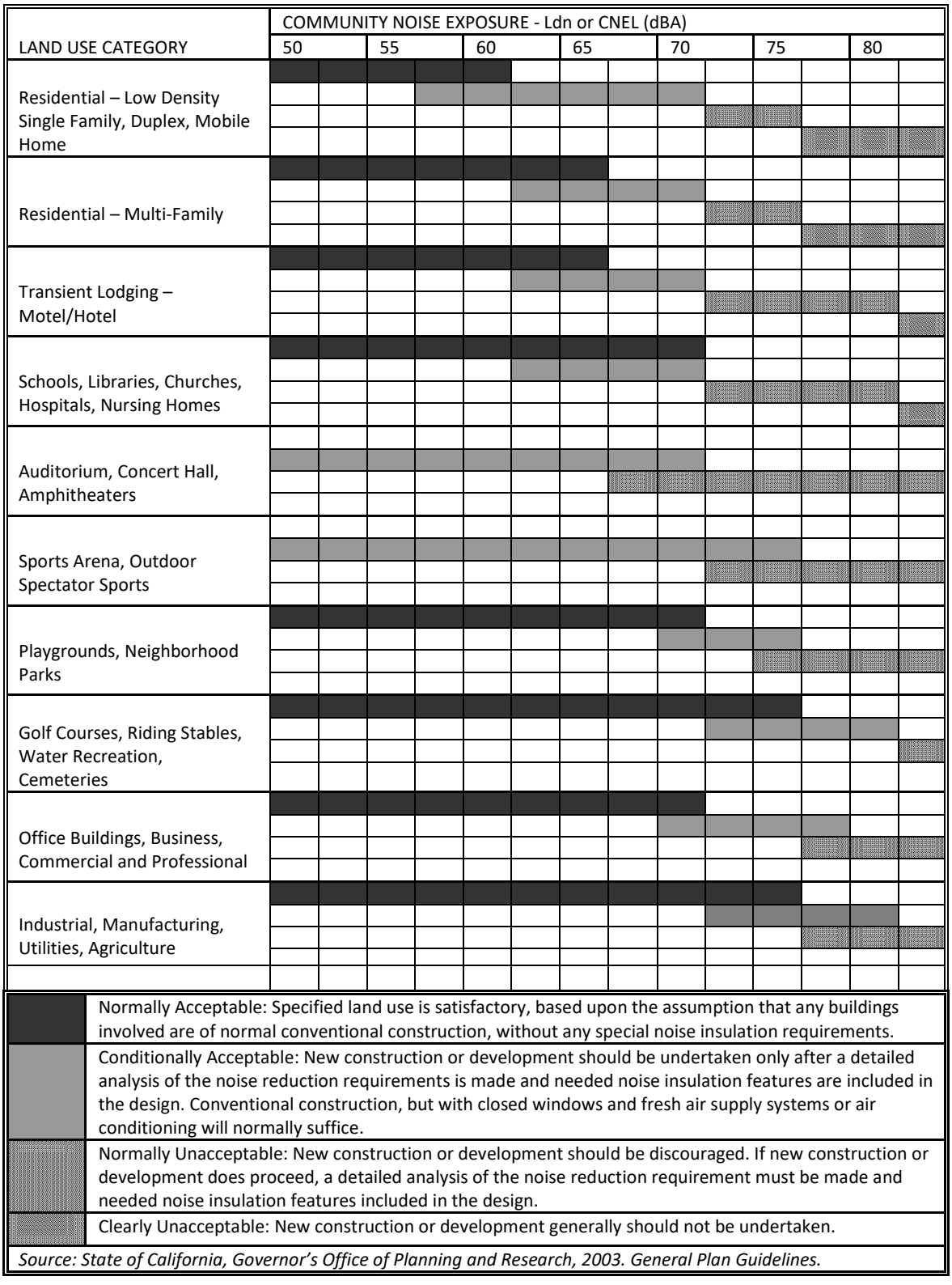
The **City of Yuba City 2040 General Plan** presents the vision for the future of Yuba City and outlines several guiding policies and policies relevant to noise.

The following goals and policies from the City of Yuba City 2040 General Plan are relevant to noise.

Guiding Policies

- 9.1-G-1 Strive to achieve an acceptable noise environment for the present and future residences of Yuba City.
- 9.1-G-2 Incorporate noise considerations into land use planning decisions and guide the location and design of transportation facilities to minimize the effects of noise on adjacent land uses.
- Implementing Policies
- 9.1-I-1 Require a noise study and mitigation for all projects that have noise exposure greater than “normally acceptable” levels. Noise mitigation measures include, but are not limited to, the following actions:
- Screen and control noise sources, such as parking and loading facilities, outdoor activities, and mechanical equipment,
- Increase setbacks for noise sources from adjacent dwellings,
- Retain fences, walls, and landscaping that serve as noise buffers,
- Use soundproofing materials and double-glazed windows, and
- Control hours of operation, including deliveries and trash pickup, to minimize noise impacts.
- 9.1-I-3 In making a determination of impact under the California Environmental Quality Act (CEQA), consider an increase of four or more dBA to be "significant" if the resulting noise level would exceed that described as normally acceptable for the affected land use in Figure 5.
- 9.1-I-4 Protect especially sensitive uses, including schools, hospitals, and senior care facilities, from excessive noise, by enforcing “normally acceptable” noise level standards for these uses.
- 9.1-I-5 Discourage the use of sound walls. As a last resort, construct sound walls along highways and arterials when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility.
- 9.1-I-6 Require new noise sources to use best available control technology (BACT) to minimize noise from all sources.
- 9.1-I-7 Minimize vehicular and stationary noise sources and noise emanating from temporary activities, such as construction

Figure 1: Noise Exposure



Source: State of California, Governor's Office of Planning and Research, 2003. General Plan Guidelines.

City of Yuba City Municipal Code: Title 4, Chapter 17, Section 4-17.10(e) of the Yuba City Municipal Code prohibits the operation of noise-generating construction equipment before 6:00 a.m. or after 9:00 p.m. daily, except Sunday and State or federal holidays when the prohibited time is before 8:00 a.m. and after 9:00 p.m.

3.13.6 Impact Assessment/Environmental Consequences:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies established in the local general plan or noise ordinance, or applicable standards of other agencies?

There are nearby noise sensitive uses – River Valley High School to the south across Spirit Way and existing single-family homes located on the west side of El Margarita Road. A temporary increase in noise will occur during construction of the religious facility. Construction will primarily occur during daylight hours, Monday through Saturday. Noise from construction activities would contribute to the noise environment in the immediate Project vicinity. Activities involved in construction could generate maximum noise levels, as indicated in Table 2, ranging from 79 to 91 dBA at a distance of 50 feet, without feasible noise control (e.g., mufflers) and ranging from 75 to 80 dBA at a distance of 50 feet, with feasible noise control. However, due to the limited duration of the construction activities, and that the construction will occur during the less sensitive daylight hours, the noise impacts on the high school and proximate homes is considered to be less than significant.

Table 2: Noise Levels of Typical Construction Equipment

Type of Equipment [1]	dBA at 50 ft.	
	Without Feasible Noise Control [2]	With Feasible Noise Control
Dozer or Tractor	80	75
Excavator	88	80
Scraper	88	80
Front End Loader	79	75
Backhoe	85	75
Grader	85	75
Truck	91	75

[1] US Environmental Protection Agency. "Noise from Construction Equipment and Operations, Building Equipment and Home Appliances." Figure IV.H-4. 1971.
[2] Feasible noise control includes the use of intake mufflers, exhaust mufflers and engine shrouds operating in accordance with manufacturers specifications

b) Generation of excessive ground borne vibration or ground borne noise levels?

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Table 3 describes the typical construction equipment vibration levels.

Table 3: Typical Construction Vibration Levels

Equipment [1]	VdB at 25 ft2
Small Bulldozer	58
Vibratory Roller	94
Jackhammer	79
Loaded Trucks	86
[1] *US Environmental Protection Agency. "Noise from Construction Equipment and Operations, Building Equipment and Home Appliances." Figure IV.H-4. 1971.*	

Vibration levels of construction equipment in Table 3 are at a distance of 25 feet from the equipment. As noted above, construction activities are limited to daylight hours. Infrequent construction-related vibrations would be short-term and temporary, and operation of heavy-duty construction equipment would be intermittent throughout the day during construction. Therefore, with the short duration of grading activities associated with the Project, the approximate reduction of 6 VdB for every doubling of distance from the source, and consideration of the distance to the nearest existing residence, the temporary impact to any uses in the vicinity of the Project would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two 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?

The Project is not within an airport land use plan nor are there any public or private airports or airfields located in this vicinity. Therefore, there is no threat from airport noise to people that would utilize the Project facilities.

3.14. Population and Housing

Table 4-14: Population and Housing				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned 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)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

3.14.1 Environmental Setting/Affected Environment

The property is located along a busy state highway on one side and within a mixed use area consisting of single-family residential, commercial and public uses. The Yuba City 2040 General Plan designates this 12 acres for office type uses (includes religious faculties with a use permit).

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on housing as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.14.2 Federal Regulatory Setting

There are no federal regulations, plans, programs, or guidelines associated with population or housing that are applicable to the proposed Project.

3.14.3 State Regulatory Setting

California law (Government Code Section 65580, et seq.) requires cities and counties to include a housing element as a part of their general plan to address housing conditions and needs in the community. Housing elements are prepared approximately every five years (eight following implementation of Senate Bill [SB] 375), following timetables set forth in the law. The housing element must identify and analyze existing and projected housing needs and "make adequate provision for the existing and projected needs of all economic segments of the community," among other requirements. The City adopted its current Housing Element in 2021.

3.14.4 Regional Regulatory Setting

State law mandates that all cities and counties offer a portion of housing to accommodate the increasing needs of regional population growth. The statewide housing demand is determined by the California Department of Housing and Community Development (HCD), while local governments and councils of governments decide and manage their specific regional and jurisdictional housing needs and develop a regional housing needs assessment (RHNA).

In the greater Sacramento region, which includes the City of Yuba City, SACOG has the responsibility of developing and approving an RHNA and a Regional Housing Needs Plan (RHNP) every eight years (Government Code, Section 65580 et seq.). This document has a central role of distributing the allocation of housing for every county and city in the SACOG region. Housing needs are assessed for very low income, low income, moderate income, and above moderate households.

As described above, SACOG is the association of local governments that includes Yuba City, along with other jurisdictions comprising the six counties in the greater Sacramento region. In addition to preparing the Metropolitan Transportation Plan and Sustainable Communities Strategy for the region, SACOG approves the distribution of affordable housing in the region through its RHNP. SACOG also assists in planning for transit, bicycle networks, clean air and serves as the Airport Land Use Commission for the region.

3.14.5 Impact Assessment/Environmental Consequences:

a) Induce substantial unplanned 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)?

The area has been planned for this growth for many years by the City's 2040 General Plan. As a result, City services were previously extended near the property in compliance with the master plans

prepared for those utilities. Since the area was previously planned for growth, there is not a potential for this Project to attract unplanned growth to the area.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

There will be no residences removed as a result of this Project.

3.15. Public Services

Table 3.15: Public Services				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?			X	
ii) Police protection?			X	
iii) Schools?			X	
iv) Parks?			X	
v) Other public facilities?			X	

3.15.1 Environmental Setting/Affected Environment

Law enforcement is provided by the Yuba City Police Department. Fire protection is provided by the Yuba City Fire Department. Nearby parks and other urban services including streets, water, sewer, and stormwater drainage will also be provided by Yuba City. The nearby River Valley High School is within the Yuba City Unified School District.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on non-transportation related public services as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.15.2 Federal Regulatory Setting

National Fire Protection Association: The National Fire Protection Association (NFPA) is an international nonprofit organization that provides consensus codes and standards, research, training, and education on fire prevention and public safety. The NFPA develops, publishes, and disseminates

more than 300 such codes and standards intended to minimize the possibility and effects of fire and other risks. The NFPA publishes the NFPA 1, Uniform Fire Code, which provides requirements to establish a reasonable level of fire safety and property protection in new and existing buildings.

3.15.3 State Regulatory Setting

California Fire Code and Building Code: The 2013 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to fire fighters and emergency responders during emergency operations. The provision of the Fire Code includes regulations regarding fire-resistance rated construction, fire protection systems such as alarm and sprinkler systems, fire service features such as fire apparatus access roads, fire safety during construction and demolition, and wildland urban interface areas.

California Health and Safety Code (HSC): State fire regulations are set forth in Sections 13000 et seq. of the California HSC, which includes regulations for building standards (as set forth in the CBC), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, childcare facility standards, and fire suppression training.

California Master Mutual Aid Agreement: The California Master Mutual Aid Agreement is a framework agreement between the State of California and local governments for aid and assistance by the interchange of services, facilities, and equipment, including but not limited to fire, police, medical and health, communication, and transportation services and facilities to cope with the problems of emergency rescue, relief, evacuation, rehabilitation, and reconstruction.

3.15.4 Impact Assessment/Environmental Consequences:

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

Fire Protection: The Fire Department reviewed the proposal and did not express concerns. Since all new development pays development impact fees intended to offset the cost of additional fire facilities and equipment costs resulting from this growth, the impacts on fire services will be less than significant.

Police Protection: The Police Department reviewed the proposal and did not express concerns. Since new development will pay development impact fees intended to offset the cost of additional police facilities and equipment resulting from this growth the impacts on police services will be less than significant.

Schools: The religious facility can create a demand for housing via its employees, even though it will not be a large employer. However new residences that may result from new employment opportunities must pay the Yuba City Unified School District adopted school impact fees that are intended to provide their fair share for expanded or new educational facilities needed to accommodate this new growth. Therefore, the impact on schools will be less than significant.

Parks: A religious facility typically does not generate significant demand for parks. Therefore, the impact on parks from this Project will be less than significant.

Other Public Facilities: The Project will be connected to City water and wastewater systems. Each new connection to those systems must pay connection fees that are utilized for expansion of the respective treatment plants. The City also collects development impact fees for County services that are provided to the new development, such as the library system and justice system.

Accordingly, the Project will have a less than significant impact with regard to the provision of public services.

3.16. Recreation

Table 3-16: Recreation				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

3.16.1 Environmental Setting/Affected Environment

Yuba City has 22 City-owned parks and recreational areas, managed by the City's Parks and Recreation Department. This consists of four community parks, 15 neighborhood parks, and three passive or mini parks.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on recreation as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.16.2 Federal Regulatory Setting

There are no federal regulations regarding parks and open space that are applicable to the proposed Project.

3.16.3 State Regulatory Setting

State Public Park Preservation Act: The primary instrument for protecting and preserving parkland is the Public Park Preservation Act of 1971. Under the PRC section 5400-5409, cities and counties may

not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

Quimby Act: California Government Code Section 66477, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fee are based upon the residential density and housing type, land cost, and other factors. Land dedicated and fees collected pursuant to the Quimby Act may be used for developing new or rehabilitating existing park or recreational facilities.

3.16.4 Local Regulatory Setting

The Yuba City General Plan and the City's Parks Master Plan provide a goal of providing 5 acres of public parkland per 1,000 residents, while it also requires 1 acre of Neighborhood Park for every 1,000 residents. The City's development impact fee program collects fees for new development which is allocated for the acquisition and development of open space in the City.

3.16.5 Impact Assessment/Environmental Consequences:

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

Since there is no residential development associated with the Project, it will not materially increase the use of the City's park system. The Project also plans to build a playground for children whose families use the church. Therefore, the impact on the City park system from this Project is less than significant.

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

There will be some on-site recreational facilities for children and a sports field. As those facilities are included as part of the Project , the facilities are included in this review. Based on the analysis provided in the other sections of this study, the impacts from those recreational facilities will be less than significant. Regarding the impact on expanded need for public recreational facilities, it appears that these new facilities will at least cause no impact as these recreational facilities would offset any expanded need caused by church activities.

3.17. Transportation/Traffic

Table 4-17: Transportation Recreation				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

3.17.1 Federal Regulatory Setting

Federal Highway Administration: FHWA is the agency of the U.S. Department of Transportation (DOT) responsible for the Federally funded roadway system, including the interstate highway network and portions of the primary State highway network. FHWA funding is provided through the Safe, Accountable, Flexible, Efficiency Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA- LU can be used to fund local transportation improvement projects, such as projects to improve the efficiency of existing roadways, traffic signal coordination, bikeways, and transit system upgrades.

Several federal regulations govern transportation issues. They include:

- Title 49, CFR, Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.
- Title 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.

3.17.2. State Regulatory Setting

The measurement of the impacts of a project's traffic is set by the CEQA Guidelines. Section 15064.3 of the Guidelines states that vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts. VMT is a metric which refers to the amount of distance of automobile traffic that is generated by a project. Per the Guidelines "Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact." "Projects that decrease vehicle miles traveled compared to existing conditions should be presumed to have a less than significant environmental impact."

The CEQA Guidelines also states that the lead agency (Yuba City) may "choose the most appropriate methodology to evaluate a project's vehicle miles traveled …". As this is a new form of calculating significant traffic events, the City has not yet determined its own methodology to calculate levels of significance for VMT. Until that methodology is determined, for purposes of this initial study the information provided by the Sacramento Council of Governments (SACOG) and the CA Office of Planning and Research is utilized. A review of these studies indicates several factors that may be utilized for determining levels of significance. One is that if the project will generate less than 110 vehicle trips per day, it is assumed that with the small size of the project, the impact is less than significant. A second criteria is that for a project, on a per capita or per employee basis, the VMT will be at least 15 percent below that of existing development is a reasonable threshold for determining significance.

As this is a new methodology, future projects may utilize different criterion as they become available.

3.17.3. Impact Assessment/Environmental Consequences:

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

A traffic study was prepared for this proposal by Flecker Associates, March 6, 2024. "*Transportation Impact Analysis for Calvary Christan Center*."

The study included traffic related projects along El Margarita Road including TSM 25-01 (The Ridge Estates), GPA 23-04 (Milner) requesting commercial property, and GPA 24-01 (Dean Ranch). The impacted intersections along El Margrita Road are the SR 20/El Margarita Road intersection, Franklin Road/El Margarita Road intersection to the south, the Frontage Road/El Margarita Road intersection, and the Spirit Way/El Margarita Road intersection. These intersections are all currently unsignalized, and growth anticipated by these projects will exacerbate existing traffic concerns.

As the El Margarita Road traffic concerns are a result of years of community growth, and that other projects beyond what is mentioned above will likely be proposed, the cost of intersection improvements that will be needed are well beyond the means of these proposed projects. Although interim solutions for the traffic impacts have been considered such as for the Ridge Estates paying their fair share of intersection improvements, inclusion of a mitigation measure that limits construction to 80 single-family residences or the equivalent for all of the projects combined, and for the northbound El Margarita Road traffic to become right-turn only at The SR 20 intersection. These mitigations would provide some temporary traffic relief.

Caltrans had previously recommended in a letter dated December 5, 2025, that an updated traffic study be prepared that addresses the cumulative impacts of all of the potential development that may occur along the El Margarita Road corridor. But more recent Caltrans concerns, in an email dated February 13, 2026, are that development of the Project should not occur prior to signalization of the El Margarita Road/SR 20 intersection. Caltrans also noted that prior to those improvements, an Intersection Safety and Operational Assessment Process (ISOAP) should be completed that addresses the needed intersection improvements; and that each project pay its fair share for these improvements. City staff has stated that the City will attach a condition(s) to the amended use permit that addresses this concern. As such, any inconsistencies with City and/or Caltrans plans, programs or policies that may otherwise occur due to allowing development to adversely affect an inadequate intersection until improvements are completed will be less than significant.

RZ 24-01: The proposed rezoning is an ordinance change that would eliminate the X_{19} Combining Zone District from the property. This zone district provides criteria that requires development of the property to pay it fair share for improvements to several nearby intersections (See Section 2.9 of this study for the specific road improvement criteria contained in the X_{19} Combining Zone District). According to City staff, the X_{19} Zone District is no longer needed for two reasons. More recent City Development Impact Fees that are applied citywide for road improvements have included many of the road improvements contained in the X_{19} Zone District. Secondly, conditions applied to the church's use permit restricts construction of the church until the intersection is improved or other criteria approved by the City and Caltrans is applied.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?

This CEQA section describes specific considerations for evaluating a project's transportation impacts in terms of Vehicle Miles Traveled (VMT). SACOG, in "Technical Advisory: On Evaluating Transportation Impacts in CEQA" provides two criteria for which if the project meets either of them, the traffic impacts are considered less than significant. One criterion is that the project generates less than 110 vehicle trips per day is considered to be less than a significant impact. The Project will exceed this criterion, so it is not further considered in this review. The second criterion is that if a project, on a per capita or per employee basis, the VMT will be at least 15 percent below that of existing development is a reasonable threshold for determining significance. SACOG also has released a draft document (SB 743 regional screening maps) that provides mapping data indicating the average miles traveled for different areas within and around Yuba City. The range of the categories are:

Less than 50% of regional average.

50-85% of regional average.

85-100% of the regional average.

115-150% of the regional average.

More than 150% of the regional average.

Per the SACOG maps for the Project area, the estimated average vehicle distance traveled is in the 50-85% range of the norm. In other words, per the SACOG regional screening maps this Project is located in an area that meets the 15 percent vehicle trip reduction criteria. Thus, the transportation impacts from this religious facility are consistent with CEQA Guidelines Section 15063.4(b). It follows that the traffic impacts generated by this Project are considered to be less than significant.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The traffic study prepared for this use permit did not identify any hazards due to design features or incompatible uses. As such the impacts from hazards due to improper design features or nearby incompatible uses are less than significant.

d) Result in inadequate emergency access?

The Fire and Police Departments have reviewed the Project plans and did not express concerns about emergency access to the property. As such the impacts on emergency access to this area from this Project will be less than significant.

3.18. Tribal Cultural Resources

Table 3-18: Tribal Cultural Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause of substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			X	
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

3.18.1 Environmental Setting/Affected Environment

This section describes the affected environment and regulatory setting for Tribal Cultural Resources (TCRs). The following analysis of the potential environmental impacts related to TCRs is derived primarily from the following sources:

- Environmental Impact Report for the City of Yuba City General Plan (2004).
- Consultation record with California Native American tribes under Assembly Bill 52 and Senate Bill 18.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on Tribal Cultural Resources as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.18.2 State Regulatory Setting

Assembly Bill 52: Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to any California Native American tribes that have requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include TCRs, the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Pursuant to AB 52, Section 21073 of the Public Resources Code defines California Native American tribes as "a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004." This includes both federally and non-federally recognized tribes.

Section 21074(a) of the Public Resource Code defines TCRs for the purpose of CEQA as:

1) Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or

    b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or

    c. a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria a and b also meet the definition of a Historical Resource under CEQA, a TCR may also require additional consideration as a Historical Resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators.

Recognizing that California tribes are experts in their TCRs and heritage, AB 52 requires that CEQA lead agencies initiate consultation with tribes at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures.

3.18.3 Cultural Setting

The Nisenan (also referred to as Southern Maidu) inhabited the General Plan area prior to large-scale European and Euroamerican settlement of the surrounding area. Nisenan territory comprised the drainages of the Yuba, Bear, and American Rivers, and the lower drainages of the Feather River. The Nisenan, together with the Maidu and Konkow, their northern neighbors, form the Maiduan language family of the Penutian linguistic stock (Shipley 1978:89). Kroeber (1976:392) noted three dialects: Northern Hill Nisenan, Southern Hill Nisenan, and Valley Nisenan. Although cultural descriptions of this group in the English language are known from as early as 1849, most of our current cultural

knowledge comes from various anthropologists in the early part of the 20th century (Levy 1978:413; Wilson and Towne 1978:397).

The basic subsistence strategy of the Nisenan was seasonally mobile hunting and gathering. Acorns, the primary staple of the Nisenan diet, were gathered in the valley along with seeds, buckeye, salmon, insects, and a wide variety of other plants and animals. During the warmer months, people moved to mountainous areas to hunt and collect food resources, such as pine nuts. Bedrock and portable mortars and pestles were used to process acorns. Nisenan settlement patterns were oriented to major river drainages and tributaries. In the foothills and lower Sierra Nevada, Nisenan located their villages in large flats or ridges near major streams. These villages tended to be smaller than the villages in the valley. (Wilson and Towne 1978:389–390.)

Trade provided other valuable resources that were not normally available in the Nisenan environment. The Valley Nisenan received black acorns, pine nuts, manzanita berries, skins, bows, and bow wood from the Hill Nisenan to their east, in exchange for fish, roots, grasses, shells, beads, salt, and feathers (Wilson and Towne 1978). To obtain, process, and utilize these material resources, the Nisenan had an array of tools to assist them. Wooden digging sticks, poles for shaking acorns loose, and baskets of primarily willow and redbud were used to gather vegetal resources. Stone mortars and pestles were used to process many of the vegetal foods; baskets, heated stones, and wooden stirring sticks were used for cooking. Basalt and obsidian were primary stone materials used for making knives, arrow and spear points, clubs, arrow straighteners, and scrapers. (Wilson and Towne 1978.)

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages were usually located on low rises along major watercourses. Village size ranged from three houses to 40 or 50 houses. Larger villages often had semi-subterranean dance houses that were covered in earth and tule or brush and had a central smoke hole at the top and an entrance that faced east (Wilson and Towne 1978:388). Early Nisenan contact with Europeans appears to have been limited to the southern reaches of their territory. Spanish expeditions intruded into Nisenan territory in the early 1800s. In the two or three years following the gold discovery, Nisenan territory was overrun by immigrants from all over the world. Gold seekers and the settlements that sprang up to support them were nearly fatal to the native inhabitants. Survivors worked as wage laborers and domestic help and lived on the edges of foothill towns. Despite severe depredations, descendants of the Nisenan still live in their original land area and maintain and pass on their cultural identity.

3.18.4 Summary of Native American Consultation

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts on "tribal cultural resources" separately from archaeological resources (PRC § 21074; 21083.09). AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC § 21080.3.1, 21080.3.2, 21082.3).

In response to AB 52, the City supplied the following Native American tribes with a Project description and map of the proposed Project area and a request for comments:

- United Auburn Indian Community of the Auburn Rancheria

- Yocha Dehe Wintun Nation
- Estom Yomeka Maidu Tribe of the Enterprise Rancheria
- Mechoopda Indian Tribe
- Pakan'yani Maidu of Strawberry Valley
- Mooretown Rancheria of Maidu Indians
- Ione Band of Miwok Indians

3.18.6 Thresholds of Significance

AB 52 established that a substantial adverse change to a TCR has a significant effect on the environment. The thresholds of significance for impacts to TCRs are as follows:

Would the Project cause a substantial adverse change to a TCR, defined in Section 21074 as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a Native American tribe that are:

- Included or determined to be eligible for inclusion in the California Register of Historical Resources;
- Included in a local register of historical resources as defined in subdivision k of Section 5010.1; and/or
- Determined by the City to be significant, as supported by substantial evidence, including:
    - A cultural landscape with a geographically defined boundary;
    - A historical resource as described in Section 21084.1 (either eligible for or listed on the California Register of Historical Resources or listed on a local registry);
    - A unique archaeological resource as defined in Section 21083.2; and/or
    - A non-unique archaeological resource as defined in Section 21083.2.

In assessing substantial adverse change, the City must determine whether or not the Project will adversely affect the qualities of the resource that convey its significance. The qualities are expressed through integrity. Integrity of a resource is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, Section 4852(c)]. Impacts are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired [CCR Title 14, Section 15064.5(a)]. Accordingly, impacts to a TCR would likely be significant if the Project negatively affects the qualities of integrity that made it significant in the first place. In making this determination, the City need only address the aspects of integrity that are important to the TCR's significance.

3.18.7 Impact Assessment/Environmental Consequences:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

There are no buildings on the property. Further, the site was likely previously in agricultural use and since tilled or mowed at least annually for reducing combustibles. In light of the previous use of the property, the impacts on any historical resources, is less than significant.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The City solicited consultation with culturally affiliated California Native American tribes regarding the proposed Project in accordance with AB 52. No comments were received. Since there still remains the potential for previously unknown sub-surface resources to be present, the "Unanticipated Discoveries" mitigation is utilized In order to avoid potential impacts to unknown remains. This ensures that the impacts on tribal cultural resources will be less than significant.

3.18.7 Tribal Cultural Mitigation Measures

Tribal Cultural Resources Mitigation Measure: Unanticipated Discoveries: If any suspected TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. A Tribal Representative from a California Native American Tribe that is traditionally and culturally affiliated with a geographic area shall be immediately notified and shall determine if the find is a TCR (PRC 21074). The Tribal Representative will make recommendations for further evaluation and treatment as necessary.

Preservation in place is the preferred alternative under CEQA and UAIC protocols, and every effort must be made to preserve the resources in place, including through project redesign. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, returning objects to a location within the project area where they will not be subject to future impacts. The Tribe does not consider curation of TCR's to be appropriate or respectful and request that materials not be permanently curated, unless approved by the Tribe.

The contractor shall implement any measures deemed by the CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including but limited to, facilitating the appropriate tribal treatment of the find, as necessary. Treatment that preserves or restores the cultural character and integrity of a Tribal Cultural Resource may include Tribal monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil.

Work at the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of CEQA, including AB 52, has been satisfied.

3.19. Utilities and Service Systems

Table 3-19: Utilities and Service Systems				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water or wastewater treatment or storm drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the projected demand in addition to the existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

3.19.1 Environmental Setting/Affected Environment

Wastewater:

Yuba City owns, operates, and maintains the wastewater collection, treatment, and disposal system that provides sewer service to over 60,000 residents and numerous businesses. The remainder of the residents and businesses in the Yuba City Sphere of Influence (SOI) are currently serviced by private septic systems. In the early 1970s, the City's original sewage treatment plant was abandoned, and the current Wastewater Treatment Facility (WWTF) was constructed.

Water:

The water supply source for the City is surface water from the Feather River with use of a backup groundwater well. The City of Yuba City is a public water agency with over 18,000 connections. City policy only allows areas within the City limits to be served by the surface water system.

Reuse and Recycling:

Solid waste generated in Yuba City is collected by Recology Yuba-Sutter. Recology offers residential, commercial, industrial, electronic, and hazardous waste collection, processing, recycling, and disposal, as well as construction and demolition waste processing, diversion, and transfer to a disposal facility.

The City's municipal solid waste is delivered to the Ostrom Road Landfill; a State-permitted solid waste facility that provides a full range of transfer and diversion services. As of June 2021, the Recology Ostrom Road Landfill Remaining Site Net Airspace is 33,764,000 cy; and has a remaining capacity of 21,297,000 tons; and remaining landfill service life is 53 years.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on public utilities or services as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.19.2 Federal Regulatory Setting

National Pollutant Discharge Elimination System: Discharge of treated wastewater to surface water(s) of the U.S., including wetlands, requires an NPDES permit. In California, the RWQCB administers the issuance of these federal permits. Obtaining a NPDES permit requires preparation of detailed information, including characterization of wastewater sources, treatment processes, and effluent quality. Any future development that exceeds one acre in size would be required to comply with NPDES criteria, including preparation of a Stormwater Pollution Prevention Plan (SWPPP) and the inclusion of BMPs to control erosion and offsite transport of soils.

3.19.3 State Regulatory Setting

State Water Resources Control Board (SWRCB): Waste Discharge Requirements Program. State regulations pertaining to the treatment, storage, processing, or disposal of solid waste are found in Title 27, CCR, Section 20005 et seq. (hereafter Title 27). In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non-Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to Section 20230 of Title 27. Several programs are administered under the WDR Program, including the Sanitary Sewer Order and recycled water programs.

Department of Resources Recycling and Recovery (CalRecycle): The Department of Resources Recycling and Recovery (CalRecycle) is the State agency designated to oversee, manage, and track the 76 million tons of waste generated each year in California. CalRecycle develops laws and regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. The board works jointly with local government to implement regulations and fund programs.

The Integrated Waste Management Act of 1989 (PRC 40050 et seq. or Assembly Bill (AB 939, codified in PRC 40000), administered by CalRecycle, requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by the year 1995 and 50 percent by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

Regional Water Quality Control Boards: The primary responsibility for the protection of water quality in California rests with the State Water Resources Control Board (State Board) and nine Regional Water Quality Control Boards. The State Board sets statewide policy for the implementation of state

and federal laws and regulations. The Regional Boards adopt and implement Water Quality Control Plans (Basin Plans), which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities.

National Pollutant Discharge Elimination System (NPDES) Permit: As authorized by the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into water of the United States. In California, it is the responsibility of Regional Water Quality Control Boards (RWQCB) to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of waste discharge requirements (WDRs). WDRs for discharges to surface waters also serve as NPDES permits.

California Department of Water Resources: The California Department of Water Resources (DWR) is a department within the California Resources Agency. The DWR is responsible for the State of California's management and regulation of water usage.

3.19.4 Impact Assessment/Environmental Consequences:

a) Require or result in the relocation or construction of new or expanded water or wastewater treatment or storm drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The Project will connect to both the City's water and wastewater treatment systems. The Yuba City Wastewater Treatment Facility (WWTF) has available capacity to accommodate new growth. The WWTF current permitted capacity is 10.5 mgd (annual average dry weather flow). The existing average influent flow to the WWTF is approximately 6 mgd. The remaining treatment capacity at the WWTF can be used to accommodate additional flow from the future developments.

The City's Water Treatment plant (WTP), for which its primary source of water is from the Feather River, also has adequate capacity to accommodate this project. The WTP uses two types of treatment systems, conventional and membrane treatment. The permitted capacity of the conventional WTP is 24 million gallons per day (mgd). The membrane treatment system has a permitted capacity of 12 mgd. Water produced from the conventional and the membrane treatment plants are blended for chlorine disinfection. Operating the conventional and membrane treatment facilities provides a total WTP capacity of 36 mgd. The City is permitted to draw 30 mgd from the Feather River. The current maximum day use is 26 mgd. The City also has an on-site water well at the water plant that supplements the surface water when needed.

For both public facilities there are City adopted master plans to expand those plants to the extent that they will accommodate the overall growth of the City.

The ongoing expansions of those plants to accommodate growth beyond this Project are funded by the connection fees paid by each new connection. Therefore, the impact on the water and wastewater treatment facilities will be less than significant.

Stormwater drainage in this area is provided by a combination of Yuba City drainage lines and the Sutter County Water agency which maintains the Live Oak Canal System. As the Sutter County Water

Agency did not comment on the Project, the impacts on the stormwater drainage system will be less than significant.

The extension of electric power facilities, natural gas facilities and telecommunication facilities are provided by private companies, none of which have voiced concerns over the extensions of their services to this Project site. With these considerations the impact on these facilities are expected to be less than significant.

c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the projected demand in addition to the existing commitments?

See Parts a) and b), above.

d). Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Recology Yuba-Sutter provides solid waste disposal for the area as well as for all of Sutter and Yuba Counties. There is adequate collection and landfill capacity to accommodate the proposed development.

e) Comply with federal, state, and local statutes and regulations related to solid waste?

Recology Yuba-Sutter is in compliance with State and Federal standards.

3.20. Wildfire

Table 3-20: Wildfire				
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	

3.20.1 Environmental Setting/Affected Environment

Wildland fires are an annual hazard in Sutter County, particularly in the vicinity of the Sutter Buttes, and, to a lesser degree due to urbanized development, Yuba City. Wildland fires burn natural vegetation on undeveloped lands and include rangeland, brush, and grass fires. Long, hot, and dry summers with temperatures often exceeding 100°F add to the County's fire hazard. Human activities are the major causes of wildland fires, while lightning causes the remaining wildland fires. Irrigated agricultural areas, which tend to surround Yuba City, are considered a low hazard for wildland fires.

The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program identifies fire threat based on a combination of two factors: 1) fire frequency, or the likelihood of a given area burning, and 2) potential fire behavior (hazard). These two factors are combined in determining the following Fire Hazard Severity Zones: Moderate, High, Very High, Extreme. These zones apply to areas designated as State Responsibility Areas – areas in which the State has primary firefighting responsibility. The project site is not within a State Responsibility Area and therefore has not been placed in a Fire Hazard Severity Zone.

Regarding the rezoning to remove the X_{19} Combining Zone District, there is no impact on wildfire potential as the rezoning involves only methods of financing street improvements, so it is not further discussed in this section.

3.20.2 Impact Assessment/ Environmental Consequences

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

As discussed in Section 3.17 of this Initial Study, this Project is not expected to substantially obstruct emergency vehicles or any evacuation routes that may occur in the area. Therefore, the impacts of the Project related to emergency response or evacuations would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The Project site is in a level urban area with little or no native vegetation remaining, and the urban area is surrounded by irrigated farmland. This type of environment is generally not subject to wildfires. Further, the City requires annual efforts be made to reduce combustible vegetation on all vacant properties. Construction of this Project would further reduce the risk of wildfire. In light of this, the exposure of the Project to wildfire is less than significant.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

As discussed above, the site is not near any wildland areas and the Project itself will not create any improvements that potentially could generate wildfire conditions. As such the Project will not be constructing or maintaining wildfire related infrastructure such as fire breaks, emergency water sources, etc. Thus, the Project will not create any potential significant impacts that could result from these types of improvements.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?.

The Project site is in a topographically flat area. There are no streams or other channels that cross the site. As such, it is not expected that people or structures would be exposed to significant risks from changes resulting from fires in steeper areas, including downslope or downstream flooding or landslides. Impacts of the Project related to these issues would be less than significant.

3.21. Mandatory Findings of Significance

Table 3.21: Mandatory Findings of Significance				
Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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, substantially reduce the number, or restrict the range of a rare or endangered plant or animal or eliminate important example of the major periods of California history or prehistory?			X	
b) 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)			X	
c) Have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

3.21.1 Impact Assessment/Environmental Consequences:

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, substantially reduce the number, or restrict the range of a rare or endangered plant or animal or eliminate important example of the major periods of California history or prehistory?

The land was stripped many years ago of native vegetation, likely for agricultural purposes. There are no trees on the property, nor are there any buildings on the property, and there are no on-site or nearby waterways or wetland areas. No concerns were raised from the Native American Tribes and the Air Quality Control District. Therefore any development that could occur as a result of this Project will not significantly degrade the quality of the natural 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 an important example of the major periods of California history or prehistory.

The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the proposed Project, with its mitigation measures, will have a less than significant effect on the local environment.

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)

CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects.

As a result of Caltrans concerns, a condition will be included with the use permit that limits development of the property until the El Margarita Road/SR 20 intersection improvements are completed or other City and Caltrans approved solutions are provided. As such, traffic concerns are reduced to less than significant. The City has adequate water and wastewater capacity, and the Project will be extending those services to the site. Stormwater drainage will also meet all City standards. Because the site is within an urban area and has been designated for many years for urban use, there is not a loss of viable agricultural land. Further, based on City and County agricultural protection program, the loss is limited to within the urban areas of the cities which is a minor portion of the entire County. The FRAQMD also did not comment that the Project would create any significant cumulative impacts on air quality. Therefore, there are no impacts that will be individually limited but that will create significant cumulative impacts.

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

The proposed Project in and of itself would not create a significant hazard to the public or the environment. Construction-related air quality, noise, and hazardous materials exposure impacts would occur for a very short period and only be a minor impact during that time period. As discussed above, impacts on public safety will be less than significant. Therefore, the proposed Project would not have any direct or indirect significant adverse impacts on humans.

4. Section References and/or Incorporated by Reference

According to Section 15150 of the CEQA Guidelines, an ND may incorporate by reference all or portions of another document that is a matter of public record. The incorporated language will be considered to be set forth in full as part of the text of the ND. All documents incorporated by reference are available for review at, or can be obtained through, the City of Yuba City Development Services Department located at the address provided above. The following documents are incorporated by reference:

Caltrans email dated February 13, 2026.

Caltrans letter dated December 5, 2025.

Flecker Associates, March 6, 2024. Transportation Impact Analysis for Calvary Christan Center.

Fehr & Peers, Inc. September 2020. SB 743 Implementation Guidelines for City of Yuba City.

Governor's Office of Planning and Research, November 2017. Technical Advisory on Evaluating Transportation Impacts in CEQA.

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California Department of Conservation, Division of Land Resource Protection (CDC DLRP). 2014. Farmland Mapping and Monitoring Program – Sutter County Important Farmland 2012. August 2014.

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Yuba Sutter Transit Route Map.

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Appendix A

Transportation Impact Analysis for Calvary Christian Center

TRANSPORTATION IMPACT ANALYSIS

FOR

CALVARY CHRISTIAN CENTER
Yuba City, CA

Prepared For:

Calvary Christian Center
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March 6, 2024

1400-01

Calvary Christian Church

TRANSPORTATION IMPACT ANALYSIS FOR
CALVARY CHRISTIAN CENTER
Yuba City, CA

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TRANSPORTATION IMPACT ANALYSIS FOR
CALVARY CHRISTIAN CENTER
Yuba City, CA

INTRODUCTION

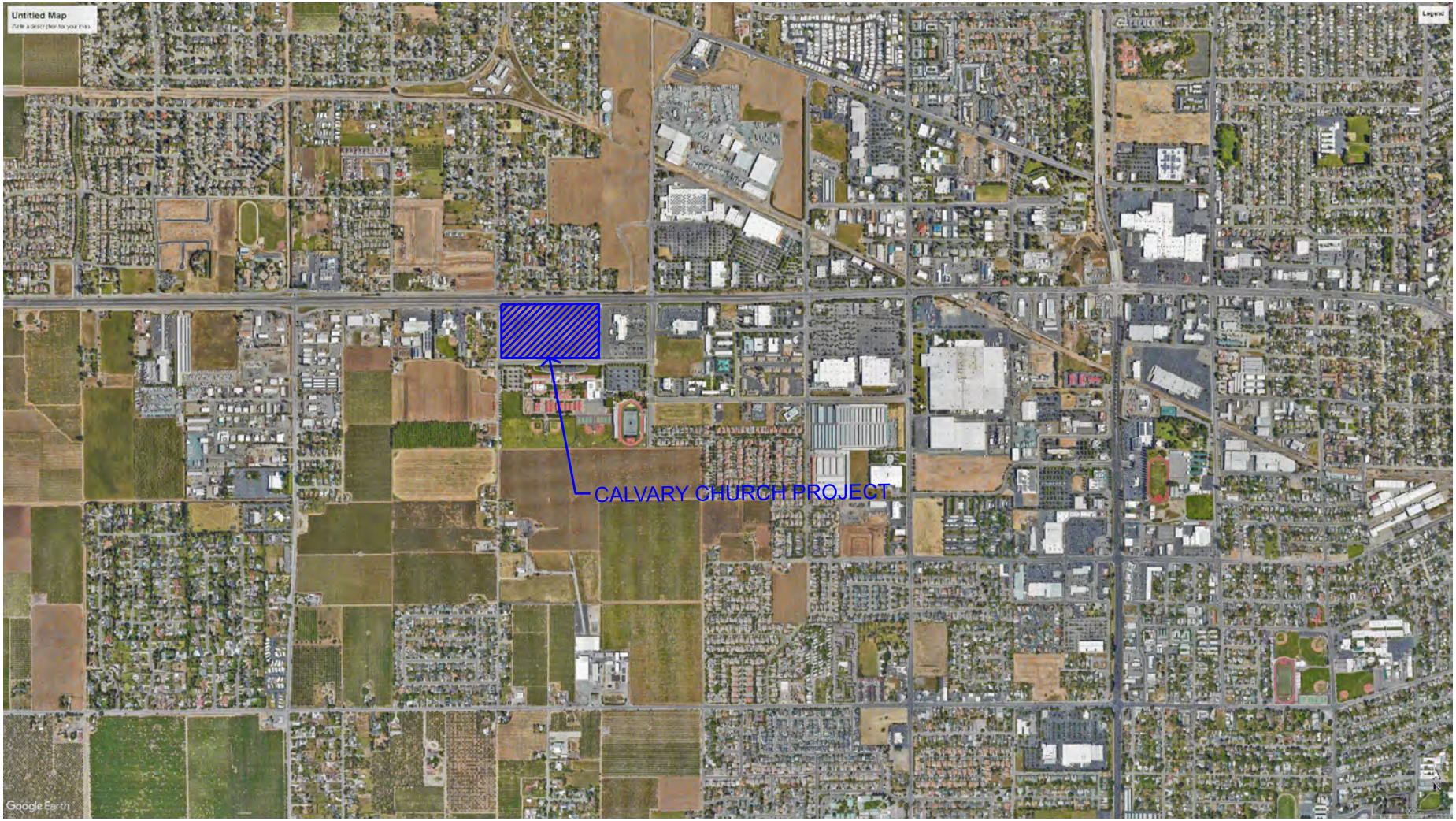
This report summarizes Flecker Associates (FA) analysis of the potential transportation impacts and traffic operational effects associated with the proposed Calvary Christian Church site in Yuba City, California. The Calvary Christian Church is planning to relocate from their existing location along Colusa Frontage Road, about 600 feet west of El Margarita Road to a new site on the east side of El Margarita Road and bounded by Colusa Highway (State Route 20) to the north and Spirit Way to the south. The site is shown regionally in Figure 1. The proposed site plan is shown in Figure 2.

Project Description. The Calvery Christian Center intends to relocate from its existing location about 600 feet west of El Margarita Road to this new location on the east side of El Margarita Road and bounded by Colusa Highway to the north, Spirit Way to the south and an automobile dealership to the east. The total site is about 22 acres of which 8 acres adjacent to the auto dealership will be sold. The remaining site will include a 53,480 square foot church, a 50-child pre-school, a 270-student K-8 private schools, play fields and a 465-foot parking files. Two driveways are proposed, one along El Margarita Road and one along Spirit Way. The Spirit Way driveway appears to be situated across from, and between, two driveways providing access to River Valley High School; the westerly driveway is for staff only and provides outbound access onto Spirit Way while the east driveway is inbound only and provides visitor parking and drop-off / pick-up for students. The second driveway will be a full access driveway along El Margarita Road about midway between Colusa Frontage Road and Spirit Way.

Analysis Approach. The purpose of this analysis is to identify the potential impacts of the project under the California Environmental Quality Act and to evaluate the project's effects on local traffic operations within the requirements of City of Yuba City General Plan standards and policies. The analysis includes identification / evaluation of existing traffic circulation conditions in the area based on current a.m. and p.m. peak hour traffic volumes. Additionally, as the Calvery Christian Center intends to operate a private K-8 school a midday midweek analysis is also being analyzed considering the River Valley High School location opposite the site. Finally, a Sunday peak hour is also being analyzed.

The extent to which improvements are currently needed were determined based on a level of service analysis of seven study intersections. The general characteristics of the proposed projects

were determined based on probable peak hour trip generation, regional trip distribution and local trip assignment. The impact of the project on regional Vehicle Miles Traveled (VMT), alternative transportation modes and safety at Caltrans facilities was also assessed. Local traffic operational analyses were conducted to determine intersection Levels of Service and queuing at the study intersections under Existing plus Project conditions and long-term cumulative conditions assuming the City of Yuba City travel demand forecasting model's Market Absorption forecast.

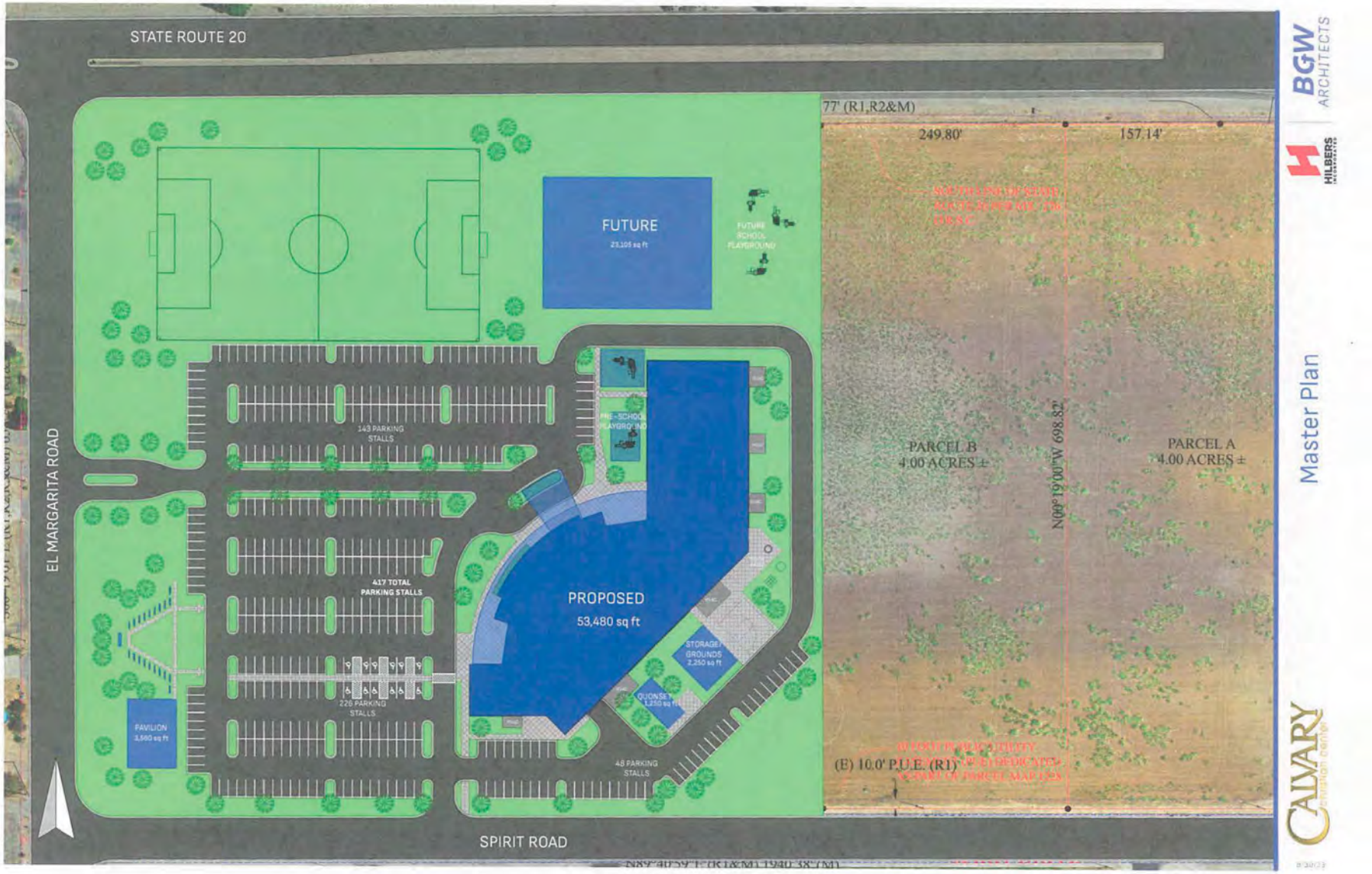


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VICINTY MAP

FIGURE 1

FLECKER ASSOCIATES
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FLECKER ASSOCIATES
1400-01

CALVARY CHRISTIAN CHURCH SITE PLAN

FIGURE 2

EXISTING SETTING

Existing Street System

Intersections. The operational analysis considers these intersections.

The **Colusa Highway (SR 20) / El Margarita Road** intersection is a tee intersection with stop control along El Margarita Road. Colusa Highway is a four-lane divided highway in this section of the highway. A dedicated left turn lane is present for westbound traffic while the outside eastbound lane is a shared through-right lane. El Margarita Road is a two-lane roadway with a single northbound lane into the intersection. There are no crosswalks present in the intersection. A streetlight is present in the southeast quadrant of the intersection.

The **El Margarita Road / S. Colusa Frontage Road** intersection is a tee intersection with stop control along the eastbound Colusa Frontage Road approach. Each approach has a single travel lane, and there are no marked crosswalks. This intersection is about 100 feet south of the Colusa Highway intersection. The closest streetlights include one at the Colusa Highway intersection and one located about 90 feet south of the intersection along the east side of the street. Bike lanes are present south of the intersection.

The **El Margarita Road / Spirit Way** intersection is a tee intersection with stop control along the westbound Spirit Way approach. The southbound El Margarita Road approach includes a through lane and a left turn lane while the northbound approach consists of a shared through-right lane. Spirit Way is a two-lane roadway with a center two-way-left-turn-lane (TWLTL) between El Margarita Road and Harter Parkway. At El Margarita Road the TWLTL is striped as a dedicated left turn lane while the 'through' lane allows for only right turn movements. Bike lanes are present along all three legs of the intersection, and crosswalks exist across all legs. Streetlights are present in the northeast and southeast quadrants.

The **El Margarita Road / Franklin Road** intersection is a tee intersection with stop control along the southbound Franklin Road approach. All approaches int the intersection are single lane although a short 'slip' lane is available for southbound right turning traffic.

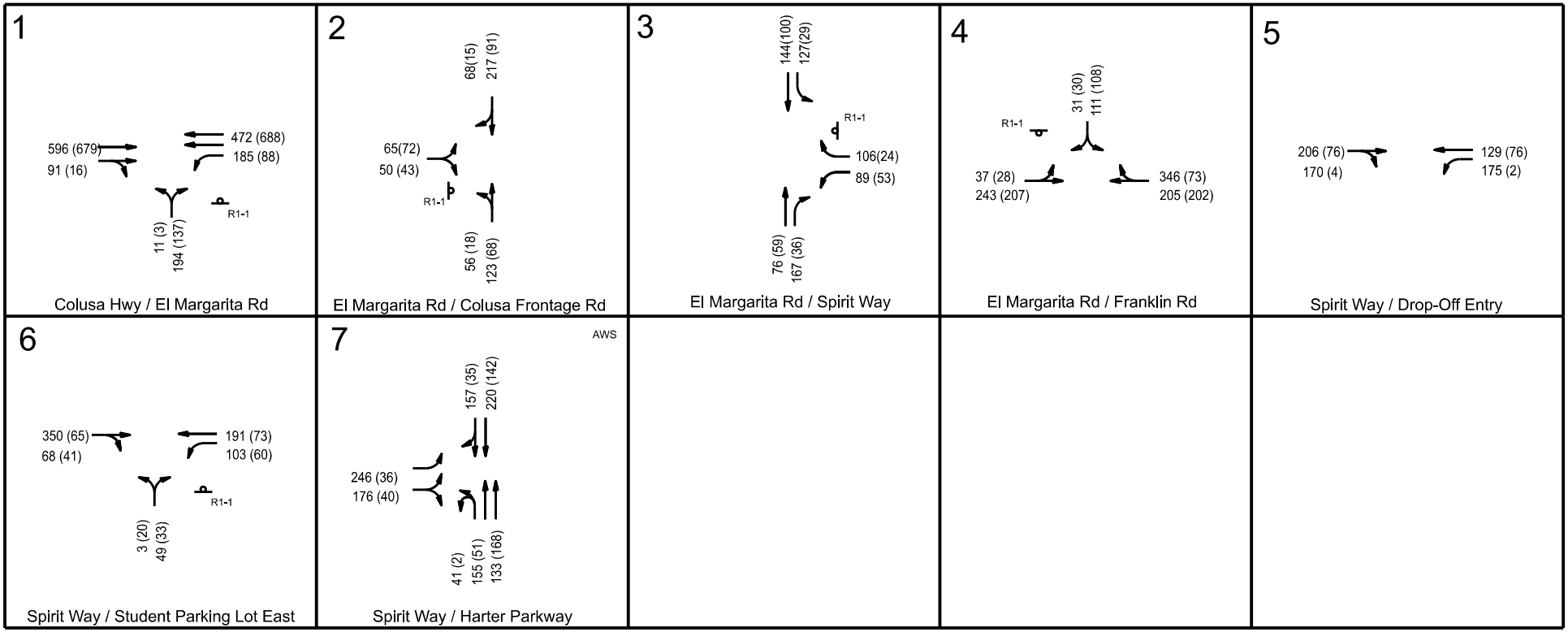
The **Spirit Way / Inbound School Driveway** intersection is a tee intersection without stop controls. The intersection provides inbound access to the drop-off / pick-up area at the entrance to the school. The TWLTL provides queuing for westbound vehicles while the driveway supports two inbound lanes; simultaneous right and left turns can be made.

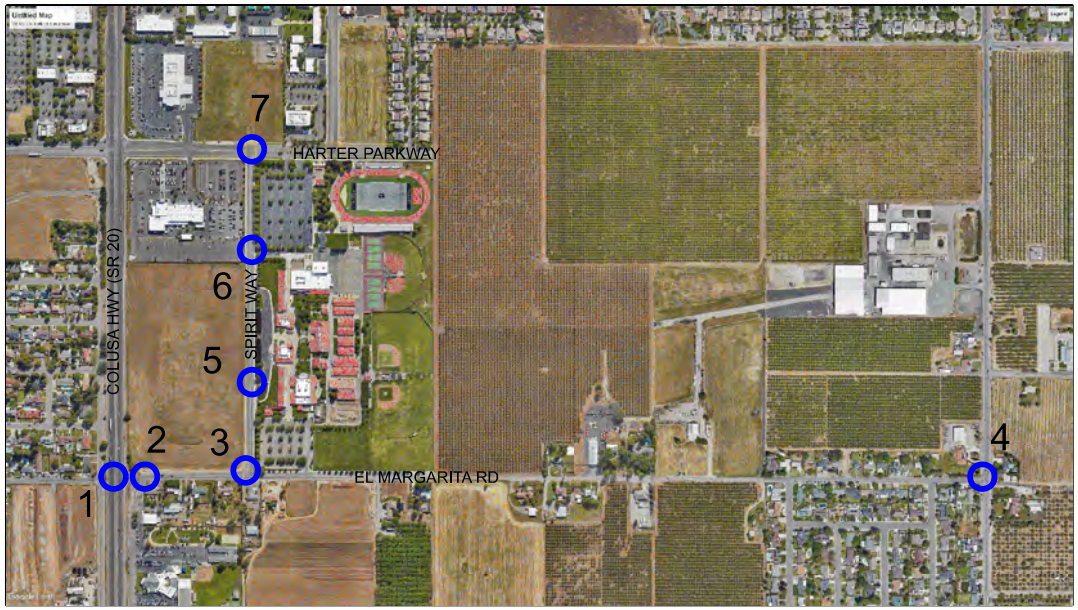
The **Spirit Way / East Parking Lot Driveway** intersection is a tee intersection with full access along all approaches. The driveway approach to the intersection is stop controlled. The TWLTL provides queuing for inbound westbound vehicles and outbound north to west vehicles exiting the parking lot.

The **Harter Parkway / Spirit Way** intersection is currently a tee intersection with all-way stop control. The Harter Parkway approaches include dedicated left turn lanes, a through lane and a shared through-right lane. The eastbound Spirit Way approach includes a dedicated left turn lane and a shared left-right lane. The east leg curb returns have been constructed with barricades on the roadway blocking access to fallow land. This fourth leg will open with development of the property on the east side of Harter Parkway. Crosswalks are present across all approaches and bike lanes exist along both roadways. Streetlights are present in the northeast and southwest quadrants of the intersection.

Existing Traffic Volumes

Traffic Counts. Traffic counts were conducted in mid-January 2024 while school was in session. Figure 3 presents the existing a.m. and p.m. peak hour volumes at the study locations. Figure 4 presents the existing volumes for the midday peak hour and the Sunday peak hour, which represent the midweek end of school and Sunday church services.





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LEGEND

XX - AM PEAK HOUR
(XX) - PM PEAK HOUR

SIGNAL

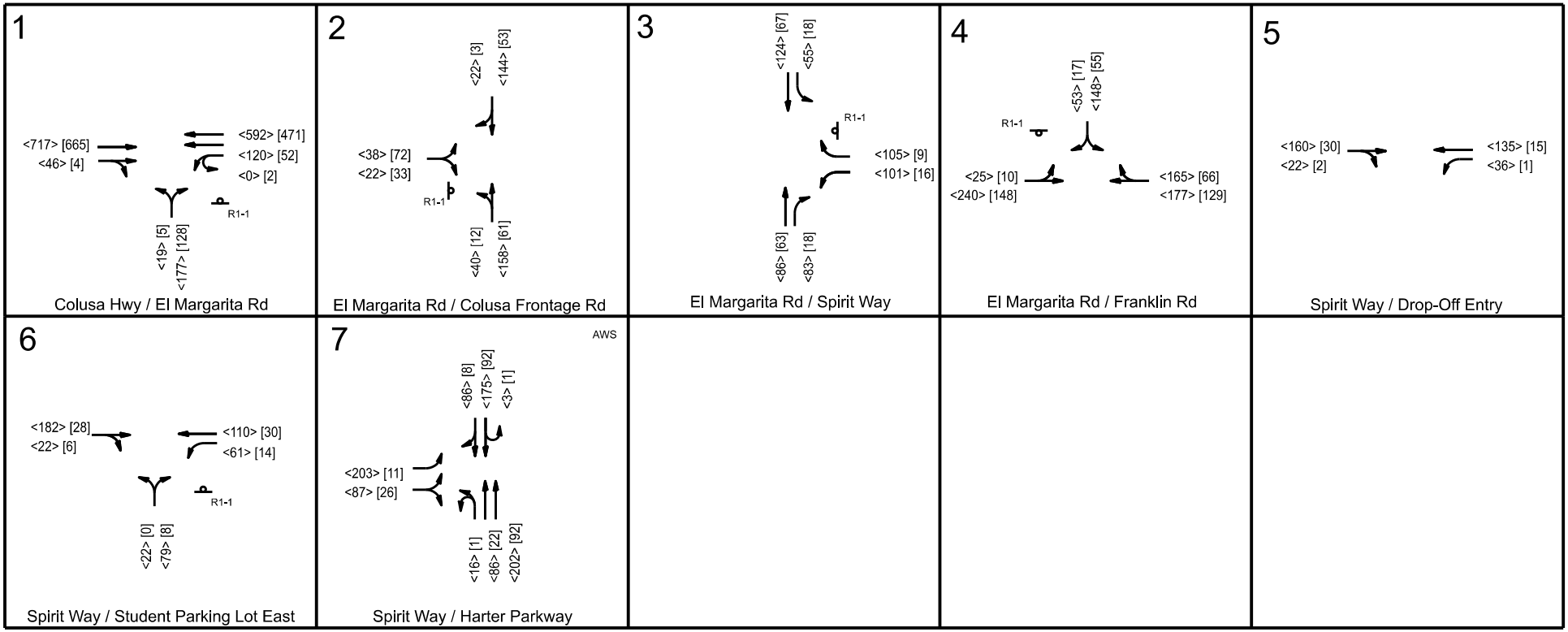
R1-1 STOP SIGN

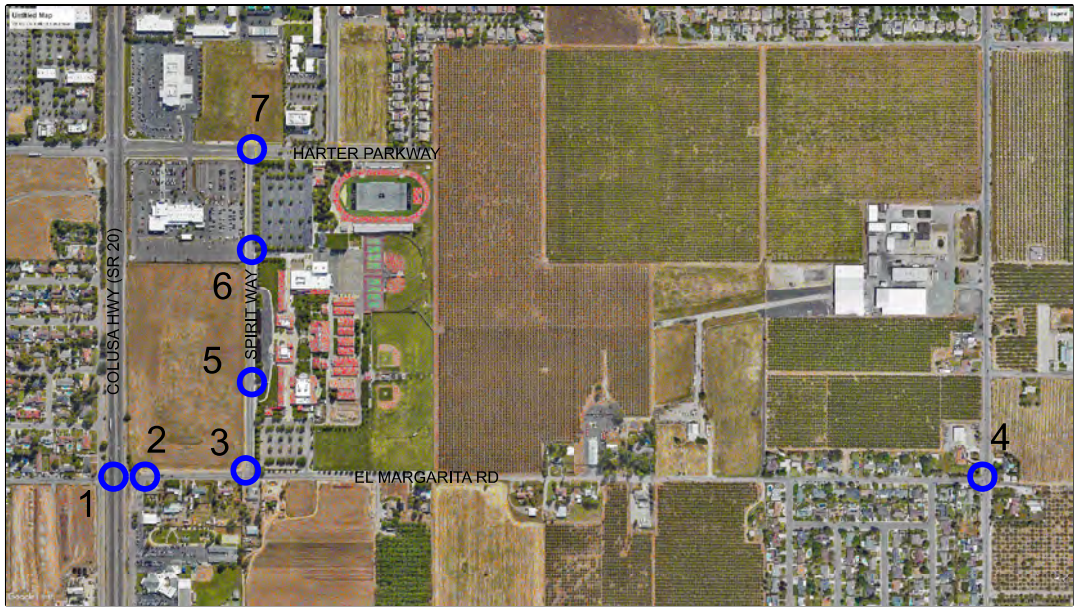
AWS ALL WAY STOP

EXISTING VOLUMES
AM / PM PEAK HOURS

FLECKER ASSOCIATES
1400-01

FIGURE 3





LEGEND

<XX> - MIDDAY PEAK HOUR

[XX]- SUNDAY PEAK HOUR

SIGNAL

R1-1 STOP SIGN

AWS ALL WAY STOP

EXISTING VOLUMES
MIDDAY / SUNDAY PEAK HOURS

FIGURE 4

Level of Service / 95th Percentile Queue Calculation

Level of Service. To quantitatively evaluate traffic conditions and to provide a basis for comparison of operating conditions with and without project generated traffic, Levels of Service were determined at study area intersections.

"Level of Service" (LOS) is a quantitative measure of traffic operating conditions whereby a letter grade "A" through "F" is assigned to an intersection. LOS "A" through "F" represents progressively worsening traffic conditions. The characteristics associated with the various LOS for intersections are presented in Table 1. The City of Yuba City General Plan has established LOS "D" measured over the peak hour as the minimum standard for City streets, with specific exceptions identified where conditions in excess of the LOS D standard will be acceptable. The Caltrans TCR for SR 20, however, identifies LOS E as the Concept LOS for the Harter Parkway intersection east.

Levels of Service were calculated for this study using the methodology contained in the *Highway Capacity Manual, 7th Edition (HCM)*. The overall Level of Service for intersections was determined based on the average length of delays for all motorists at signalized intersections. At unsignalized intersections the Level of Service was based on the length of the average delay experienced by motorists who must yield the right of way before turning or continuing through an intersection. Level of Service was calculated using *Synchro* Version 12 software.

Peak Period Queues. Queues created during peak periods at key signalized and unsignalized intersections were identified based on the *Synchro* results. The 95th percentile queue is the metric used in developing turn lane lengths. The 95th percentile queues is not necessarily the longest queue occurring during the peak period but represent queues with lengths that are exceeded only 5% of the time. While the City of Yuba City has not adopted significance criteria for queueing, it is commonly accepted that queue's length that extend beyond the limits of available turn lane storage and interfere with through traffic represent a potential safety conflict.

Traffic Signal Warrants. The extent to which existing or projected traffic volumes may justify signalization at key unsignalized intersections has been determined based on consideration of traffic signal warrant presented in the *Manual of Uniform Traffic Control Devices, 2014.* For this analysis, the volume thresholds associated with Warrant 3 (Peak Hour Volume) have been assessed. The "rural" criterion was used where speed limits are in excess of 40 mph. The warrant applies to side street stop controlled intersections; however, this criteria was also applied to the Harter Parkway / Spirit Way which is all-way stop controlled.

TABLE 1 LEVEL OF SERVICE DEFINITIONS			
Level of Service	**Signalized Intersection**	**Unsignalized Intersection**	**Roadway (Daily)**
"A"	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long-standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤ 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.
Sources: Highway Capacity Manual, 7th Edition.			

Existing Peak Hour Traffic Conditions

Current a.m. and p.m. peak hour Levels of Service were calculated at existing intersections selected by the City for inclusion in the analysis under Existing conditions. Results are presented in Table 2 for the midweek a.m. and p.m. peak hours while Table 3 presents the LOS for the midday and Sunday periods.

Level of Service. Peak hour operating conditions show that the El Margarita Road / Spirit Way intersection currently operates at LOS E in the a.m. peak hour. This is a result of the high peak hour factor due to school traffic. Similar to other schools, this LOS is a short-term occurrence

during the time students come to school in the morning, lasting for about 15 to 20 minutes. All other intersections operate at LOS D or better in the a.m., p.m., midday and Sunday peak hours.

One intersection currently meets the peak hour signal warrant, the SR 20 / El Margarita Road intersection. This intersection meets the warrant for all time periods studied.

TABLE 2
EXISTING AM / PM PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	Min LOS[1]	AM Peak Hour		PM Peak Hour		Meets Peak Hour Warrant
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	
1. Colusa Hwy (SR 20) / El Margarita Rd	NB Stop	D	24.2	C	14.2	B	Yes
2. El Margarita Rd / S. Colusa Frontage Rd	EB Stop	D	24.5	C	11.4	B	No
3. El Margarita Rd / Spirit Way	WB Stop	D	**38.8**	**E**	10.1	B	No
4. El Margarita Rd / Franklin Rd	SB Stop	D	25.1	D	14.5	B	No
5. Spirit Way / HS Drop-Off Driveway	WB Yield	D	11.1	B	7.4	A	N/S
6. Spirit Way / East Parking Lot	NB Stop	D	14.5	B	9.8	A	N/S
7. Harter Parkway / Spirit Way	AWS	D	28.5	D	8.7	A	No

[1] minimum LOS established by the City of Yuba City or Caltrans SR 20 TCR.
Bold indicates LOS exceeds City thresholds
N/S – not studied

TABLE 3 EXISTING MIDDAY / SUNDAY PEAK HOUR INTERSECTION LEVELS OF SERVICE							
Intersection	**Control**	**Min LOS[1]**	**Midday Peak Hour**		**Sunday Peak Hour**		**Meets Peak Hour Warrant**
			Average Delay (sec/veh)	**LOS**	**Average Delay (sec/veh)**	**LOS**	
1. Colusa Hwy (SR 20) / El Margarita Rd	NB Stop	D	32.3	D	Yes	B	Yes
2. El Margarita Rd / S. Colusa Frontage Rd	EB Stop	D	14.0	B	No	B	No
3. El Margarita Rd / Spirit Way	WB Stop	D	17.7	C	No	A	No
4. El Margarita Rd / Franklin Rd	SB Stop	D	21.9	C	No	B	No
5. Spirit Way / HS Drop-Off Driveway	WB Yield	D	8.2	A	N/S	A	N/S
6. Spirit Way / East Parking Lot	NB Stop	D	13.5	B	N/S	A	N/S
7. Harter Parkway / Spirit Way	AWS	D	15.2	C	No	A	No
[1] minimum LOS established by the City of Yuba City							

Peak Hour 95th Percentile Queues. Table 4 presents current peak hour 95th percentile. Traffic on the El Margarita Road approach to SR 20 creates queues that can back up through the N. Colusa a Frontage Road intersection due to the closely spaced intersection (90'±) with SR 20. Queues at all turn lanes except the northbound left turn lane along Harter Parkway at Spirit Way are contained within their lanes. This northbound lane queue exceeds the available storage lane by about one car (23') during the a.m. peak hour. This is a result of the high peak hour factor due to short-term school traffic.

Collison History. Recent collision history for the SR 20 / El Margarita Road key intersection was obtained from the California Highway Patrol (CHP), review and assessed. Table 5 summarizes the results at the local intersection over the last 5 years along Colusa Highway (SR 20), between 2018 and 2022; Caltrans' latest crash data publication is the *2021 Crash Data on California State Highways*.

The equivalent annual collision frequency rate was calculated for the intersection on SR 20, and the result was compared to statewide averages for similar facilities (i.e., 0.29 acc/mve). The recent overall collision frequency is lower than the statewide average.

TABLE 4
EXISTING PEAK HOUR INTERSECTION 95th PERCENTILE QUEUE LENGTHS

Intersection	Lane	Storage (feet)	AM Peak Hr 95th % Queue (feet)	PM Peak Hr 95th % Queue (feet)	Midday Peak Hr 95th % Queue (feet)	Sunday Peak Hr 95th % Queue (feet)
1. Colusa Hwy (SR 20) / El Margarita Rd	WB left	200	30	<25	<25	<25
	NB	90	90	30	113	<25
2. El Margarita Rd / Colusa Frontage Rd	EB	--	75	<25	<25	<25
	NB	--	8[1]	<25	5[1]	<25
3. El Margarita Rd / Spirit Way	SB left	--	<25	<215	<25	<25
	WB left	260[2]	145	<25	73	<25
4. El Margarita Rd / Franklin Rd	SB	--	65	30	80	<25
	WB	--	<25	<25	<25	<25
5. Spirit Way / Inbound Driveway	WB left	480[2]	40	<25	<25	<25
6. Spirit Way / East Driveway	WB left	500[2]	<25	<25	<25	<25
7. Harter Parkway / Spirit Way	NB left	100	**123**	<25	33	<25
	SB thru-right	300[2]	153	<25	48	<25
	EB left	500[3]	218	<25	103	<25

Bold indicates queue exceeds available storage
[1] continuation of queue from adjacent intersection
[2] length to adjacent intersection
[3] approach includes left turn lane (TWLTL) and shared left-right lane 500 feet to adjacent intersection – longest queue shown

TABLE 5
YEAR 2018 - 2022 COLLISION HISTORY

Location	2018		2019		2020		2021		2022		Total	
	total	inj	total	inj	total	inj	total	inj	total	inj	total	inj
Colusa Hwy (SR 20) / El Margarita Rd	1	1	1	2	0	0	2	5	0	0	4[1]	8

MVE – million vehicles entering; ev – entering vehicles; acc/MVE – accidents per million vehicles entering
crash rate = [(No of crashes in 'n' years) x (1,000,000)] / [(total entering vehicles) x (365) x ('n' years)]
[1] collision frequency [4 x 1,000,000] / [16,760[2] ev x 365 x 5] = 0.13 acc/MVE
[2] daily volume estimated based on peak pm traffic entering intersection
Statewide average is 0.29 for total collisions at rural unsignalized tee intersections (Group 17)

Alternative Transportation Modes

The text which follows outlines facilities for pedestrians, bicyclists and transit riders in the area of the project.

Pedestrians. Sidewalks are rare in the area of the proposed project but have been provided as new development has completed frontage improvements. Typically pedestrians walk along the paved shoulders on major roads and on unimproved shoulders on local streets. Table 6 summarizes available pedestrian facilities.

TABLE 6
STUDY AREA PEDESTRIAN FACILITIES

Street	Location	Side	Description
Spirit Way	El Margarita Road to Harter Pkwy	north	None along project frontage; existing along adjacent frontage to Harter Prkwy
		south	Existing along entire length
S. Colusa Frontage Rd	El Margarita Road to to Hooper Rd	north	None
		south	None
El Margarita Road	S. Colusa Frontage Rd to Spirit Way	east	None
		west	None

Bicycles. The Yuba City Bicycle Master Plan (2011) identifies existing and planned facilities for this transportation mode under these classifications:

- Class 1 Bicycle Path – a facility separated from other vehicular traffic
- Class 2 Bicycle Lanes – a paved lane along a street striped for the exclusive use of bicycles
- Class 3 Bicycle Route – a shared facility designated for bicycle use

Table 7 identifies existing and planned bicycle facilities in the area of the proposed project.

Transit Services. The Yuba City area is served by Yuba Sutter Transit. Fixed route service is provided via routes #1 (Yuba City to Yuba College) and #5 (South Yuba City to North Yuba City). These routes travel on 30-minute and 60-minute headways on Harter Parkway between Lassen Blvd, one block south of Spirit Way to Butte House Road. Both routes have a designated stop at the Harter Parkway / Spirit Way intersection, about ⅛ mile from the Calvary Christian Center site.

Yuba-Sutter Dial-A-Ride offers curb-to-curb shared ride service to eligible passengers anywhere within its service area. The Christian Center is within the current service area. This service is available from 6:30 a.m. to 9:30 p.m. on weekdays and from 8:30 a.m. to 5:30 p.m. on Saturdays. Service is not provided on Sundays or holidays.

TABLE 7 STUDY AREA BICYCLE FACILITIES			
Street	**Location**	**Side**	**Description**
Existing			
El Margarita Rd	S. Colusa Frontage Rd to 1,000'± south of Spirit Way	Both	Class 2 Lanes
Spirit Way	El Margarita Rd to Harter Prkwy	Both	Class 2 Lanes
Harter Prkwy	Colusa Hwy (SR 20) to Lassen Blvd	West / Both	Class 1 Path / Class 2 Lanes
Planned			
S. Colusa Frontage Rd	El Margarita Rd to Geo Washington Blvd	Both	Class 2 Lanes
El Margarita Rd	1,000'± south of Spirit Way to Franklin Ave	Both	Class 2 Lanes
Source: Yuba City Bicycle Master Plan, 2011			

PROJECT CHARACTERISTICS

Project Description

The text that follows describes the characteristics of the project in terms of automobile trip generation and distribution.

Trip Generation – Calvary Christian Center. The number of vehicle trips that are expected to be generated by development of the Calvary Christian Center can be estimated using typical trip generation rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation, 11th Edition.* The project includes a 53,480 square foot church which includes a sanctuary, classrooms and office space, a 50-child pre-school and up to a 270-student K-8 school. The ITE rates for the a.m. and p.m. peak hours are presented in Table 8 while the midday and Sunday rates are presented in Table 9. The proposed project is expected to generate 1,721 daily trips, 329 a.m. peak hour trips, 136 p.m. peak hour trips, 213 midday trips and 554 Sunday peak hour trips. An internal trip rate reduction of 5% was used to account for single trips made to the three separate on-site land uses. After applying the internal capture rate the net new total trips will be 1,635 daily trips, 312 new a.m. peak hour trips, 129 new p.m. peak hour trips, 202 midday trips and 554 Sunday peak hour trips.

TABLE 8 AM / PM PEAK HOUR TRIP GENERATION RATES								
Land Use	**Quantity / Unit**	**Trip Per Unit**						
		Daily	**AM Peak Hour**			**PM Peak Hour**		
			Total	**In**	**Out**	**Total**	**In**	**Out**
Church (LU 560) [1]	53.48 ksf	7.60	0.32	62%	38%	0.49	44%	56%
Day Care Center (Pre-School) – (LU 565) [1]	50 Students	4.09	0.78	53%	47%	0.79	47%	53%
K-8 Private School (LU 530) [1]	270 Students	4.11	1.01	56%	44%	0.26	46%	54%
Church (LU 560)		406	17	11	7	26	12	15
Day Care Center (Pre-School) – (LU 565)		205	39	21	18	40	19	21
K-8 Private School (LU 530)		1110	273	153	120	70	32	38
Sub-Total		**1721**	**329**	184	145	**136**	62	74
Internal Trips (5%)								
Church (LU 560)		(20)	(1)	(1)	(0)	(1)	(1)	(1)
Day Care Center (Pre-School) – (LU 565)		(10)	(2)	(1)	(1)	(2)	(1)	(1)
K-8 Private School (LU 530)		(55)	(14)	(8)	(6)	(4)	(2)	(2)
Total Internal Trips		**(86)**	**(16)**	(9)	(7)	**(7)**	(3)	(4)
Net New Trips		**1635**	**312**	**175**	**138**	**129**	**59**	**70**

ksf – thousand square feet

numbers may not equal due to rounding

[1] *ITE Trip Generation*, 11th Edition

TABLE 9
MIDDAY / SUNDAY PEAK HOUR TRIP GENERATION RATES

Land Use	Quantity / Unit	Trip Per Unit					
		Midday Peak Hour			Sunday Peak Hour		
		Total	In	Out	Total	In	Out
Church (LU 560)[1]	53.48 ksf	0.41[2]	53%[2]	47%[2]	10.36	48%	52%
Day Care Center (Pre-School) – (LU 565)[1]	50 Students	7.2%[3]	52%	48%	N/A	N/A	N/A
K-8 Private School (LU 530)[1]	270 Students	0.60	47%	53%	N/A	N/A	N/A
Church (LU 560)		22[4]	11	10	554	266	288
Day Care Center (Pre-School) – (LU 565)		29	15	14	N/A	N/A	N/A
K-8 Private School (LU 530)		162	76	86	N/A	N/A	N/A
Sub-Total		**213**	103	110	**554**	266	288
Internal Trips (5%)[5]							
Church (LU 560)		(1)	(1)	(1)	N/A	N/A	N/A
Day Care Center (Pre-School) – (LU 565)		(1)	(1)	(1)	N/A	N/A	N/A
K-8 Private School (LU 530)		(8)	(4)	(4)	N/A	N/A	N/A
Total Internal Trips		**(11)**	(5)	(6)	N/A	N/A	N/A
Net New Trips		**202**	**98**	**105**	**554**	**266**	**288**

ksf – thousand square feet

numbers may not equal due to rounding

[1]*ITE Trip Generation*, 11th Edition

[2]average of a.m. / p.m. peak hour rates

[3]Time of Day Distribution for Vehicles, ITE Trip Generation Appendix

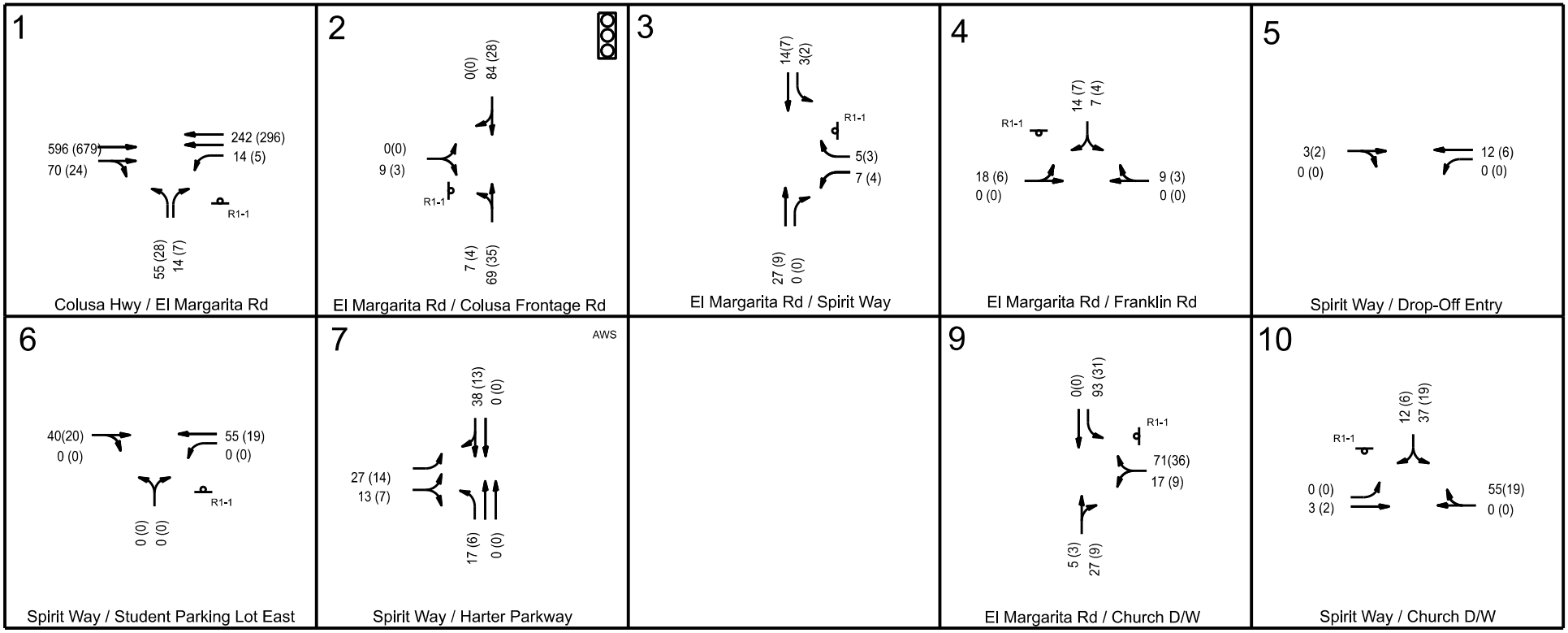
[4] (quantity) x (daily rate, Table 7) x (trip rate) x (inbound/outbound)

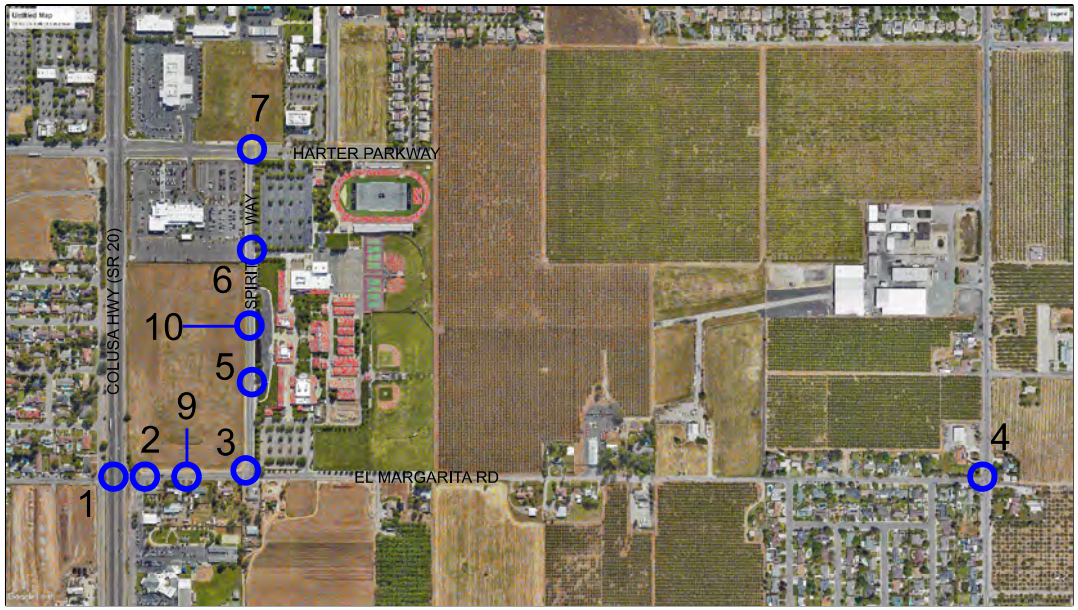
[5]Caltrans *Guide for the Preparation of Traffic Impact Studies*, December 2002

Trip Distribution. The regional distribution of project trips was developed based on existing travel patterns, the City's regional travel demand forecasting model for future conditions, current and future roadway network and the demographics of the project. The projected trip distribution is shown in Table 10.

TABLE 10 PROJECT TRIP DISTRIBUTION ASSUMPTIONS			
Direction	**Route**	**Percentages**	
		Existing	**Future**
North	Via Harter Parkway	15%	15%
East	Via Colusa Highway (SR 20)	15%	15%
South	Via Franklin Rd west	10%	10%
	Via Harter Parkway south	15%	20%
West	Via SR 20	40%	40%
	Via Colusa Frontage Rd	5%	0%
Total		**100%**	**100%**

Trip Assignment. Project traffic was assigned to the study area circulation system based on the driveway locations identified in the site plan. Calvary Christian Center "Project only" traffic under this scenario is presented in Figures 5 and 6.





N

LEGEND

XX - AM PEAK HOUR
(XX) - PM PEAK HOUR

SIGNAL

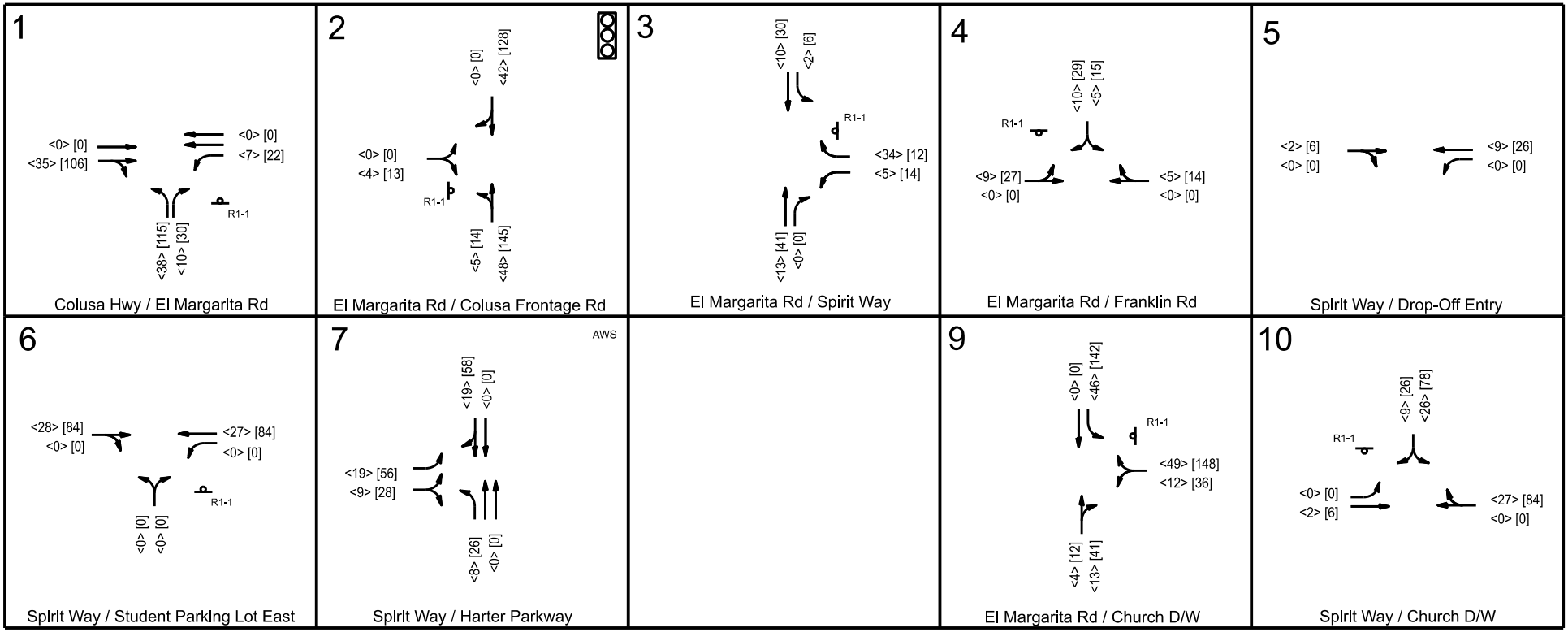
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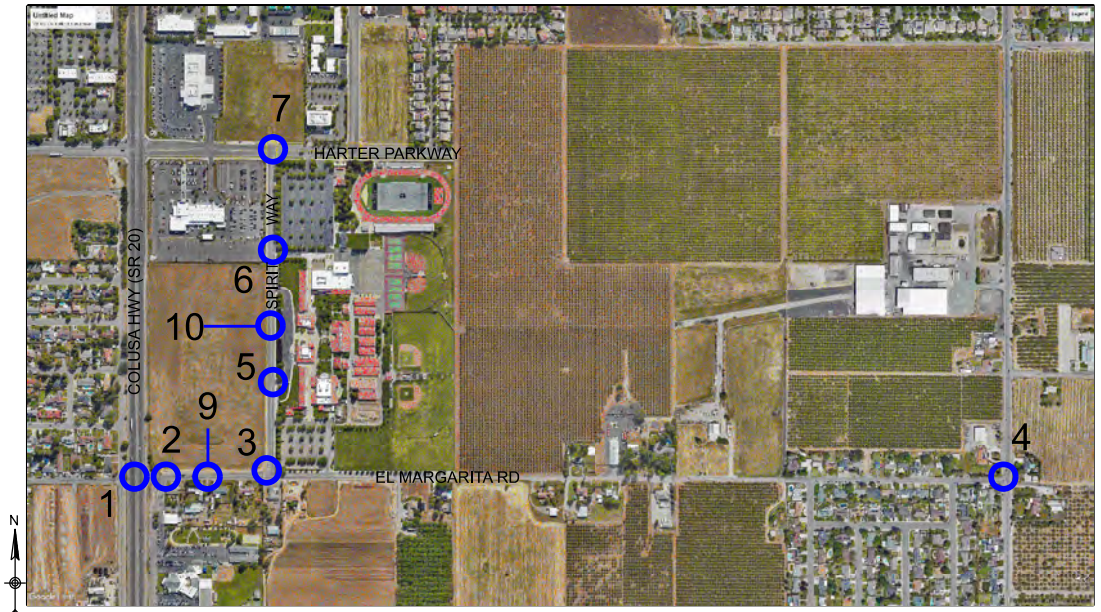
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CALVARY CHRISTIAN CHURCH
AM / PM PEAK HOUR PROJECT VOLUMES

FIGURE 5

FLECKER ASSOCIATES
1400-01





LEGEND

<XX> - MIDDAY PEAK HOUR

[XX]- SUNDAY PEAK HOUR

SIGNAL

R1-1 STOP SIGN

AWS ALL WAY STOP

CALVARY CHRISTIAN CHURCH
MIDDAY / SUNDAY PROJECT VOLUMES

FIGURE 6

FLECKER ASSOCIATES

1400-01

CEQA TRANSPORTATION IMPACTS

This report section identifies transportation impact under current CEQA requirements and Caltrans transportation analysis guidelines.

Vehicle Miles Traveled Analysis

Vehicle Miles Traveled (VMT) refers to the amount and distance of vehicle travel attributable to a project. VMT generally represents the number of vehicle trips generated by a project multiplied by the average trip length for those trips. For CEQA transportation impact assessment, VMT shall be calculated using the origin-destination VMT method, which accounts for the full distance of vehicle trips with one end from the project.

Process. Because Yuba City has not yet adopted guidelines for addressing VMT impacts for land development projects in compliance with CEQA Guidelines Section 15064.3, guidance provided in the Governor's Office of Planning and Research (OPR) technical directive on CEQA has been employed. The directive addresses several aspects of VMT impact analysis, and is organized as follows:

- ***Screening Criteria***: Screening criteria are intended to quickly identify when a project should be expected to cause a less-than-significant VMT impact without conducting a detailed study.

- ***Significance Thresholds***: Significance thresholds define what constitutes an acceptable level of VMT and what is considered a significant level of VMT requiring mitigation.

- ***Analysis Methodology***: These are the procedures and tools for producing VMT forecasts to use in the VMT impact assessment.

- ***Mitigation***: Projects that are found to have a significant VMT impact based on the County's significance thresholds are required to implement mitigation measures to reduce impacts to a less than significant level (or to the extent feasible).

Screening Criteria. Screening criteria can be used to quickly identify whether sufficient evidence exists to presume a project will have a less than significant VMT impact without conducting a detailed study. However, each project should be evaluated against the evidence supporting that screening criteria to determine if it applies. Projects meeting at least one of the criteria below can be presumed to have a less than significant VMT impact, absent substantial evidence that the project will lead to a significant impact.

The following screening criteria have been reviewed. The extent to which the proposed project qualifies under each criterion is also noted. Each of the screening criteria was reviewed for both projects to determine whether additional VMT analyses are necessary.

- Small Projects – The proposed project is estimated to generate 1,635 new daily trips. This value exceeds the 110 daily threshold, and this screening criterion does not apply.

- Affordable Housing – The proposed project is not of residential use, and this screening criterion does not apply.

- Locations Served by High Quality Transit – The proposed project is along two transit routes; however, the current service does not meet the 15-minute headway. Therefore, this screening criterion does not apply.

- Local Serving Retail – The proposed project is a 53,480 square foot church with private school. This screening criterion does not apply.

- Map Based Screening for Residential and Office Projects – The proposed project is not a residential or office use, and this screening criterion does not apply.

OPR does not address local serving assembly uses such as places of worship. Nor do they address local serving community colleges, primary schools, day care centers and other community institutions such as libraries, fire stations and local government facilities. Some local agencies, such as the City of San Dimas, have included in their guidelines a variety of uses including those listed above as part of their 'project type' screening criteria.

While the City has not yet established their guidelines, from a qualitative evaluation, the proposed Calvary Christian Center would fall within a screening such as used by San Dimas. Additionally, the existing Calvary Christian Center is located about 500 feet west of El Margarita Road along S. Colusa Frontage Road. The relocation of the church will cause some congregants to travel slightly longer distances to the new church while also reducing the distance traveled for other congregants. The project's driveways are closer to the major roadways when compared to the current site, and the project's impact can be presumed to be less than significant under this criteria.

Multi-Modal Plan Consistency

The significance of the project's Multi-Modal impacts is discussed in the text which follows.

Transit Service and Facilities. The closest fixed route transit service runs along Harter Parkway. There is no existing service along Spirit Way east of El Margarita Road. The project does not

physically disrupt an existing transit service or facility nor interfere with implementation of any known planned transit service or facility. The traffic contribution of the project to streets near the Walton Avenue Transfer Center would be too slight to result in increased travel time for buses that adversely affects system on-time performance. It is possible that the Calvary Christian Center project could result in use of the dial-a-ride service operated by Yuba-Sutter Transit during the midweek, but it is unlikely the project would result in increased transit ridership demands that result in passenger loads that exceed vehicle loading standards. As the project driveways are not adjacent to any transit facility and demand response service can be loaded and unloaded on site, the project does not result in increased potential for safety conflicts involving transit vehicles and other modes of travel.

Conclusion. The project's impact to Transit Service and Facilities is not significant.

Bicycle Facilities.

El Margarita Road – Curb and gutter has previously been installed along the east side of El Margarita Road, along the Calvary Christian Center frontage between Spirit Way and S. Colusa Frontage Road. The roadway will be widened to its ultimate width along the east side of the road between S. Colusa Frontage Road and Colusa Highway (SR 20). Bicycle lane striping and markings will be added to complete the planned northbound facility. Along southbound El Margarita Road the west side of the roadway is unimproved. Development of the west side of the roadway will result in the construction of frontage improvements that are consistent with City standards. This will include restriping the bicycle lane and adding signage and will be part of the City's Bicycle Master Plan.

Spirit Way – Curb and gutter has been previously installed along the north side of Spirit Way; curb, gutter and sidewalk is present along the south side of the roadway along the River Valley High School frontage. Bike lanes have been previously installed along both directions of Spirit Way.

Pedestrian Facilities.

The project is expected to construct sidewalks along the project frontage along the north side of Spirit Way and along the east side of El Margarita Road. The project does not physically disrupt an existing pedestrian facility nor interfere with implementation of a planned pedestrian facility.

Standards of Significance / Level of Service Thresholds

The significance of the proposed project's impact on traffic operating conditions is based on a determination of whether project generated traffic results in roadway or intersection operating conditions below acceptable standards as defined by the governing agency. A project's impact

on traffic conditions is considered significant if implementation of the project would result in LOS changing from levels considered acceptable to levels considered unacceptable, or if the project would significantly worsen an already unacceptable LOS without the project. Relevant policies for the study area consist of the following.

SB 743

SB 743 required that as of July 1, 2020 evaluation of transportation impacts under CEQA may no longer be based on consideration of Level of Service and moved to evaluation based on Vehicle Miles Traveled (VMT). Methods for estimating project VMT and for evaluating VMT impacts are outlined in Office of Planning & Research (OPR) directives and are implemented by individual jurisdictions. The City of Yuba City is working towards creation and adoption of applicable methods for estimating and evaluating a project's effects on VMT but thresholds of significance have not yet been adopted

Yuba City General Plan (Adopted April 2004)

Implementing Policy 5.2-1-12 *(Traffic Level of Service)* of the General Plan's Transportation section states the following:

> Develop and manage the roadway system to obtain LOS D or better for all major roadways and intersections in the City. This policy does not extend to residential streets (i.e., streets with direct driveway access to homes) or bridges across the Feather River nor does the policy apply to state highways and their intersections, where Caltrans policies apply. Exceptions to LOS D policy may be allowed by the City Council in areas, such as downtown, where allowing a lower LOS would result in clear public benefits. Specific exceptions granted by the Council shall be added to the list of exceptions below:
>
> - SR 20 (SR 99 to Feather River Bridge) – LOS F is acceptable;
> - SR 20 (Feather River Bridge) – LOS F is acceptable;
> - Bridge Street (Twin Cities Bridge) – LOS F is acceptable;
> - Lincoln Road (New Bridge across the Feather River) – LOS F is acceptable;
> - Bridge Street from Palora Avenue to Second Street – LOS F is acceptable.
>
> No new development will be approved unless it can be shown that the required level of service can be maintained on the affected roadways.

Based upon the above, the following standards and significance criteria have been used for this analysis to identify a significant impact.

- Cause level of service at a study intersection to degrade from an acceptable LOS D or better to LOS E or F.

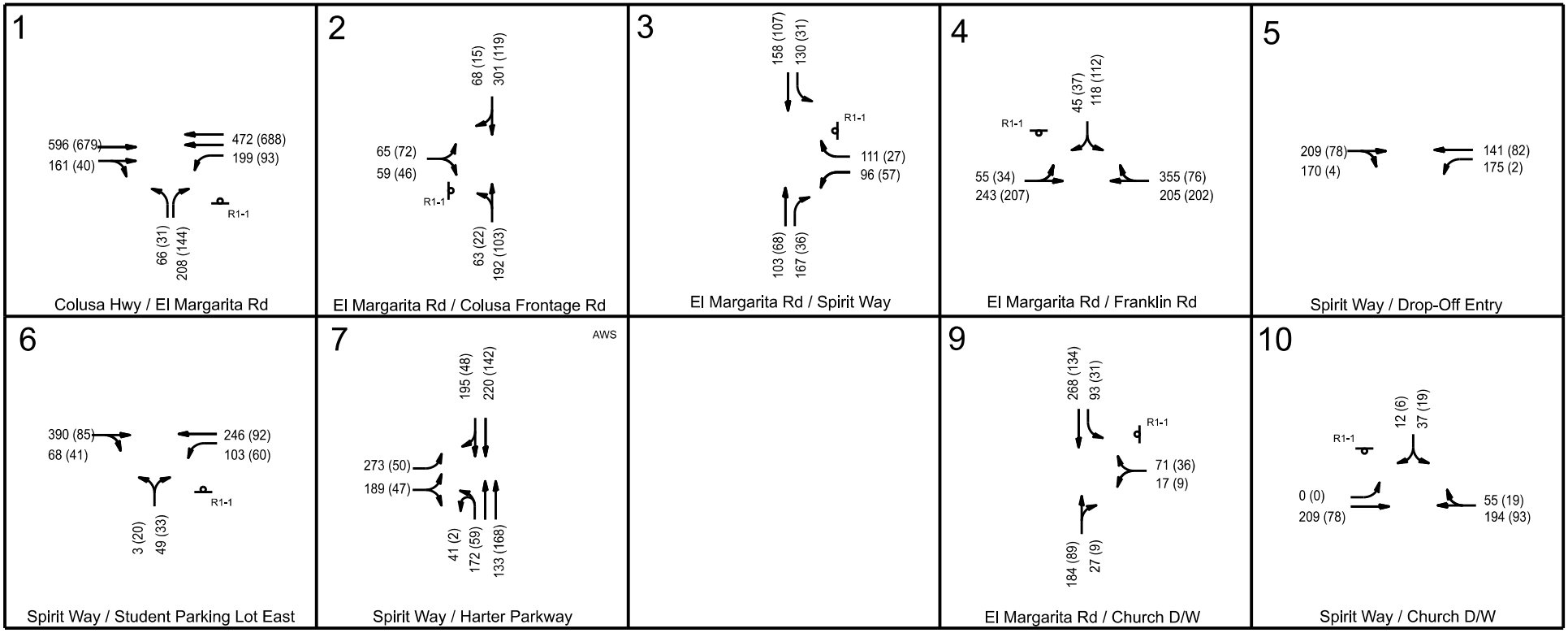
- Exacerbate the no project level of service at a study intersection operating at an unacceptable LOS. Based upon direction provided by City staff for past studies in this area, exacerbation of unacceptable operations at a City signalized intersection is considered an impact if the proposed project causes an increase in the average vehicle delay of 5 seconds or more.

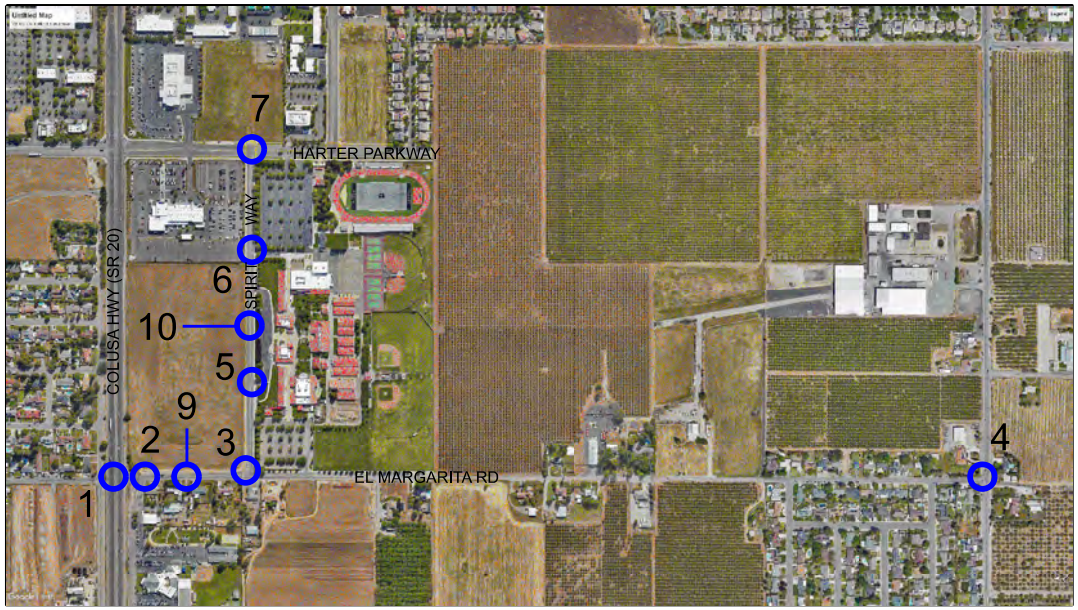
EXISTING PLUS PROJECT CONDITIONS

Intersection Levels of Service. Figures 7 and 8 present the sum of existing traffic and project trips for the Calvary Christian Center project for a.m. and p.m. peak hours , and midday and Sunday peak hours. Table 11 shows the LOS conditions during the midweek a.m. and p.m. peak hours while Table 12 presents the LOS conditions during the midweek midday period at the end of school and on a Sunday morning when church services will occur. The addition of project trips will result in four intersections operating at LOS E or LOS F conditions. These include the SR 20 at El Margarita Road intersection, El Margarita Road at S. Colusa Frontage Rd, El Margarita Road at Spirit Way and Harter Parkway at Spirit Way.

One intersection will meet the peak hour signal warrant, the SR 20 / El Margarita Road intersection. This intersection meets the warrant for all time periods studied.

95th Percentile Queues. Table 13 presents the projected queues under Existing plus Project conditions for each of the four study periods. Queues at the northbound El Margarita Road / SR 20 intersection will lengthen and continue back into the adjacent Colusa Frontage Road intersection. This will occur for short time periods before and after school and after Sunday church services. The northbound left turn lane queue along Harter Parkway at Spirit Way will also continue to exceed the available turn lane during the a.m. peak hour.





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LEGEND

<XX> - MIDDAY PEAK HOUR

[XX]- SUNDAY PEAK HOUR

SIGNAL

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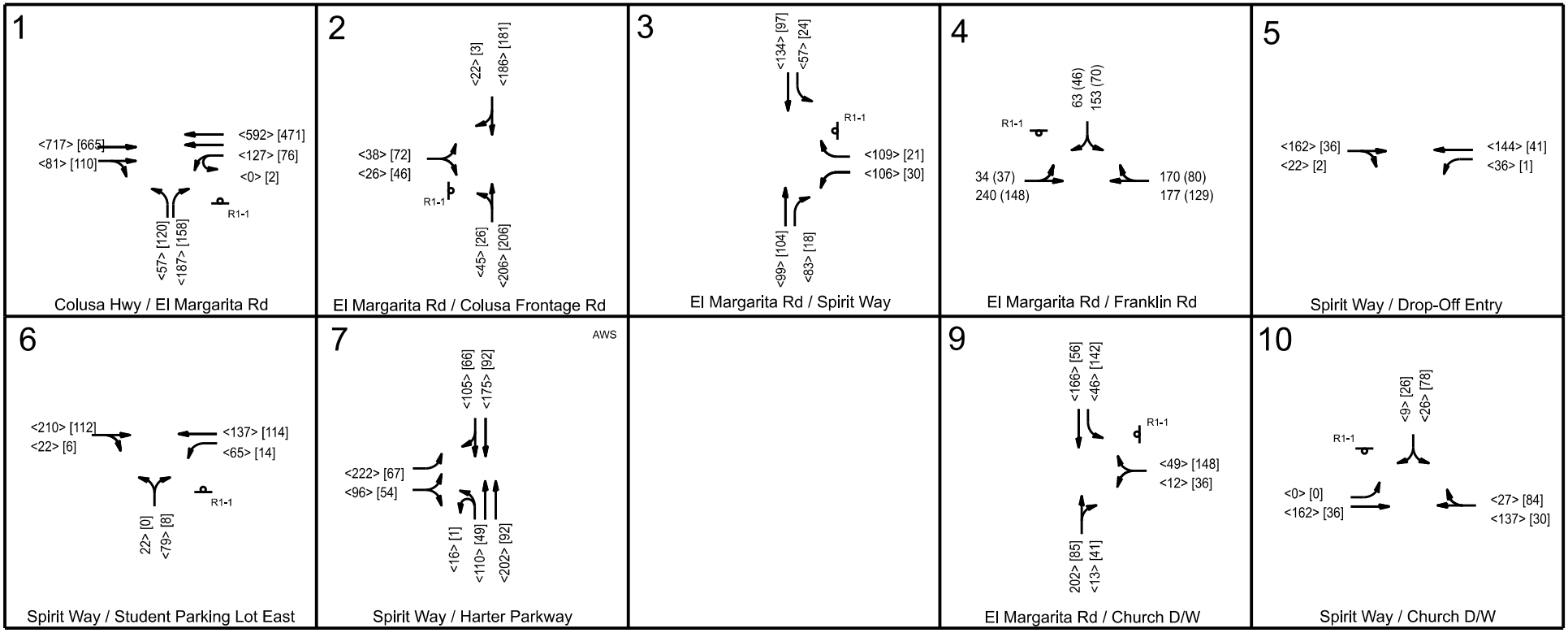
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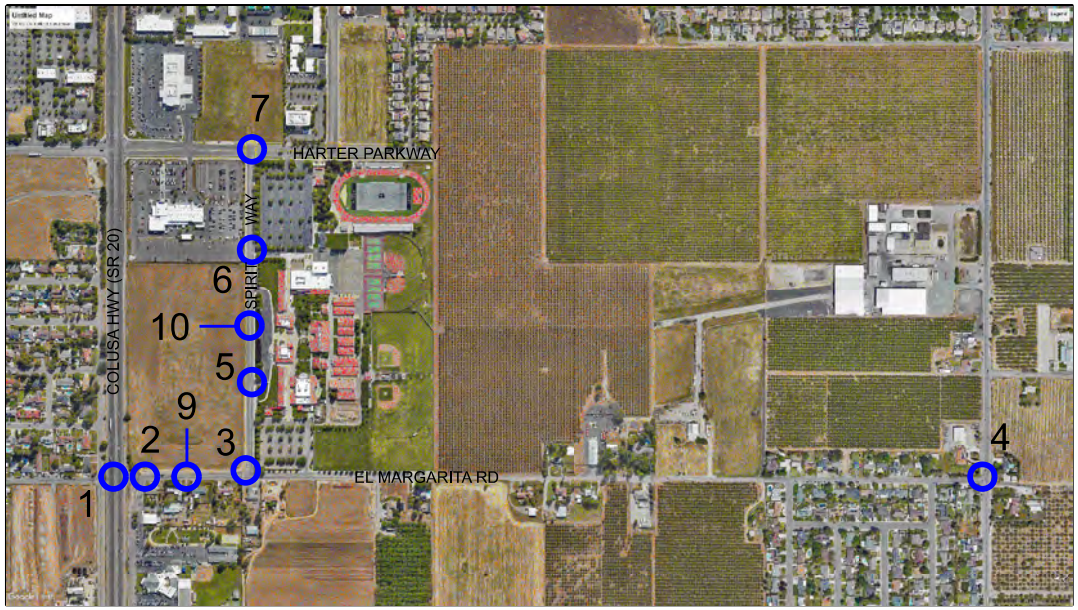
CALVARY CHRISTIAN CHURCH
EXISTING PLUS PROJECT VOLUMES AM / PM PEAK HOUR

FIGURE 7

FLECKER ASSOCIATES

1400-01





N

LEGEND

<XX> - MIDDAY PEAK HOUR

[XX]- SUNDAY PEAK HOUR

SIGNAL

R1-1 STOP SIGN

AWS ALL WAY STOP

CALVARY CHRISTIAN CHURCH
EXISTING PLUS PROJECT VOLUMES MIDDAY / SUNDAY

FIGURE 8

FLECKER ASSOCIATES

1400-01

TABLE 11
EXISTING PLUS PROJECT
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	Min LOS[1]	AM Peak Hour				PM Peak Hour				Meets Peak Hour Warrant
			Exist		Exist Plus Calvary Christian Center		Exist		Exist Plus Calvary Christian Center		
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	
1. Colusa Hwy (SR 20) / El Margarita Rd	NB Stop	D	24.2	C	**86.4**	**F**	14.2	B	20.3	C	Yes[2]
2. El Margarita Rd / S. Colusa Frontage Rd	EB Stop	D	24.5	C	**53.7**	**E**	11.4	B	12.6	B	No
3. El Margarita Rd / Spirit Way	WB Stop	D	**38.8**	**E**	**63.4**	**F**	10.1	B	10.2	B	No
4. El Margarita Rd / Franklin Rd	SB Stop	D	25.1	D	31.0	D	14.5	B	14.9	B	No
5. Spirit Way / HS Drop-Off Driveway	WB Yield	D	11.1	B	11.1	B	7.4	A	7.4	A	N/S
6. Spirit Way / East Parking Lot	NB Stop	D	14.5	B	15.6	C	9.8	A	10.0	B	N/S
7. Harter Parkway / Spirit Way	AWS	D	28.5	D	**37.4**	**E**	8.7	A	8.5	A	No
9. El Margarita Rd / Project Driveway	WB Stop	D	-	-	10.8	B	-	-	9.3	A	N/S
10. Spirit Way / Project Driveway	SB Stop	D	-	-	11.0	B	-	-	9.6	A	N/S

Note: Intersection 8 not used
[1] Minimum LOS established by the City of Yuba City
[2] meets peak hour warrant under No Project and Plus Project conditions, both time periods
Bold indicates LOS exceeds City thresholds
N/S – not studied

TABLE 12
EXISTING PLUS PROJECT
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	Min LOS[1]	MidDay Peak Hour				Sunday Peak Hour				Meets Peak Hour Warrant
			Exist		Exist Plus Calvary Christian Center		Exist		Exist Plus Calvary Christian Center		
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	
1. Colusa Hwy (SR 20) / El Margarita Rd	NB Stop	D	32.3	D	**50.3**	**F**	12.7	B	**35.1**	**E**	Yes[2]
2. El Margarita Rd / S. Colusa Frontage Rd	EB Stop	D	14.0	B	16.3	C	10.5	B	16.8	C	No
3. El Margarita Rd / Spirit Way	WB Stop	D	17.7	C	20.2	C	9.3	A	9.8	A	No
4. El Margarita Rd / Franklin Rd	SB Stop	D	21.9	C	24.2	C	11.1	B	11.9	B	No
5. Spirit Way / HS Drop-Off Driveway	WB Yield	D	8.2	A	8.2	A	7.3	A	7.3	A	N/S
6. Spirit Way / East Parking Lot	NB Stop	D	13.5	B	14.3	B	8.5	A	9.0	A	N/S
7. Harter Parkway / Spirit Way	AWS	D	15.2	C	16.2	C	7.9	A	8.3	A	No
9. El Margarita Rd / Project Driveway	WB Stop	D	-	-	10.2	B	-	-	11.9	B	N/S
10. Spirit Way / Project Driveway	SB Stop	D	-	-	10.2	B	-	-	10.1	B	N/S

Note: Intersection 8 not used
[1] Minimum LOS established by the City of Yuba City
[2] meets peak hour warrant under No Project and Plus Project conditions, both time periods
Bold indicates LOS exceeds City thresholds

TABLE 13
EXISTING PLUS PROJECT
PEAK HOUR INTERSECTION 95th PERCENTILE QUEUE LENGTHS

Intersection	Lane	Storage (feet)	AM Peak Hr		PM Peak Hr		Midday Peak Hr		Sunday Peak Hr	
			Exist	Exist + Project	Exist	Exist + Project	Exist	Exist + Project	Exist	Exist + Project
			95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)
1. Colusa Hwy (SR 20) / El Margarita Rd	WB left	200	30	38	<25	<25	<25	<25	<25	<25
	NB	90	90	**165**	30	30	**113**	**113**	<25	**108**
2. El Margarita Rd / Colusa Frontage Rd	EB	--	139[1]	153[1]	<25	28	18[1]	25[1]	<25	43[1]
	NB	--	8[1]	10[1]	<25	<25	5[1]	5[1]	<25	21[1]
3. El Margarita Rd / Spirit Way	SB left	--	<25	<25	<25	<25	<25	<25	<25	<25
	WB left	260[2]	145	205	<25	<25	73	90	<25	<25
4. El Margarita Rd / Franklin Rd	SB	--	65	93	30	33	80	95	<25	<25
	EB	--	<25	<25	<25	<25	<25	<25	<25	<25
5. Spirit Way / Inbound Driveway	WB left	480[2]	40	40	<25	<25	<25	<25	<25	<25
6. Spirit Way / East Driveway	WB left	500[2]	<25	<25	<25	<25	<25	<25	<25	<25
7. Harter Parkway / Spirit Way	NB left	100	**123**	**113**	<25	<25	33	38	<25	<25
	SB thru-right	300[2]	153	228	<25	<25	48	58	<25	<25
	EB left	500[3]	218	290	<25	>25	103	125	<25	<25

Bold indicates queue exceeds available storage
[1] continuation of queue from adjacent intersection
[2] length to adjacent intersection
[3] approach includes left turn lane (TWLTL) and shared left-right lane 500 feet to adjacent intersection – longest queue shown

CUMULATIVE CONDITIONS

Long Term Cumulative Conditions

Basis for Long Term Projections. The City of Yuba City's Traffic Impact Fee Update Traffic Circulation / Operational Analysis was the source of long-term traffic volumes for this analysis. Year 2035 traffic forecasts were based on the most recent Yuba City traffic model 'Market Absorption' scenario. Peak hour traffic volumes from the travel model were used to generate growth factors. These growth factors were applied to existing peak hour intersection turning movement traffic volumes. The development of future year intersection turning movement traffic volumes requires that the turning movements at each intersection "balance". To achieve the balance, inbound traffic volumes must equal the outbound traffic volumes, and the volumes must be distributed among the various left-turn, through, and right-turn movements at each intersection. The "balancing" of future year intersection turning movement traffic volumes was conducted using methods described in the Transportation Research Board's (TRB's) National Cooperative Highway Research Program (NCHRP) Report 765, *Analytical Travel Forecasting Approaches for Project-Level Planning and Design*. The NCHRP 765 method applies the desired peak hour directional volumes to the intersection turning movement volumes, using an iterative process to balance and adjust the resulting forecasts to match the desired peak hour directional volumes. The peak hour volumes were adjusted to reflect the background, non-school related growth.

The following scenarios were evaluated:

- Cumulative Baseline – This scenario assumes development based on the current traffic model and includes the Milner Gas Station project proposed on the west side of El Margarita Road opposite the church's driveway; the projected trip generation of the Milner project can be found in the appendix.

- Cumulative plus Calvary Christian Center - This scenario assumes development based on the current traffic model plus the Calvary Christian Center. The traffic model shows that there is development on the site, and that traffic was subtracted from the Baseline with Calvary Christian Center project added to avoid double counting.

Circulation System Assumptions. The traffic volume forecasts made for this analysis include those city-wide circulation system improvements incorporated into the City's updated General Plan traffic model and CIP.

SR 20, from Civic Center Blvd east, is assumed to be widened to 6 lanes, and is assumed to remain as a 4-lane roadway in the area of the project. Harter Parkway is assumed to be extended northerly to Pease Road and southerly from its current terminus at Lassen Avenue. The roadway

is projected to be four lanes from Lincoln Road in the south to Butte House Road to the north. North of Butte House Road and south of Lincoln Road, Harter Parkway will be two lanes. As part of the General Plan Franklin Road will be upgraded to a four lane arterial road. A traffic signal at the SR 20 / El Margarita Road intersection is in the City's fee program and is assumed installed with left and right turn lanes along El Margarita Road. The traffic model identifies development along the east side of Harter Parkway at Spirit Way. It was assumed that the fourth leg of the intersection would be constructed.

Cumulative No Project Conditions

Levels of Service. Peak hour intersection turning movements were developed for the No Project conditions and are shown in Figures 9 and 10 for each of the study intersections. Tables 14 and 15 identify peak hour LOS under future conditions. Three intersections are projected to operate at LOS that exceed the identified minimum standard:

- El Margarita Road / S. Colusa Frontage Road: LOS F in the a.m. peak hour
- El Margarita Road / Franklin Road: LOS E in the midday peak hours
- Harter Parkway / Spirit Way: LOS F in the a.m., p.m., and midday peak hours

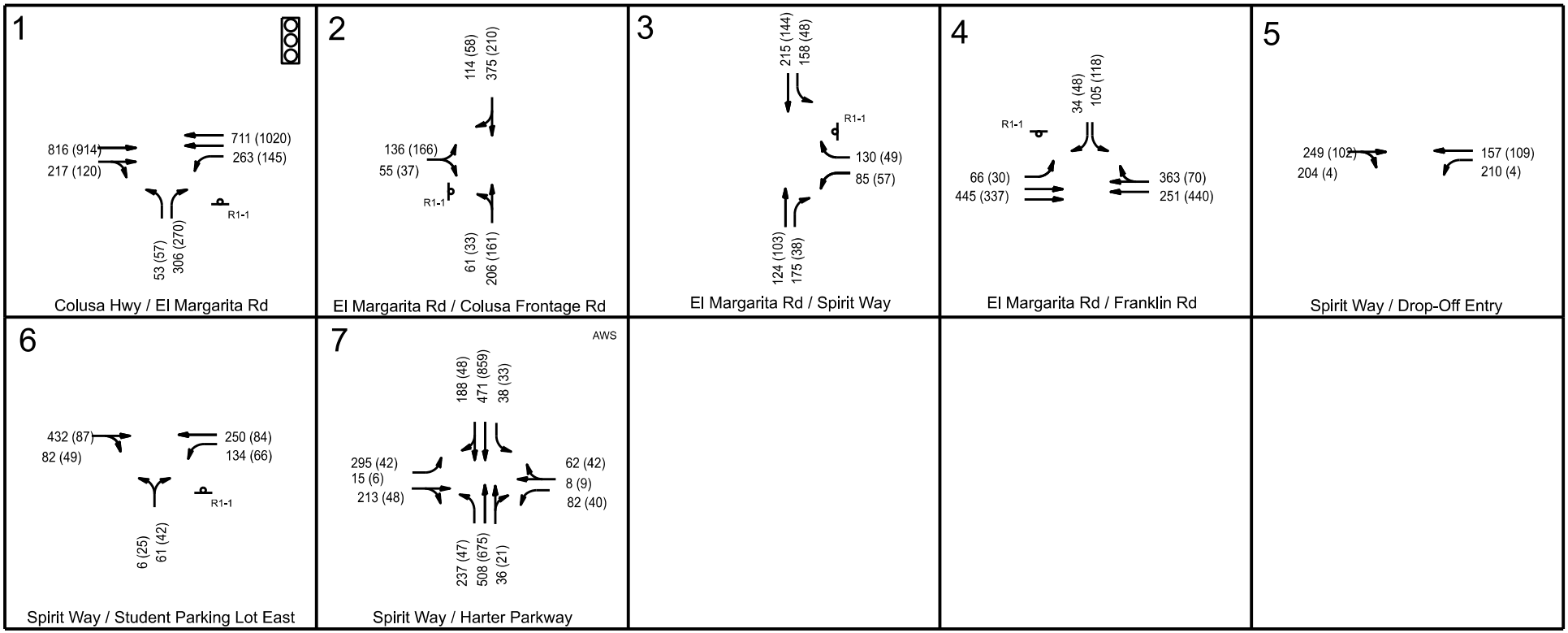
Conditions at the El Margarita Road / S. Colusa Road intersection relate to the lack of separation between this intersection and the adjacent SR 20 / El Margarita Road intersection. As the intersection exhibits poor level of service during the a.m. peak period only this appears to be a result of the background growth and the peaking factor related to the high school. The intersection will not meet the peak hour signal warrant. No improvements are planned at this location.

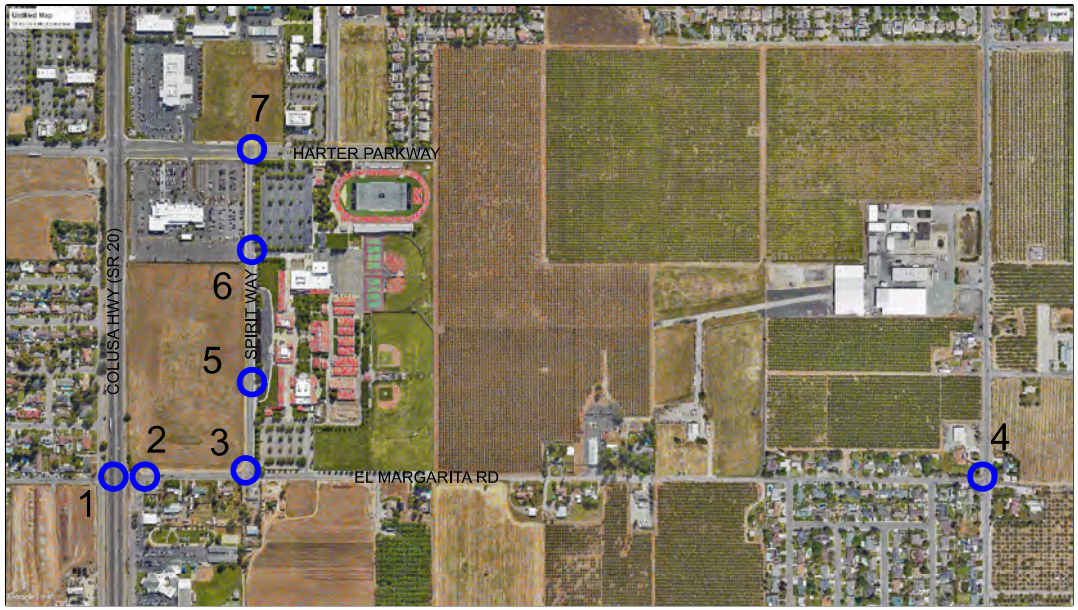
The El Margarita Road / Franklin Road intersection will decline to LOS E conditions in the midday peak hour period. The intersection will not meet the peak hour warrant.

The Harter Parkway / Spirit Way intersection will decline to LOS F conditions in the a.m., p.m. and midday peak hour periods. The intersection will meet the peak hour warrant during the a.m and midday peak hours.

95th Percentile Queues. Table 16 describes the projected queues under Cumulative traffic conditions. The SR 20 / El Margarita Road intersection will be signalized with queues lengthening in the westbound left turn lane as a result. Under No Project conditions the westbound left turn lane queue is projected to lengthen to 255 feet, 55 feet longer than the existing turn lane. Northbound Colusa Frontage Road is assumed to have left and right turn lanes extending to the adjacent Colusa Frontage Road. The right lane queue is projected to extend beyond Colusa Frontage Road. The northbound left turn lane along Harter Parkway at Spirit Way is also projected to exceed the available turn lane while the shared southbound through-right lane will queue

beyond the adjacent driveways to the north. The southbound left turn lane along El Margarita Road at Franklin Road is projected to be 163 feet in the midday peak hour.





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LEGEND

XX - AM PEAK HOUR

(XX) - PM PEAK HOUR

SIGNAL

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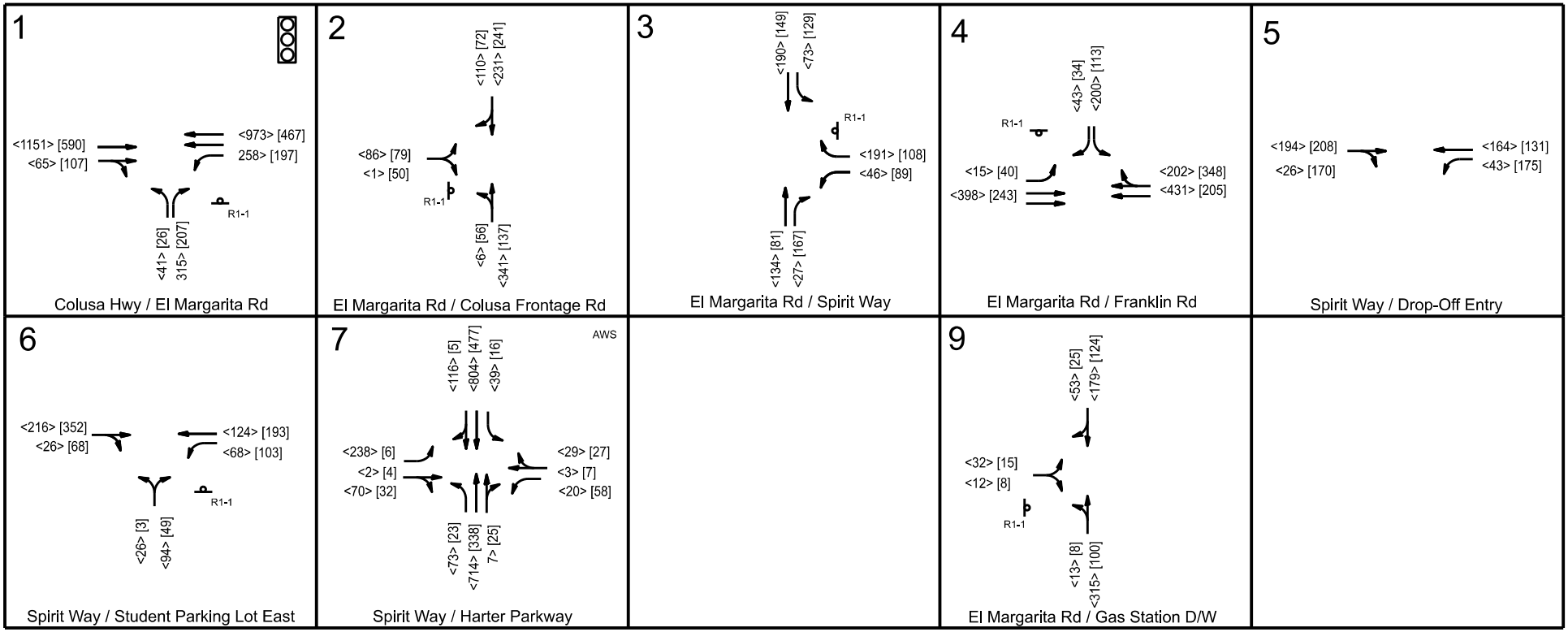
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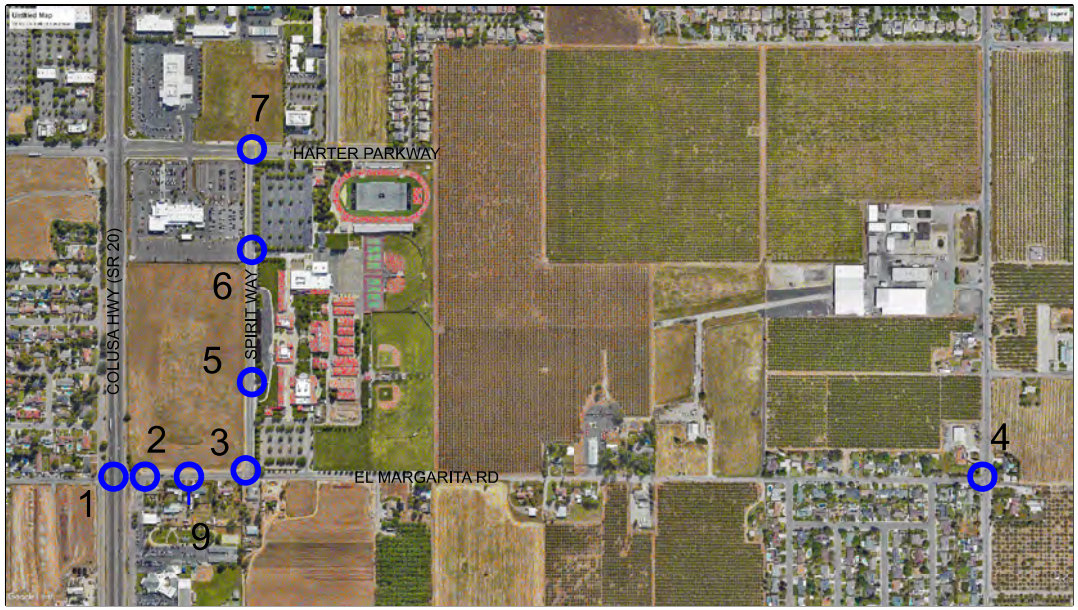
CUMULATIVE VOLUMES
AM / PM PEAK HOURS

FIGURE 9

FLECKER ASSOCIATES

1400-01





LEGEND

<XX> - MIDDAY PEAK HOUR

[XX]- SUNDAY PEAK HOUR

SIGNAL

R1-1 STOP SIGN

AWS ALL WAY STOP

CUMULATIVE VOLUMES
MIDDAY / SUNDAY HOURS

FIGURE 10

FLECKER ASSOCIATES

1400-01

TABLE 14
CUMULATIVE PLUS PROJECT
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	Min LOS[1]	AM Peak Hour				PM Peak Hour				Meets Peak Hour Warrant
			Cumulative		Cum Plus Calvary Christian Center		Cumulative		Cum Plus Calvary Christian Center		
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	
1. Colusa Hwy (SR 20) / El Margarita Rd	Signal	D	19.8	B	26.9	C	12.9	B	13.5	B	N/A
2. El Margarita Rd / S. Colusa Frontage Rd	EB Stop	D	**71.8**	**F**	**161.0**	**F**	20.4	C	23.9	C	No
3. El Margarita Rd / Spirit Way	WB Stop	D	22.8	C	29.2	D	10.7	B	11.0	B	No
4. El Margarita Rd / Franklin Rd	SB Stop	D	26.6	D	31.4	D	19.2	C	19.9	C	No
5. Spirit Way / HS Drop-Off Driveway	WB Yield	D	13.4	B	13.5	B	7.5	A	7.5	A	N/S
6. Spirit Way / East Parking Lot	NB Stop	D	18.1	C	19.9	C	10.1	B	10.4	B	N/S
7. Harter Parkway / Spirit Way	AWS	D	**168.7**	**F**	**203.9**	**F**	**69.7**	**F**	**79.5**	**F**	Yes[2]
9. El Margarita Rd / Project Driveway	EB / WB Stop	D	11.9	B	16.2	C	11.3	B	12.7	B	N/S
10. Spirit Way / Project Driveway	SB Stop	D	-	-	11.7	B	-	-	9.7	A	N/S

Note: Intersection 8 not used
[1] Minimum LOS established by the City of Yuba City
[2] meets peak hour warrant under Cum and Cum Plus Project conditions, AM peak
Bold indicates LOS exceeds City thresholds
N/A – not applicable
N/S – not studied

TABLE 15
CUMULATIVE PLUS PROJECT
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	Min LOS[1]	MidDay Peak Hour				Sunday Peak Hour				Meets Peak Hour Warrant
			Cumulative		Cum Plus Calvary Christian Center		Cumulative		Cum Plus Calvary Christian Center		
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	
1. Colusa Hwy (SR 20) / El Margarita Rd	Signal	D	26.6	C	31.4	C	9.6	A	10.4	B	N/A
2. El Margarita Rd / S. Colusa Frontage Rd	EB Stop	D	20.9	C	17.0	C	11.9	B	14.7	B	No
3. El Margarita Rd / Spirit Way	WB Stop	D	12.2	B	12.8	B	9.4	A	9.8	A	No
4. El Margarita Rd / Franklin Rd	SB Stop	D	**47.8**	**E**	**57.5**	**F**	13.0	B	13.5	B	No
5. Spirit Way / HS Drop-Off Driveway	WB Yield	D	8.4	A	8.4	A	7.3	A	7.3	A	N/S
6. Spirit Way / East Parking Lot	NB Stop	D	15.0	C	16.2	C	8.6	A	8.9	A	N/S
7. Harter Parkway / Spirit Way	AWS	D	**191.7**	**F**	**207.1**	**F**	13.3	B	14.1	B	Yes[2]
9. El Margarita Rd / Project Driveway	EB/WB Stop	D	12.6	B	15.8	C	11.5	B	11.8	B	N/S
10. Spirit Way / Project Driveway	SB Stop	D	-	-	10.5	B	-	-	9.5	A	N/S

Note: Intersection 8 not used
[1] Minimum LOS established by the City of Yuba City
[2] meets peak hour warrant under Cum and Cum Plus Project conditions, midday peak
Bold indicates LOS exceeds City thresholds
N/A – not applicable
N/S – not studied

TABLE 16
CUMULATIVE PLUS PROJECT
PEAK HOUR INTERSECTION 95th PERCENTILE QUEUE LENGTHS

Intersection	Lane	Storage (feet)	AM Peak Hr		PM Peak Hr		Midday Peak Hr		Sunday Peak Hr	
			Cum	Cum + Project	Cum	Cum + Project	Cum	Cum + Project	Cum	Cum + Project
			95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)
1. Colusa Hwy (SR 20) / El Margarita Rd	WB left	200	200	**280**	80	80	**255**	**310**	35	35
	NB left	90	35	88	25	35	35	73	<25	<25
	NB right	90	**195**	**260**	**115**	**113**	**253**	**313**	33	43
2. El Margarita Rd / Colusa Frontage Rd	EB	--	208[1]	310[1]	75[1]	90[1]	35[1]	45[1]	28[1]	40[1]
	NB	--	113[1]	178[1]	28[1]	25[1]	163[1]	223[1]	<25	<25
3. El Margarita Rd / Spirit Way	SB left	150	<25	<25	<25	<25	<25	<25	<25	<25
	WB left	260[2]	73	98	<25	<25	35	38	<25	<25
4. El Margarita Rd / Franklin Rd	SB left	--	60	80	45	50	163	193	<25	<25
	SB right	100[4]	<25	<25	<25	<25	<25	<25	<25	<25
	EB left	150[4]	<25	<25	<25	<25	<25	<25	<25	<25
5. Spirit Way / Inbound Driveway	WB left	480[2]	65	65	<25	<25	<25	<25	<25	<25
6. Spirit Way / East Driveway	WB left	500[2]	28	30	<25	<25	<25	<25	<25	<25

Bold indicates queue exceeds available storage
[1] continuation of queue from adjacent intersection
[2] length to adjacent intersection
[3] approach includes left turn lane (TWLTL) and shared left-right lane 500 feet to adjacent intersection – longest queue shown
[4] assumed
[5] TWLTL

TABLE 16 (cont'd)
CUMULATIVE PLUS PROJECT
PEAK HOUR INTERSECTION 95th PERCENTILE QUEUE LENGTHS

Intersection	Lane	Storage (feet)	AM Peak Hr		PM Peak Hr		Midday Peak Hr		Sunday Peak Hr	
			Cum	Cum + Project	Cum	Cum + Project				Cum
			95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)	95th % Queue (feet)				95th % Queue (feet)
7. Harter Parkway / Spirit Way	NB left	100	**225**	**275**	<25	<25	25	30	<25	<25
	SB thru-right	300[2]	780	890	403	465	453	528	30	<25
	EB left	500[3]	405	475	<25	<25	203	240	<25	<25
	WB left	200[4]	45	45	<25	<25	<25	<25	<25	<25
9. El Margarita Rd / Gas Station-Church Driveways	NB left	[5]	<25	<25	<25	<25	<25	<25	<25	<25
	SB left	[5]	--	<25	--	<25	--	<25	--	<25
10. Spirit Way / Church Driveway	EB left	[5]	--	<25	--	<25	--	<25	--	

Bold indicates queue exceeds available storage
[1] continuation of queue from adjacent intersection
[2] length to adjacent intersection
[3] approach includes left turn lane (TWLTL) and shared left-right lane 500 feet to adjacent intersection – longest queue shown
[4] assumed
[5] TWLTL

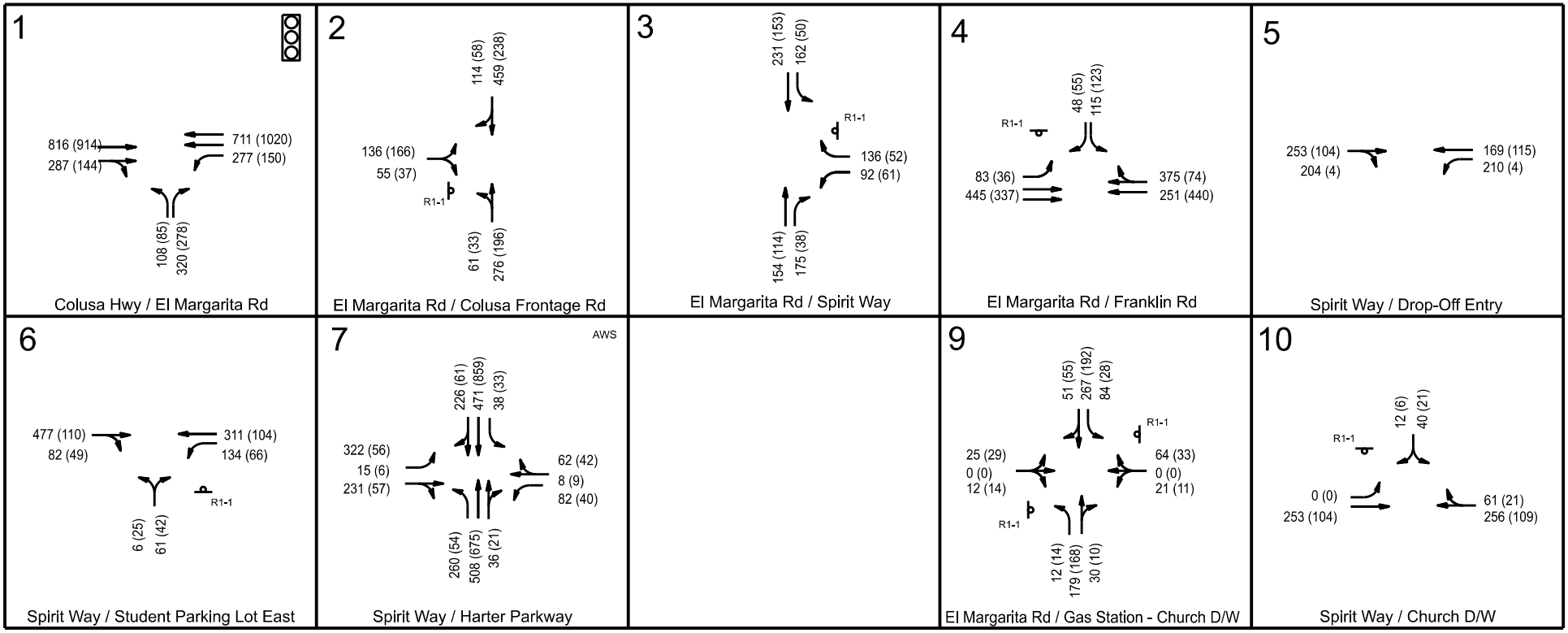
Cumulative Plus Calvary Christian Center Conditions

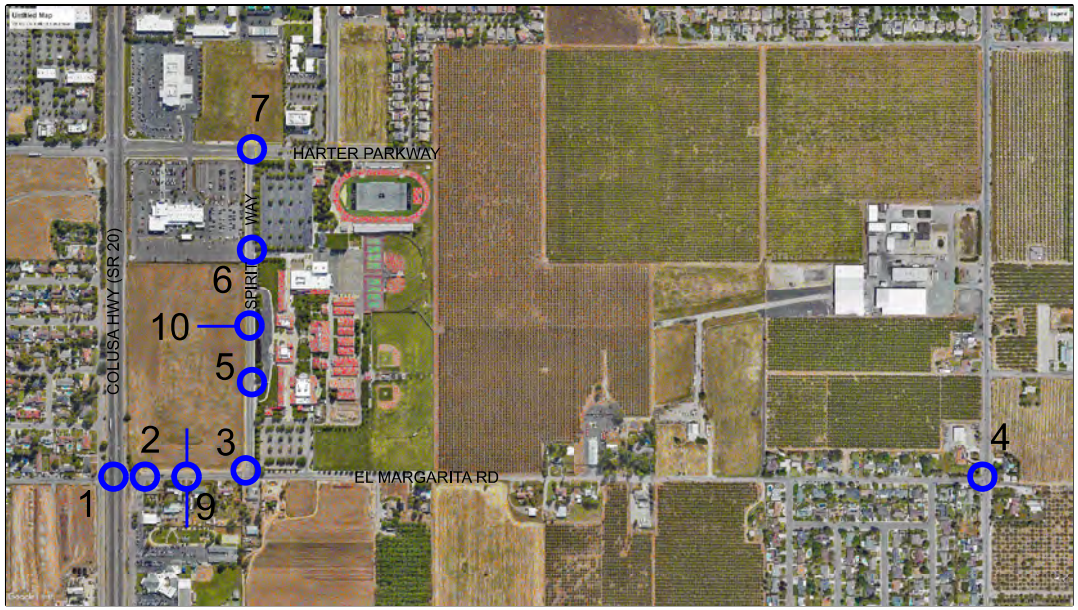
Levels of Service. Calvary Christian Center project traffic was added to the Cumulative Base peak hour volumes and are shown in Figures 11 and 12 at each of the study intersections. The project frontage improvements along El Margarita Road are assumed to include the widening of the roadway to accommodate a TWLTL and bike lanes in both directions. Tables 14 and 15 identify peak hour LOS under future conditions. Three intersections are projected to operate at LOS that exceed the identified minimum standard:

- El Margarita Road / S. Colusa Frontage Road: LOS F in the a.m. peak hour
- El Margarita Road / Franklin Road: LOS F in the midday peak hour
- Harter Parkway / Spirit Way: LOS F in the a.m., p.m., and midday peak hours

The conditions cited under the No Project conditions will be exacerbated with the project.

95th Percentile Queues. Table 16 describes the projected queues under Cumulative plus Calvary Christian Center traffic conditions. The westbound left turn queue along SR 20 is projected to reach 310 feet while the northbound right turn lane along El Margarita Road will extend to 313 feet. Similarly, the queues at the Harter Parkway / Spirit Way intersection will lengthen, to 890 feet in the southbound shared through-right lane and 275 feet in the northbound left turn lane. The southbound left turn lane along El Margarita Road at Franklin Road is projected to lengthen to 193 feet.





N

LEGEND

<XX> - MIDDAY PEAK HOUR

[XX]- SUNDAY PEAK HOUR

SIGNAL

R1-1 STOP SIGN

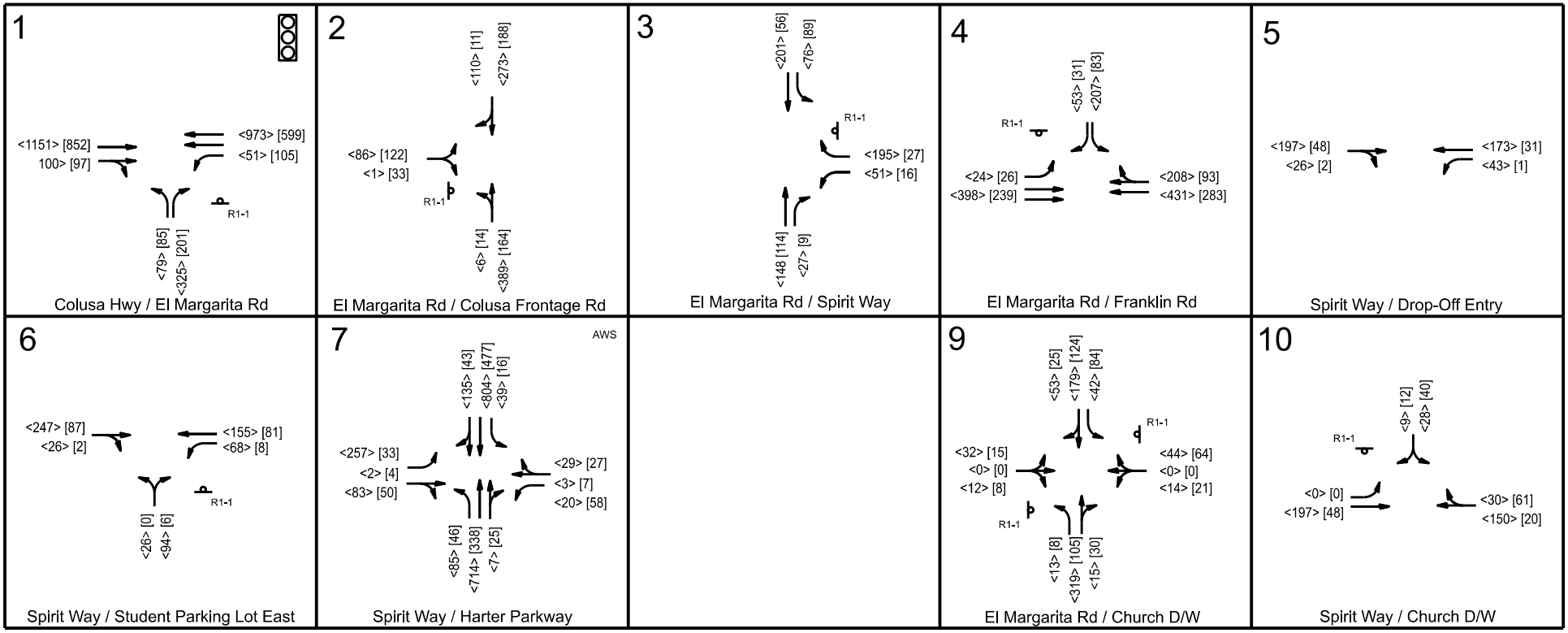
AWS ALL WAY STOP

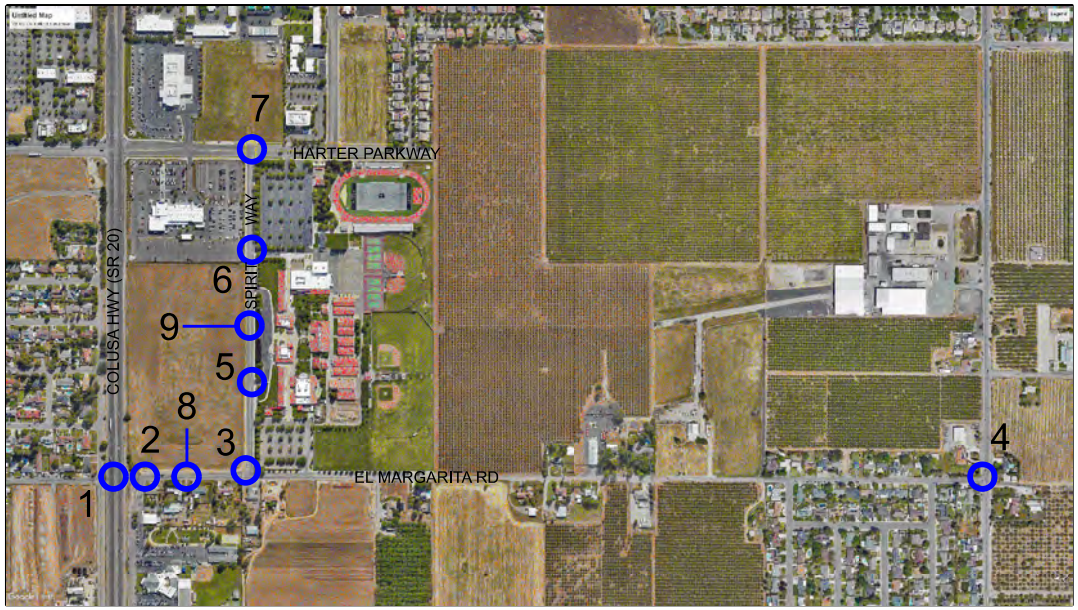
CALVARY CHRISTIAN CHURCH
CUMULATIVE PLUS PROJECT VOLUMES AM / PM PEAK HOUR

FIGURE 11

FLECKER ASSOCIATES

1400-01





N

LEGEND

<XX> - MIDDAY PEAK HOUR

[XX]- SUNDAY PEAK HOUR

SIGNAL

R1-1 STOP SIGN

AWS ALL WAY STOP

CALVARY CHRISTIAN CHURCH
CUMULATIVE PLUS PROJECT VOLUMES MIDDAY / SUNDAY

FLECKER ASSOCIATES

1400-01

FIGURE 12

FINDINGS / RECOMMENDATIONS/ IMPROVEMENTS

The preceding analysis has identified project impacts that may occur without identifying any recommendations or improvements. The text that follows identifies a strategy for recommendations to the 'No Project' conditions or improvements to the 'Plus Project' conditions.

Existing Conditions

Recommendations. All intersections except the El Margarita Road / Spirit Way intersection currently operate within agency thresholds, at LOS D or better. The El Margarita Road / Spirit Way intersection operates at LOS E in the a.m. peak hour due to the adjacent high school traffic patterns. Due to the operating level being short term at school no improvements are recommended. The SR 20 / El Margarita Road intersection operates at acceptable LOS but meets the peak hour signal warrant. The SR 20 / El Margarita Road intersection is in the City's fee program for signalization.

Transportation Effects for Existing plus Calvary Christian Center

Improvements. Under Existing plus Project conditions, four intersections will operate below City LOS thresholds. These include the SR 20 / El Margarita Road intersection, El Margarita Road at S. Colusa Frontage Road, El Margarita Way at Spirit Way and the Harter Parkway / Spirit Way intersection.

The SR 20 / El Margarita Road intersection will operate at LOS E or F during the a.m., midday and Sunday peak periods.

The El Margarita Road / S. Colusa Frontage Road intersection, El Margarita Way / Spirit Way intersection and Harter Parkway /Spirit Way intersection will operate below LOS D during the a.m. peak period. These operating levels are based on the school traffic volumes and the peak hour factor associated with school traffic.

The following improvements are recommended:

- The project shall pay their fair share traffic impact fees Yuba City. This will include fees paid toward signalization of the SR 20 / El Margarita Road intersection.

- The project shall complete widening of El Margarita Road along the project frontage, from Spirit Way to SR 20 and include construction of pedestrian facilities.

Cumulative Conditions

Recommendations. Under Cumulative conditions three intersections will operate below City LOS threshold. These include El Margarita Road at S. Colusa Frontage Road, El Margarita Road at Franklin Road and Harter Parkway at Spirit Way. The El Margarita Road / Franklin Road intersection will meet the peak hour signal warrant in the midday peak hour while the Harter Parkway / Spirit Way intersection will meet the peak hour warrant in the a.m. and midday peak periods.

The LOS condition at the El Margarita Road / S. Colusa Frontage Road intersection will continue to be a result of the peak hour factor associated with school traffic. The proposed traffic signal at SR 20 will impact queuing with the northbound approach at SR 20 being "in red" for the majority of the signal cycle. Queues along S. Colusa Frontage Road will be a result of vehicles not being able to turn onto El Margarita Road. The lengthy queues occur primarily before and after school.

The proximity of S. Colusa Frontage Road to SR 20 presents operational issues at the adjacent El Margarita Road intersection with several similar locations present along SR 20. Regional measures to reduce the volume of traffic on S. Colusa Frontage Road could include closing off the frontage road to El Margarita Road; however, parcels near El Margarita Road would have to travel about ½ mile west to George Washington Blvd for access. That action is not included in the Yuba City General Plan Circulation Element. Another option could be to signalize the El Margarita Road / S. Colusa Road intersection and cluster it with the SR 20 / El Margarita Road signal so that the two intersections operate singularly. The westbound left turn lane along SR 20 at El Margarita Road should also be lengthened to 280 feet to provide queuing outside of the through travel way.

The City and/or Caltrans should consider whether improvements at these two intersections should be undertaken to improve the Level of Service and reduce queuing to acceptable conditions. Incorporating these elements into the General Plan / Capital Improvement Program would be needed.

The El Margarita Road / Franklin Road intersection will operate at unacceptable LOS during the midday peak hour. This is partially a result of school traffic at the end of the school day. The intersection will not meet the peak hour warrant, and as no other hours meet the peak warrant it is unlikely that a full warrant study would indicate other traffic signal warrants are met. No recommendations are made.

The Harter Road / Spirit Way intersection will operate at LOS F conditions in the a.m., p.m. and midday peak hours and meet the peak hour warrant in the a.m. and midday peak hours. With signalization, the intersection will operate at LOS C or better during these peak periods. The queues in the northbound left turn lane and southbound shared through-right lane were

previously identified to exceed available lanes or extend beyond the adjacent driveways. With signalization, the northbound queues will continue to exceed the existing turn lane length. The projected queue will be longest during the a.m. peak hour with a projected queue of 215 feet. The existing turn lane can be extended to about 250 feet without impeding the back-to-back southbound left turn lane at Lassen Blvd. The southbound shared through-right lane queue will shorten to about 278 feet while the eastbound left turn lane will shorten to about 255 feet. The City should add this intersection in the City's fee program.

Transportation Effects for Cumulative Plus Calvary Christian Center

Improvements. Under Cumulative plus Project conditions three intersections will continue to operate below City LOS threshold. These include El Margarita Road at S. Colusa Frontage Road, El Margarita Road at Franklin Road and Harter Parkway at Spirit Way. The El Margarita Road / Franklin Road intersection will meet the peak hour signal warrant in the midday peak hour while the Harter Parkway / Spirit Way intersection will meet the peak hour warrant in the a.m. and midday peak periods.

The LOS condition at the El Margarita Road / S. Colusa Frontage Road intersection will be exacerbated with the project's school traffic added to the intersection. The lengthy queues occur primarily before and after school.

As previously noted, the proximity of S. Colusa Frontage Road to SR 20 presents operational issues at the adjacent El Margarita Road intersection. The City and/or Caltrans should consider whether improvements at these two intersections should be undertaken to improve the Level of Service and reduce queuing to acceptable conditions. Incorporating these elements into the General Plan / Capital Improvement Program would be needed.

With the project, the westbound left turn lane along SR 20 will need to be further lengthened, to 310 feet, to accommodate the projected turning queue.

The El Margarita Road / Franklin Road intersection will continue to operate at unacceptable LOS during the midday peak hour. The intersection will not meet the peak hour warrant, and as no other hours meet the peak warrant it is unlikely that a full warrant study would indicate other traffic signal warrants are met. No recommendations are made.

The Harter Road / Spirit Way intersection will continue to operate at LOS F conditions in the a.m., p.m. and midday peak hours and meet the peak hour warrant in the a.m. and midday peak hours. With signalization, the intersection will operate at LOS C or better during these peak periods. The queues in the northbound left turn lane and southbound shared through-right lane were previously identified to exceed available lanes or extend beyond the adjacent driveways. With

signalization, the northbound queues will continue to exceed the existing turn lane length. The projected queue will be longest during the a.m. peak hour with a projected queue of 248 feet. The existing turn lane can be extended to about 250 feet without impeding the back-to-back southbound left turn lane at Lassen Blvd. The southbound shared through-right lane queue will shorten to about 308 feet while the eastbound left turn lane will also shorten to about 308 feet.

The project should pay their fair share of improvements. Using the Caltrans fair share methodology, this would be about 6.64% of the cost.

REFERENCES

1. Yuba City. *Yuba City General Plan.* April 2004.
2. California Department of Transportation. *California Manual on Uniform Traffic Control Devices for Streets and Highways* – 2014 Edition, 2021 Addendum. Sacramento, CA
3. Caltrans *Highway Design Manual*, 2022
4. California Highway Patrol, *Statewide Integrated Traffic Records System (SWITRS)*. https://iswitrs.chp.ca.gov/reports/jsp/index.jsp
5. Transportation Research Board. *Highway Capacity Manual 7th Edition*. Washington, D.C.
6. Transportation Research Board. 2014. National Cooperative Highway Research Program (NCHRP) Report 765, *Analytical Travel Forecasting Approaches for Project-Level Planning and Design.* Washington, D.C.
7. California Department of Transportation. *Transportation Concept Report State Route 20*, District 3 March 2013

CALVARY CHRISTIAN CENTER
TRAFFIC IMPACT ANALYSIS

APPENDIX

March 6, 2024

Prepared by National Data & Surveying Services

El Margarita Rd & SR 20/Colusa Hwy

Peak Hour Turning Movement Count

ID: 24-070005-001
City: Yuba City

Day: Tuesday
Date: 1/9/2024

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NONE	NONE
03:30 PM - 04:30 PM	2:30 PM - 06:00 PM

CONTROL: 1-Way Stop(NB)

	AM	NOON	PM
TEV	1550	0	1676
PHF	0.82		0.83

SOUTHBOUND (El Margarita Rd)

	Left	Thru	Right	U-Turn	
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

EASTBOUND (SR 20/Colusa Hwy)

	Left	Thru	Right	
AM	483	0	648	
NOON	0	0	0	0
PM	0	0	0	0
AM	596	0	709	2
NOON	91	0	31	0

WESTBOUND (SR 20/Colusa Hwy)

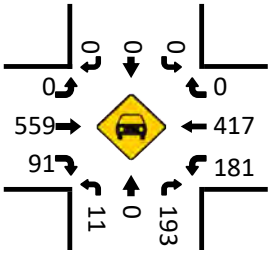
	Left	Thru	Right	
PM	0	0	0	0
NOON	629	0	472	2
AM	110	0	185	1
	0	0	1	0
	887	0	791	

NORTHBOUND (El Margarita Rd)

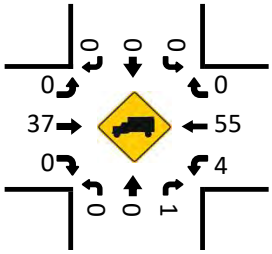
	Left	Thru	Right	U-Turn	
PM	141	0	19	0	178	PM
NOON	0	0	0	0	0	NOON
AM	276	0	11	0	194	AM

0 0 0 0 | 0 0 0 0 | 0 0 0.5 0.5

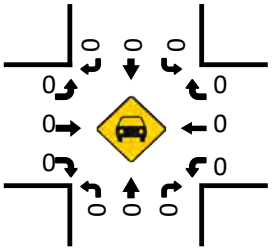
Cars (AM)



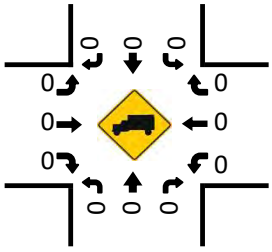
HT (AM)



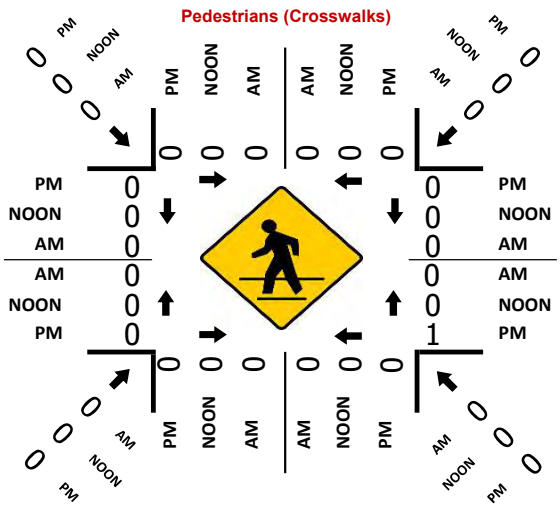
Cars (NOON)



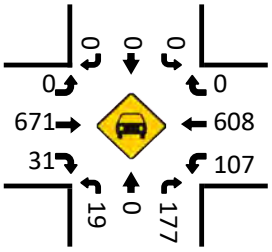
HT (NOON)



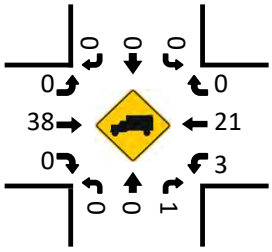
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: El Margarita Rd & SR 20/Colusa Hwy
City: Yuba City
Control: 1-Way Stop(NB)

Project ID: 24-070005-001
Date: 1/9/2024

Data - Total

NS/EW Streets:	El Margarita Rd				El Margarita Rd				SR 20/Colusa Hwy				SR 20/Colusa Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	9	0	0	0	0	0	0	109	0	0	14	94	0	0	226
7:15 AM	1	0	7	0	0	0	0	0	0	131	3	0	15	122	0	0	279
7:30 AM	1	0	10	0	0	0	0	0	0	148	6	0	16	108	0	0	289
7:45 AM	3	0	35	0	0	0	0	0	0	193	11	0	34	130	0	0	406
8:00 AM	2	0	53	0	0	0	0	0	0	140	29	0	67	91	0	0	382
8:15 AM	5	0	79	0	0	0	0	0	0	146	48	0	74	119	0	1	472
8:30 AM	1	0	27	0	0	0	0	0	0	117	3	0	10	132	0	0	290
8:45 AM	1	0	15	0	0	0	0	0	0	156	3	0	21	117	0	0	313
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	14	0	235	0	0	0	0	0	0	1140	103	0	251	913	0	1	2657
APPROACH %'s :	5.62%	0.00%	94.38%	0.00%					0.00%	91.71%	8.29%	0.00%	21.55%	78.37%	0.00%	0.09%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	11	0	194	0	0	0	0	0	0	596	91	0	185	472	0	1	1550
PEAK HR FACTOR :	0.550	0.000	0.614	0.000	0.000	0.000	0.000	0.000	0.000	0.772	0.474	0.000	0.625	0.894	0.000	0.250	0.821
	0.610								0.842				0.848				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:30 PM	0	0	19	0	0	0	0	0	0	158	5	0	28	141	0	0	351
2:45 PM	1	0	40	0	0	0	0	0	0	170	7	0	31	137	0	0	386
3:00 PM	2	0	21	0	0	0	0	0	0	140	8	0	24	148	0	0	343
3:15 PM	0	0	23	0	0	0	0	0	0	179	16	0	33	125	0	0	376
3:30 PM	10	0	83	0	0	0	0	0	0	187	19	0	36	169	0	0	504
3:45 PM	6	0	43	0	0	0	0	0	0	170	8	0	24	155	0	0	406
4:00 PM	3	0	28	0	0	0	0	0	0	181	3	0	27	143	0	0	385
4:15 PM	0	0	24	0	0	0	0	0	0	171	1	0	23	162	0	0	381
4:30 PM	2	0	30	0	0	0	0	0	0	162	4	0	21	164	0	0	383
4:45 PM	0	0	23	0	0	0	0	0	0	161	4	0	25	173	0	0	386
5:00 PM	1	0	60	0	0	0	0	0	0	185	7	0	19	189	0	0	461
5:15 PM	1	0	24	0	0	0	0	0	0	137	5	0	22	169	0	0	358
5:30 PM	2	0	6	0	0	0	0	0	0	159	3	0	18	146	0	0	334
5:45 PM	0	0	11	0	0	0	0	0	0	131	0	0	15	144	0	0	301
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	28	0	435	0	0	0	0	0	0	2291	90	0	346	2165	0	0	5355
APPROACH %'s :	6.05%	0.00%	93.95%	0.00%					0.00%	96.22%	3.78%	0.00%	13.78%	86.22%	0.00%	0.00%	
PEAK HR :	03:30 PM - 04:30 PM																TOTAL
PEAK HR VOL :	19	0	178	0	0	0	0	0	0	709	31	0	110	629	0	0	1676
PEAK HR FACTOR :	0.475	0.000	0.536	0.000	0.000	0.000	0.000	0.000	0.000	0.948	0.408	0.000	0.764	0.930	0.000	0.000	0.831
	0.530								0.898				0.901				

Prepared by National Data & Surveying Services

El Margarita Rd & SR 20/Colusa Hwy

Peak Hour Turning Movement Count

ID: 24-070005-001
City: Yuba City

Day: Sunday
Date: 1/14/2024

PEAK HOURS

AM	09:30 AM - 10:30 AM
NOON	12:00 PM - 01:00 PM
PM	NONE

COUNT PERIODS

AM	9:00 AM - 10:30 AM
NOON	12:00 PM - 02:00 PM
PM	NONE

SOUTHBOUND (El Margarita Rd)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (SR 20/Colusa Hwy)

AM	NOON	PM	
308	476	0	⇦
0	0	0	↶ 0
0	0	0	↱ 0
422	665	0	→ 2
7	4	0	↷ 0
AM	NOON	PM	

WESTBOUND (SR 20/Colusa Hwy)

PM	NOON	AM	
0	0	0	0 ↶
0	471	306	2 ←
0	52	90	1 ↰
0	2	0	0 ↷
0	795	480	⇨
PM	NOON	AM	

CONTROL: 1-Way Stop(NB)

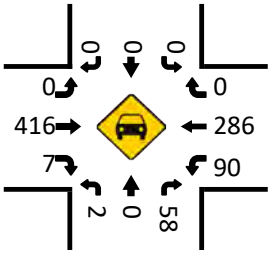
	AM	NOON	PM
TEV	885	1327	0
PHF	0.89	0.97	

NORTHBOUND (El Margarita Rd)

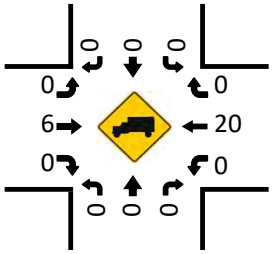
PM	0	0	0	0	0	PM
NOON	56	0	5	0	128	NOON
AM	97	0	2	0	58	AM

0 0 0 0 | 0 0 0.5 0.5

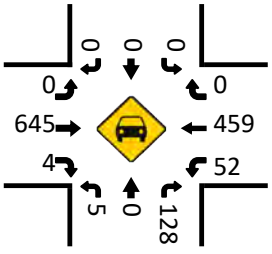
Cars (AM)



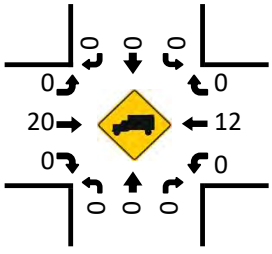
HT (AM)



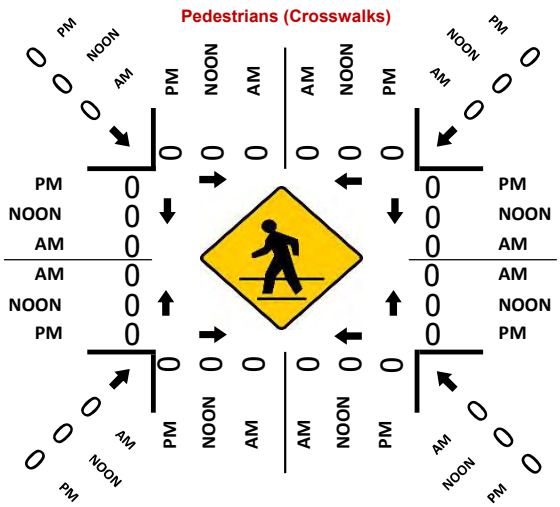
Cars (NOON)



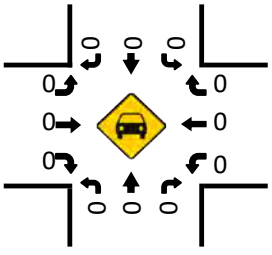
HT (NOON)



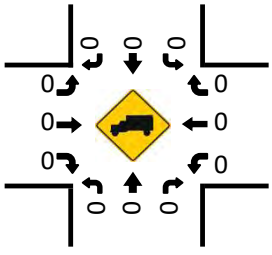
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: El Margarita Rd & SR 20/Colusa Hwy
City: Yuba City
Control: 1-Way Stop(NB)

Project ID: 24-070005-001
Date: 1/14/2024

Data - Total

NS/EW Streets:	El Margarita Rd				El Margarita Rd				SR 20/Colusa Hwy				SR 20/Colusa Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
9:00 AM	1	0	9	0	0	0	0	0	0	74	0	0	6	55	0	0	145
9:15 AM	0	0	9	0	0	0	0	0	0	83	0	0	16	75	0	0	183
9:30 AM	1	0	15	0	0	0	0	0	0	93	1	0	24	69	0	0	203
9:45 AM	0	0	16	0	0	0	0	0	0	109	2	0	37	86	0	0	250
10:00 AM	1	0	17	0	0	0	0	0	0	104	0	0	19	82	0	0	223
10:15 AM	0	0	10	0	0	0	0	0	0	116	4	0	10	69	0	0	209
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	76	0	0	0	0	0	0	579	7	0	112	436	0	0	1213
APPROACH %'s :	3.80%	0.00%	96.20%	0.00%					0.00%	98.81%	1.19%	0.00%	20.44%	79.56%	0.00%	0.00%	
PEAK HR :	09:30 AM - 10:30 AM																TOTAL
PEAK HR VOL :	2	0	58	0	0	0	0	0	0	422	7	0	90	306	0	0	885
PEAK HR FACTOR :	0.500	0.000	0.853	0.000	0.000	0.000	0.000	0.000	0.000	0.909	0.438	0.000	0.608	0.890	0.000	0.000	0.885
	0.833								0.894				0.805				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0.5	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	1	0	52	0	0	0	0	0	0	158	2	0	15	107	0	1	336
12:15 PM	0	0	20	0	0	0	0	0	0	166	1	0	11	118	0	0	316
12:30 PM	2	0	28	0	0	0	0	0	0	186	0	0	14	102	0	1	333
12:45 PM	2	0	28	0	0	0	0	0	0	155	1	0	12	144	0	0	342
1:00 PM	1	0	10	0	0	0	0	0	0	166	2	0	18	116	0	1	314
1:15 PM	3	0	16	0	0	0	0	0	0	122	1	0	14	154	0	0	310
1:30 PM	1	0	16	0	0	0	0	0	0	147	3	0	9	123	0	0	299
1:45 PM	2	0	14	0	0	0	0	0	0	134	2	0	13	131	0	0	296
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	12	0	184	0	0	0	0	0	0	1234	12	0	106	995	0	3	2546
APPROACH %'s :	6.12%	0.00%	93.88%	0.00%					0.00%	99.04%	0.96%	0.00%	9.60%	90.13%	0.00%	0.27%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	5	0	128	0	0	0	0	0	0	665	4	0	52	471	0	2	1327
PEAK HR FACTOR :	0.625	0.000	0.615	0.000	0.000	0.000	0.000	0.000	0.000	0.894	0.500	0.000	0.867	0.818	0.000	0.500	0.970
	0.627								0.899				0.841				

Prepared by National Data & Surveying Services

El Margarita Rd & Colusa Rd

Peak Hour Turning Movement Count

ID: 24-070005-002
City: Yuba City

Day: Tuesday
Date: 1/9/2024

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	7:00 AM - 09:00 AM
NONE	NONE
03:15 PM - 04:15 PM	2:30 PM - 06:00 PM

SOUTHBOUND (El Margarita Rd)

AM	68	217	0	0	188	AM
NOON	0	0	0	0	0	NOON
PM	22	144	0	0	196	PM

EASTBOUND (Colusa Rd)

AM	NOON	PM	
123	0	62	
0	0	0	0
65	0	38	0
0	0	0	1
50	0	22	0

WESTBOUND (Colusa Rd)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
			0

NORTHBOUND (El Margarita Rd)

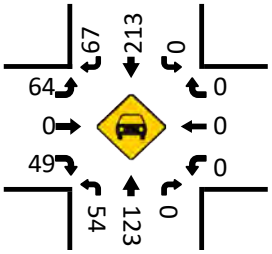
PM	166	0	40	158	0	PM
NOON	0	0	0	0	0	NOON
AM	268	1	55	123	0	AM

CONTROL

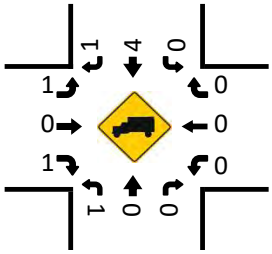
1-Way Stop(EB)

TEV	579 AM	0 NOON	424 PM
PHF	0.57		0.61

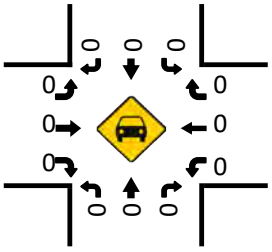
Cars (AM)



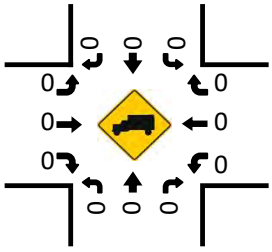
HT (AM)



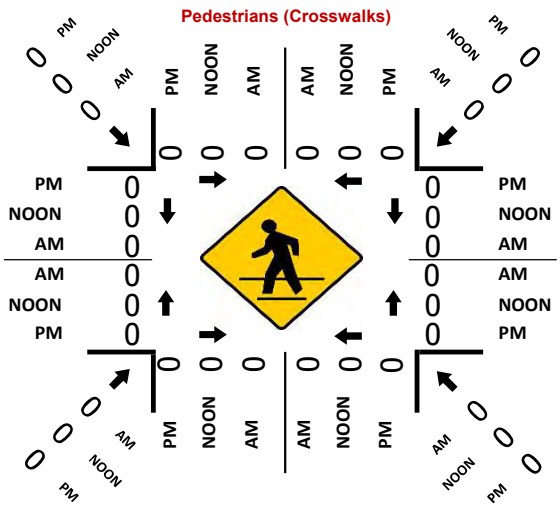
Cars (NOON)



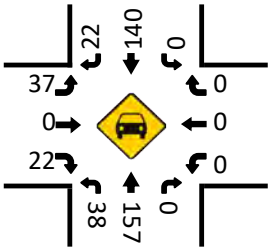
HT (NOON)



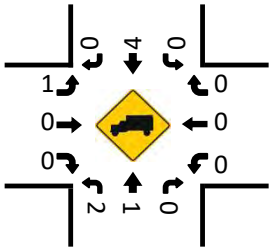
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: El Margarita Rd & Colusa Rd
City: Yuba City
Control: 1-Way Stop(EB)

Project ID: 24-070005-002
Date: 1/9/2024

Data - Total

NS/EW Streets:	El Margarita Rd				El Margarita Rd				Colusa Rd				Colusa Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	6	0	0	0	3	11	0	3	0	0	0	0	0	0	0	27
7:15 AM	3	7	0	0	0	8	10	0	1	0	2	0	0	0	0	0	31
7:30 AM	7	10	0	0	0	15	7	0	2	0	10	0	0	0	0	0	51
7:45 AM	6	23	0	0	0	30	13	0	14	0	8	0	0	0	0	0	94
8:00 AM	13	35	0	1	0	74	21	0	21	0	15	0	0	0	0	0	180
8:15 AM	29	55	0	0	0	98	27	0	28	0	17	0	0	0	0	0	254
8:30 AM	5	15	0	0	0	6	7	0	13	0	0	0	0	0	0	0	46
8:45 AM	4	12	0	0	0	15	8	0	5	0	4	0	0	0	0	0	48
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	71	163	0	1	0	249	104	0	87	0	56	0	0	0	0	0	731
APPROACH %'s :	30.21%	69.36%	0.00%	0.43%	0.00%	70.54%	29.46%	0.00%	60.84%	0.00%	39.16%	0.00%					
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	55	123	0	1	0	217	68	0	65	0	50	0	0	0	0	0	579
PEAK HR FACTOR :	0.474	0.559	0.000	0.250	0.000	0.554	0.630	0.000	0.580	0.000	0.735	0.000	0.000	0.000	0.000	0.000	0.570
	0.533				0.570				0.639								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:30 PM	13	11	0	0	0	18	15	0	9	0	5	0	0	0	0	0	71
2:45 PM	5	19	0	0	0	27	11	0	23	0	10	0	0	0	0	0	95
3:00 PM	1	9	0	1	0	28	4	0	12	0	12	0	0	0	0	0	67
3:15 PM	4	14	0	0	0	45	4	0	9	0	6	0	0	0	0	0	82
3:30 PM	17	90	0	0	0	51	4	0	6	0	5	0	0	0	0	0	173
3:45 PM	14	39	0	0	0	24	8	0	8	0	6	0	0	0	0	0	99
4:00 PM	5	15	0	0	0	24	6	0	15	0	5	0	0	0	0	0	70
4:15 PM	3	18	0	0	0	18	6	0	6	0	10	0	0	0	0	0	61
4:30 PM	5	20	0	0	0	20	4	1	11	0	5	0	0	0	0	0	66
4:45 PM	4	17	0	0	0	21	8	0	6	0	6	0	0	0	0	0	62
5:00 PM	4	9	0	0	0	24	2	0	52	0	27	0	0	0	0	0	118
5:15 PM	5	22	0	0	0	26	1	0	3	0	5	0	0	0	0	0	62
5:30 PM	2	7	0	0	0	20	1	0	1	0	6	0	0	0	0	0	37
5:45 PM	2	10	0	0	0	14	1	0	1	0	4	0	0	0	0	0	32
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	84	300	0	1	0	360	75	1	162	0	112	0	0	0	0	0	1095
APPROACH %'s :	21.82%	77.92%	0.00%	0.26%	0.00%	82.57%	17.20%	0.23%	59.12%	0.00%	40.88%	0.00%					
PEAK HR :	03:15 PM - 04:15 PM																TOTAL
PEAK HR VOL :	40	158	0	0	0	144	22	0	38	0	22	0	0	0	0	0	424
PEAK HR FACTOR :	0.588	0.439	0.000	0.000	0.000	0.706	0.688	0.000	0.633	0.000	0.917	0.000	0.000	0.000	0.000	0.000	0.613
	0.463				0.755				0.750								

Prepared by National Data & Surveying Services

El Margarita Rd & Colusa Rd

Peak Hour Turning Movement Count

ID: 24-070005-002
City: Yuba City

Day: Sunday
Date: 1/14/2024

PEAK HOURS	COUNT PERIODS
09:15 AM - 10:15 AM	9:00 AM - 10:30 AM
12:00 PM - 01:00 PM	12:00 PM - 02:00 PM
NONE	NONE

SOUTHBOUND (El Margarita Rd)

AM	74	25	0	0	59	AM
NOON	3	53	0	0	133	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Colusa Rd)

AM	NOON	PM	
102	15	0	⇦
0	0	0	↰ 0
5	72	0	↱ 0
0	0	0	→ 1
3	33	0	↳ 0
AM	NOON	PM	

WESTBOUND (Colusa Rd)

PM	NOON	AM	
0	0	0	↱ 0
0	0	0	← 0
0	0	0	↰ 0
0	0	0	↲ 0
0	0	0	⇨
PM	NOON	AM	

NORTHBOUND (El Margarita Rd)

PM	0	0	0	0	0	PM
NOON	86	0	12	61	0	NOON
AM	29	1	28	54	0	AM

0 1 0 0 (EB turning movements)

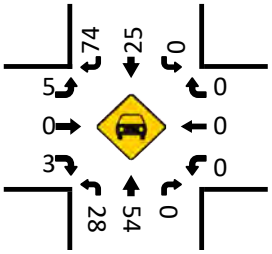
0 0 1 0 (NB turning movements)

CONTROL

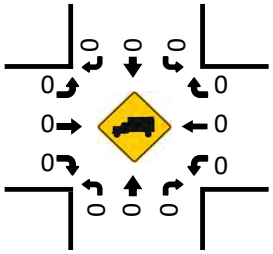
1-Way Stop(EB)

TEV	190 AM	234 NOON	0 PM
PHF	0.70	0.64	

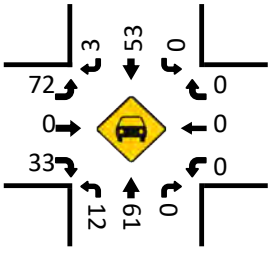
Cars (AM)



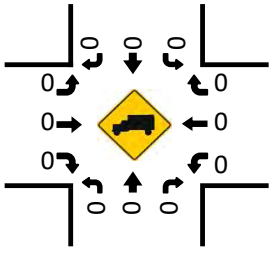
HT (AM)



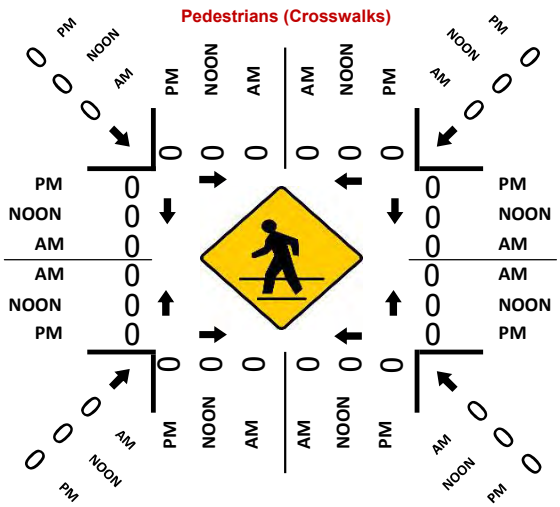
Cars (NOON)



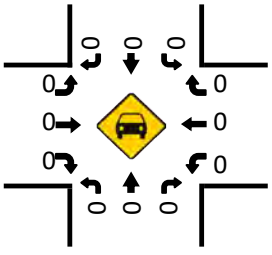
HT (NOON)



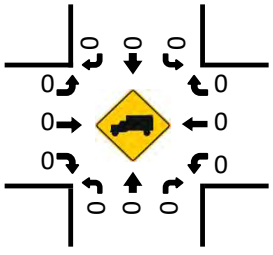
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: El Margarita Rd & Colusa Rd
City: Yuba City
Control: 1-Way Stop(EB)

Project ID: 24-070005-002
Date: 1/14/2024

Data - Total

NS/EW Streets:	El Margarita Rd				El Margarita Rd				Colusa Rd				Colusa Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
9:00 AM	3	10	0	0	0	4	2	0	0	0	0	0	0	0	0	0	19
9:15 AM	4	8	0	0	0	3	13	0	1	0	1	0	0	0	0	0	30
9:30 AM	3	15	0	0	0	5	20	0	1	0	1	0	0	0	0	0	45
9:45 AM	13	13	0	0	0	10	29	0	3	0	0	0	0	0	0	0	68
10:00 AM	8	18	0	1	0	7	12	0	0	0	1	0	0	0	0	0	47
10:15 AM	3	10	0	0	0	7	7	0	0	0	1	0	0	0	0	0	28
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	34	74	0	1	0	36	83	0	5	0	4	0	0	0	0	0	237
APPROACH %'s :	31.19%	67.89%	0.00%	0.92%	0.00%	30.25%	69.75%	0.00%	55.56%	0.00%	44.44%	0.00%					
PEAK HR :	09:15 AM - 10:15 AM																TOTAL
PEAK HR VOL :	28	54	0	1	0	25	74	0	5	0	3	0	0	0	0	0	190
PEAK HR FACTOR :	0.538	0.750	0.000	0.250	0.000	0.625	0.638	0.000	0.417	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.699
	0.769				0.635				0.667								

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	1	11	0	0	0	15	2	0	42	0	20	0	0	0	0	0	91
12:15 PM	4	6	0	0	0	12	0	0	15	0	8	0	0	0	0	0	45
12:30 PM	5	25	0	0	0	13	1	0	6	0	2	0	0	0	0	0	52
12:45 PM	2	19	0	0	0	13	0	0	9	0	3	0	0	0	0	0	46
1:00 PM	0	9	0	0	0	19	1	0	3	0	4	0	0	0	0	0	36
1:15 PM	2	18	0	0	0	15	0	0	0	0	3	0	0	0	0	0	38
1:30 PM	2	16	0	0	0	10	2	0	1	0	1	0	0	0	0	0	32
1:45 PM	1	15	0	0	0	13	2	0	1	0	0	0	0	0	0	0	32
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	17	119	0	0	0	110	8	0	77	0	41	0	0	0	0	0	372
APPROACH %'s :	12.50%	87.50%	0.00%	0.00%	0.00%	93.22%	6.78%	0.00%	65.25%	0.00%	34.75%	0.00%					
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	12	61	0	0	0	53	3	0	72	0	33	0	0	0	0	0	234
PEAK HR FACTOR :	0.600	0.610	0.000	0.000	0.000	0.883	0.375	0.000	0.429	0.000	0.413	0.000	0.000	0.000	0.000	0.000	0.643
	0.608				0.824				0.423								

Prepared by National Data & Surveying Services

El Margarita Rd & Spirit Way

Peak Hour Turning Movement Count

ID: 24-070005-003
City: Yuba City

Day: Tuesday
Date: 1/9/2024

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	03:00 PM - 04:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	2:30 PM - 06:00 PM

SOUTHBOUND (El Margarita Rd)

AM	0	144	127	0	182	AM
NOON	0	0	0	0	0	NOON
PM	0	124	54	1	192	PM

EASTBOUND (Spirit Way)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (Spirit Way)

PM	NOON	AM	
105	0	106	1
0	0	0	0
101	0	89	1
0	0	0	0
137	0	294	
PM	NOON	AM	

NORTHBOUND (El Margarita Rd)

PM	225	0	0	86	83	PM
NOON	0	0	0	0	0	NOON
AM	233	0	0	76	167	AM

CONTROL

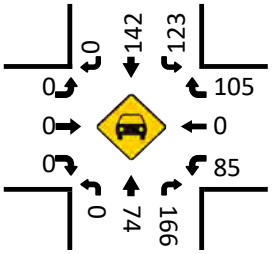
1-Way Stop(WB)

TEV	709 AM	0 NOON	554 PM
PHF	0.54		0.52

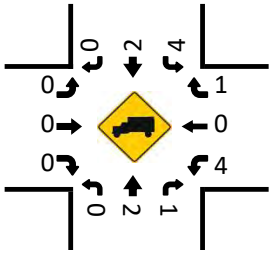
0 1 1 0

0 0 1 0

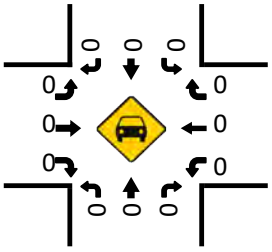
Cars (AM)



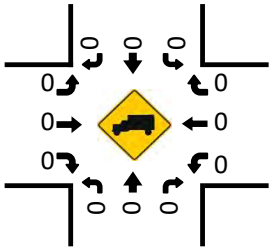
HT (AM)



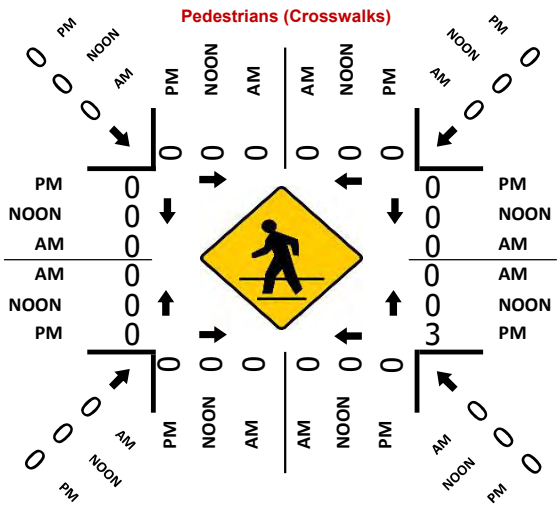
Cars (NOON)



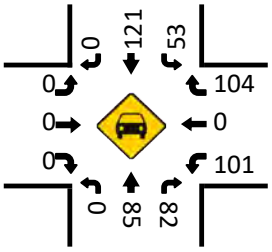
HT (NOON)



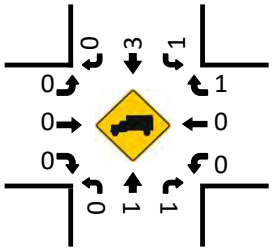
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: El Margarita Rd & Spirit Way
City: Yuba City
Control: 1-Way Stop(WB)

Project ID: 24-070005-003
Date: 1/9/2024

Data - Total

NS/EW Streets:	El Margarita Rd				El Margarita Rd				Spirit Way				Spirit Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	1	0	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	7	1	0	0	3	0	0	0	0	0	0	3	0	1	0	15
7:15 AM	0	11	6	0	2	8	0	0	0	0	0	0	4	0	0	0	31
7:30 AM	0	13	11	0	10	14	0	0	0	0	0	0	5	0	4	0	57
7:45 AM	0	20	30	0	19	20	0	0	0	0	0	0	13	0	8	0	110
8:00 AM	0	22	50	0	40	50	0	0	0	0	0	0	21	0	28	0	211
8:15 AM	0	21	76	0	58	60	0	0	0	0	0	0	50	0	66	0	331
8:30 AM	0	5	9	0	3	3	0	0	0	0	0	0	21	0	12	0	53
8:45 AM	0	13	12	0	3	16	0	0	0	0	0	0	7	0	3	0	54
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	112	195	0	135	174	0	0	0	0	0	0	124	0	122	0	862
APPROACH %'s :	0.00%	36.48%	63.52%	0.00%	43.69%	56.31%	0.00%	0.00%					50.41%	0.00%	49.59%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	76	167	0	127	144	0	0	0	0	0	0	89	0	106	0	709
PEAK HR FACTOR :	0.000	0.864	0.549	0.000	0.547	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.445	0.000	0.402	0.000	0.535
	0.626				0.574								0.420				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	1	0	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:30 PM	0	22	8	0	6	15	0	0	0	0	0	0	1	0	5	0	57
2:45 PM	0	19	5	1	11	26	0	0	0	0	0	0	11	0	3	0	76
3:00 PM	0	8	17	0	6	35	0	1	0	0	0	0	9	0	3	0	79
3:15 PM	0	19	23	0	18	31	0	0	0	0	0	0	14	0	3	0	108
3:30 PM	0	45	28	0	20	39	0	0	0	0	0	0	59	0	76	0	267
3:45 PM	0	14	15	0	10	19	0	0	0	0	0	0	19	0	23	0	100
4:00 PM	0	12	10	0	8	20	0	0	0	0	0	0	10	0	8	0	68
4:15 PM	0	18	7	0	4	23	0	0	0	0	0	0	7	0	4	0	63
4:30 PM	0	16	7	0	6	20	0	0	0	0	0	0	15	0	9	0	73
4:45 PM	0	17	6	0	4	21	0	0	0	0	0	0	10	0	3	0	61
5:00 PM	0	6	11	0	15	35	0	0	0	0	0	0	14	0	6	0	87
5:15 PM	0	20	12	0	4	24	0	0	0	0	0	0	14	0	6	0	80
5:30 PM	0	6	13	0	3	26	0	0	0	0	0	0	21	0	3	0	72
5:45 PM	0	10	10	0	3	13	0	0	0	0	0	0	4	0	2	0	42
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	232	172	1	118	347	0	1	0	0	0	0	208	0	154	0	1233
APPROACH %'s :	0.00%	57.28%	42.47%	0.25%	25.32%	74.46%	0.00%	0.21%					57.46%	0.00%	42.54%	0.00%	
PEAK HR :	03:00 PM - 04:00 PM																TOTAL
PEAK HR VOL :	0	86	83	0	54	124	0	1	0	0	0	0	101	0	105	0	554
PEAK HR FACTOR :	0.000	0.478	0.741	0.000	0.675	0.795	0.000	0.250	0.000	0.000	0.000	0.000	0.428	0.000	0.345	0.000	0.519
	0.579				0.758								0.381				

Prepared by National Data & Surveying Services

El Margarita Rd & Spirit Way

Peak Hour Turning Movement Count

ID: 24-070005-003
City: Yuba City

Day: Sunday
Date: 1/14/2024

PEAK HOURS	COUNT PERIODS
09:30 AM - 10:30 AM	9:00 AM - 10:30 AM
12:00 PM - 01:00 PM	12:00 PM - 02:00 PM
NONE	NONE

SOUTHBOUND (El Margarita Rd)

AM	0	29	3	0	81	AM
NOON	0	67	18	0	72	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Spirit Way)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (Spirit Way)

PM	NOON	AM	
0	9	11	1
0	0	0	0
0	16	11	1
0	0	0	0
0	36	13	
PM	NOON	AM	

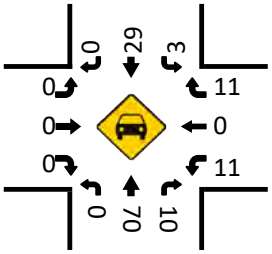
NORTHBOUND (El Margarita Rd)

PM	0	0	0	0	0	PM
NOON	83	0	0	63	18	NOON
AM	40	0	0	70	10	AM

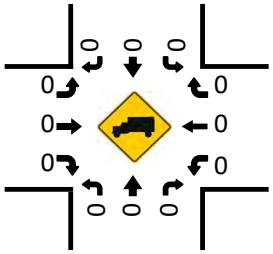
	0	1	1	0
	0	0	1	0

CONTROL			
1-Way Stop(WB)			
TEV	134 AM	191 NOON	0 PM
PHF	0.78	0.96	

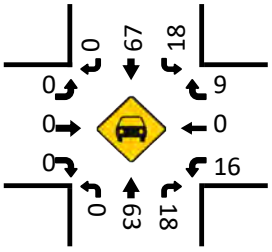
Cars (AM)



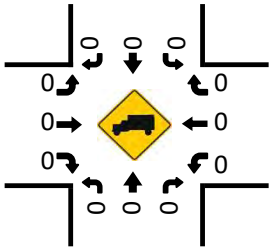
HT (AM)



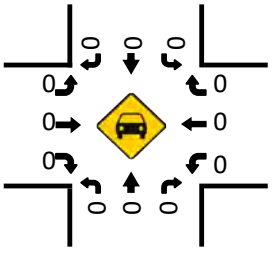
Cars (NOON)



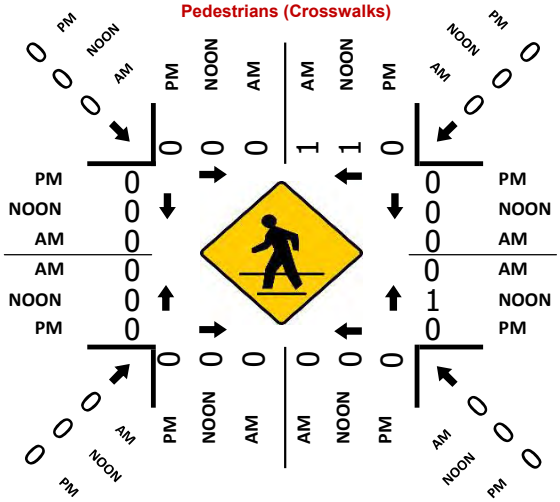
HT (NOON)



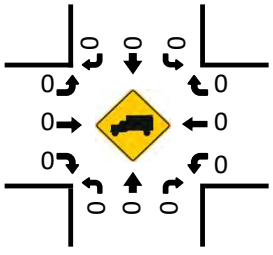
Cars (PM)



Pedestrians (Crosswalks)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: El Margarita Rd & Spirit Way
City: Yuba City
Control: 1-Way Stop(WB)

Project ID: 24-070005-003
Date: 1/14/2024

Data - Total

NS/EW Streets:	El Margarita Rd				El Margarita Rd				Spirit Way				Spirit Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	1	0	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
9:00 AM	0	10	1	0	0	4	0	0	0	0	0	0	0	0	1	0	16
9:15 AM	0	9	3	0	1	2	0	0	0	0	0	0	1	0	3	0	19
9:30 AM	0	18	2	0	0	6	0	0	0	0	0	0	5	0	2	0	33
9:45 AM	0	22	4	0	0	10	0	0	0	0	0	0	2	0	5	0	43
10:00 AM	0	19	3	0	2	7	0	0	0	0	0	0	2	0	2	0	35
10:15 AM	0	11	1	0	1	6	0	0	0	0	0	0	2	0	2	0	23
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	89	14	0	4	35	0	0	0	0	0	0	12	0	15	0	169
APPROACH %'s :	0.00%	86.41%	13.59%	0.00%	10.26%	89.74%	0.00%	0.00%					44.44%	0.00%	55.56%	0.00%	
PEAK HR :	09:30 AM - 10:30 AM																TOTAL
PEAK HR VOL :	0	70	10	0	3	29	0	0	0	0	0	0	11	0	11	0	134
PEAK HR FACTOR :	0.000	0.795	0.625	0.000	0.375	0.725	0.000	0.000	0.000	0.000	0.000	0.000	0.550	0.000	0.550	0.000	0.779
	0.769				0.800								0.786				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	1	0	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	10	1	0	11	24	0	0	0	0	0	0	2	0	2	0	50
12:15 PM	0	9	7	0	4	16	0	0	0	0	0	0	6	0	2	0	44
12:30 PM	0	26	2	0	1	13	0	0	0	0	0	0	2	0	3	0	47
12:45 PM	0	18	8	0	2	14	0	0	0	0	0	0	6	0	2	0	50
1:00 PM	0	8	3	0	1	21	0	0	0	0	0	0	2	0	1	0	36
1:15 PM	0	17	2	0	2	17	0	0	0	0	0	0	5	0	3	0	46
1:30 PM	0	17	5	0	3	7	0	0	0	0	0	0	5	0	1	0	38
1:45 PM	0	13	3	0	0	14	0	0	0	0	0	0	3	0	3	0	36
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	118	31	0	24	126	0	0	0	0	0	0	31	0	17	0	347
APPROACH %'s :	0.00%	79.19%	20.81%	0.00%	16.00%	84.00%	0.00%	0.00%					64.58%	0.00%	35.42%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	63	18	0	18	67	0	0	0	0	0	0	16	0	9	0	191
PEAK HR FACTOR :	0.000	0.606	0.563	0.000	0.409	0.698	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.750	0.000	0.955
	0.723				0.607								0.781				

Prepared by National Data & Surveying Services

El Margarita Rd & Franklin Rd

Peak Hour Turning Movement Count

ID: 24-070005-004
City: Yuba City

Day: Tuesday
Date: 1/9/2024

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	7:00 AM - 09:00 AM
NONE	NONE
03:15 PM - 04:15 PM	2:30 PM - 06:00 PM

SOUTHBOUND (El Margarita Rd)

AM	31	0	111	0	383	AM
NOON	0	0	0	0	0	NOON
PM	53	0	148	0	190	PM

EASTBOUND (Franklin Rd)

AM	NOON	PM	
236	0	230	
0	0	0	0
37	0	25	0
243	0	240	1
0	0	0	0
AM	NOON	PM	

WESTBOUND (Franklin Rd)

PM	NOON	AM	
165	0	346	0
177	0	205	1
0	0	0	0
0	0	0	0
388	0	354	
PM	NOON	AM	

NORTHBOUND (El Margarita Rd)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

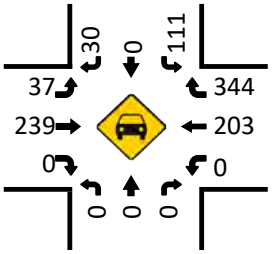
0.5 0.5 0 0 (SB turning movements)
0 0 0 0 (NB turning movements)

CONTROL

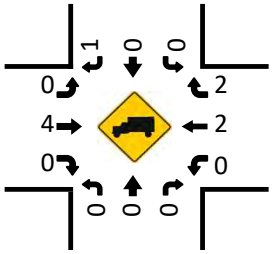
1-Way Stop(SB)

TEV	973 AM	0 NOON	808 PM
PHF	0.82		0.81

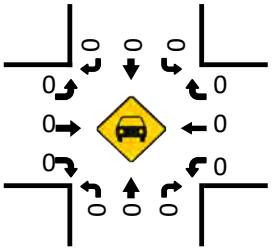
Cars (AM)



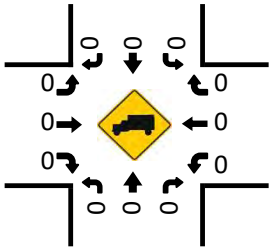
HT (AM)



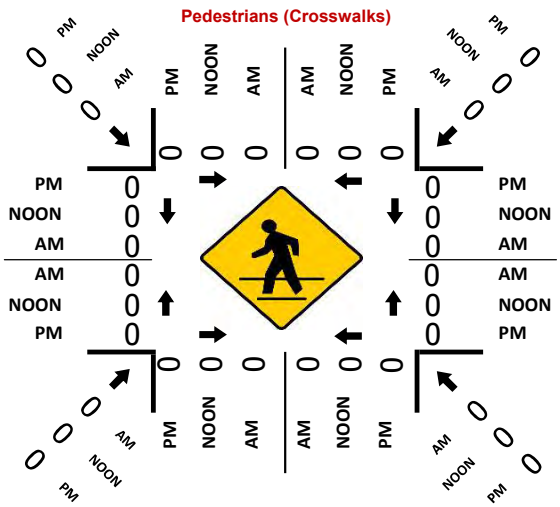
Cars (NOON)



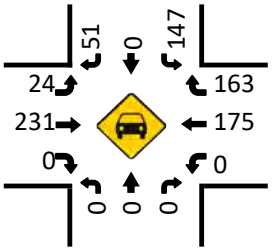
HT (NOON)



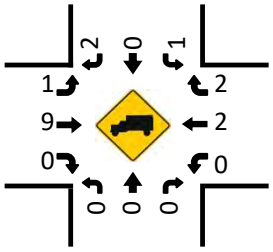
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: El Margarita Rd & Franklin Rd
City: Yuba City
Control: 1-Way Stop(SB)

Project ID: 24-070005-004
Date: 1/9/2024

Data - Total

NS/EW Streets:	El Margarita Rd				El Margarita Rd				Franklin Rd				Franklin Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	5	0	5	0	4	22	0	0	0	30	10	0	76
7:15 AM	0	0	0	0	8	0	5	0	2	30	0	0	0	37	14	0	96
7:30 AM	0	0	0	0	12	0	3	0	6	37	0	0	0	63	26	0	147
7:45 AM	0	0	0	0	22	0	7	0	8	68	0	0	0	75	71	0	251
8:00 AM	0	0	0	0	28	0	8	0	15	71	0	0	0	42	115	0	279
8:15 AM	0	0	0	0	49	0	13	0	8	67	0	0	0	25	134	0	296
8:30 AM	0	0	0	0	34	0	4	0	4	37	0	0	0	25	11	0	115
8:45 AM	0	0	0	0	19	0	1	0	6	29	0	0	0	32	9	0	96
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	177	0	46	0	53	361	0	0	0	329	390	0	1356
APPROACH %'s :					79.37%	0.00%	20.63%	0.00%	12.80%	87.20%	0.00%	0.00%	0.00%	45.76%	54.24%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	111	0	31	0	37	243	0	0	0	205	346	0	973
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.566	0.000	0.596	0.000	0.617	0.856	0.000	0.000	0.000	0.683	0.646	0.000	0.822
					0.573				0.814				0.866				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:30 PM	0	0	0	0	7	0	7	0	4	49	0	0	0	53	29	0	149
2:45 PM	0	0	0	0	19	0	11	0	9	60	0	0	0	37	17	0	153
3:00 PM	0	0	0	0	22	0	2	0	2	40	0	0	0	35	41	0	142
3:15 PM	0	0	0	0	10	0	7	0	7	59	0	0	0	36	64	0	183
3:30 PM	0	0	0	0	55	0	28	0	7	60	0	0	0	42	56	0	248
3:45 PM	0	0	0	0	64	0	9	0	6	57	0	0	0	49	24	0	209
4:00 PM	0	0	0	0	19	0	9	0	5	64	0	0	0	50	21	0	168
4:15 PM	0	0	0	0	25	0	4	0	7	65	0	0	0	48	22	0	171
4:30 PM	0	0	0	0	26	0	10	0	3	41	0	0	0	54	16	0	150
4:45 PM	0	0	0	0	18	0	7	0	11	47	0	0	0	52	15	0	150
5:00 PM	0	0	0	0	39	0	9	0	7	54	0	0	0	48	20	0	177
5:15 PM	0	0	0	0	25	0	4	0	6	57	0	0	0	42	24	0	158
5:30 PM	0	0	0	0	28	0	10	0	2	38	0	0	0	50	19	0	147
5:45 PM	0	0	0	0	12	0	4	0	7	40	0	0	0	34	22	0	119
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	369	0	121	0	83	731	0	0	0	630	390	0	2324
APPROACH %'s :					75.31%	0.00%	24.69%	0.00%	10.20%	89.80%	0.00%	0.00%	0.00%	61.76%	38.24%	0.00%	
PEAK HR :	03:15 PM - 04:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	148	0	53	0	25	240	0	0	0	177	165	0	808
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.578	0.000	0.473	0.000	0.893	0.938	0.000	0.000	0.000	0.885	0.645	0.000	0.815
					0.605				0.960				0.855				

Prepared by National Data & Surveying Services

El Margarita Rd & Franklin Rd

Peak Hour Turning Movement Count

ID: 24-070005-004
City: Yuba City

Day: Sunday
Date: 1/14/2024

PEAK HOURS

AM	09:30 AM - 10:30 AM
NOON	12:15 PM - 01:15 PM
PM	NONE

COUNT PERIODS

AM	9:00 AM - 10:30 AM
NOON	12:00 PM - 02:00 PM
PM	NONE

SOUTHBOUND (El Margarita Rd)

AM	6	0	40	1	76	AM
NOON	17	0	54	1	77	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Franklin Rd)

AM	NOON	PM	
101	146	0	
0	0	0	0
4	10	0	0
117	148	0	1
0	0	0	0
AM	NOON	PM	

WESTBOUND (Franklin Rd)

PM	NOON	AM	
0	66	71	0
0	129	95	1
0	0	0	0
0	0	0	0
0	202	157	
PM	NOON	AM	

NORTHBOUND (El Margarita Rd)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

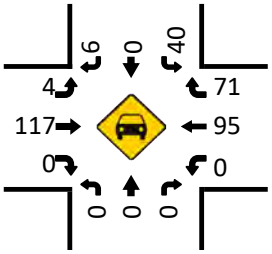
CONTROL: 1-Way Stop(SB)

	AM	NOON	PM
TEV	334	425	0
PHF	0.84	0.90	

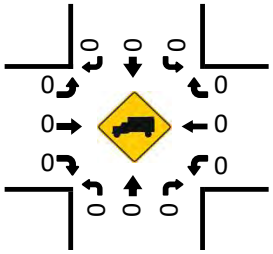
0.5 0.5 0 0

0 0 0 0

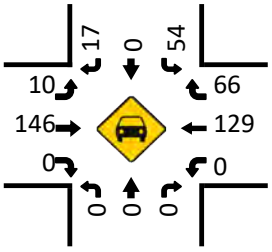
Cars (AM)



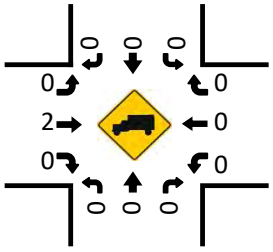
HT (AM)



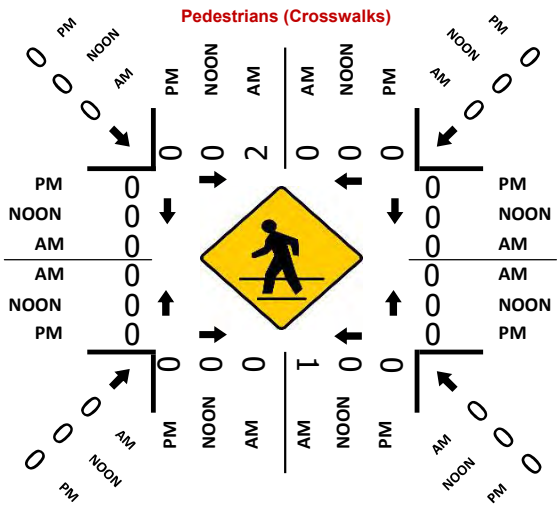
Cars (NOON)



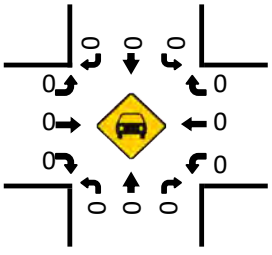
HT (NOON)



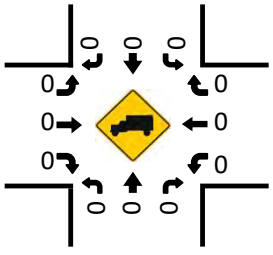
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: El Margarita Rd & Franklin Rd
City: Yuba City
Control: 1-Way Stop(SB)

Project ID: 24-070005-004
Date: 1/14/2024

Data - Total

NS/EW Streets:	El Margarita Rd				El Margarita Rd				Franklin Rd				Franklin Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
9:00 AM	0	0	0	0	4	0	0	0	1	23	0	0	0	18	9	0	55
9:15 AM	0	0	0	0	5	0	1	0	1	23	0	0	0	20	9	0	59
9:30 AM	0	0	0	0	9	0	1	0	2	21	0	0	0	29	14	0	76
9:45 AM	0	0	0	0	13	0	4	0	1	40	0	0	0	16	25	0	99
10:00 AM	0	0	0	0	7	0	1	1	1	32	0	0	0	26	19	0	87
10:15 AM	0	0	0	0	11	0	0	0	0	24	0	0	0	24	13	0	72
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	49	0	7	1	6	163	0	0	0	133	89	0	448
APPROACH %'s :					85.96%	0.00%	12.28%	1.75%	3.55%	96.45%	0.00%	0.00%	0.00%	59.91%	40.09%	0.00%	
PEAK HR :	09:30 AM - 10:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	40	0	6	1	4	117	0	0	0	95	71	0	334
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.769	0.000	0.375	0.250	0.500	0.731	0.000	0.000	0.000	0.819	0.710	0.000	0.843
					0.691				0.738				0.922				

NS/EW Streets:	El Margarita Rd				El Margarita Rd				Franklin Rd				Franklin Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0.5	0.5	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	21	0	2	0	0	35	0	0	0	26	9	0	93
12:15 PM	0	0	0	0	15	0	4	0	4	30	0	0	0	37	17	0	107
12:30 PM	0	0	0	0	9	0	4	0	2	36	0	0	0	29	20	0	100
12:45 PM	0	0	0	0	18	0	5	1	2	44	0	0	0	30	18	0	118
1:00 PM	0	0	0	0	12	0	4	0	2	38	0	0	0	33	11	0	100
1:15 PM	0	0	0	0	17	0	1	0	2	33	0	0	0	28	19	0	100
1:30 PM	0	0	0	0	11	0	1	0	3	35	0	0	0	38	17	0	105
1:45 PM	0	0	0	0	11	0	4	0	1	18	0	0	0	23	21	0	78
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	114	0	25	1	16	269	0	0	0	244	132	0	801
APPROACH %'s :					81.43%	0.00%	17.86%	0.71%	5.61%	94.39%	0.00%	0.00%	0.00%	64.89%	35.11%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	54	0	17	1	10	148	0	0	0	129	66	0	425
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.750	0.000	0.850	0.250	0.625	0.841	0.000	0.000	0.000	0.872	0.825	0.000	0.900
					0.750				0.859				0.903				

Prepared by National Data & Surveying Services

River Valley High School W Dwy & Spirit Way

Peak Hour Turning Movement Count

ID: 24-070005-006
City: Yuba City

Day: Tuesday
Date: 1/9/2024

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NONE	NONE
03:15 PM - 04:15 PM	2:30 PM - 06:00 PM

SOUTHBOUND — River Valley High School W Dwy

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND — Spirit Way

AM	NOON	PM		
129	0	137	⇦	
0	0	2	↰	0
0	0	0	↱	0
206	0	160	→	1
170	0	22	↴	0
AM	NOON	PM		

WESTBOUND — Spirit Way

PM	NOON	AM		
0	0	0	↰	0
135	0	129	←	1
36	0	175	↰	0
0	0	0	↰	0
160	0	206	⇨	
PM	NOON	AM		

NORTHBOUND — River Valley High School W Dwy

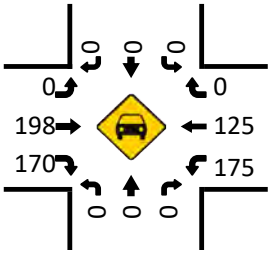
PM	58	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	345	0	0	0	0	AM

CONTROL

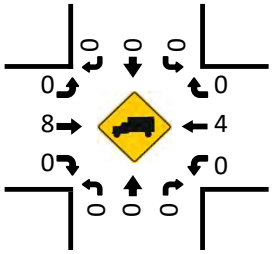
No Control

TEV	680 AM	0 NOON	355 PM
PHF	0.55		0.52

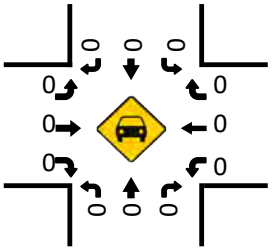
Cars (AM)



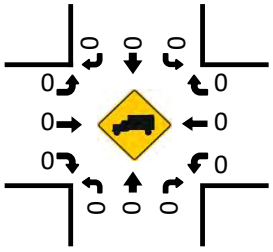
HT (AM)



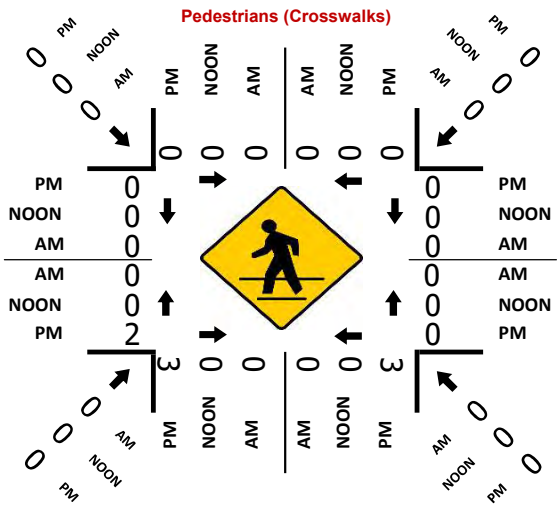
Cars (NOON)



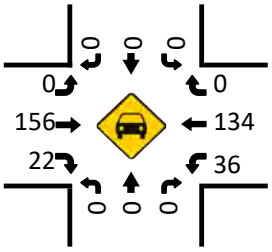
HT (NOON)



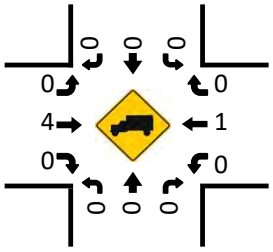
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: River Valley High School W Dwy & Spirit Way
City: Yuba City
Control: No Control

Project ID: 24-070005-006
Date: 1/9/2024

Data - Total

NS/EW Streets:	River Valley High School W Dwy				River Valley High School W Dwy				Spirit Way				Spirit Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	4	4	0	0	9
7:15 AM	0	0	0	0	0	0	0	0	0	3	5	0	4	4	0	0	16
7:30 AM	0	0	0	0	0	0	0	0	0	15	8	0	18	10	0	0	51
7:45 AM	0	0	0	0	0	0	0	0	0	40	27	0	39	18	0	0	124
8:00 AM	0	0	0	0	0	0	0	0	0	54	49	0	52	26	0	0	181
8:15 AM	0	0	0	0	0	0	0	0	0	94	88	0	60	66	0	0	308
8:30 AM	0	0	0	0	0	0	0	0	0	18	6	0	24	19	0	0	67
8:45 AM	0	0	0	0	0	0	0	0	0	12	4	0	4	10	0	0	30
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	237	157	0	205	157	0	0	786
APPROACH %'s :									0.00%	55.90%	44.10%	0.00%	56.63%	43.37%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	206	170	0	175	129	0	0	680
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.548	0.483	0.000	0.729	0.489	0.000	0.000	0.552
										0.516				0.603			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:30 PM	0	0	0	0	0	0	0	0	0	10	4	0	9	5	0	0	28
2:45 PM	0	0	0	0	0	0	0	0	0	17	3	0	5	22	0	0	47
3:00 PM	0	0	0	0	0	0	0	0	0	20	5	0	6	10	0	0	41
3:15 PM	0	0	0	0	0	0	0	0	0	30	7	0	6	20	0	0	63
3:30 PM	0	0	0	0	0	0	0	0	0	74	12	2	11	73	0	0	172
3:45 PM	0	0	0	0	0	0	0	0	0	35	3	0	15	24	0	0	77
4:00 PM	0	0	0	0	0	0	0	0	0	21	0	0	4	18	0	0	43
4:15 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	11	0	0	23
4:30 PM	0	0	0	0	0	0	0	0	0	14	0	0	0	23	0	0	37
4:45 PM	0	0	0	0	0	0	0	0	0	11	1	0	0	10	0	0	22
5:00 PM	0	0	0	0	0	0	0	0	0	23	2	0	1	20	0	0	46
5:15 PM	0	0	0	0	0	0	0	0	0	16	1	0	0	19	0	0	36
5:30 PM	0	0	0	0	0	0	0	0	0	19	0	0	0	27	0	0	46
5:45 PM	0	0	0	0	0	0	0	0	0	18	1	0	1	10	0	0	30
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	320	39	2	58	292	0	0	711
APPROACH %'s :									0.00%	88.64%	10.80%	0.55%	16.57%	83.43%	0.00%	0.00%	
PEAK HR :	03:15 PM - 04:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	160	22	2	36	135	0	0	355
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.541	0.458	0.250	0.600	0.462	0.000	0.000	0.516
										0.523				0.509			

Prepared by National Data & Surveying Services

River Valley High School Football Field Dwy & Spirit Way

Peak Hour Turning Movement Count

ID: 24-070005-005
City: Yuba City

Day: Thursday
Date: 1/25/2024

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NONE	NONE
03:15 PM - 04:15 PM	2:30 PM - 06:00 PM

SOUTHBOUND — River Valley High School Football Field Dwy

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	1	0	2	0	1	PM

EASTBOUND — Spirit Way

AM	NOON	PM	
194	0	137	
0	0	4	0
0	0	1	0
350	0	182	1
68	0	22	0
AM	NOON	PM	

WESTBOUND — Spirit Way

PM	NOON	AM	
0	0	0	0
110	0	191	1
61	0	103	0
4	0	0	0
267	0	399	
PM	NOON	AM	

NORTHBOUND — River Valley High School Football Field Dwy

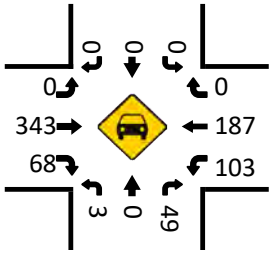
PM	83	0	22	0	79	PM
NOON	0	0	0	0	0	NOON
AM	171	0	3	0	49	AM

CONTROL

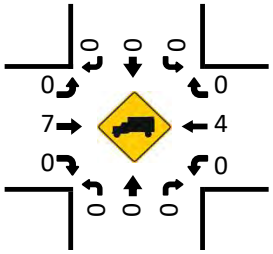
1-Way Stop(NB)

	AM	NOON	PM
TEV	764	0	488
PHF	0.62		0.55

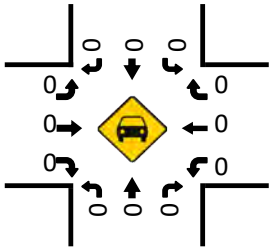
Cars (AM)



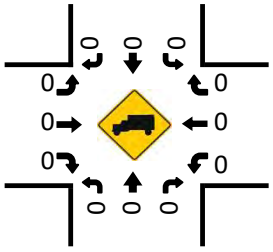
HT (AM)



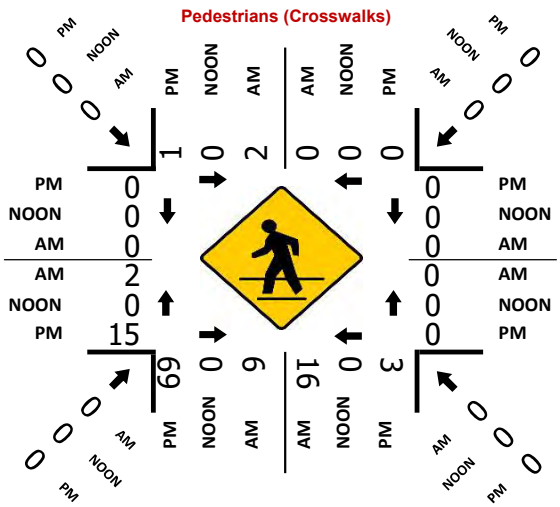
Cars (NOON)



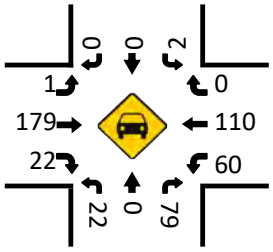
HT (NOON)



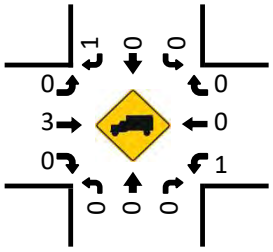
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: River Valley High School Football Field Dwy & Spirit Way
City: Yuba City
Control: 1-Way Stop(NB)

Project ID: 24-070005-005
Date: 1/25/2024

Data - Total

NS/EW Streets:	River Valley High School Football Field Dwy				River Valley High School Football Field Dwy				Spirit Way				Spirit Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	1	0	0	0	0	0	0	1	0	0	2	3	0	0	7
7:15 AM	0	0	2	0	0	0	0	0	0	14	0	0	1	7	0	0	24
7:30 AM	1	0	0	0	0	0	0	0	0	30	2	0	3	27	0	0	63
7:45 AM	0	0	8	0	0	0	0	0	0	54	6	0	18	47	0	0	133
8:00 AM	0	0	9	0	0	0	0	0	0	107	26	0	38	68	0	0	248
8:15 AM	2	0	30	0	0	0	0	0	0	149	33	0	42	54	0	0	310
8:30 AM	1	0	2	0	0	0	0	0	0	40	3	0	5	22	0	0	73
8:45 AM	0	0	0	0	0	0	0	0	0	20	2	0	1	18	0	0	41
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	0	52	0	0	0	0	0	0	415	72	0	110	246	0	0	899
APPROACH %'s :	7.14%	0.00%	92.86%	0.00%					0.00%	85.22%	14.78%	0.00%	30.90%	69.10%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	3	0	49	0	0	0	0	0	0	350	68	0	103	191	0	0	764
PEAK HR FACTOR :	0.375	0.000	0.408	0.000	0.000	0.000	0.000	0.000	0.000	0.587	0.515	0.000	0.613	0.702	0.000	0.000	0.616
	0.406				0.000				0.574				0.693				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:30 PM	0	0	1	0	0	0	0	0	0	10	0	0	3	13	0	0	27
2:45 PM	1	0	1	0	0	0	0	0	0	18	1	0	2	20	0	1	44
3:00 PM	1	0	1	0	0	0	1	0	1	14	2	0	10	29	0	0	59
3:15 PM	2	0	3	0	0	0	0	0	0	14	7	1	17	40	0	3	87
3:30 PM	12	0	43	0	0	0	0	0	0	106	7	2	13	40	0	0	223
3:45 PM	4	0	23	0	0	0	1	0	1	49	5	1	20	11	0	1	116
4:00 PM	4	0	10	0	2	0	0	0	0	13	3	0	11	19	0	0	62
4:15 PM	6	0	3	0	2	0	0	0	1	21	9	0	11	12	0	0	65
4:30 PM	0	0	2	0	3	0	0	0	0	15	2	0	5	12	0	0	39
4:45 PM	1	0	7	0	0	0	0	0	0	23	11	0	18	23	0	0	83
5:00 PM	6	0	11	0	3	0	0	0	0	27	19	0	16	22	0	0	104
5:15 PM	7	0	13	0	1	0	0	0	0	12	9	0	9	12	0	0	63
5:30 PM	6	0	2	0	2	0	0	0	0	3	2	0	16	16	0	1	48
5:45 PM	3	0	3	0	1	0	0	0	0	18	2	0	22	14	0	0	63
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	53	0	123	0	14	0	2	0	3	343	79	4	173	283	0	6	1083
APPROACH %'s :	30.11%	0.00%	69.89%	0.00%	87.50%	0.00%	12.50%	0.00%	0.70%	79.95%	18.41%	0.93%	37.45%	61.26%	0.00%	1.30%	
PEAK HR :	03:15 PM - 04:15 PM																TOTAL
PEAK HR VOL :	22	0	79	0	2	0	1	0	1	182	22	4	61	110	0	4	488
PEAK HR FACTOR :	0.458	0.000	0.459	0.000	0.250	0.000	0.250	0.000	0.250	0.429	0.786	0.500	0.763	0.688	0.000	0.333	0.547
	0.459				0.375				0.454				0.729				

Prepared by National Data & Surveying Services

River Valley High School Football Field Dwy & Spirit Way

Peak Hour Turning Movement Count

ID: 24-070005-005
City: Yuba City

Day: Sunday
Date: 1/28/2024

PEAK HOURS

AM	09:30 AM - 10:30 AM
NOON	12:15 PM - 01:15 PM
PM	NONE

COUNT PERIODS

AM	9:00 AM - 10:30 AM
NOON	12:00 PM - 02:00 PM
PM	NONE

SOUTHBOUND — River Valley High School Football Field Dwy

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND — Spirit Way

AM	NOON	PM	
28	30	0	
0	0	0	0
0	0	0	0
18	28	0	1
7	6	0	0

WESTBOUND — Spirit Way

PM	NOON	AM	
0	0	0	0
0	30	24	1
0	14	8	0
0	0	0	0
0	36	29	

NORTHBOUND — River Valley High School Football Field Dwy

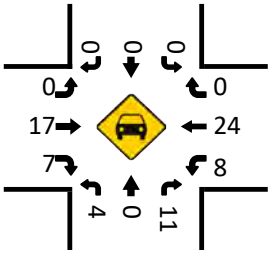
PM	0	0	0	0	0	PM
NOON	20	0	0	0	8	NOON
AM	15	0	4	0	11	AM

CONTROL

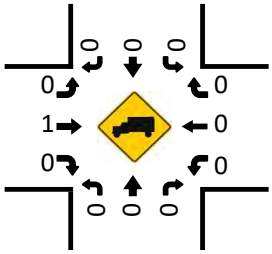
1-Way Stop(NB)

	AM	NOON	PM
TEV	72	86	0
PHF	0.82	0.80	

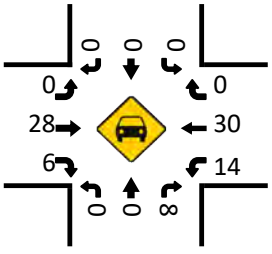
Cars (AM)



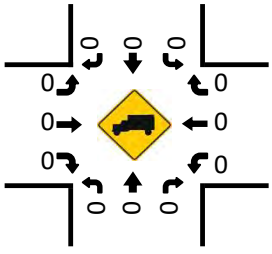
HT (AM)



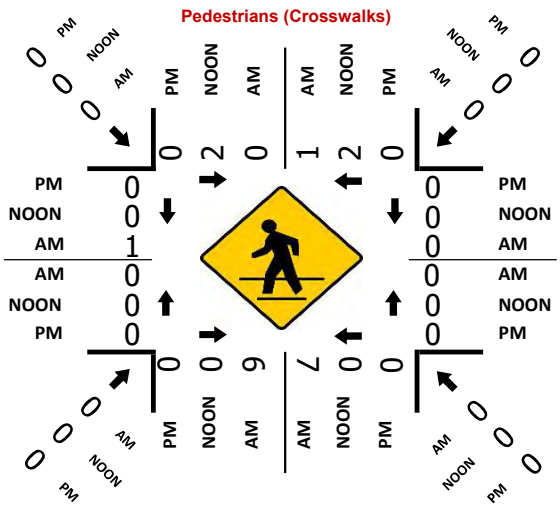
Cars (NOON)



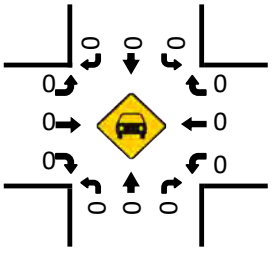
HT (NOON)



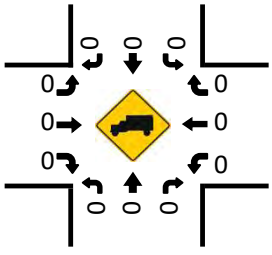
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: River Valley High School Football Field Dwy & Spirit Way
City: Yuba City
Control: 1-Way Stop(NB)

Project ID: 24-070005-005
Date: 1/28/2024

Data - Total

NS/EW Streets:	River Valley High School Football Field Dwy				River Valley High School Football Field Dwy				Spirit Way				Spirit Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
9:00 AM	0	0	2	0	0	0	0	0	0	3	4	0	2	5	0	0	16
9:15 AM	0	0	3	0	0	0	0	0	0	3	0	0	7	2	0	0	15
9:30 AM	2	0	3	0	0	0	0	0	0	5	2	0	2	4	0	0	18
9:45 AM	1	0	3	0	0	0	0	0	0	6	3	0	1	3	0	0	17
10:00 AM	0	0	3	0	0	0	0	0	0	5	2	0	3	9	0	0	22
10:15 AM	1	0	2	0	0	0	0	0	0	2	0	0	2	8	0	0	15
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	0	16	0	0	0	0	0	0	24	11	0	17	31	0	0	103
APPROACH %'s :	20.00%	0.00%	80.00%	0.00%					0.00%	68.57%	31.43%	0.00%	35.42%	64.58%	0.00%	0.00%	
PEAK HR :	09:30 AM - 10:30 AM																TOTAL
PEAK HR VOL :	4	0	11	0	0	0	0	0	0	18	7	0	8	24	0	0	72
PEAK HR FACTOR :	0.500	0.000	0.917	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.583	0.000	0.667	0.667	0.000	0.000	0.818
	0.750				0.000				0.694				0.667				

NS/EW Streets:	River Valley High School Football Field Dwy				River Valley High School Football Field Dwy				Spirit Way				Spirit Way				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	2	0	0	0	0	0	0	14	3	0	0	5	0	0	24
12:15 PM	0	0	5	0	0	0	0	0	0	6	3	0	3	10	0	0	27
12:30 PM	0	0	1	0	0	0	0	0	0	5	1	0	5	4	0	0	16
12:45 PM	0	0	2	0	0	0	0	0	0	4	0	0	2	9	0	0	17
1:00 PM	0	0	0	0	0	0	0	0	0	13	2	0	4	7	0	0	26
1:15 PM	1	0	1	0	0	0	0	0	0	6	3	0	1	6	0	0	18
1:30 PM	0	0	5	0	0	0	0	0	0	9	0	0	1	7	0	0	22
1:45 PM	0	0	1	0	0	0	0	0	0	4	0	0	2	10	0	0	17
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	17	0	0	0	0	0	0	61	12	0	18	58	0	0	167
APPROACH %'s :	5.56%	0.00%	94.44%	0.00%					0.00%	83.56%	16.44%	0.00%	23.68%	76.32%	0.00%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																TOTAL
PEAK HR VOL :	0	0	8	0	0	0	0	0	0	28	6	0	14	30	0	0	86
PEAK HR FACTOR :	0.000	0.000	0.400	0.000	0.000	0.000	0.000	0.000	0.000	0.538	0.500	0.000	0.700	0.750	0.000	0.000	0.796
	0.400				0.000				0.567				0.846				

Prepared by National Data & Surveying Services

Harter Pkwy & Spirit Way

Peak Hour Turning Movement Count

ID: 24-070005-005
City: Yuba City

Day: Tuesday
Date: 1/9/2024

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NONE	NONE
03:15 PM - 04:15 PM	2:30 PM - 06:00 PM

SOUTHBOUND (Harter Pkwy)

AM	157	220	0	0	379	AM
NOON	0	0	0	0	0	NOON
PM	86	175	0	3	408	PM
	0.5	1.5	1	0		

EASTBOUND (Spirit Way)

AM	NOON	PM	
312	0	172	
0	0	0	0
246	0	203	1.5
0	0	0	0
176	0	87	0.5
AM	NOON	PM	

WESTBOUND (Spirit Way)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
PM	NOON	AM	

CONTROL

3-Way Stop(NB/SB/EB)

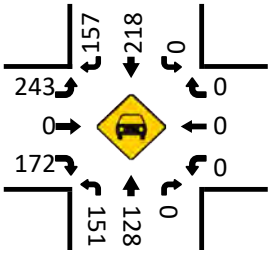
TEV	1128 AM	0 NOON	858 PM
PHF	0.68		0.70

0 1 1.5 0.5

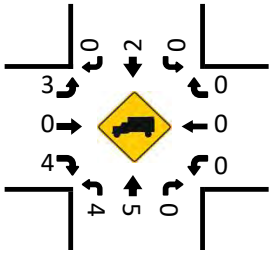
NORTHBOUND (Harter Pkwy)

PM	278	16	86	202	0 PM
NOON	0	0	0	0	0 NOON
AM	437	41	155	133	0 AM

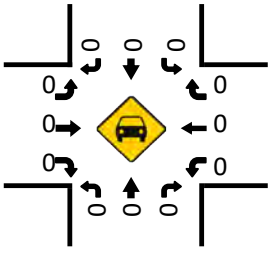
Cars (AM)



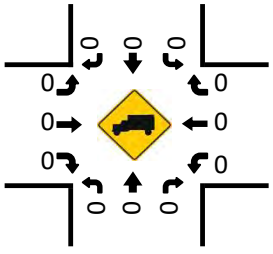
HT (AM)



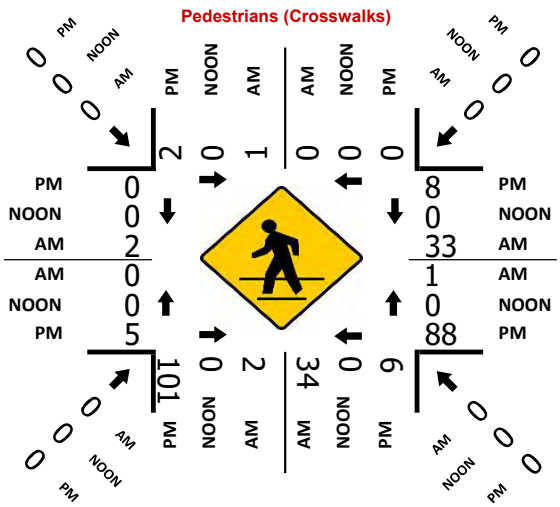
Cars (NOON)



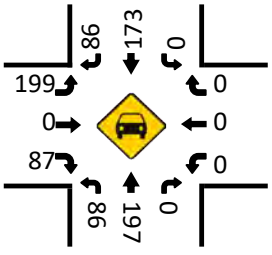
HT (NOON)



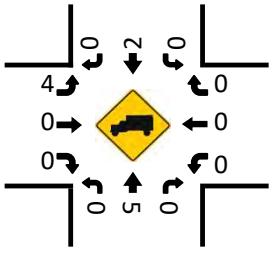
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Harter Pkwy & Spirit Way
City: Yuba City
Control: 3-Way Stop(NB/SB/EB)

Project ID: 24-070005-005
Date: 1/9/2024

Data - Total

NS/EW Streets:	Harter Pkwy				Harter Pkwy				Spirit Way				Spirit Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1	1.5	0.5	0	1.5	0	0.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	10	0	0	0	7	7	0	1	0	1	0	0	0	0	0	29
7:15 AM	4	13	0	0	0	14	5	0	2	0	5	0	0	0	0	0	43
7:30 AM	16	15	0	1	0	19	21	0	11	0	17	0	0	0	0	0	100
7:45 AM	26	39	0	4	0	49	39	0	43	0	33	0	0	0	0	0	233
8:00 AM	52	23	0	12	0	64	57	0	67	0	47	0	0	0	0	0	322
8:15 AM	56	41	0	23	0	89	49	0	97	0	60	0	0	0	0	0	415
8:30 AM	21	30	0	2	0	18	12	0	39	0	36	0	0	0	0	0	158
8:45 AM	7	18	0	0	0	16	5	0	4	0	8	1	0	0	0	0	59
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	185	189	0	42	0	276	195	0	264	0	207	1	0	0	0	0	1359
APPROACH %'s :	44.47%	45.43%	0.00%	10.10%	0.00%	58.60%	41.40%	0.00%	55.93%	0.00%	43.86%	0.21%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	155	133	0	41	0	220	157	0	246	0	176	0	0	0	0	0	1128
PEAK HR FACTOR :	0.692	0.811	0.000	0.446	0.000	0.618	0.689	0.000	0.634	0.000	0.733	0.000	0.000	0.000	0.000	0.000	0.680
	0.685				0.683				0.672								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1	1.5	0.5	0	1.5	0	0.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:30 PM	10	27	0	1	0	21	7	0	8	0	6	0	0	0	0	0	80
2:45 PM	15	24	0	3	0	32	20	0	6	0	11	0	0	0	0	0	111
3:00 PM	12	30	0	4	0	37	16	0	8	0	15	0	0	0	0	0	122
3:15 PM	34	20	0	5	0	55	30	1	4	0	8	0	0	0	0	0	157
3:30 PM	21	74	0	6	0	38	29	1	106	0	32	0	0	0	0	0	307
3:45 PM	19	68	0	3	0	42	18	1	70	0	35	0	0	0	0	0	256
4:00 PM	12	40	0	2	0	40	9	0	23	0	12	0	0	0	0	0	138
4:15 PM	7	40	0	1	0	31	6	0	11	0	11	0	0	0	0	0	107
4:30 PM	14	38	0	0	0	37	10	0	10	0	7	0	0	0	0	0	116
4:45 PM	9	46	0	1	0	45	5	0	10	0	13	0	0	0	0	0	129
5:00 PM	19	43	0	1	0	33	5	0	6	0	14	0	0	0	0	0	121
5:15 PM	9	41	0	0	0	27	15	0	10	0	6	0	0	0	0	0	108
5:30 PM	15	36	0	1	0	29	9	0	14	0	10	0	0	0	0	0	114
5:45 PM	4	28	0	1	0	31	9	0	7	0	8	0	0	0	0	0	88
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	200	555	0	29	0	498	188	3	293	0	188	0	0	0	0	0	1954
APPROACH %'s :	25.51%	70.79%	0.00%	3.70%	0.00%	72.28%	27.29%	0.44%	60.91%	0.00%	39.09%	0.00%					
PEAK HR :	03:15 PM - 04:15 PM																TOTAL
PEAK HR VOL :	86	202	0	16	0	175	86	3	203	0	87	0	0	0	0	0	858
PEAK HR FACTOR :	0.632	0.682	0.000	0.667	0.000	0.795	0.717	0.750	0.479	0.000	0.621	0.000	0.000	0.000	0.000	0.000	0.699
	0.752				0.767				0.525								

Prepared by National Data & Surveying Services

Harter Pkwy & Spirit Way

Peak Hour Turning Movement Count

ID: 24-070005-005
City: Yuba City

Day: Sunday
Date: 1/14/2024

PEAK HOURS

AM	09:30 AM - 10:30 AM
NOON	12:00 PM - 01:00 PM
PM	NONE

COUNT PERIODS

AM	9:00 AM - 10:30 AM
NOON	12:00 PM - 02:00 PM
PM	NONE

SOUTHBOUND (Harter Pkwy)

AM	6	58	0	0	69	AM
NOON	8	92	0	1	104	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Spirit Way)

AM	NOON	PM		
22	30	0		
0	0	0	0	
5	11	0	1.5	
0	0	0	0	
8	26	0	0.5	
AM	NOON	PM		

WESTBOUND (Spirit Way)

PM	NOON	AM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	
PM	NOON	AM	

NORTHBOUND (Harter Pkwy)

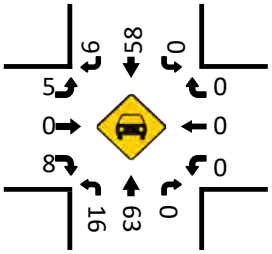
PM	0	0	0	0	0	PM
NOON	119	1	22	92	0	NOON
AM	66	0	16	64	0	AM

CONTROL

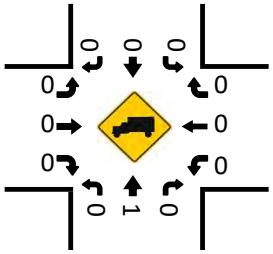
3-Way Stop(NB/SB/EB)

TEV	157 AM	253 NOON	0 PM
PHF	0.82	0.94	

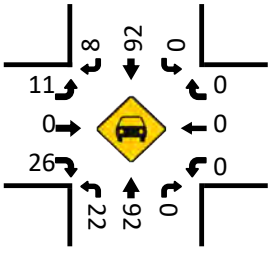
Cars (AM)



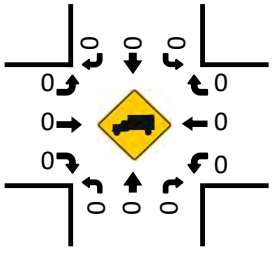
HT (AM)



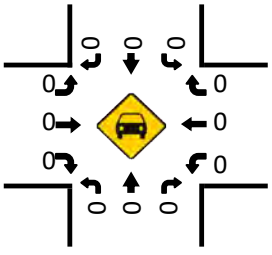
Cars (NOON)



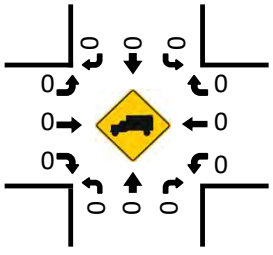
HT (NOON)



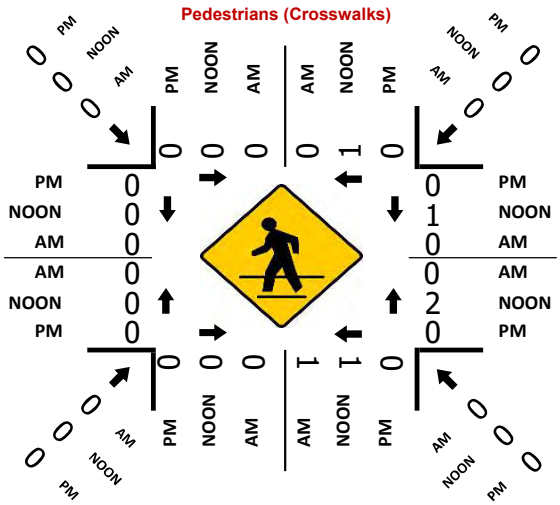
Cars (PM)



HT (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Harter Pkwy & Spirit Way
City: Yuba City
Control: 3-Way Stop(NB/SB/EB)

Project ID: 24-070005-005
Date: 1/14/2024

Data - Total

NS/EW Streets:	Harter Pkwy				Harter Pkwy				Spirit Way				Spirit Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1	1.5	0.5	0	1.5	0	0.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
9:00 AM	1	6	0	0	0	8	0	0	1	0	0	0	0	0	0	0	16
9:15 AM	4	11	0	0	0	5	2	0	1	0	2	0	0	0	0	0	25
9:30 AM	5	12	0	0	0	5	1	0	1	0	1	0	0	0	0	0	25
9:45 AM	7	17	0	0	0	19	1	0	3	0	1	0	0	0	0	0	48
10:00 AM	3	17	0	0	0	17	1	0	0	0	4	0	0	0	0	0	42
10:15 AM	1	18	0	0	0	17	3	0	1	0	2	0	0	0	0	0	42
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	21	81	0	0	0	71	8	0	7	0	10	0	0	0	0	0	198
APPROACH %'s :	20.59%	79.41%	0.00%	0.00%	0.00%	89.87%	10.13%	0.00%	41.18%	0.00%	58.82%	0.00%					
PEAK HR :	09:30 AM - 10:30 AM																TOTAL
PEAK HR VOL :	16	64	0	0	0	58	6	0	5	0	8	0	0	0	0	0	157
PEAK HR FACTOR :	0.571	0.889	0.000	0.000	0.000	0.763	0.500	0.000	0.417	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.818
	0.833				0.800				0.813								

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1	1.5	0.5	0	1.5	0	0.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	4	28	0	0	0	20	0	0	1	0	10	0	0	0	0	0	63
12:15 PM	9	20	0	0	0	24	1	1	5	0	7	0	0	0	0	0	67
12:30 PM	5	17	0	1	0	25	3	0	1	0	4	0	0	0	0	0	56
12:45 PM	4	27	0	0	0	23	4	0	4	0	5	0	0	0	0	0	67
1:00 PM	2	13	0	0	0	24	3	0	2	0	5	0	0	0	0	0	49
1:15 PM	6	13	0	0	0	26	0	0	3	0	3	0	0	0	0	0	51
1:30 PM	3	13	0	0	0	15	2	0	3	0	5	0	0	0	0	0	41
1:45 PM	6	27	0	0	0	16	1	0	2	0	2	0	0	0	0	0	54
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	39	158	0	1	0	173	14	1	21	0	41	0	0	0	0	0	448
APPROACH %'s :	19.70%	79.80%	0.00%	0.51%	0.00%	92.02%	7.45%	0.53%	33.87%	0.00%	66.13%	0.00%					
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	22	92	0	1	0	92	8	1	11	0	26	0	0	0	0	0	253
PEAK HR FACTOR :	0.611	0.821	0.000	0.250	0.000	0.920	0.500	0.250	0.550	0.000	0.650	0.000	0.000	0.000	0.000	0.000	0.944
	0.898				0.902				0.771								

Intersection	
Int Delay, s/veh	4.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	596	91	185	472	11	194
Future Vol, veh/h	596	91	185	472	11	194
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	6	2	5	12	2	2
Mvmt Flow	727	111	226	576	13	237

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	838	0	1521	419
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	739	-
Critical Hdwy	-	-	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	773	-	109	583
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	433	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	773	-	77	583
Mov Cap-2 Maneuver	-	-	-	-	77	-
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	307	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.26	24.21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	432	-	-	773	-
HCM Lane V/C Ratio	0.579	-	-	0.292	-
HCM Control Delay (s/veh)	24.2	-	-	11.6	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	3.6	-	-	1.2	-

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	50	56	123	217	68
Future Vol, veh/h	65	50	56	123	217	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	57	57	57	57
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	114	88	98	216	381	119

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	853	440	500	0	-	0
Stage 1	440	-	-	-	-	-
Stage 2	412	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	330	617	1064	-	-	-
Stage 1	649	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	295	617	1064	-	-	-
Mov Cap-2 Maneuver	295	-	-	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	24.53	2.73	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	563	-	382	-	-
HCM Lane V/C Ratio	0.092	-	0.529	-	-
HCM Control Delay (s/veh)	8.7	0	24.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	3	-	-

Intersection	
Int Delay, s/veh	12.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	89	106	76	167	127	144
Future Vol, veh/h	89	106	76	167	127	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	54	54	54	54	54	54
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	165	196	141	309	235	267

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1032	295	0	0	450	0
Stage 1	295	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	258	744	-	-	1110	-
Stage 1	755	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	203	744	-	-	1110	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	373	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	38.78	0	4.27
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	203	744	1110	-
HCM Lane V/C Ratio	-	-	0.811	0.264	0.212	-
HCM Control Delay (s/veh)	-	-	71.2	11.6	9.1	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	5.8	1.1	0.8	-

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	243	205	346	111	31
Future Vol, veh/h	37	243	205	346	111	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	296	250	422	135	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	672	0	-	0	848	461
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	387	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	919	-	-	-	332	601
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	687	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	919	-	-	-	312	601
Mov Cap-2 Maneuver	-	-	-	-	312	-
Stage 1	-	-	-	-	598	-
Stage 2	-	-	-	-	687	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.21	0	25.06
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	238	-	-	-	349
HCM Lane V/C Ratio	0.049	-	-	-	0.496
HCM Control Delay (s/veh)	9.1	0	-	-	25.1
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	2.6

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	206	170	175	129	0	0
Future Vol, veh/h	206	170	175	129	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	375	309	318	235	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	684	0	1400	-
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	871	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	910	-	155	0
Stage 1	-	-	-	-	591	0
Stage 2	-	-	-	-	410	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	910	-	101	-
Mov Cap-2 Maneuver	-	-	-	-	205	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	266	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	6.37	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	910	-
HCM Lane V/C Ratio	-	-	-	0.35	-
HCM Control Delay (s/veh)	0	-	-	11.1	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	1.6	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	350	68	103	191	3	49
Future Vol, veh/h	350	68	103	191	3	49
Conflicting Peds, #/hr	0	22	22	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	565	110	166	308	5	79

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	696	0	1284	641
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	642	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	900	-	182	474
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	524	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	883	-	145	466
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	515	-
Stage 2	-	-	-	-	425	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.51	14.53
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	278	466	-	-	883	-
HCM Lane V/C Ratio	0.017	0.17	-	-	0.188	-
HCM Control Delay (s/veh)	18.2	14.3	-	-	10	-
HCM Lane LOS	C	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	0.6	-	-	0.7	-

Intersection	
Intersection Delay, s/veh	28.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	246	0	176	0	0	0	41	155	133	0	0	220
Future Vol, veh/h	246	0	176	0	0	0	41	155	133	0	0	220
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68	0.92	0.68	0.68	0.68	0.68	0.68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	362	0	259	0	0	0	45	228	196	0	0	324
Number of Lanes	1	1	0	0	1	0	0	1	2	0	0	2

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	1	2
HCM Control Delay, s/veh	35.2	0	22.6	26.1
HCM LOS	E	-	C	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	32%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	68%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	67	67	246	176	0	147	230
LT Vol	196	0	0	246	0	0	0	0
Through Vol	0	67	67	0	0	0	147	73
RT Vol	0	0	0	0	176	0	0	157
Lane Flow Rate	273	98	98	362	259	0	216	339
Geometry Grp	6	6	6	6	6	6	6	6
Degree of Util (X)	0.679	0.23	0.23	0.869	0.534	0	0.503	0.743
Departure Headway (Hd)	8.976	8.46	8.46	8.644	7.421	10.455	8.392	7.898
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	403	423	423	420	484	0	429	457
Service Time	6.747	6.231	6.231	6.412	5.188	8.155	6.165	5.67
HCM Lane V/C Ratio	0.677	0.232	0.232	0.862	0.535	0	0.503	0.742
HCM Control Delay, s/veh	28.9	13.8	13.8	47.3	18.4	13.2	19.4	30.4
HCM Lane LOS	D	B	B	E	C	N	C	D
HCM 95th-tile Q	4.9	0.9	0.9	8.7	3.1	0	2.7	6.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBR
Lane Configurations	
Traffic Vol, veh/h	157
Future Vol, veh/h	157
Peak Hour Factor	0.68
Heavy Vehicles, %	2
Mvmt Flow	231
Number of Lanes	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	679	16	88	688	3	137
Future Vol, veh/h	679	16	88	688	3	137
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	6	2	5	12	2	2
Mvmt Flow	780	18	101	791	3	157

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	799	0	1387	399
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	598	-
Critical Hdwy	-	-	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	800	-	134	600
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	512	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	800	-	117	600
Mov Cap-2 Maneuver	-	-	-	-	117	-
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	447	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.15	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	551	-	-	800	-
HCM Lane V/C Ratio	0.292	-	-	0.126	-
HCM Control Delay (s/veh)	14.2	-	-	10.1	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	1.2	-	-	0.4	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	43	18	68	91	15
Future Vol, veh/h	72	43	18	68	91	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	111	66	28	105	140	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	312	152	163	0	-	0
Stage 1	152	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	681	895	1416	-	-	-
Stage 1	876	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	667	895	1416	-	-	-
Mov Cap-2 Maneuver	667	-	-	-	-	-
Stage 1	858	-	-	-	-	-
Stage 2	869	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11.42	1.59	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	377	-	737	-	-
HCM Lane V/C Ratio	0.02	-	0.24	-	-
HCM Control Delay (s/veh)	7.6	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	24	59	36	29	100
Future Vol, veh/h	53	24	59	36	29	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	28	69	42	34	116

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	273	90	0	0	110	0
Stage 1	90	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	716	968	-	-	1480	-
Stage 1	934	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	700	968	-	-	1480	-
Mov Cap-2 Maneuver	700	-	-	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	828	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.07	0	1.68
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	700	968	1480	-
HCM Lane V/C Ratio	-	-	0.088	0.029	0.023	-
HCM Control Delay (s/veh)	-	-	10.6	8.8	7.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	207	202	73	108	30
Future Vol, veh/h	28	207	202	73	108	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	225	220	79	117	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	299	0	-	0	545	259
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1262	-	-	-	499	779
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1262	-	-	-	486	779
Mov Cap-2 Maneuver	-	-	-	-	486	-
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	763	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.94	0	14.48
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	214	-	-	-	529
HCM Lane V/C Ratio	0.024	-	-	-	0.284
HCM Control Delay (s/veh)	7.9	0	-	-	14.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	76	4	2	76	0	0
Future Vol, veh/h	76	4	2	76	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	5	2	88	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	93	0	184	-
Stage 1	-	-	-	-	91	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1501	-	806	0
Stage 1	-	-	-	-	933	0
Stage 2	-	-	-	-	931	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1501	-	804	-
Mov Cap-2 Maneuver	-	-	-	-	792	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	929	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.19	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1501	-
HCM Lane V/C Ratio	-	-	-	0.002	-
HCM Control Delay (s/veh)	0	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	65	41	60	73	20	33
Future Vol, veh/h	65	41	60	73	20	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	57	83	101	28	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	147	0	387	119
Stage 1	-	-	-	-	119	-
Stage 2	-	-	-	-	268	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1435	-	616	933
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	777	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1435	-	581	933
Mov Cap-2 Maneuver	-	-	-	-	624	-
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	732	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.46	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	624	933	-	-	1435	-
HCM Lane V/C Ratio	0.044	0.049	-	-	0.058	-
HCM Control Delay (s/veh)	11	9.1	-	-	7.7	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	36	0	40	0	0	0	2	51	168	0	0	142
Future Vol, veh/h	36	0	40	0	0	0	2	51	168	0	0	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	0	43	0	0	0	2	55	183	0	0	154
Number of Lanes	1	1	0	0	1	0	0	1	2	0	0	2

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	1	2
HCM Control Delay, s/veh	8.7	0	8.8	8.7
HCM LOS	A	-	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	57%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	43%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	84	84	36	40	0	95	82
LT Vol	53	0	0	36	0	0	0	0
Through Vol	0	84	84	0	0	0	95	47
RT Vol	0	0	0	0	40	0	0	35
Lane Flow Rate	58	91	91	39	43	0	103	89
Geometry Grp	6	6	6	6	6	6	6	6
Degree of Util (X)	0.091	0.131	0.131	0.067	0.06	0	0.151	0.124
Departure Headway (Hd)	5.672	5.17	5.17	6.154	4.952	5.844	5.267	4.968
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	631	692	692	581	720	0	680	720
Service Time	3.412	2.91	2.91	3.907	2.705	3.611	3.007	2.709
HCM Lane V/C Ratio	0.092	0.132	0.132	0.067	0.06	0	0.151	0.124
HCM Control Delay, s/veh	9	8.7	8.7	9.4	8	8.6	8.9	8.4
HCM Lane LOS	A	A	A	A	A	N	A	A
HCM 95th-tile Q	0.3	0.4	0.4	0.2	0.2	0	0.5	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBR
Lane Configurations	
Traffic Vol, veh/h	35
Future Vol, veh/h	35
Peak Hour Factor	0.92
Heavy Vehicles, %	2
Mvmt Flow	38
Number of Lanes	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	4.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	717	46	120	592	19	177
Future Vol, veh/h	717	46	120	592	19	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	6	2	5	12	2	2
Mvmt Flow	864	55	145	713	23	213

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	919	0	1537	460
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	646	-
Critical Hdwy	-	-	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	720	-	107	548
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	484	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	720	-	85	548
Mov Cap-2 Maneuver	-	-	-	-	85	-
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	387	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.9	32.35
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	359	-	-	720	-
HCM Lane V/C Ratio	0.658	-	-	0.201	-
HCM Control Delay (s/veh)	32.3	-	-	11.3	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	4.5	-	-	0.7	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	22	40	158	144	22
Future Vol, veh/h	38	22	40	158	144	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	36	66	259	236	36

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	644	254	272	0	-	0
Stage 1	254	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	437	785	1291	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	684	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	411	785	1291	-	-	-
Mov Cap-2 Maneuver	411	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	684	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	14	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	364	-	498	-	-
HCM Lane V/C Ratio	0.051	-	0.197	-	-
HCM Control Delay (s/veh)	7.9	0	14	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-

Intersection	
Int Delay, s/veh	7.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	101	105	86	83	55	124
Future Vol, veh/h	101	105	86	83	55	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	52	52	52	52	52	52
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	194	202	165	160	106	238

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	695	245	0	0	325	0
Stage 1	245	-	-	-	-	-
Stage 2	450	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	408	794	-	-	1235	-
Stage 1	796	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	373	794	-	-	1235	-
Mov Cap-2 Maneuver	373	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	587	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	17.73	0	2.52
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	373	794	1235	-
HCM Lane V/C Ratio	-	-	0.521	0.254	0.086	-
HCM Control Delay (s/veh)	-	-	24.7	11.1	8.2	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	2.9	1	0.3	-

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	240	177	165	148	53
Future Vol, veh/h	25	240	177	165	148	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	296	219	204	183	65

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	422	0	-	0	678	320
Stage 1	-	-	-	-	320	-
Stage 2	-	-	-	-	358	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1137	-	-	-	417	720
Stage 1	-	-	-	-	736	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1137	-	-	-	404	720
Mov Cap-2 Maneuver	-	-	-	-	404	-
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	707	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.78	0	21.86
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	170	-	-	-	457
HCM Lane V/C Ratio	0.027	-	-	-	0.543
HCM Control Delay (s/veh)	8.3	0	-	-	21.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	3.2

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	160	22	36	135	0	0
Future Vol, veh/h	160	22	36	135	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	52	52	52	52
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	308	42	69	260	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	350	0	727	-
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	398	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1209	-	391	0
Stage 1	-	-	-	-	729	0
Stage 2	-	-	-	-	678	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1209	-	369	-
Mov Cap-2 Maneuver	-	-	-	-	478	-
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	640	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.72	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1209	-
HCM Lane V/C Ratio	-	-	-	0.057	-
HCM Control Delay (s/veh)	0	-	-	8.2	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0.2	-

Intersection	
Int Delay, s/veh	4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	182	22	61	110	22	79
Future Vol, veh/h	182	22	61	110	22	79
Conflicting Peds, #/hr	0	72	72	0	15	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	331	40	111	200	40	144

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	443	0	860	423
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	437	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1117	-	327	631
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1050	-	271	593
Mov Cap-2 Maneuver	-	-	-	-	396	-
Stage 1	-	-	-	-	621	-
Stage 2	-	-	-	-	575	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.15	13.46
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	396	593	-	-	1050	-
HCM Lane V/C Ratio	0.101	0.242	-	-	0.106	-
HCM Control Delay (s/veh)	15.1	13	-	-	8.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.9	-	-	0.4	-

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Vol, veh/h	203	0	87	0	0	0	16	86	202	0	3	0
Future Vol, veh/h	203	0	87	0	0	0	16	86	202	0	3	0
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	290	0	124	0	0	0	23	123	289	0	4	0
Number of Lanes	1	1	0	0	1	0	0	1	2	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	2
HCM Control Delay, s/veh	18.6	0	13.2	13.9
HCM LOS	C	-	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	100%	40%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	0%	60%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	101	101	203	87	0	3	117	144
LT Vol	102	0	0	203	0	0	0	0	0
Through Vol	0	101	101	0	0	0	3	117	58
RT Vol	0	0	0	0	87	0	0	0	86
Lane Flow Rate	146	144	144	290	124	0	4	167	206
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.311	0.287	0.287	0.615	0.222	0	0.009	0.339	0.395
Departure Headway (Hd)	7.685	7.172	7.172	7.64	6.436	8.386	7.319	7.319	6.891
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	468	502	502	476	562	0	489	492	522
Service Time	5.423	4.91	4.91	5.34	4.136	6.139	5.057	5.057	4.63
HCM Lane V/C Ratio	0.312	0.287	0.287	0.609	0.221	0	0.008	0.339	0.395
HCM Control Delay, s/veh	13.9	12.8	12.8	21.8	11	11.1	10.1	13.8	14.1
HCM Lane LOS	B	B	B	C	B	N	B	B	B
HCM 95th-tile Q	1.3	1.2	1.2	4.1	0.8	0	0	1.5	1.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBT	SBR
Lane Configurations		
Traffic Vol, veh/h	175	86
Future Vol, veh/h	175	86
Peak Hour Factor	0.70	0.70
Heavy Vehicles, %	2	2
Mvmt Flow	250	123
Number of Lanes	2	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Vol, veh/h	665	4	2	52	471	5	128
Future Vol, veh/h	665	4	2	52	471	5	128
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	-	-	-	205	-	0	-
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97	97
Heavy Vehicles, %	6	2	2	5	12	2	2
Mvmt Flow	686	4	2	54	486	5	132

Major/Minor	Major1		Major2			Minor1	
Conflicting Flow All	0	0	690	690	0	1042	345
Stage 1	-	-	-	-	-	688	-
Stage 2	-	-	-	-	-	354	-
Critical Hdwy	-	-	6.44	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.52	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	524	881	-	225	651
Stage 1	-	-	-	-	-	460	-
Stage 2	-	-	-	-	-	681	-
Platoon blocked, %	-	-			-		
Mov Cap-1 Maneuver	-	-	846	846	-	216	651
Mov Cap-2 Maneuver	-	-	-	-	-	216	-
Stage 1	-	-	-	-	-	460	-
Stage 2	-	-	-	-	-	652	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.98	12.68
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	605	-	-	846	-
HCM Lane V/C Ratio	0.227	-	-	0.066	-
HCM Control Delay (s/veh)	12.7	-	-	9.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.2	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	33	12	61	53	3
Future Vol, veh/h	72	33	12	61	53	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	113	52	19	95	83	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	218	85	88	0	-	0
Stage 1	85	-	-	-	-	-
Stage 2	133	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	770	974	1508	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	760	974	1508	-	-	-
Mov Cap-2 Maneuver	760	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	893	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.52	1.22	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	296	-	816	-	-
HCM Lane V/C Ratio	0.012	-	0.201	-	-
HCM Control Delay (s/veh)	7.4	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	9	63	18	18	67
Future Vol, veh/h	16	9	63	18	18	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	9	66	19	19	70

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	182	75	0	0	84	0
Stage 1	75	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	807	986	-	-	1512	-
Stage 1	948	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	797	986	-	-	1512	-
Mov Cap-2 Maneuver	797	-	-	-	-	-
Stage 1	948	-	-	-	-	-
Stage 2	906	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.28	0	1.57
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	797	986	1512	-
HCM Lane V/C Ratio	-	-	0.021	0.01	0.012	-
HCM Control Delay (s/veh)	-	-	9.6	8.7	7.4	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	148	129	66	55	17
Future Vol, veh/h	10	148	129	66	55	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	164	143	73	61	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	217	0	-	0	367	180
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	187	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1353	-	-	-	633	863
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	845	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1353	-	-	-	627	863
Mov Cap-2 Maneuver	-	-	-	-	627	-
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	845	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.49	0	11.09
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	114	-	-	-	671
HCM Lane V/C Ratio	0.008	-	-	-	0.119
HCM Control Delay (s/veh)	7.7	0	-	-	11.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	30	2	1	15	0	0
Future Vol, veh/h	30	2	1	15	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	3	1	19	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	40	0	60	-
Stage 1	-	-	-	-	39	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1570	-	947	0
Stage 1	-	-	-	-	984	0
Stage 2	-	-	-	-	1001	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1570	-	946	-
Mov Cap-2 Maneuver	-	-	-	-	884	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.46	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1570	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s/veh)	0	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	28	6	14	30	0	8
Future Vol, veh/h	28	6	14	30	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	8	18	38	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	43	0	111	39
Stage 1	-	-	-	-	39	-
Stage 2	-	-	-	-	73	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1566	-	886	1033
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1566	-	876	1033
Mov Cap-2 Maneuver	-	-	-	-	836	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	940	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.33	8.52
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	1033	-	-	1566	-
HCM Lane V/C Ratio	-	0.01	-	-	0.011	-
HCM Control Delay (s/veh)	0	8.5	-	-	7.3	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0	-

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Vol, veh/h	11	0	26	0	0	0	1	22	92	0	1	0
Future Vol, veh/h	11	0	26	0	0	0	1	22	92	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	28	0	0	0	1	23	98	0	1	0
Number of Lanes	1	1	0	0	1	0	0	1	2	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	2
HCM Control Delay, s/veh	7.6	0	8	7.9
HCM LOS	A	-	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	100%	79%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	46	46	11	26	0	1	61	39
LT Vol	23	0	0	11	0	0	0	0	0
Through Vol	0	46	46	0	0	0	1	61	31
RT Vol	0	0	0	0	26	0	0	0	8
Lane Flow Rate	24	49	49	12	28	0	1	65	41
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.036	0.066	0.066	0.018	0.034	0	0.001	0.089	0.054
Departure Headway (Hd)	5.359	4.859	4.859	5.614	4.416	5.195	4.884	4.884	4.739
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	672	741	741	640	814	0	736	737	759
Service Time	3.059	2.559	2.559	3.325	2.127	2.909	2.591	2.591	2.446
HCM Lane V/C Ratio	0.036	0.066	0.066	0.019	0.034	0	0.001	0.088	0.054
HCM Control Delay, s/veh	8.3	7.9	7.9	8.4	7.3	7.9	7.6	8.1	7.7
HCM Lane LOS	A	A	A	A	A	N	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.1	0.1	0	0	0.3	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBT	SBR
Lane Configurations		
Traffic Vol, veh/h	92	8
Future Vol, veh/h	92	8
Peak Hour Factor	0.94	0.94
Heavy Vehicles, %	2	2
Mvmt Flow	98	9
Number of Lanes	2	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	15.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	596	161	199	472	66	208
Future Vol, veh/h	596	161	199	472	66	208
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	6	2	5	12	2	2
Mvmt Flow	727	196	243	576	80	254

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	923	0	1598	462
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	773	-
Critical Hdwy	-	-	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	717	-	97	547
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	416	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	717	-	~ 64	547
Mov Cap-2 Maneuver	-	-	-	-	~ 64	-
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	275	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.73	86.44
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	64	547	-	-	717	-
HCM Lane V/C Ratio	1.253	0.464	-	-	0.338	-
HCM Control Delay (s/veh)	$ 304.8	17.1	-	-	12.6	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	6.6	2.4	-	-	1.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	9.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	59	63	192	301	68
Future Vol, veh/h	65	59	63	192	301	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	57	57	57	57
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	114	104	111	337	528	119

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1146	588	647	0	-	0
Stage 1	588	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	220	509	938	-	-	-
Stage 1	555	-	-	-	-	-
Stage 2	573	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	195	509	938	-	-	-
Mov Cap-2 Maneuver	195	-	-	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	573	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	53.69	2.31	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	938	-	276	-	-
HCM Lane V/C Ratio	0.118	-	0.79	-	-
HCM Control Delay (s/veh)	9.3	-	53.7	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.4	-	6.1	-	-

Intersection	
Int Delay, s/veh	18.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	96	111	103	167	130	158
Future Vol, veh/h	96	111	103	167	130	158
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	54	54	54	54	54	54
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	178	206	191	309	241	293

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1119	345	0	0	500	0
Stage 1	345	-	-	-	-	-
Stage 2	774	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	229	698	-	-	1064	-
Stage 1	717	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 177	698	-	-	1064	-
Mov Cap-2 Maneuver	~ 177	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	352	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	63.37	0	4.23
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	177	698	1064	-
HCM Lane V/C Ratio	-	-	1.005	0.295	0.226	-
HCM Control Delay (s/veh)	-	-	122.4	12.3	9.4	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	8.2	1.2	0.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	243	205	355	118	45
Future Vol, veh/h	55	243	205	355	118	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	296	250	433	144	55

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	683	0	-	0	897	466
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	430	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	910	-	-	-	310	596
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	910	-	-	-	283	596
Mov Cap-2 Maneuver	-	-	-	-	283	-
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	656	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.71	0	30.97
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	332	-	-	-	331
HCM Lane V/C Ratio	0.074	-	-	-	0.601
HCM Control Delay (s/veh)	9.3	0	-	-	31
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	3.7

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	209	170	175	141	0	0
Future Vol, veh/h	209	170	175	141	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	380	309	318	256	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	689	0	1427	-
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	893	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	905	-	149	0
Stage 1	-	-	-	-	587	0
Stage 2	-	-	-	-	400	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	905	-	97	-
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	587	-
Stage 2	-	-	-	-	259	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	6.16	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	905	-
HCM Lane V/C Ratio	-	-	-	0.351	-
HCM Control Delay (s/veh)	0	-	-	11.1	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	1.6	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	390	68	103	246	3	49
Future Vol, veh/h	390	68	103	246	3	49
Conflicting Peds, #/hr	0	22	22	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	629	110	166	397	5	79

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	761	0	1437	706
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	731	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	851	-	147	436
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	476	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	836	-	115	428
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	480	-
Stage 2	-	-	-	-	381	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.06	15.58
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	246	428	-	-	836	-
HCM Lane V/C Ratio	0.02	0.185	-	-	0.199	-
HCM Control Delay (s/veh)	19.9	15.3	-	-	10.4	-
HCM Lane LOS	C	C	-	-	B	-
HCM 95th %tile Q(veh)	0.1	0.7	-	-	0.7	-

Intersection	
Intersection Delay, s/veh	37.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	273	0	189	0	0	0	0	172	133	0	0	220
Future Vol, veh/h	273	0	189	0	0	0	0	172	133	0	0	220
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68	0.92	0.68	0.68	0.68	0.68	0.68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	401	0	278	0	0	0	0	253	196	0	0	324
Number of Lanes	1	1	0	0	1	0	0	1	2	0	0	2

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	1	2
HCM Control Delay, s/veh	48.6	0	21.5	36.5
HCM LOS	E	-	C	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	27%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	73%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	172	67	67	273	189	0	147	268
LT Vol	172	0	0	273	0	0	0	0
Through Vol	0	67	67	0	0	0	147	73
RT Vol	0	0	0	0	189	0	0	195
Lane Flow Rate	253	98	98	401	278	0	216	395
Geometry Grp	6	6	6	6	6	6	6	6
Degree of Util (X)	0.654	0.239	0.19	0.975	0.58	0	0.51	0.875
Departure Headway (Hd)	9.313	8.795	7	8.742	7.518	10.763	8.515	7.986
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	387	407	510	414	478	0	423	454
Service Time	7.091	6.573	4.777	6.515	5.29	8.463	6.29	5.761
HCM Lane V/C Ratio	0.654	0.241	0.192	0.969	0.582	0	0.511	0.87
HCM Control Delay, s/veh	28.2	14.3	11.4	68.3	20.2	13.5	19.9	45.6
HCM Lane LOS	D	B	B	F	C	N	C	E
HCM 95th-tile Q	4.5	0.9	0.7	11.6	3.6	0	2.8	9.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBR
Lane Configurations	
Traffic Vol, veh/h	195
Future Vol, veh/h	195
Peak Hour Factor	0.68
Heavy Vehicles, %	2
Mvmt Flow	287
Number of Lanes	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	71	184	27	93	268
Future Vol, veh/h	17	71	184	27	93	268
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	77	200	29	101	291

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	708	215	0	0	229	0
Stage 1	215	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	401	825	-	-	1339	-
Stage 1	821	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	371	825	-	-	1339	-
Mov Cap-2 Maneuver	463	-	-	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	567	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.79	0	2.04
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	717	1339	-
HCM Lane V/C Ratio	-	-	0.133	0.076	-
HCM Control Delay (s/veh)	-	-	10.8	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.2	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	209	194	55	37	12
Future Vol, veh/h	0	209	194	55	37	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	227	211	60	40	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	271	0	-	0	468	241
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	227	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1293	-	-	-	553	798
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	811	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1293	-	-	-	553	798
Mov Cap-2 Maneuver	-	-	-	-	620	-
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	811	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	10.97
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1293	-	-	-	656
HCM Lane V/C Ratio	-	-	-	-	0.081
HCM Control Delay (s/veh)	0	-	-	-	11
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	679	40	93	688	31	144
Future Vol, veh/h	679	40	93	688	31	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	6	2	5	12	2	2
Mvmt Flow	780	46	107	791	36	166

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	826	0	1413	413
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	609	-
Critical Hdwy	-	-	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	781	-	129	588
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	505	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	781	-	111	588
Mov Cap-2 Maneuver	-	-	-	-	111	-
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	436	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.23	20.31
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	111	588	-	-	781	-
HCM Lane V/C Ratio	0.32	0.282	-	-	0.137	-
HCM Control Delay (s/veh)	51.9	13.5	-	-	10.3	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	1.2	1.2	-	-	0.5	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	46	22	103	119	15
Future Vol, veh/h	72	46	22	103	119	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	111	71	34	158	183	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	421	195	206	0	-	0
Stage 1	195	-	-	-	-	-
Stage 2	226	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	589	847	1365	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	575	847	1365	-	-	-
Mov Cap-2 Maneuver	575	-	-	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.56	1.36	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1365	-	657	-	-
HCM Lane V/C Ratio	0.025	-	0.276	-	-
HCM Control Delay (s/veh)	7.7	-	12.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	27	68	36	31	107
Future Vol, veh/h	57	27	68	36	31	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	31	79	42	36	124

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	297	100	0	0	121	0
Stage 1	100	-	-	-	-	-
Stage 2	197	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	695	956	-	-	1467	-
Stage 1	924	-	-	-	-	-
Stage 2	837	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	678	956	-	-	1467	-
Mov Cap-2 Maneuver	678	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	816	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.25	0	1.69
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	678	956	1467	-
HCM Lane V/C Ratio	-	-	0.098	0.033	0.025	-
HCM Control Delay (s/veh)	-	-	10.9	8.9	7.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	207	202	76	112	37
Future Vol, veh/h	34	207	202	76	112	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	225	220	83	122	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	302	0	-	0	560	261
Stage 1	-	-	-	-	261	-
Stage 2	-	-	-	-	299	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1259	-	-	-	490	778
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	752	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1259	-	-	-	473	778
Mov Cap-2 Maneuver	-	-	-	-	473	-
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	752	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.12	0	14.91
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	254	-	-	-	524
HCM Lane V/C Ratio	0.029	-	-	-	0.309
HCM Control Delay (s/veh)	7.9	0	-	-	14.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	78	4	2	82	0	0
Future Vol, veh/h	78	4	2	82	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	91	5	2	95	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	95	0	193	-
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	100	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1498	-	796	0
Stage 1	-	-	-	-	931	0
Stage 2	-	-	-	-	924	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1498	-	795	-
Mov Cap-2 Maneuver	-	-	-	-	785	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	923	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.18	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1498	-
HCM Lane V/C Ratio	-	-	-	0.002	-
HCM Control Delay (s/veh)	0	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	41	60	92	20	33
Future Vol, veh/h	85	41	60	92	20	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	118	57	83	128	28	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	175	0	441	147
Stage 1	-	-	-	-	147	-
Stage 2	-	-	-	-	294	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1401	-	574	900
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	756	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1401	-	540	900
Mov Cap-2 Maneuver	-	-	-	-	597	-
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	711	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.05	10.01
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	597	900	-	-	1401	-
HCM Lane V/C Ratio	0.047	0.051	-	-	0.059	-
HCM Control Delay (s/veh)	11.3	9.2	-	-	7.7	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	50	0	47	0	0	0	0	59	168	0	0	142
Future Vol, veh/h	50	0	47	0	0	0	0	59	168	0	0	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	0	51	0	0	0	0	64	183	0	0	154
Number of Lanes	1	1	0	0	1	0	0	1	2	0	0	2

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	1	2
HCM Control Delay, s/veh	8.8	0	8.1	8.7
HCM LOS	A	-	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	50%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	84	84	50	47	0	95	95
LT Vol	59	0	0	50	0	0	0	0
Through Vol	0	84	84	0	0	0	95	47
RT Vol	0	0	0	0	47	0	0	48
Lane Flow Rate	64	91	91	54	51	0	103	104
Geometry Grp	6	6	6	6	6	6	6	6
Degree of Util (X)	0.103	0.134	0.089	0.093	0.07	0	0.151	0.142
Departure Headway (Hd)	5.773	5.27	3.528	6.135	4.933	5.878	5.3	4.946
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	620	679	1011	582	722	0	675	722
Service Time	3.513	3.011	1.268	3.893	2.691	3.653	3.048	2.694
HCM Lane V/C Ratio	0.103	0.134	0.09	0.093	0.071	0	0.153	0.144
HCM Control Delay, s/veh	9.2	8.8	6.6	9.5	8.1	8.7	9	8.5
HCM Lane LOS	A	A	A	A	A	N	A	A
HCM 95th-tile Q	0.3	0.5	0.3	0.3	0.2	0	0.5	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBR
Lane Configurations	
Traffic Vol, veh/h	48
Future Vol, veh/h	48
Peak Hour Factor	0.92
Heavy Vehicles, %	2
Mvmt Flow	52
Number of Lanes	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	36	89	9	31	134
Future Vol, veh/h	9	36	89	9	31	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	39	97	10	34	146

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	315	102	0	0	107	0
Stage 1	102	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	678	954	-	-	1484	-
Stage 1	922	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	663	954	-	-	1484	-
Mov Cap-2 Maneuver	688	-	-	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	804	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.3	0	1.41
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	885	1484	-
HCM Lane V/C Ratio	-	-	0.055	0.023	-
HCM Control Delay (s/veh)	-	-	9.3	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	78	93	19	19	6
Future Vol, veh/h	0	78	93	19	19	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	85	101	21	21	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	122	0	-	0	196	111
Stage 1	-	-	-	-	111	-
Stage 2	-	-	-	-	85	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1466	-	-	-	793	942
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	939	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1466	-	-	-	793	942
Mov Cap-2 Maneuver	-	-	-	-	784	-
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	939	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	9.56
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1466	-	-	-	817
HCM Lane V/C Ratio	-	-	-	-	0.033
HCM Control Delay (s/veh)	0	-	-	-	9.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	7.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	717	81	127	592	57	187
Future Vol, veh/h	717	81	127	592	57	187
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	6	2	5	12	2	2
Mvmt Flow	864	98	153	713	69	225

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	961	0	1575	481
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	663	-
Critical Hdwy	-	-	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	693	-	101	531
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	474	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	693	-	78	531
Mov Cap-2 Maneuver	-	-	-	-	78	-
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	370	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.06	50.31
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	78	531	-	-	693	-
HCM Lane V/C Ratio	0.877	0.424	-	-	0.221	-
HCM Control Delay (s/veh)	160.7	16.7	-	-	11.7	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	4.5	2.1	-	-	0.8	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	26	45	206	186	22
Future Vol, veh/h	38	26	45	206	186	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	61	61	61	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	43	74	338	305	36

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	808	323	341	0	-	0
Stage 1	323	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	350	718	1218	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	619	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	329	718	1218	-	-	-
Mov Cap-2 Maneuver	329	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	619	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.34	1.46	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1218	-	422	-	-
HCM Lane V/C Ratio	0.061	-	0.249	-	-
HCM Control Delay (s/veh)	8.1	-	16.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1	-	-

Intersection	
Int Delay, s/veh	8.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	106	109	99	83	57	134
Future Vol, veh/h	106	109	99	83	57	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	52	52	52	52	52	52
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	204	210	190	160	110	258

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	747	270	0	0	350	0
Stage 1	270	-	-	-	-	-
Stage 2	477	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	380	768	-	-	1209	-
Stage 1	775	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	346	768	-	-	1209	-
Mov Cap-2 Maneuver	346	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	568	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	20.24	0	2.47
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	346	768	1209	-
HCM Lane V/C Ratio	-	-	0.589	0.273	0.091	-
HCM Control Delay (s/veh)	-	-	29.3	11.4	8.3	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	3.6	1.1	0.3	-

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	240	177	170	153	63
Future Vol, veh/h	34	240	177	170	153	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	296	219	210	189	78

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	428	0	-	0	704	323
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	380	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1131	-	-	-	403	718
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	691	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1131	-	-	-	386	718
Mov Cap-2 Maneuver	-	-	-	-	386	-
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.03	0	24.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	223	-	-	-	446
HCM Lane V/C Ratio	0.037	-	-	-	0.598
HCM Control Delay (s/veh)	8.3	0	-	-	24.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	3.8

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	162	22	36	144	0	0
Future Vol, veh/h	162	22	36	144	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	52	52	52	52
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	312	42	69	277	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	354	0	748	-
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	415	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1205	-	380	0
Stage 1	-	-	-	-	726	0
Stage 2	-	-	-	-	666	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1205	-	358	-
Mov Cap-2 Maneuver	-	-	-	-	469	-
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	628	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.63	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1205	-
HCM Lane V/C Ratio	-	-	-	0.057	-
HCM Control Delay (s/veh)	0	-	-	8.2	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0.2	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	210	22	65	137	22	79
Future Vol, veh/h	210	22	65	137	22	79
Conflicting Peds, #/hr	0	72	72	0	15	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	382	40	118	249	40	144

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	494	0	974	474
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	500	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1070	-	279	591
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	609	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1006	-	229	555
Mov Cap-2 Maneuver	-	-	-	-	359	-
Stage 1	-	-	-	-	589	-
Stage 2	-	-	-	-	531	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.91	14.29
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	359	555	-	-	1006	-
HCM Lane V/C Ratio	0.112	0.259	-	-	0.118	-
HCM Control Delay (s/veh)	16.3	13.7	-	-	9.1	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	1	-	-	0.4	-

Intersection	
Intersection Delay, s/veh	16.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Vol, veh/h	222	0	96	0	0	0	0	110	202	0	0	3
Future Vol, veh/h	222	0	96	0	0	0	0	110	202	0	0	3
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	317	0	137	0	0	0	0	157	289	0	0	4
Number of Lanes	1	1	0	0	1	0	0	1	2	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	2
HCM Control Delay, s/veh	20.9	0	12.7	14.8
HCM LOS	C	-	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	0%	100%	36%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	0%	64%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	101	101	222	96	0	3	117	163
LT Vol	110	0	0	222	0	0	3	0	0
Through Vol	0	101	101	0	0	0	0	117	58
RT Vol	0	0	0	0	96	0	0	0	105
Lane Flow Rate	157	144	144	317	137	0	4	167	233
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.345	0.296	0.225	0.676	0.246	0	0.009	0.345	0.452
Departure Headway (Hd)	7.908	7.394	5.613	7.671	6.467	8.574	7.957	7.443	6.981
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	456	486	639	473	555	0	450	483	516
Service Time	5.648	5.134	3.352	5.406	4.202	6.332	5.697	5.183	4.721
HCM Lane V/C Ratio	0.344	0.296	0.225	0.67	0.247	0	0.009	0.346	0.452
HCM Control Delay, s/veh	14.8	13.2	10	25	11.3	11.3	10.8	14.1	15.4
HCM Lane LOS	B	B	A	C	B	N	B	B	C
HCM 95th-tile Q	1.5	1.2	0.9	5	1	0	0	1.5	2.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBT	SBR
Lane Configurations		
Traffic Vol, veh/h	175	105
Future Vol, veh/h	175	105
Peak Hour Factor	0.70	0.70
Heavy Vehicles, %	2	2
Mvmt Flow	250	150
Number of Lanes	2	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	49	202	13	46	166
Future Vol, veh/h	12	49	202	13	46	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	53	220	14	50	180

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	507	227	0	0	234	0
Stage 1	227	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	525	813	-	-	1334	-
Stage 1	811	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	506	813	-	-	1334	-
Mov Cap-2 Maneuver	582	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	738	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.23	0	1.69
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	754	1334	-
HCM Lane V/C Ratio	-	-	0.088	0.037	-
HCM Control Delay (s/veh)	-	-	10.2	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	162	137	27	26	9
Future Vol, veh/h	0	162	137	27	26	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	176	149	29	28	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	178	0	-	0	340	164
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	176	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1398	-	-	-	656	881
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1398	-	-	-	656	881
Mov Cap-2 Maneuver	-	-	-	-	692	-
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	854	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	10.18
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1398	-	-	-	732
HCM Lane V/C Ratio	-	-	-	-	0.052
HCM Control Delay (s/veh)	0	-	-	-	10.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	6.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	665	110	76	471	120	158
Future Vol, veh/h	665	110	76	471	120	158
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	205	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	6	2	5	12	2	2
Mvmt Flow	686	113	78	486	124	163

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	799	0	1142	399
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	399	-
Critical Hdwy	-	-	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	800	-	194	600
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	800	-	175	600
Mov Cap-2 Maneuver	-	-	-	-	175	-
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	583	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.39	35.14
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	175	600	-	-	800	-
HCM Lane V/C Ratio	0.707	0.271	-	-	0.098	-
HCM Control Delay (s/veh)	64	13.2	-	-	10	-
HCM Lane LOS	F	B	-	-	A	-
HCM 95th %tile Q(veh)	4.3	1.1	-	-	0.3	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	46	26	206	181	3
Future Vol, veh/h	72	46	26	206	181	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	113	72	41	322	283	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	688	285	288	0	-	0
Stage 1	285	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	412	754	1275	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	399	754	1275	-	-	-
Mov Cap-2 Maneuver	399	-	-	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	675	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.77	0.89	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1275	-	488	-	-
HCM Lane V/C Ratio	0.032	-	0.377	-	-
HCM Control Delay (s/veh)	7.9	-	16.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.7	-	-

NB thru Q = NBQ (Int 1) - (length bet 1&2)+NBQ (int 2)

108-90+3 = 21

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	21	104	18	24	97
Future Vol, veh/h	30	21	104	18	24	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	22	108	19	25	101

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	269	118	0	0	127	0
Stage 1	118	-	-	-	-	-
Stage 2	151	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	721	934	-	-	1459	-
Stage 1	907	-	-	-	-	-
Stage 2	877	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	708	934	-	-	1459	-
Mov Cap-2 Maneuver	708	-	-	-	-	-
Stage 1	907	-	-	-	-	-
Stage 2	862	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.75	0	1.49
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	708	934	1459	-
HCM Lane V/C Ratio	-	-	0.044	0.023	0.017	-
HCM Control Delay (s/veh)	-	-	10.3	8.9	7.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.1	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	148	129	80	70	46
Future Vol, veh/h	37	148	129	80	70	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	164	143	89	78	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	232	0	-	0	434	188
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	247	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1335	-	-	-	579	854
Stage 1	-	-	-	-	844	-
Stage 2	-	-	-	-	794	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1335	-	-	-	559	854
Mov Cap-2 Maneuver	-	-	-	-	559	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	794	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.56	0	11.93
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	360	-	-	-	648
HCM Lane V/C Ratio	0.031	-	-	-	0.199
HCM Control Delay (s/veh)	7.8	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	36	2	1	41	0	0
Future Vol, veh/h	36	2	1	41	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	3	1	51	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	48	0	100	-
Stage 1	-	-	-	-	46	-
Stage 2	-	-	-	-	54	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1560	-	899	0
Stage 1	-	-	-	-	976	0
Stage 2	-	-	-	-	969	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1560	-	898	-
Mov Cap-2 Maneuver	-	-	-	-	853	-
Stage 1	-	-	-	-	976	-
Stage 2	-	-	-	-	968	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.17	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1560	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s/veh)	0	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	112	6	14	114	0	8
Future Vol, veh/h	112	6	14	114	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	140	8	18	143	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	148	0	321	144
Stage 1	-	-	-	-	144	-
Stage 2	-	-	-	-	178	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1434	-	672	904
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	853	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1434	-	664	904
Mov Cap-2 Maneuver	-	-	-	-	696	-
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	843	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.82	9.03
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	904	-	-	1434	-
HCM Lane V/C Ratio	-	0.011	-	-	0.012	-
HCM Control Delay (s/veh)	0	9	-	-	7.5	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0	-

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Vol, veh/h	67	0	54	0	0	0	0	49	92	0	0	0
Future Vol, veh/h	67	0	54	0	0	0	0	49	92	0	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	0	57	0	0	0	0	52	98	0	0	0
Number of Lanes	1	1	0	0	1	0	0	1	2	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	2
HCM Control Delay, s/veh	8.6	0	8	8.3
HCM LOS	A	-	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	100%	32%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	0%	68%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	46	46	67	54	0	0	61	97
LT Vol	49	0	0	67	0	0	0	0	0
Through Vol	0	46	46	0	0	0	0	61	31
RT Vol	0	0	0	0	54	0	0	0	66
Lane Flow Rate	52	49	49	71	57	0	0	65	103
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.083	0.071	0.048	0.115	0.074	0	0	0.094	0.135
Departure Headway (Hd)	5.743	5.241	3.499	5.824	4.623	5.606	5.2	5.2	4.72
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	624	684	1020	615	773	0	0	689	759
Service Time	3.476	2.973	1.231	3.564	2.363	3.358	2.933	2.933	2.452
HCM Lane V/C Ratio	0.083	0.072	0.048	0.115	0.074	0	0	0.094	0.136
HCM Control Delay, s/veh	9	8.4	6.4	9.3	7.7	8.4	7.9	8.5	8.2
HCM Lane LOS	A	A	A	A	A	N	N	A	A
HCM 95th-tile Q	0.3	0.2	0.2	0.4	0.2	0	0	0.3	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBT	SBR
Lane Configurations		
Traffic Vol, veh/h	92	66
Future Vol, veh/h	92	66
Peak Hour Factor	0.94	0.94
Heavy Vehicles, %	2	2
Mvmt Flow	98	70
Number of Lanes	2	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	7.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	148	85	41	142	56
Future Vol, veh/h	36	148	85	41	142	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	92	92	70	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	211	92	45	203	61

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	581	115	0	0	137	0
Stage 1	115	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	476	938	-	-	1447	-
Stage 1	910	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	409	938	-	-	1447	-
Mov Cap-2 Maneuver	470	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	11.88	0	6.07
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	785	1447	-
HCM Lane V/C Ratio	-	-	0.335	0.14	-
HCM Control Delay (s/veh)	-	-	11.9	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.5	0.5	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	36	30	84	78	26
Future Vol, veh/h	0	36	30	84	78	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	70	92	92	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	33	120	111	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	153	0	-	0	132	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	39	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1428	-	-	-	862	965
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	983	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1428	-	-	-	862	965
Mov Cap-2 Maneuver	-	-	-	-	827	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	983	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	10.07
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1428	-	-	-	858
HCM Lane V/C Ratio	-	-	-	-	0.173
HCM Control Delay (s/veh)	0	-	-	-	10.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	816	217	263	711	53	306
Future Volume (veh/h)	816	217	263	711	53	306
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1870	1826	1722	1870	1870
Adj Flow Rate, veh/h	938	192	302	817	61	295
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	6	2	5	12	2	2
Cap, veh/h	1022	209	344	2061	377	335
Arrive On Green	0.36	0.36	0.20	0.63	0.21	0.21
Sat Flow, veh/h	2936	582	1739	3358	1781	1585
Grp Volume(v), veh/h	567	563	302	817	61	295
Grp Sat Flow(s),veh/h/ln	1721	1706	1739	1636	1781	1585
Q Serve(g_s), s	22.0	22.1	11.8	8.6	2.0	12.6
Cycle Q Clear(g_c), s	22.0	22.1	11.8	8.6	2.0	12.6
Prop In Lane		0.34	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	618	613	344	2061	377	335
V/C Ratio(X)	0.92	0.92	0.88	0.40	0.16	0.88
Avail Cap(c_a), veh/h	1192	1183	619	2268	774	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	21.4	27.2	6.4	22.5	26.7
Incr Delay (d2), s/veh	2.4	2.5	2.9	0.0	0.1	3.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.1	12.0	8.0	3.1	1.4	7.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.9	23.9	30.1	6.4	22.6	29.7
LnGrp LOS	C	C	C	A	C	C
Approach Vol, veh/h	1130			1119	356	
Approach Delay, s/veh	23.9			12.8	28.5	
Approach LOS	C			B	C	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	19.4	18.9	31.6		50.6
Change Period (Y+Rc), s	4.6	5.1	6.5		6.5
Max Green Setting (Gmax), s	30.4	24.9	48.5		48.5
Max Q Clear Time (g_c+I1), s	14.6	13.8	24.1		10.6
Green Ext Time (p_c), s	0.2	0.1	1.1		1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.8
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	15.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	136	55	61	206	375	114
Future Vol, veh/h	136	55	61	206	375	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	181	73	81	275	500	152

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1013	576	652	0	-	0
Stage 1	576	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	265	517	935	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	237	517	935	-	-	-
Mov Cap-2 Maneuver	237	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	651	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	71.84	2.11	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	411	-	281	-	-
HCM Lane V/C Ratio	0.087	-	0.906	-	-
HCM Control Delay (s/veh)	9.2	0	71.8	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.3	-	8.3	-	-

Intersection	
Int Delay, s/veh	7.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	85	130	124	175	158	215
Future Vol, veh/h	85	130	124	175	158	215
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	116	178	170	240	216	295

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1017	290	0	0	410	0
Stage 1	290	-	-	-	-	-
Stage 2	727	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	263	749	-	-	1149	-
Stage 1	760	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	214	749	-	-	1149	-
Mov Cap-2 Maneuver	214	-	-	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	388	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	22.78	0	3.75
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	214	749	1149	-
HCM Lane V/C Ratio	-	-	0.545	0.238	0.188	-
HCM Control Delay (s/veh)	-	-	40.4	11.3	8.9	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	2.9	0.9	0.7	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	445	251	363	105	34
Future Vol, veh/h	66	445	251	363	105	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	511	289	417	121	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	706	0	-	0	905	353
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	407	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	888	-	-	-	276	643
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	640	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	888	-	-	-	253	643
Mov Cap-2 Maneuver	-	-	-	-	253	-
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	640	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.22	0	26.57
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	888	-	-	-	253	643
HCM Lane V/C Ratio	0.085	-	-	-	0.478	0.061
HCM Control Delay (s/veh)	9.4	-	-	-	31.6	11
HCM Lane LOS	A	-	-	-	D	B
HCM 95th %tile Q(veh)	0.3	-	-	-	2.4	0.2

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	249	204	210	157	0	0
Future Vol, veh/h	249	204	210	157	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	453	371	382	285	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	824	0	1687	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	1049	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	806	-	103	0
Stage 1	-	-	-	-	526	0
Stage 2	-	-	-	-	337	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	806	-	54	-
Mov Cap-2 Maneuver	-	-	-	-	139	-
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	177	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	7.68	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	806	-
HCM Lane V/C Ratio	-	-	-	0.474	-
HCM Control Delay (s/veh)	0	-	-	13.4	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	2.6	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	432	82	134	250	6	61
Future Vol, veh/h	432	82	134	250	6	61
Conflicting Peds, #/hr	0	22	22	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	697	132	216	403	10	98

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	851	0	1622	785
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	837	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	787	-	113	393
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	425	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	773	-	80	386
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	305	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	4	18.08
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	200	386	-	-	773	-
HCM Lane V/C Ratio	0.048	0.255	-	-	0.28	-
HCM Control Delay (s/veh)	23.9	17.5	-	-	11.5	-
HCM Lane LOS	C	C	-	-	B	-
HCM 95th %tile Q(veh)	0.2	1	-	-	1.1	-

Intersection	
Intersection Delay, s/veh	168.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	295	15	213	82	8	62	0	237	508	36	38	471
Future Vol, veh/h	295	15	213	82	8	62	0	237	508	36	38	471
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	369	19	266	103	10	78	0	296	635	45	48	589
Number of Lanes	1	1	0	1	1	0	0	1	2	0	0	2

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay, s/veh	146.1	23.6	109.8	283.4
HCM LOS	F	C	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	14%	0%
Vol Thru, %	0%	100%	82%	0%	7%	0%	11%	86%	56%
Vol Right, %	0%	0%	18%	0%	93%	0%	89%	0%	44%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	237	339	205	295	228	82	70	274	424
LT Vol	237	0	0	295	0	82	0	38	0
Through Vol	0	339	169	0	15	0	8	236	236
RT Vol	0	0	36	0	213	0	62	0	188
Lane Flow Rate	296	423	257	369	285	103	88	342	529
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.928	1.267	0.759	1.3	0.914	0.39	0.306	1.156	1.735
Departure Headway (Hd)	12.323	11.801	11.673	15.068	13.871	14.139	12.963	13.422	13.022
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	296	313	313	243	265	256	279	273	286
Service Time	10.023	9.501	9.373	12.768	11.571	11.839	10.663	11.122	10.722
HCM Lane V/C Ratio	1	1.351	0.821	1.519	1.075	0.402	0.315	1.253	1.85
HCM Control Delay, s/veh	72.4	176.2	43.4	200.9	75.2	25.6	21.3	141.9	374.8
HCM Lane LOS	F	F	E	F	F	D	C	F	F
HCM 95th-tile Q	8.9	18.2	5.8	16.2	8.1	1.8	1.3	13.7	31.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBR
Lane Configurations	
Traffic Vol, veh/h	188
Future Vol, veh/h	188
Peak Hour Factor	0.80
Heavy Vehicles, %	2
Mvmt Flow	235
Number of Lanes	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	12	12	174	262	51
Future Vol, veh/h	25	12	12	174	262	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	13	13	189	285	55

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	528	313	340	0	-	0
Stage 1	313	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	511	728	1219	-	-	-
Stage 1	742	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	505	728	1219	-	-	-
Mov Cap-2 Maneuver	505	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11.92	0.52	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	116	-	561	-	-
HCM Lane V/C Ratio	0.011	-	0.072	-	-
HCM Control Delay (s/veh)	8	0	11.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	914	120	145	1020	57	270
Future Volume (veh/h)	914	120	145	1020	57	270
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1870	1826	1722	1870	1870
Adj Flow Rate, veh/h	1016	77	161	1133	63	244
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	2	5	12	2	2
Cap, veh/h	1195	91	204	1925	336	299
Arrive On Green	0.37	0.37	0.12	0.59	0.19	0.19
Sat Flow, veh/h	3332	246	1739	3358	1781	1585
Grp Volume(v), veh/h	539	554	161	1133	63	244
Grp Sat Flow(s),veh/h/ln	1721	1767	1739	1636	1781	1585
Q Serve(g_s), s	14.3	14.3	4.5	10.8	1.5	7.3
Cycle Q Clear(g_c), s	14.3	14.3	4.5	10.8	1.5	7.3
Prop In Lane		0.14	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	634	651	204	1925	336	299
V/C Ratio(X)	0.85	0.85	0.79	0.59	0.19	0.82
Avail Cap(c_a), veh/h	1850	1900	870	3519	909	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.4	14.4	21.4	6.4	17.0	19.4
Incr Delay (d2), s/veh	1.3	1.2	2.6	0.1	0.1	2.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.6	8.8	3.2	4.4	1.0	4.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.7	15.7	23.9	6.6	17.1	21.5
LnGrp LOS	B	B	C	A	B	C
Approach Vol, veh/h	1093			1294	307	
Approach Delay, s/veh	15.7			8.7	20.6	
Approach LOS	B			A	C	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	14.0	10.9	24.8		35.8
Change Period (Y+Rc), s	4.6	5.1	6.5		6.5
Max Green Setting (Gmax), s	25.4	24.9	53.5		53.5
Max Q Clear Time (g_c+I1), s	9.3	6.5	16.3		12.8
Green Ext Time (p_c), s	0.2	0.1	2.0		2.5

Intersection Summary	
HCM 7th Control Delay, s/veh	12.9
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	166	37	33	161	210	58
Future Vol, veh/h	166	37	33	161	210	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	210	47	42	204	266	73

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	590	303	339	0	-	0
Stage 1	303	-	-	-	-	-
Stage 2	287	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	470	737	1220	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	452	737	1220	-	-	-
Mov Cap-2 Maneuver	452	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	762	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	20.39	1.37	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	306	-	486	-	-
HCM Lane V/C Ratio	0.034	-	0.528	-	-
HCM Control Delay (s/veh)	8.1	0	20.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	3	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	49	103	38	48	144
Future Vol, veh/h	57	49	103	38	48	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	55	116	43	54	162

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	407	137	0	0	158	0
Stage 1	137	-	-	-	-	-
Stage 2	270	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	600	911	-	-	1421	-
Stage 1	889	-	-	-	-	-
Stage 2	776	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	578	911	-	-	1421	-
Mov Cap-2 Maneuver	578	-	-	-	-	-
Stage 1	889	-	-	-	-	-
Stage 2	746	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.71	0	1.91
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	578	911	1421	-
HCM Lane V/C Ratio	-	-	0.111	0.06	0.038	-
HCM Control Delay (s/veh)	-	-	12	9.2	7.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	0.1	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	337	440	70	118	48
Future Vol, veh/h	30	337	440	70	118	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	366	478	76	128	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	765	277
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	248	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1012	-	-	-	340	720
Stage 1	-	-	-	-	564	-
Stage 2	-	-	-	-	770	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1012	-	-	-	329	720
Mov Cap-2 Maneuver	-	-	-	-	329	-
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	770	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.71	0	19.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1012	-	-	-	329	720
HCM Lane V/C Ratio	0.032	-	-	-	0.39	0.072
HCM Control Delay (s/veh)	8.7	-	-	-	22.8	10.4
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.8	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	102	4	4	109	0	0
Future Vol, veh/h	102	4	4	109	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	119	5	5	127	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	123	0	257	-
Stage 1	-	-	-	-	121	-
Stage 2	-	-	-	-	136	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1464	-	732	0
Stage 1	-	-	-	-	904	0
Stage 2	-	-	-	-	890	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1464	-	729	-
Mov Cap-2 Maneuver	-	-	-	-	742	-
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	888	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.26	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1464	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s/veh)	0	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	87	49	66	84	25	42
Future Vol, veh/h	87	49	66	84	25	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	121	68	92	117	35	58

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	189	0	455	155
Stage 1	-	-	-	-	155	-
Stage 2	-	-	-	-	300	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1385	-	563	891
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	752	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1385	-	526	891
Mov Cap-2 Maneuver	-	-	-	-	587	-
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	702	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.42	10.14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	587	891	-	-	1385	-
HCM Lane V/C Ratio	0.059	0.065	-	-	0.066	-
HCM Control Delay (s/veh)	11.5	9.3	-	-	7.8	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	69.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	42	6	48	40	9	42	0	47	675	21	33	859
Future Vol, veh/h	42	6	48	40	9	42	0	47	675	21	33	859
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	7	52	43	10	46	0	51	734	23	36	934
Number of Lanes	1	1	0	1	1	0	0	1	2	0	0	2

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay, s/veh	14.5	14.5	60.6	87.9
HCM LOS	B	B	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	7%	0%
Vol Thru, %	0%	100%	91%	0%	11%	0%	18%	93%	90%
Vol Right, %	0%	0%	9%	0%	89%	0%	82%	0%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	450	246	42	54	40	51	463	478
LT Vol	47	0	0	42	0	40	0	33	0
Through Vol	0	450	225	0	6	0	9	430	430
RT Vol	0	0	21	0	48	0	42	0	48
Lane Flow Rate	51	489	267	46	59	43	55	503	519
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.118	1.059	0.575	0.132	0.151	0.126	0.144	1.056	1.075
Departure Headway (Hd)	8.553	8.043	7.982	10.787	9.629	10.813	9.701	7.794	7.686
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	421	455	455	335	374	333	372	468	478
Service Time	6.253	5.743	5.682	8.487	7.329	8.513	7.401	5.494	5.386
HCM Lane V/C Ratio	0.121	1.075	0.587	0.137	0.158	0.129	0.148	1.075	1.086
HCM Control Delay, s/veh	12.4	87.3	20.9	15.1	14	15.1	14	85.2	90.5
HCM Lane LOS	B	F	C	C	B	C	B	F	F
HCM 95th-tile Q	0.4	15.1	3.5	0.5	0.5	0.4	0.5	15.2	16.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBR
Lane Configurations	
Traffic Vol, veh/h	48
Future Vol, veh/h	48
Peak Hour Factor	0.92
Heavy Vehicles, %	2
Mvmt Flow	52
Number of Lanes	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	14	14	165	192	55
Future Vol, veh/h	29	14	14	165	192	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	15	15	179	209	60

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	448	239	268	0	-	0
Stage 1	239	-	-	-	-	-
Stage 2	210	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	568	800	1295	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	825	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	800	1295	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	825	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11.27	0.61	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	141	-	621	-	-
HCM Lane V/C Ratio	0.012	-	0.075	-	-
HCM Control Delay (s/veh)	7.8	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1151	65	258	973	41	315
Future Volume (veh/h)	1151	65	258	973	41	315
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1870	1826	1722	1870	1870
Adj Flow Rate, veh/h	1308	51	293	1106	47	301
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	6	2	5	12	2	2
Cap, veh/h	1388	54	328	2157	375	334
Arrive On Green	0.41	0.41	0.19	0.66	0.21	0.21
Sat Flow, veh/h	3467	132	1739	3358	1781	1585
Grp Volume(v), veh/h	666	693	293	1106	47	301
Grp Sat Flow(s),veh/h/ln	1721	1787	1739	1636	1781	1585
Q Serve(g_s), s	31.7	31.9	14.0	14.9	1.8	15.8
Cycle Q Clear(g_c), s	31.7	31.9	14.0	14.9	1.8	15.8
Prop In Lane		0.07	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	707	735	328	2157	375	334
V/C Ratio(X)	0.94	0.94	0.89	0.51	0.13	0.90
Avail Cap(c_a), veh/h	977	1015	507	2157	634	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	24.2	33.8	7.5	27.3	32.8
Incr Delay (d2), s/veh	11.7	11.7	8.7	0.1	0.1	6.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.0	19.7	10.2	6.2	1.4	10.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	35.9	35.9	42.5	7.6	27.4	38.9
LnGrp LOS	D	D	D	A	C	D
Approach Vol, veh/h	1359			1399	348	
Approach Delay, s/veh	35.9			14.9	37.4	
Approach LOS	D			B	D	

Timer - Assigned Phs	2	3	4	8
Phs Duration (G+Y+Rc), s	22.6	21.2	41.6	62.8
Change Period (Y+Rc), s	4.6	5.1	6.5	6.5
Max Green Setting (Gmax), s	30.4	24.9	48.5	48.5
Max Q Clear Time (g_c+I1), s	17.8	16.0	33.9	16.9
Green Ext Time (p_c), s	0.2	0.1	1.2	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	26.6
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	86	1	6	341	231	110
Future Vol, veh/h	86	1	6	341	231	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	112	1	8	443	300	143

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	830	371	443	0	-	0
Stage 1	371	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	340	674	1117	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	637	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	337	674	1117	-	-	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	637	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	20.85	0.14	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	31	-	339	-	-
HCM Lane V/C Ratio	0.007	-	0.333	-	-
HCM Control Delay (s/veh)	8.2	0	20.8	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.4	-	-

Intersection	
Int Delay, s/veh	5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	191	134	27	73	190
Future Vol, veh/h	46	191	134	27	73	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	265	186	38	101	264

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	672	205	0	0	224	0
Stage 1	205	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	421	836	-	-	1345	-
Stage 1	829	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	390	836	-	-	1345	-
Mov Cap-2 Maneuver	390	-	-	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	584	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	12.22	0	2.19
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	390	836	1345	-
HCM Lane V/C Ratio	-	-	0.164	0.317	0.075	-
HCM Control Delay (s/veh)	-	-	16	11.3	7.9	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	1.4	0.2	-

Intersection	
Int Delay, s/veh	9.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	398	431	202	200	43
Future Vol, veh/h	15	398	431	202	200	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	457	495	232	230	49

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	728	0	-	0	875	364
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	263	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	872	-	-	-	289	633
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	757	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	872	-	-	-	283	633
Mov Cap-2 Maneuver	-	-	-	-	283	-
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	757	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.33	0	47.79
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	872	-	-	-	283	633
HCM Lane V/C Ratio	0.02	-	-	-	0.812	0.078
HCM Control Delay (s/veh)	9.2	-	-	-	55.7	11.2
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.1	-	-	-	6.5	0.3

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	194	26	43	164	0	0
Future Vol, veh/h	194	26	43	164	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	52	52	52	52
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	373	50	83	315	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	423	0	879	-
Stage 1	-	-	-	-	398	-
Stage 2	-	-	-	-	481	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1136	-	318	0
Stage 1	-	-	-	-	678	0
Stage 2	-	-	-	-	622	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1136	-	295	-
Mov Cap-2 Maneuver	-	-	-	-	417	-
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	577	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.75	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1136	-
HCM Lane V/C Ratio	-	-	-	0.073	-
HCM Control Delay (s/veh)	0	-	-	8.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0.2	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	216	26	68	124	26	94
Future Vol, veh/h	216	26	68	124	26	94
Conflicting Peds, #/hr	0	72	72	0	15	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	393	47	124	225	47	171

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	512	0	976	488
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	488	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1053	-	278	580
Stage 1	-	-	-	-	617	-
Stage 2	-	-	-	-	617	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	990	-	226	545
Mov Cap-2 Maneuver	-	-	-	-	357	-
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	533	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.24	15.04
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	357	545	-	-	990	-
HCM Lane V/C Ratio	0.133	0.314	-	-	0.125	-
HCM Control Delay (s/veh)	16.6	14.6	-	-	9.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	1.3	-	-	0.4	-

Intersection	
Intersection Delay, s/veh	191.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Vol, veh/h	238	2	70	20	3	29	0	73	714	7	0	39
Future Vol, veh/h	238	2	70	20	3	29	0	73	714	7	0	39
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	294	2	86	25	4	36	0	90	881	9	0	48
Number of Lanes	1	1	0	1	1	0	0	1	2	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay, s/veh	57.2	17.4	179.7	254.5
HCM LOS	F	C	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	97%	0%	3%	0%	9%	0%	100%	70%
Vol Right, %	0%	0%	3%	0%	97%	0%	91%	0%	0%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	476	245	238	72	20	32	39	536	384
LT Vol	73	0	0	238	0	20	0	39	0	0
Through Vol	0	476	238	0	2	0	3	0	536	268
RT Vol	0	0	7	0	70	0	29	0	0	116
Lane Flow Rate	90	588	302	294	89	25	40	48	662	474
Geometry Grp	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.247	1.526	0.784	0.899	0.243	0.085	0.124	0.131	1.707	1.195
Departure Headway (Hd)	10.636	10.119	10.098	13.009	11.81	13.848	12.676	10.497	9.978	9.758
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	340	364	360	282	306	260	284	344	371	375
Service Time	8.336	7.819	7.798	10.709	9.51	11.548	10.376	8.197	7.678	7.458
HCM Lane V/C Ratio	0.265	1.615	0.839	1.043	0.291	0.096	0.141	0.14	1.784	1.264
HCM Control Delay, s/veh	16.8	275.9	41.2	69	18.3	17.8	17.2	14.8	353.3	141
HCM Lane LOS	C	F	E	F	C	C	C	B	F	F
HCM 95th-tile Q	1	30.1	6.5	8.1	0.9	0.3	0.4	0.4	38	18.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBT	SBR
Lane Configurations		
Traffic Vol, veh/h	804	116
Future Vol, veh/h	804	116
Peak Hour Factor	0.81	0.81
Heavy Vehicles, %	2	2
Mvmt Flow	993	143
Number of Lanes	2	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	12	13	315	179	53
Future Vol, veh/h	32	12	13	315	179	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	13	14	342	195	58

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	594	223	252	0	-	0
Stage 1	223	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	468	816	1313	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	698	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	461	816	1313	-	-	-
Mov Cap-2 Maneuver	461	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	698	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.57	0.31	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	71	-	523	-	-
HCM Lane V/C Ratio	0.011	-	0.091	-	-
HCM Control Delay (s/veh)	7.8	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	852	27	91	599	30	187
Future Volume (veh/h)	852	27	91	599	30	187
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1870	1826	1722	1870	1870
Adj Flow Rate, veh/h	878	18	94	618	31	141
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	6	2	5	12	2	2
Cap, veh/h	1154	24	122	1782	210	187
Arrive On Green	0.33	0.33	0.07	0.54	0.12	0.12
Sat Flow, veh/h	3539	71	1739	3358	1781	1585
Grp Volume(v), veh/h	438	458	94	618	31	141
Grp Sat Flow(s),veh/h/ln	1721	1798	1739	1636	1781	1585
Q Serve(g_s), s	7.5	7.5	1.7	3.5	0.5	2.8
Cycle Q Clear(g_c), s	7.5	7.5	1.7	3.5	0.5	2.8
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	576	602	122	1782	210	187
V/C Ratio(X)	0.76	0.76	0.77	0.35	0.15	0.75
Avail Cap(c_a), veh/h	2798	2924	1342	5320	1375	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.8	9.8	15.0	4.2	13.0	14.0
Incr Delay (d2), s/veh	0.8	0.8	9.8	0.0	0.1	2.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	4.0	1.4	0.1	0.2	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	10.6	10.5	24.9	4.3	13.1	16.3
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	896			712	172	
Approach Delay, s/veh	10.5			7.0	15.8	
Approach LOS	B			A	B	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	8.5	6.9	17.5		24.4
Change Period (Y+Rc), s	4.6	4.6	6.5		6.5
Max Green Setting (Gmax), s	25.4	25.4	53.5		53.5
Max Q Clear Time (g_c+I1), s	4.8	3.7	9.5		5.5
Green Ext Time (p_c), s	0.1	0.2	1.5		0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	9.6
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	122	33	14	94	104	11
Future Vol, veh/h	122	33	14	94	104	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	156	42	18	121	133	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	297	140	147	0	-	0
Stage 1	140	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	694	908	1434	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	685	908	1434	-	-	-
Mov Cap-2 Maneuver	685	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	872	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11.86	0.98	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	233	-	723	-	-
HCM Lane V/C Ratio	0.013	-	0.275	-	-
HCM Control Delay (s/veh)	7.5	0	11.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	1.1	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	21	84	9	85	40
Future Vol, veh/h	9	21	84	9	85	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	22	88	9	89	42

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	311	92	0	0	97	0
Stage 1	92	-	-	-	-	-
Stage 2	219	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	682	965	-	-	1497	-
Stage 1	931	-	-	-	-	-
Stage 2	818	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	641	965	-	-	1497	-
Mov Cap-2 Maneuver	641	-	-	-	-	-
Stage 1	931	-	-	-	-	-
Stage 2	769	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.38	0	5.14
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	641	965	1497	-
HCM Lane V/C Ratio	-	-	0.015	0.023	0.059	-
HCM Control Delay (s/veh)	-	-	10.7	8.8	7.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0.2	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	239	283	81	73	17
Future Vol, veh/h	9	239	283	81	73	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	263	311	89	80	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	400	0	-	0	507	200
Stage 1	-	-	-	-	355	-
Stage 2	-	-	-	-	151	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1155	-	-	-	495	808
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1155	-	-	-	491	808
Mov Cap-2 Maneuver	-	-	-	-	491	-
Stage 1	-	-	-	-	674	-
Stage 2	-	-	-	-	861	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.3	0	12.97
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1155	-	-	-	491	808
HCM Lane V/C Ratio	0.009	-	-	-	0.163	0.023
HCM Control Delay (s/veh)	8.1	-	-	-	13.8	9.6
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.6	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	44	2	1	19	0	0
Future Vol, veh/h	44	2	1	19	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	450	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	3	1	24	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	54	0	79	-
Stage 1	-	-	-	-	52	-
Stage 2	-	-	-	-	26	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1552	-	924	0
Stage 1	-	-	-	-	970	0
Stage 2	-	-	-	-	996	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1552	-	923	-
Mov Cap-2 Maneuver	-	-	-	-	869	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.37	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1552	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s/veh)	0	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	42	2	8	20	0	6
Future Vol, veh/h	42	2	8	20	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	3	10	25	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	55	0	99	54
Stage 1	-	-	-	-	54	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1550	-	900	1013
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1550	-	894	1013
Mov Cap-2 Maneuver	-	-	-	-	851	-
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	971	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.1	8.58
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	1013	-	-	1550	-
HCM Lane V/C Ratio	-	0.007	-	-	0.006	-
HCM Control Delay (s/veh)	0	8.6	-	-	7.3	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0	-

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Vol, veh/h	6	4	32	58	7	27	0	23	338	25	0	16
Future Vol, veh/h	6	4	32	58	7	27	0	23	338	25	0	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	4	34	62	7	29	0	24	360	27	0	17
Number of Lanes	1	1	0	1	1	0	0	1	2	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay, s/veh	10.2	11	12.4	14.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	82%	0%	11%	0%	21%	0%	100%	97%
Vol Right, %	0%	0%	18%	0%	89%	0%	79%	0%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	225	138	6	36	58	34	16	318	164
LT Vol	23	0	0	6	0	58	0	16	0	0
Through Vol	0	225	113	0	4	0	7	0	318	159
RT Vol	0	0	25	0	32	0	27	0	0	5
Lane Flow Rate	24	240	146	6	38	62	36	17	338	174
Geometry Grp	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.046	0.418	0.25	0.014	0.072	0.132	0.067	0.031	0.57	0.293
Departure Headway (Hd)	6.786	6.282	6.154	7.903	6.775	7.718	6.658	6.565	6.061	6.04
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	527	573	583	452	527	463	536	545	595	595
Service Time	4.535	4.031	3.903	5.673	4.544	5.482	4.422	4.307	3.804	3.782
HCM Lane V/C Ratio	0.046	0.419	0.25	0.013	0.072	0.134	0.067	0.031	0.568	0.292
HCM Control Delay, s/veh	9.9	13.5	11	10.8	10.1	11.7	9.9	9.5	16.6	11.3
HCM Lane LOS	A	B	B	B	B	B	A	A	C	B
HCM 95th-tile Q	0.1	2.1	1	0	0.2	0.5	0.2	0.1	3.6	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBT	SBR
Lane Configurations		
Traffic Vol, veh/h	477	5
Future Vol, veh/h	477	5
Peak Hour Factor	0.94	0.94
Heavy Vehicles, %	2	2
Mvmt Flow	507	5
Number of Lanes	2	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	8	8	178	267	25
Future Vol, veh/h	15	8	8	178	267	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	9	9	193	290	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	515	304	317	0	-	0
Stage 1	304	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	520	736	1243	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	516	736	1243	-	-	-
Mov Cap-2 Maneuver	516	-	-	-	-	-
Stage 1	743	-	-	-	-	-
Stage 2	824	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11.54	0.34	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	77	-	576	-	-
HCM Lane V/C Ratio	0.007	-	0.043	-	-
HCM Control Delay (s/veh)	7.9	0	11.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	816	287	277	711	108	320
Future Volume (veh/h)	816	287	277	711	108	320
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1870	1826	1722	1870	1870
Adj Flow Rate, veh/h	938	273	318	817	124	311
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	6	2	5	12	2	2
Cap, veh/h	1026	298	353	2136	386	344
Arrive On Green	0.39	0.39	0.20	0.65	0.22	0.22
Sat Flow, veh/h	2721	763	1739	3358	1781	1585
Grp Volume(v), veh/h	612	599	318	817	124	311
Grp Sat Flow(s),veh/h/ln	1721	1674	1739	1636	1781	1585
Q Serve(g_s), s	28.7	28.9	15.2	9.8	5.0	16.3
Cycle Q Clear(g_c), s	28.7	28.9	15.2	9.8	5.0	16.3
Prop In Lane		0.46	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	671	653	353	2136	386	344
V/C Ratio(X)	0.91	0.92	0.90	0.38	0.32	0.91
Avail Cap(c_a), veh/h	980	954	509	2136	636	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	24.6	33.1	6.8	28.1	32.5
Incr Delay (d2), s/veh	7.3	7.9	11.5	0.0	0.2	7.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.4	18.2	11.2	4.1	3.5	10.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	31.9	32.5	44.6	6.9	28.2	39.8
LnGrp LOS	C	C	D	A	C	D
Approach Vol, veh/h	1211			1135	435	
Approach Delay, s/veh	32.2			17.5	36.5	
Approach LOS	C			B	D	

Timer - Assigned Phs	2	3	4	8
Phs Duration (G+Y+Rc), s	23.0	22.4	39.7	62.1
Change Period (Y+Rc), s	4.6	5.1	6.5	6.5
Max Green Setting (Gmax), s	30.4	24.9	48.5	48.5
Max Q Clear Time (g_c+I1), s	18.3	17.2	30.9	11.8
Green Ext Time (p_c), s	0.2	0.1	2.3	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	26.9
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	28.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	136	55	61	276	459	114
Future Vol, veh/h	136	55	61	276	459	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	181	73	81	368	612	152

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1219	688	764	0	-	0
Stage 1	688	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	199	446	849	-	-	-
Stage 1	499	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 180	446	849	-	-	-
Mov Cap-2 Maneuver	~ 180	-	-	-	-	-
Stage 1	451	-	-	-	-	-
Stage 2	590	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	60.98	1.75	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	849	-	218	-	-
HCM Lane V/C Ratio	0.096	-	1.171	-	-
HCM Control Delay (s/veh)	9.7	-	161	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.3	-	12.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	8.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	92	136	154	175	162	231
Future Vol, veh/h	92	136	154	175	162	231
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	186	211	240	222	316

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1091	331	0	0	451	0
Stage 1	331	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	238	711	-	-	1110	-
Stage 1	728	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	190	711	-	-	1110	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	369	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	29.19	0	3.73
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	190	711	1110	-
HCM Lane V/C Ratio	-	-	0.663	0.262	0.2	-
HCM Control Delay (s/veh)	-	-	54.8	11.9	9.1	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	3.9	1	0.7	-

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	445	251	375	115	48
Future Vol, veh/h	83	445	251	375	115	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	95	511	289	431	132	55

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	720	0	-	0	951	360
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	447	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	878	-	-	-	258	637
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	612	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	878	-	-	-	230	637
Mov Cap-2 Maneuver	-	-	-	-	230	-
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	612	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.51	0	31.43
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	878	-	-	-	230	637
HCM Lane V/C Ratio	0.109	-	-	-	0.575	0.087
HCM Control Delay (s/veh)	9.6	-	-	-	39.9	11.2
HCM Lane LOS	A	-	-	-	E	B
HCM 95th %tile Q(veh)	0.4	-	-	-	3.2	0.3

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	253	204	210	169	0	0
Future Vol, veh/h	253	204	210	169	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	460	371	382	307	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	831	0	1716	-
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	1071	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	801	-	99	0
Stage 1	-	-	-	-	522	0
Stage 2	-	-	-	-	329	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	801	-	52	-
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	522	-
Stage 2	-	-	-	-	172	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	7.49	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	801	-
HCM Lane V/C Ratio	-	-	-	0.477	-
HCM Control Delay (s/veh)	0	-	-	13.5	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	2.6	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	477	82	134	311	6	61
Future Vol, veh/h	477	82	134	311	6	61
Conflicting Peds, #/hr	0	22	22	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	62	62	62	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	769	132	216	502	10	98

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	924	0	1793	857
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	936	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	740	-	89	357
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	382	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	726	-	61	350
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	268	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.63	19.93
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	174	350	-	-	726	-
HCM Lane V/C Ratio	0.056	0.281	-	-	0.298	-
HCM Control Delay (s/veh)	26.9	19.2	-	-	12	-
HCM Lane LOS	D	C	-	-	B	-
HCM 95th %tile Q(veh)	0.2	1.1	-	-	1.2	-

Intersection	
Intersection Delay, s/veh	203.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	322	15	231	82	8	62	0	260	508	36	38	471
Future Vol, veh/h	322	15	231	82	8	62	0	260	508	36	38	471
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	403	19	289	103	10	78	0	325	635	45	48	589
Number of Lanes	1	1	0	1	1	0	0	1	2	0	0	2

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay, s/veh	190.1	22.4	119	344.9
HCM LOS	F	C	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	14%	0%
Vol Thru, %	0%	100%	82%	0%	6%	0%	11%	86%	51%
Vol Right, %	0%	0%	18%	0%	94%	0%	89%	0%	49%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	260	339	205	322	246	82	70	274	462
LT Vol	260	0	0	322	0	82	0	38	0
Through Vol	0	339	169	0	15	0	8	236	236
RT Vol	0	0	36	0	231	0	62	0	226
Lane Flow Rate	325	423	257	403	308	103	88	342	577
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	1.025	1.277	0.765	1.441	1.002	0.393	0.308	1.187	1.92
Departure Headway (Hd)	12.526	12.005	11.877	15.863	14.663	13.243	12.069	14.123	13.69
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	293	305	308	233	249	274	299	260	271
Service Time	10.226	9.705	9.577	13.563	12.363	10.943	9.769	11.823	11.39
HCM Lane V/C Ratio	1.109	1.387	0.834	1.73	1.237	0.376	0.294	1.315	2.129
HCM Control Delay, s/veh	97.1	180.9	44.7	259.7	99.1	24.3	20.1	155.4	457.2
HCM Lane LOS	F	F	E	F	F	C	C	F	F
HCM 95th-tile Q	11	18.3	5.9	19	9.6	1.8	1.3	14	35.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBR
Lane Configurations	
Traffic Vol, veh/h	226
Future Vol, veh/h	226
Peak Hour Factor	0.80
Heavy Vehicles, %	2
Mvmt Flow	283
Number of Lanes	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	0	12	21	0	64	12	179	30	84	262	51
Future Vol, veh/h	25	0	12	21	0	64	12	179	30	84	262	51
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	0	13	23	0	70	13	195	33	91	285	55

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	716	748	313	704	760	211	340	0	0	227	0	0
Stage 1	495	495	-	237	237	-	-	-	-	-	-	-
Stage 2	221	253	-	467	523	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	345	341	728	352	336	829	1219	-	-	1341	-	-
Stage 1	556	546	-	766	709	-	-	-	-	-	-	-
Stage 2	782	698	-	576	531	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	292	314	728	318	309	829	1219	-	-	1341	-	-
Mov Cap-2 Maneuver	292	314	-	318	309	-	-	-	-	-	-	-
Stage 1	518	509	-	758	701	-	-	-	-	-	-	-
Stage 2	709	690	-	527	494	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	16.18	12.18	0.43	1.67
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1219	-	-	362	594	1341	-	-
HCM Lane V/C Ratio	0.011	-	-	0.111	0.156	0.068	-	-
HCM Control Delay (s/veh)	8	-	-	16.2	12.2	7.9	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.5	0.2	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	253	256	61	40	12
Future Vol, veh/h	0	253	256	61	40	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	275	278	66	43	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	345	0	-	0	586	311
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	275	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1214	-	-	-	472	729
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	771	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1214	-	-	-	472	729
Mov Cap-2 Maneuver	-	-	-	-	561	-
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	771	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	11.72
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1214	-	-	-	592
HCM Lane V/C Ratio	-	-	-	-	0.095
HCM Control Delay (s/veh)	0	-	-	-	11.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	914	144	150	1020	85	278
Future Volume (veh/h)	914	144	150	1020	85	278
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1870	1826	1722	1870	1870
Adj Flow Rate, veh/h	1016	104	167	1133	94	253
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	2	5	12	2	2
Cap, veh/h	1183	121	210	1944	344	306
Arrive On Green	0.38	0.38	0.12	0.59	0.19	0.19
Sat Flow, veh/h	3242	322	1739	3358	1781	1585
Grp Volume(v), veh/h	555	565	167	1133	94	253
Grp Sat Flow(s),veh/h/ln	1721	1753	1739	1636	1781	1585
Q Serve(g_s), s	15.5	15.5	4.9	11.2	2.3	8.0
Cycle Q Clear(g_c), s	15.5	15.5	4.9	11.2	2.3	8.0
Prop In Lane		0.18	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	646	658	210	1944	344	306
V/C Ratio(X)	0.86	0.86	0.79	0.58	0.27	0.83
Avail Cap(c_a), veh/h	1600	1630	830	3042	1038	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	15.0	22.3	6.6	17.9	20.2
Incr Delay (d2), s/veh	1.3	1.3	2.6	0.1	0.2	2.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.3	9.4	3.2	3.0	1.4	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.3	16.3	24.9	6.7	18.1	22.4
LnGrp LOS	B	B	C	A	B	C
Approach Vol, veh/h	1120			1300	347	
Approach Delay, s/veh	16.3			9.0	21.2	
Approach LOS	B			A	C	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	14.7	11.4	26.1		37.5
Change Period (Y+Rc), s	4.6	5.1	6.5		6.5
Max Green Setting (Gmax), s	30.4	24.9	48.5		48.5
Max Q Clear Time (g_c+I1), s	10.0	6.9	17.5		13.2
Green Ext Time (p_c), s	0.1	0.0	2.1		1.6

Intersection Summary	
HCM 7th Control Delay, s/veh	13.5
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	166	37	33	196	238	58
Future Vol, veh/h	166	37	33	196	238	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	210	47	42	248	301	73

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	670	338	375	0	-	0
Stage 1	338	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	422	704	1184	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	727	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	408	704	1184	-	-	-
Mov Cap-2 Maneuver	408	-	-	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	727	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	23.9	1.17	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1184	-	441	-	-
HCM Lane V/C Ratio	0.035	-	0.582	-	-
HCM Control Delay (s/veh)	8.2	-	23.9	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	3.6	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	61	52	114	38	50	153
Future Vol, veh/h	61	52	114	38	50	153
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	69	58	128	43	56	172

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	434	149	0	0	171	0
Stage 1	149	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	579	897	-	-	1406	-
Stage 1	878	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	556	897	-	-	1406	-
Mov Cap-2 Maneuver	556	-	-	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	733	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.96	0	1.89
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	556	897	1406	-
HCM Lane V/C Ratio	-	-	0.123	0.065	0.04	-
HCM Control Delay (s/veh)	-	-	12.4	9.3	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	0.1	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	337	440	74	123	55
Future Vol, veh/h	36	337	440	74	123	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	366	478	80	134	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	559	0	-	0	780	279
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	261	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1008	-	-	-	332	718
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	758	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1008	-	-	-	319	718
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	758	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.84	0	19.93
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1008	-	-	-	319	718
HCM Lane V/C Ratio	0.039	-	-	-	0.419	0.083
HCM Control Delay (s/veh)	8.7	-	-	-	24.2	10.5
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	2	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	104	4	4	115	0	0
Future Vol, veh/h	104	4	4	115	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	121	5	5	134	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	126	0	266	-
Stage 1	-	-	-	-	123	-
Stage 2	-	-	-	-	143	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1461	-	723	0
Stage 1	-	-	-	-	902	0
Stage 2	-	-	-	-	884	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1461	-	721	-
Mov Cap-2 Maneuver	-	-	-	-	736	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	881	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.25	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1461	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s/veh)	0	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	110	49	66	104	25	42
Future Vol, veh/h	110	49	66	104	25	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	153	68	92	144	35	58

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	221	0	515	187
Stage 1	-	-	-	-	187	-
Stage 2	-	-	-	-	328	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1348	-	520	855
Stage 1	-	-	-	-	845	-
Stage 2	-	-	-	-	730	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1348	-	485	855
Mov Cap-2 Maneuver	-	-	-	-	558	-
Stage 1	-	-	-	-	845	-
Stage 2	-	-	-	-	680	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.05	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	558	855	-	-	1348	-
HCM Lane V/C Ratio	0.062	0.068	-	-	0.068	-
HCM Control Delay (s/veh)	11.9	9.5	-	-	7.9	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0.2	-

Intersection	
Intersection Delay, s/veh	79.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	56	6	57	40	9	42	0	54	675	21	33	859
Future Vol, veh/h	56	6	57	40	9	42	0	54	675	21	33	859
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	7	62	43	10	46	0	59	734	23	36	934
Number of Lanes	1	1	0	1	1	0	0	1	2	0	0	2

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay, s/veh	15.3	14.8	64.6	105.4
HCM LOS	C	B	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	7%	0%
Vol Thru, %	0%	100%	91%	0%	10%	0%	18%	93%	88%
Vol Right, %	0%	0%	9%	0%	90%	0%	82%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	450	246	56	63	40	51	463	491
LT Vol	54	0	0	56	0	40	0	33	0
Through Vol	0	450	225	0	6	0	9	430	430
RT Vol	0	0	21	0	57	0	42	0	61
Lane Flow Rate	59	489	267	61	68	43	55	503	533
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.138	1.078	0.585	0.177	0.177	0.128	0.147	1.092	1.14
Departure Headway (Hd)	8.766	8.256	8.195	10.954	9.784	11.105	9.992	7.985	7.86
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	411	445	444	329	369	325	361	457	464
Service Time	6.466	5.956	5.895	8.654	7.484	8.805	7.692	5.685	5.56
HCM Lane V/C Ratio	0.144	1.099	0.601	0.185	0.184	0.132	0.152	1.101	1.149
HCM Control Delay, s/veh	12.9	94.2	21.8	16	14.6	15.4	14.4	97.4	112.9
HCM Lane LOS	B	F	C	C	B	C	B	F	F
HCM 95th-tile Q	0.5	15.6	3.6	0.6	0.6	0.4	0.5	16.4	18.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBR
Lane Configurations	
Traffic Vol, veh/h	61
Future Vol, veh/h	61
Peak Hour Factor	0.92
Heavy Vehicles, %	2
Mvmt Flow	66
Number of Lanes	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	0	14	11	0	33	14	168	10	28	192	55
Future Vol, veh/h	29	0	14	11	0	33	14	168	10	28	192	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	0	15	12	0	36	15	183	11	30	209	60

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	513	523	239	488	548	188	268	0	0	193	0	0
Stage 1	299	299	-	218	218	-	-	-	-	-	-	-
Stage 2	213	224	-	270	329	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	472	458	800	490	444	854	1295	-	-	1380	-	-
Stage 1	709	666	-	784	722	-	-	-	-	-	-	-
Stage 2	789	718	-	736	646	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	437	443	800	465	429	854	1295	-	-	1380	-	-
Mov Cap-2 Maneuver	437	443	-	465	429	-	-	-	-	-	-	-
Stage 1	694	651	-	775	714	-	-	-	-	-	-	-
Stage 2	747	710	-	706	632	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.72	10.47	0.57	0.78
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1295	-	-	513	706	1380	-	-
HCM Lane V/C Ratio	0.012	-	-	0.091	0.068	0.022	-	-
HCM Control Delay (s/veh)	7.8	-	-	12.7	10.5	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	104	109	21	21	6
Future Vol, veh/h	0	104	109	21	21	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	113	118	23	23	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	141	0	-	0	243	130
Stage 1	-	-	-	-	130	-
Stage 2	-	-	-	-	113	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1442	-	-	-	745	920
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	912	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1442	-	-	-	745	920
Mov Cap-2 Maneuver	-	-	-	-	753	-
Stage 1	-	-	-	-	896	-
Stage 2	-	-	-	-	912	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	9.77
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1442	-	-	-	784
HCM Lane V/C Ratio	-	-	-	-	0.037
HCM Control Delay (s/veh)	0	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1151	100	265	973	79	325
Future Volume (veh/h)	1151	100	265	973	79	325
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1870	1826	1722	1870	1870
Adj Flow Rate, veh/h	1308	86	301	1106	90	312
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	6	2	5	12	2	2
Cap, veh/h	1398	92	332	2193	383	340
Arrive On Green	0.43	0.43	0.19	0.67	0.21	0.21
Sat Flow, veh/h	3368	215	1739	3358	1781	1585
Grp Volume(v), veh/h	685	709	301	1106	90	312
Grp Sat Flow(s),veh/h/ln	1721	1772	1739	1636	1781	1585
Q Serve(g_s), s	36.6	36.9	16.3	16.3	4.0	18.6
Cycle Q Clear(g_c), s	36.6	36.9	16.3	16.3	4.0	18.6
Prop In Lane		0.12	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	734	756	332	2193	383	340
V/C Ratio(X)	0.93	0.94	0.91	0.50	0.24	0.92
Avail Cap(c_a), veh/h	865	891	449	2193	561	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	26.4	38.2	7.9	31.3	37.0
Incr Delay (d2), s/veh	14.4	14.6	15.3	0.1	0.1	13.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	24.3	25.1	12.4	7.3	2.9	12.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	40.8	41.1	53.5	8.0	31.5	50.3
LnGrp LOS	D	D	D	A	C	D
Approach Vol, veh/h	1394			1407	402	
Approach Delay, s/veh	40.9			17.7	46.1	
Approach LOS	D			B	D	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	25.3	23.5	47.7		71.2
Change Period (Y+Rc), s	4.6	5.1	6.5		6.5
Max Green Setting (Gmax), s	30.4	24.9	48.5		48.5
Max Q Clear Time (g_c+I1), s	20.6	18.3	38.9		18.3
Green Ext Time (p_c), s	0.2	0.1	2.3		1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	31.4
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	86	1	6	389	273	110
Future Vol, veh/h	86	1	6	389	273	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	112	1	8	505	355	143

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	947	426	497	0	-	0
Stage 1	426	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	290	628	1067	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	288	628	1067	-	-	-
Mov Cap-2 Maneuver	288	-	-	-	-	-
Stage 1	654	-	-	-	-	-
Stage 2	596	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	25.17	0.13	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1067	-	290	-	-
HCM Lane V/C Ratio	0.007	-	0.39	-	-
HCM Control Delay (s/veh)	8.4	-	25.2	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0	-	1.8	-	-

Intersection	
Int Delay, s/veh	5.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	195	148	27	76	201
Future Vol, veh/h	51	195	148	27	76	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	271	206	38	106	279

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	715	224	0	0	243	0
Stage 1	224	-	-	-	-	-
Stage 2	490	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	398	815	-	-	1323	-
Stage 1	813	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	366	815	-	-	1323	-
Mov Cap-2 Maneuver	366	-	-	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	567	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	12.76	0	2.18
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	366	815	1323	-
HCM Lane V/C Ratio	-	-	0.194	0.332	0.08	-
HCM Control Delay (s/veh)	-	-	17.2	11.6	8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.7	1.5	0.3	-

Intersection	
Int Delay, s/veh	11.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	398	431	208	207	53
Future Vol, veh/h	24	398	431	208	207	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	457	495	239	238	61

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	734	0	-	0	899	367
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	284	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	866	-	-	-	279	630
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	739	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	866	-	-	-	270	630
Mov Cap-2 Maneuver	-	-	-	-	270	-
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	739	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.53	0	57.46
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	866	-	-	-	270	630
HCM Lane V/C Ratio	0.032	-	-	-	0.882	0.097
HCM Control Delay (s/veh)	9.3	-	-	-	69.3	11.3
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.1	-	-	-	7.7	0.3

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	197	26	43	173	0	0
Future Vol, veh/h	197	26	43	173	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	52	52	52	52
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	379	50	83	333	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	429	0	902	-
Stage 1	-	-	-	-	404	-
Stage 2	-	-	-	-	498	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1131	-	308	0
Stage 1	-	-	-	-	674	0
Stage 2	-	-	-	-	611	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1131	-	286	-
Mov Cap-2 Maneuver	-	-	-	-	409	-
Stage 1	-	-	-	-	674	-
Stage 2	-	-	-	-	566	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.68	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1131	-
HCM Lane V/C Ratio	-	-	-	0.073	-
HCM Control Delay (s/veh)	0	-	-	8.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0.2	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	247	26	68	155	26	94
Future Vol, veh/h	247	26	68	155	26	94
Conflicting Peds, #/hr	0	72	72	0	15	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	55	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	449	47	124	282	47	171

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	568	0	1089	545
Stage 1	-	-	-	-	545	-
Stage 2	-	-	-	-	544	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1004	-	238	538
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	582	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	944	-	192	506
Mov Cap-2 Maneuver	-	-	-	-	326	-
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	499	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	2.86	16.18
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	326	506	-	-	944	-
HCM Lane V/C Ratio	0.145	0.338	-	-	0.131	-
HCM Control Delay (s/veh)	17.9	15.7	-	-	9.4	-
HCM Lane LOS	C	C	-	-	A	-
HCM 95th %tile Q(veh)	0.5	1.5	-	-	0.5	-

Intersection	
Intersection Delay, s/veh	207.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Vol, veh/h	257	2	83	20	3	29	0	85	714	7	0	39
Future Vol, veh/h	257	2	83	20	3	29	0	85	714	7	0	39
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	317	2	102	25	4	36	0	105	881	9	0	48
Number of Lanes	1	1	0	1	1	0	0	1	2	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay, s/veh	72.2	17.9	187.4	280.6
HCM LOS	F	C	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	97%	0%	2%	0%	9%	0%	100%	67%
Vol Right, %	0%	0%	3%	0%	98%	0%	91%	0%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	476	245	257	85	20	32	39	536	403
LT Vol	85	0	0	257	0	20	0	39	0	0
Through Vol	0	476	238	0	2	0	3	0	536	268
RT Vol	0	0	7	0	83	0	29	0	0	135
Lane Flow Rate	105	588	302	317	105	25	40	48	662	498
Geometry Grp	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.293	1.56	0.801	0.982	0.29	0.087	0.127	0.135	1.758	1.29
Departure Headway (Hd)	10.934	10.417	10.396	13.504	12.304	14.208	13.036	10.838	10.318	10.074
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	331	353	351	273	294	254	277	333	357	363
Service Time	8.634	8.117	8.096	11.204	10.004	11.908	10.736	8.538	8.018	7.774
HCM Lane V/C Ratio	0.317	1.666	0.86	1.161	0.357	0.098	0.144	0.144	1.854	1.372
HCM Control Delay, s/veh	18.1	291.4	44.2	89.5	20	18.3	17.6	15.2	376.6	178.6
HCM Lane LOS	C	F	E	F	C	C	C	C	F	F
HCM 95th-tile Q	1.2	30.8	6.8	9.6	1.2	0.3	0.4	0.5	39	21.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBT	SBR
Lane Configurations		
Traffic Vol, veh/h	804	135
Future Vol, veh/h	804	135
Peak Hour Factor	0.81	0.81
Heavy Vehicles, %	2	2
Mvmt Flow	993	167
Number of Lanes	2	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	0	12	14	0	44	13	319	15	42	179	53
Future Vol, veh/h	32	0	12	14	0	44	13	319	15	42	179	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	0	13	15	0	48	14	347	16	46	195	58

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	690	706	223	669	727	355	252	0	0	363	0	0
Stage 1	315	315	-	383	383	-	-	-	-	-	-	-
Stage 2	375	391	-	286	343	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	360	361	816	371	351	689	1313	-	-	1196	-	-
Stage 1	696	656	-	640	612	-	-	-	-	-	-	-
Stage 2	646	607	-	721	637	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	318	343	816	348	334	689	1313	-	-	1196	-	-
Mov Cap-2 Maneuver	318	343	-	348	334	-	-	-	-	-	-	-
Stage 1	670	631	-	633	605	-	-	-	-	-	-	-
Stage 2	595	600	-	683	613	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	15.77	12.29	0.29	1.25
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1313	-	-	382	557	1196	-	-
HCM Lane V/C Ratio	0.011	-	-	0.125	0.113	0.038	-	-
HCM Control Delay (s/veh)	7.8	-	-	15.8	12.3	8.1	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	197	150	30	28	9
Future Vol, veh/h	0	197	150	30	28	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	214	163	33	30	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	196	0	-	0	393	179
Stage 1	-	-	-	-	179	-
Stage 2	-	-	-	-	214	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1377	-	-	-	611	863
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	822	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1377	-	-	-	611	863
Mov Cap-2 Maneuver	-	-	-	-	660	-
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	822	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	10.45
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1377	-	-	-	700
HCM Lane V/C Ratio	-	-	-	-	0.057
HCM Control Delay (s/veh)	0	-	-	-	10.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	852	97	105	599	85	201
Future Volume (veh/h)	852	97	105	599	85	201
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1870	1826	1722	1870	1870
Adj Flow Rate, veh/h	878	69	108	618	88	155
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	6	2	5	12	2	2
Cap, veh/h	1113	87	135	1834	246	219
Arrive On Green	0.34	0.34	0.08	0.56	0.14	0.14
Sat Flow, veh/h	3322	254	1739	3358	1781	1585
Grp Volume(v), veh/h	467	480	108	618	88	155
Grp Sat Flow(s),veh/h/ln	1721	1765	1739	1636	1781	1585
Q Serve(g_s), s	9.0	9.0	2.2	3.8	1.6	3.4
Cycle Q Clear(g_c), s	9.0	9.0	2.2	3.8	1.6	3.4
Prop In Lane		0.14	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	592	608	135	1834	246	219
V/C Ratio(X)	0.79	0.79	0.80	0.34	0.36	0.71
Avail Cap(c_a), veh/h	2501	2566	1177	4757	1229	1094
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.9	10.9	16.7	4.4	14.4	15.2
Incr Delay (d2), s/veh	0.9	0.9	4.1	0.0	0.3	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.9	5.1	1.4	0.3	0.8	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	11.8	11.7	20.8	4.4	14.7	16.7
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	947			726	243	
Approach Delay, s/veh	11.8			6.9	16.0	
Approach LOS	B			A	B	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	9.7	8.0	19.2		27.1
Change Period (Y+Rc), s	4.6	5.1	6.5		6.5
Max Green Setting (Gmax), s	25.4	24.9	53.5		53.5
Max Q Clear Time (g_c+I1), s	5.4	4.2	11.0		5.8
Green Ext Time (p_c), s	0.1	0.0	1.7		0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	10.4
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	122	33	14	164	188	11
Future Vol, veh/h	122	33	14	164	188	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	156	42	18	210	241	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	494	248	255	0	-	0
Stage 1	248	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	534	791	1310	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	527	791	1310	-	-	-
Mov Cap-2 Maneuver	527	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	795	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	14.73	0.61	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1310	-	567	-	-
HCM Lane V/C Ratio	0.014	-	0.35	-	-
HCM Control Delay (s/veh)	7.8	-	14.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	1.6	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	27	114	9	41	104
Future Vol, veh/h	16	27	114	9	41	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	28	119	9	43	108

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	317	123	0	0	128	0
Stage 1	123	-	-	-	-	-
Stage 2	194	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	676	927	-	-	1458	-
Stage 1	902	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	656	927	-	-	1458	-
Mov Cap-2 Maneuver	656	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.61	0	2.13
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	656	927	1458	-
HCM Lane V/C Ratio	-	-	0.025	0.03	0.029	-
HCM Control Delay (s/veh)	-	-	10.6	9	7.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.1	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	239	283	93	83	31
Future Vol, veh/h	26	239	283	93	83	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	263	311	102	91	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	413	0	-	0	551	207
Stage 1	-	-	-	-	362	-
Stage 2	-	-	-	-	188	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1142	-	-	-	465	800
Stage 1	-	-	-	-	675	-
Stage 2	-	-	-	-	825	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1142	-	-	-	453	800
Mov Cap-2 Maneuver	-	-	-	-	453	-
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	825	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.81	0	13.51
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1142	-	-	-	453	800
HCM Lane V/C Ratio	0.025	-	-	-	0.201	0.043
HCM Control Delay (s/veh)	8.2	-	-	-	14.9	9.7
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	48	2	1	31	0	0
Future Vol, veh/h	48	2	1	31	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	3	1	39	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	63	0	103	-
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	-	-	4.12	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	-
Pot Cap-1 Maneuver	-	-	1540	-	896	0
Stage 1	-	-	-	-	961	0
Stage 2	-	-	-	-	981	0
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1540	-	895	-
Mov Cap-2 Maneuver	-	-	-	-	851	-
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	980	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.23	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1540	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s/veh)	0	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	87	2	8	81	0	6
Future Vol, veh/h	87	2	8	81	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	109	3	10	101	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	111	0	231	110
Stage 1	-	-	-	-	110	-
Stage 2	-	-	-	-	121	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1479	-	757	943
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	904	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1479	-	752	943
Mov Cap-2 Maneuver	-	-	-	-	757	-
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	898	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.67	8.85
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	943	-	-	1479	-
HCM Lane V/C Ratio	-	0.008	-	-	0.007	-
HCM Control Delay (s/veh)	0	8.8	-	-	7.5	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0	-

Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Vol, veh/h	33	4	50	58	7	27	0	46	338	25	0	16
Future Vol, veh/h	33	4	50	58	7	27	0	46	338	25	0	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	4	53	62	7	29	0	49	360	27	0	17
Number of Lanes	1	1	0	1	1	0	0	1	2	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay, s/veh	11	11.5	13.1	15.9
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	82%	0%	7%	0%	21%	0%	100%	79%
Vol Right, %	0%	0%	18%	0%	93%	0%	79%	0%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	46	225	138	33	54	58	34	16	318	202
LT Vol	46	0	0	33	0	58	0	16	0	0
Through Vol	0	225	113	0	4	0	7	0	318	159
RT Vol	0	0	25	0	50	0	27	0	0	43
Lane Flow Rate	49	240	146	35	57	62	36	17	338	215
Geometry Grp	6	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.097	0.44	0.264	0.08	0.111	0.14	0.072	0.032	0.598	0.371
Departure Headway (Hd)	7.113	6.608	6.479	8.23	7.077	8.197	7.134	6.87	6.365	6.214
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	501	542	551	438	510	440	505	518	565	576
Service Time	4.895	4.389	4.261	5.933	4.777	5.897	4.834	4.646	4.141	3.99
HCM Lane V/C Ratio	0.098	0.443	0.265	0.08	0.112	0.141	0.071	0.033	0.598	0.373
HCM Control Delay, s/veh	10.7	14.5	11.6	11.6	10.7	12.2	10.4	9.9	18.3	12.7
HCM Lane LOS	B	B	B	B	B	B	B	A	C	B
HCM 95th-tile Q	0.3	2.2	1.1	0.3	0.4	0.5	0.2	0.1	3.9	1.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBT	SBR
Lane Configurations		
Traffic Vol, veh/h	477	43
Future Vol, veh/h	477	43
Peak Hour Factor	0.94	0.94
Heavy Vehicles, %	2	2
Mvmt Flow	507	46
Number of Lanes	2	0

Approach	
Opposing Approach	
Opposing Lanes	
Conflicting Approach Left	
Conflicting Lanes Left	
Conflicting Approach Right	
Conflicting Lanes Right	
HCM Control Delay, s/veh	
HCM LOS	

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	7	21	0	64	7	105	30	84	124	13
Future Vol, veh/h	8	0	7	21	0	64	7	105	30	84	124	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	50	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	75	92	75	92	92	75	75	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	8	28	0	85	8	114	40	112	135	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	495	535	142	508	522	134	149	0	0	154	0	0
Stage 1	366	366	-	149	149	-	-	-	-	-	-	-
Stage 2	129	169	-	359	373	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	485	451	906	475	459	915	1433	-	-	1426	-	-
Stage 1	653	623	-	853	774	-	-	-	-	-	-	-
Stage 2	874	758	-	659	618	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	403	414	906	432	421	915	1433	-	-	1426	-	-
Mov Cap-2 Maneuver	403	414	-	432	421	-	-	-	-	-	-	-
Stage 1	602	574	-	849	770	-	-	-	-	-	-	-
Stage 2	789	754	-	602	570	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.82	10.96	0.35	3.32
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1433	-	-	544	717	1426	-	-
HCM Lane V/C Ratio	0.005	-	-	0.03	0.158	0.079	-	-
HCM Control Delay (s/veh)	7.5	-	-	11.8	11	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.6	0.3	-	-

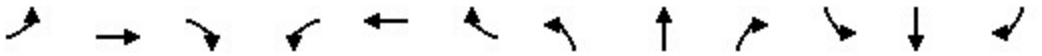
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	48	20	61	40	12
Future Vol, veh/h	0	48	20	61	40	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	92	92	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	52	22	81	53	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	103	0	-	0	115	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	52	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1489	-	-	-	882	1002
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	970	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1489	-	-	-	882	1002
Mov Cap-2 Maneuver	-	-	-	-	843	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	970	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	9.47
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1489	-	-	-	875
HCM Lane V/C Ratio	-	-	-	-	0.079
HCM Control Delay (s/veh)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3



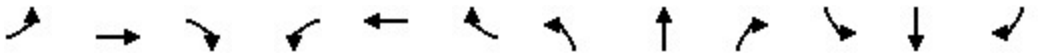
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	15	213	82	8	62	237	508	36	38	471	188
Future Volume (veh/h)	295	15	213	82	8	62	237	508	36	38	471	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.84	1.00		0.96	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	369	19	204	102	10	78	296	635	45	48	589	173
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	412	29	314	132	10	81	339	1445	102	61	732	214
Arrive On Green	0.23	0.22	0.22	0.07	0.07	0.07	0.19	0.43	0.43	0.03	0.27	0.27
Sat Flow, veh/h	1781	131	1403	1781	156	1217	1781	3355	237	1781	2666	780
Grp Volume(v), veh/h	369	0	223	102	0	88	296	336	344	48	392	370
Grp Sat Flow(s),veh/h/ln	1781	0	1534	1781	0	1373	1781	1777	1816	1781	1777	1669
Q Serve(g_s), s	14.3	0.0	9.4	4.0	0.0	4.5	11.5	9.4	9.5	1.9	14.6	14.7
Cycle Q Clear(g_c), s	14.3	0.0	9.4	4.0	0.0	4.5	11.5	9.4	9.5	1.9	14.6	14.7
Prop In Lane	1.00		0.91	1.00		0.89	1.00		0.13	1.00		0.47
Lane Grp Cap(c), veh/h	412	0	343	132	0	91	339	765	782	61	488	458
V/C Ratio(X)	0.90	0.00	0.65	0.78	0.00	0.97	0.87	0.44	0.44	0.78	0.80	0.81
Avail Cap(c_a), veh/h	721	0	423	331	0	91	598	984	1006	148	534	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	25.1	32.4	0.0	33.1	28.0	14.2	14.2	34.1	24.0	24.1
Incr Delay (d2), s/veh	3.6	0.0	1.3	3.7	0.0	82.1	2.8	0.1	0.1	7.8	7.1	7.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.2	0.0	6.1	3.2	0.0	6.4	8.6	6.3	6.5	1.7	11.0	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.1	0.0	26.4	36.0	0.0	115.2	30.7	14.4	14.4	41.9	31.1	31.9
LnGrp LOS	C		C	D		F	C	B	B	D	C	C
Approach Vol, veh/h		592			190			976			810	
Approach Delay, s/veh		28.7			72.7			19.3			32.1	
Approach LOS		C			E			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	35.2	9.4	20.0	17.6	24.1	20.5	8.8
Change Period (Y+Rc), s	4.1	4.6	4.1	4.1	4.1	4.6	4.1	4.1
Max Green Setting (Gmax), s	5.9	39.4	13.2	19.6	23.9	21.4	28.8	4.0
Max Q Clear Time (g_c+I1), s	3.9	11.5	6.0	11.4	13.5	16.7	16.3	6.5
Green Ext Time (p_c), s	0.0	1.5	0.1	0.6	0.1	1.0	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	29.5
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



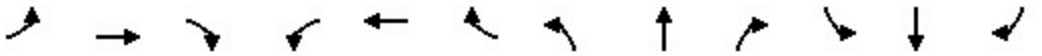
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	6	48	40	9	42	47	675	21	33	859	48
Future Volume (veh/h)	42	6	48	40	9	42	47	675	21	33	859	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	7	47	43	10	46	51	734	23	36	934	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	35	234	67	24	108	112	1288	40	94	1226	62
Arrive On Green	0.10	0.17	0.17	0.04	0.08	0.08	0.06	0.37	0.35	0.05	0.36	0.34
Sat Flow, veh/h	1781	210	1407	1781	291	1338	1781	3517	110	1781	3443	173
Grp Volume(v), veh/h	46	0	54	43	0	56	51	371	386	36	482	499
Grp Sat Flow(s),veh/h/ln	1781	0	1617	1781	0	1629	1781	1777	1851	1781	1777	1839
Q Serve(g_s), s	1.0	0.0	1.2	1.0	0.0	1.3	1.1	6.8	6.8	0.8	9.7	9.7
Cycle Q Clear(g_c), s	1.0	0.0	1.2	1.0	0.0	1.3	1.1	6.8	6.8	0.8	9.7	9.7
Prop In Lane	1.00		0.87	1.00		0.82	1.00		0.06	1.00		0.09
Lane Grp Cap(c), veh/h	176	0	269	67	0	132	112	651	678	94	633	655
V/C Ratio(X)	0.26	0.00	0.20	0.64	0.00	0.42	0.46	0.57	0.57	0.38	0.76	0.76
Avail Cap(c_a), veh/h	658	0	1032	268	0	642	215	998	1039	215	998	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.9	0.0	14.6	19.3	0.0	17.8	18.4	10.3	10.3	18.6	11.5	11.6
Incr Delay (d2), s/veh	0.3	0.0	0.1	3.7	0.0	0.8	1.1	0.3	0.3	1.0	0.7	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.7	0.8	0.0	0.8	0.8	3.7	3.8	0.6	5.4	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.2	0.0	14.7	22.9	0.0	18.6	19.4	10.6	10.6	19.6	12.3	12.3
LnGrp LOS	B		B	C		B	B	B	B	B	B	B
Approach Vol, veh/h		100			99			808			1017	
Approach Delay, s/veh		15.9			20.5			11.2			12.5	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	18.7	5.6	10.9	5.8	18.3	9.1	7.4
Change Period (Y+Rc), s	4.1	4.6	4.1	4.1	4.1	4.6	5.1	4.1
Max Green Setting (Gmax), s	4.1	22.0	6.1	25.9	4.1	22.0	15.0	16.0
Max Q Clear Time (g_c+I1), s	2.8	8.8	3.0	3.2	3.1	11.7	3.0	3.3
Green Ext Time (p_c), s	0.0	1.5	0.0	0.1	0.0	1.9	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	12.5
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



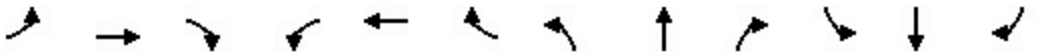
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	2	70	20	3	29	73	714	7	39	804	116
Future Volume (veh/h)	238	2	70	20	3	29	73	714	7	39	804	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.82	1.00		0.89	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	294	2	24	25	4	36	90	881	9	48	993	81
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	341	31	374	40	15	136	136	1488	15	85	1265	103
Arrive On Green	0.19	0.28	0.28	0.02	0.11	0.11	0.08	0.41	0.40	0.05	0.39	0.37
Sat Flow, veh/h	1781	110	1324	1781	133	1200	1781	3598	37	1781	3286	268
Grp Volume(v), veh/h	294	0	26	25	0	40	90	435	455	48	537	537
Grp Sat Flow(s),veh/h/ln	1781	0	1434	1781	0	1333	1781	1777	1858	1781	1777	1778
Q Serve(g_s), s	10.5	0.0	0.9	0.9	0.0	1.8	3.2	12.5	12.5	1.7	17.4	17.5
Cycle Q Clear(g_c), s	10.5	0.0	0.9	0.9	0.0	1.8	3.2	12.5	12.5	1.7	17.4	17.5
Prop In Lane	1.00		0.92	1.00		0.90	1.00		0.02	1.00		0.15
Lane Grp Cap(c), veh/h	341	0	406	40	0	152	136	735	769	85	684	684
V/C Ratio(X)	0.86	0.00	0.06	0.63	0.00	0.26	0.66	0.59	0.59	0.56	0.78	0.79
Avail Cap(c_a), veh/h	568	0	457	109	0	152	182	922	964	185	924	925
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	0.0	17.2	31.8	0.0	26.5	29.4	14.9	14.9	30.5	17.8	17.8
Incr Delay (d2), s/veh	3.5	0.0	0.0	5.9	0.0	0.3	2.0	0.3	0.3	2.2	2.1	2.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	0.0	0.5	0.8	0.0	1.0	2.5	8.1	8.3	1.4	11.1	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.2	0.0	17.2	37.7	0.0	26.9	31.5	15.2	15.2	32.7	19.9	20.0
LnGrp LOS	C		B	D		C	C	B	B	C	B	B
Approach Vol, veh/h		320			65			980			1122	
Approach Delay, s/veh		28.2			31.1			16.7			20.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	30.9	5.6	22.6	8.3	29.0	16.7	11.6
Change Period (Y+Rc), s	4.1	4.6	4.1	4.1	4.1	4.6	4.1	4.1
Max Green Setting (Gmax), s	6.0	33.2	4.0	20.9	5.9	33.3	20.9	4.0
Max Q Clear Time (g_c+I1), s	3.7	14.5	2.9	2.9	5.2	19.5	12.5	3.8
Green Ext Time (p_c), s	0.0	2.0	0.0	0.0	0.0	2.4	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	20.3
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



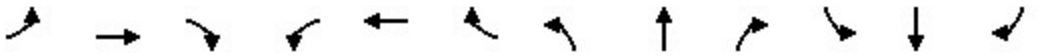
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	15	231	82	8	62	260	508	36	38	471	226
Future Volume (veh/h)	322	15	231	82	8	62	260	508	36	38	471	226
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.80	1.00		0.96	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	402	19	227	102	10	72	325	635	45	48	589	220
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	441	27	321	131	8	61	381	1517	107	79	702	261
Arrive On Green	0.25	0.23	0.23	0.07	0.05	0.05	0.21	0.45	0.44	0.04	0.28	0.27
Sat Flow, veh/h	1781	118	1414	1781	160	1154	1781	3356	237	1781	2483	925
Grp Volume(v), veh/h	402	0	246	102	0	82	325	336	344	48	421	388
Grp Sat Flow(s),veh/h/ln	1781	0	1532	1781	0	1314	1781	1777	1816	1781	1777	1631
Q Serve(g_s), s	16.5	0.0	11.2	4.2	0.0	4.0	13.2	9.6	9.7	2.0	16.8	16.9
Cycle Q Clear(g_c), s	16.5	0.0	11.2	4.2	0.0	4.0	13.2	9.6	9.7	2.0	16.8	16.9
Prop In Lane	1.00		0.92	1.00		0.88	1.00		0.13	1.00		0.57
Lane Grp Cap(c), veh/h	441	0	348	131	0	70	381	803	821	79	502	461
V/C Ratio(X)	0.91	0.00	0.71	0.78	0.00	1.18	0.85	0.42	0.42	0.61	0.84	0.84
Avail Cap(c_a), veh/h	680	0	398	312	0	70	583	947	968	158	523	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	0.0	26.8	34.3	0.0	35.7	28.5	14.0	14.0	35.4	25.4	25.7
Incr Delay (d2), s/veh	8.5	0.0	3.6	3.7	0.0	163.4	4.8	0.1	0.1	2.8	10.4	11.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.3	0.0	7.6	3.5	0.0	7.9	9.9	6.5	6.6	1.6	12.9	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.1	0.0	30.5	38.0	0.0	199.1	33.3	14.1	14.1	38.2	35.9	37.3
LnGrp LOS	D		C	D		F	C	B	B	D	D	D
Approach Vol, veh/h		648			184			1005			857	
Approach Delay, s/veh		34.0			109.8			20.3			36.6	
Approach LOS		C			F			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	37.9	9.7	21.2	19.4	25.1	22.8	8.1
Change Period (Y+Rc), s	4.1	4.6	4.1	4.1	4.1	4.6	4.1	4.1
Max Green Setting (Gmax), s	5.9	39.4	13.2	19.6	23.9	21.4	28.8	4.0
Max Q Clear Time (g_c+I1), s	4.0	11.7	6.2	13.2	15.2	18.9	18.5	6.0
Green Ext Time (p_c), s	0.0	1.5	0.1	0.6	0.1	0.7	0.2	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	34.9
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



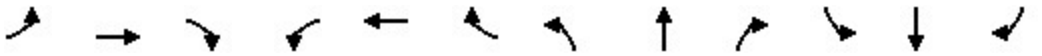
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	6	57	40	9	42	54	675	21	33	859	61
Future Volume (veh/h)	56	6	57	40	9	42	54	675	21	33	859	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	7	57	43	10	46	59	734	23	36	934	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	28	228	66	23	104	115	1438	45	90	1336	87
Arrive On Green	0.12	0.16	0.16	0.04	0.08	0.08	0.06	0.41	0.39	0.05	0.39	0.38
Sat Flow, veh/h	1781	176	1436	1781	291	1338	1781	3517	110	1781	3386	221
Grp Volume(v), veh/h	61	0	64	43	0	56	59	371	386	36	490	505
Grp Sat Flow(s),veh/h/ln	1781	0	1612	1781	0	1629	1781	1777	1851	1781	1777	1831
Q Serve(g_s), s	1.4	0.0	1.5	1.1	0.0	1.5	1.4	6.9	6.9	0.9	10.2	10.3
Cycle Q Clear(g_c), s	1.4	0.0	1.5	1.1	0.0	1.5	1.4	6.9	6.9	0.9	10.2	10.3
Prop In Lane	1.00		0.89	1.00		0.82	1.00		0.06	1.00		0.12
Lane Grp Cap(c), veh/h	210	0	256	66	0	127	115	727	757	90	701	722
V/C Ratio(X)	0.29	0.00	0.25	0.65	0.00	0.44	0.51	0.51	0.51	0.40	0.70	0.70
Avail Cap(c_a), veh/h	642	0	940	245	0	587	197	912	950	197	912	940
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	16.3	21.1	0.0	19.5	20.1	9.8	9.8	20.4	11.2	11.3
Incr Delay (d2), s/veh	0.8	0.0	0.5	10.3	0.0	2.4	3.5	0.6	0.5	2.9	1.6	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	1.0	1.1	0.0	1.0	1.2	3.9	4.1	0.7	6.1	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.6	0.0	16.9	31.4	0.0	21.9	23.6	10.4	10.4	23.3	12.8	12.8
LnGrp LOS	B		B	C		C	C	B	B	C	B	B
Approach Vol, veh/h		125			99			816			1031	
Approach Delay, s/veh		17.7			26.0			11.3			13.2	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	22.0	5.7	11.2	6.2	21.3	9.3	7.6
Change Period (Y+Rc), s	4.1	4.6	4.1	4.1	4.1	4.6	4.1	4.1
Max Green Setting (Gmax), s	4.1	22.0	6.1	25.9	4.1	22.0	16.0	16.0
Max Q Clear Time (g_c+I1), s	2.9	8.9	3.1	3.5	3.4	12.3	3.4	3.5
Green Ext Time (p_c), s	0.0	3.9	0.0	0.3	0.0	4.5	0.1	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	13.3
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	2	83	20	3	29	85	714	7	39	804	135
Future Volume (veh/h)	257	2	83	20	3	29	85	714	7	39	804	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.79	1.00		0.89	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	317	2	40	25	4	36	105	881	9	48	993	105
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	363	19	378	40	13	114	155	1517	15	84	1220	129
Arrive On Green	0.20	0.28	0.28	0.02	0.10	0.10	0.09	0.42	0.41	0.05	0.38	0.37
Sat Flow, veh/h	1781	68	1354	1781	129	1162	1781	3598	37	1781	3193	337
Grp Volume(v), veh/h	317	0	42	25	0	40	105	435	455	48	552	546
Grp Sat Flow(s),veh/h/ln	1781	0	1421	1781	0	1292	1781	1777	1858	1781	1777	1753
Q Serve(g_s), s	11.5	0.0	1.5	0.9	0.0	1.9	3.8	12.5	12.5	1.8	18.6	18.6
Cycle Q Clear(g_c), s	11.5	0.0	1.5	0.9	0.0	1.9	3.8	12.5	12.5	1.8	18.6	18.6
Prop In Lane	1.00		0.95	1.00		0.90	1.00		0.02	1.00		0.19
Lane Grp Cap(c), veh/h	363	0	397	40	0	126	155	749	783	84	679	670
V/C Ratio(X)	0.87	0.00	0.11	0.63	0.00	0.32	0.68	0.58	0.58	0.57	0.81	0.81
Avail Cap(c_a), veh/h	559	0	446	107	0	126	179	907	948	182	909	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	0.0	17.8	32.3	0.0	28.0	29.5	14.8	14.8	31.1	18.5	18.5
Incr Delay (d2), s/veh	6.3	0.0	0.0	6.0	0.0	0.5	5.7	0.3	0.3	2.2	3.1	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	0.0	0.8	0.8	0.0	1.1	3.3	8.1	8.4	1.4	11.9	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.0	0.0	17.9	38.3	0.0	28.5	35.2	15.0	15.0	33.3	21.6	21.7
LnGrp LOS	C		B	D		C	D	B	B	C	C	C
Approach Vol, veh/h		359			65			995			1146	
Approach Delay, s/veh		30.3			32.3			17.2			22.1	
Approach LOS		C			C			B			C	

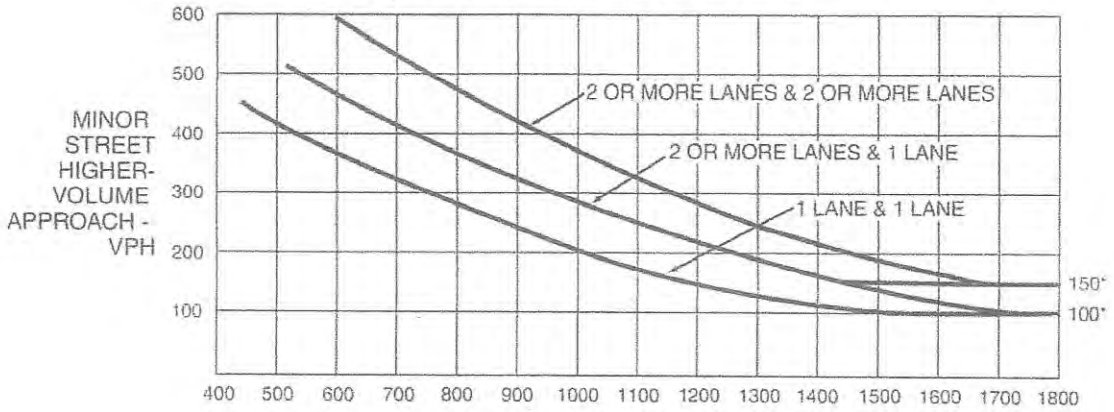
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	31.9	5.6	22.7	9.1	29.3	17.7	10.6
Change Period (Y+Rc), s	4.1	4.6	4.1	4.1	4.1	4.6	4.1	4.1
Max Green Setting (Gmax), s	6.0	33.2	4.0	20.9	5.9	33.3	20.9	4.0
Max Q Clear Time (g_c+I1), s	3.8	14.5	2.9	3.5	5.8	20.6	13.5	3.9
Green Ext Time (p_c), s	0.0	2.0	0.0	0.1	0.0	2.4	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	21.6
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

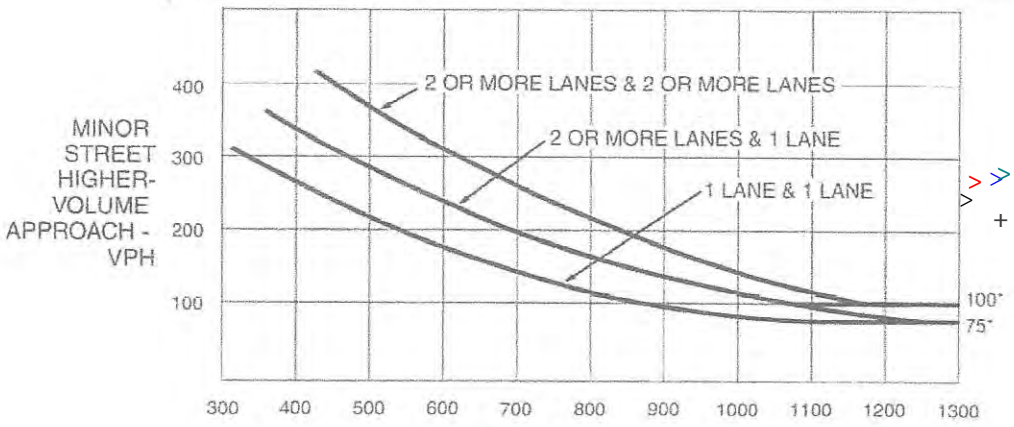
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



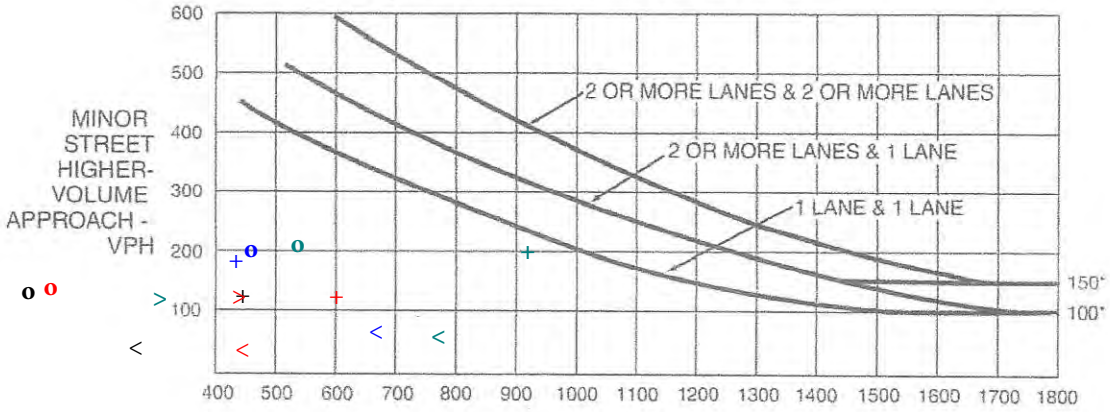
*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Exist AM +	E+P AM +	Cum AM +	C+P AM +
Exist PM o	E+P PM o	Cum PM o	C+P PM o
Exist Midday <	E+P Midday <	Cum Midday <	C+P Midday <
Exist Sunday >	E+P Sunday >	Cum Sunday >	C+P Sunday >

NOTE - intersection in city fee program

SR 20 / EL MARGARITA RD

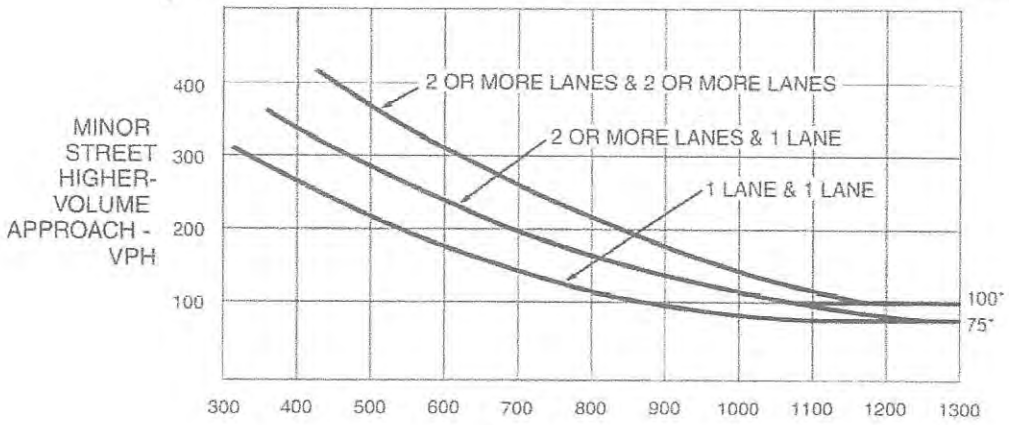
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

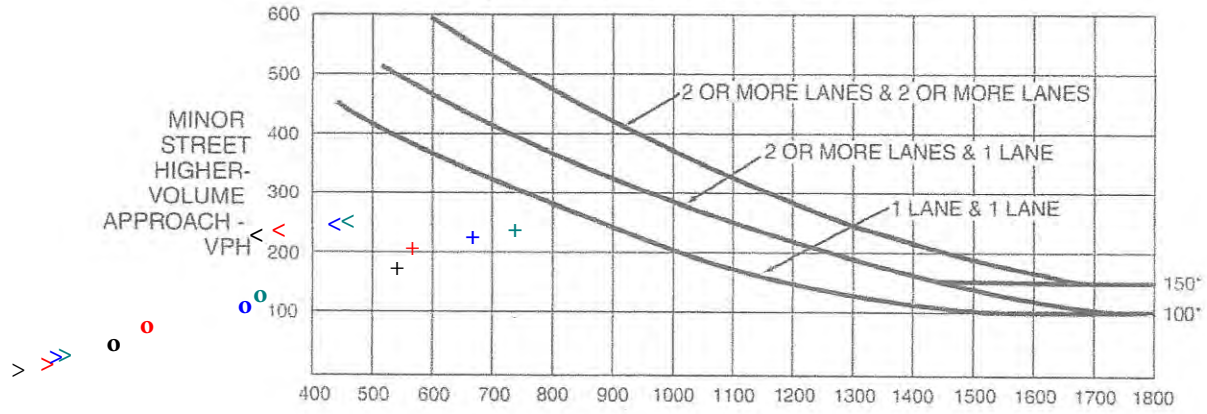


*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Exist AM +	E+P AM +	Cum AM +	C+P AM +
Exist PM **o**	E+P PM **o**	Cum PM **o**	C+P PM **o**
Exist Midday <	E+P Midday <	Cum Midday <	C+P Midday <
Exist Sunday >	E+P Midday >	Cum Midday >	C+P Sunday >

EL MARGARITA RD / COLUSA FRONTAGE RD

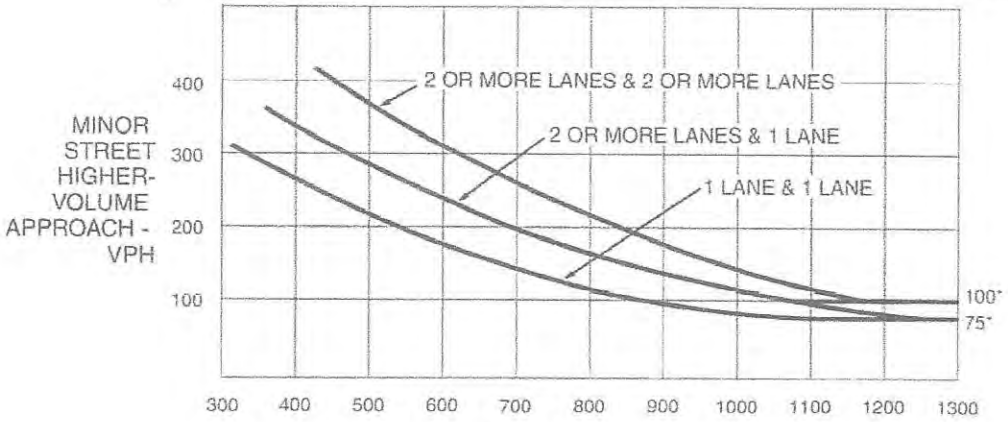
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

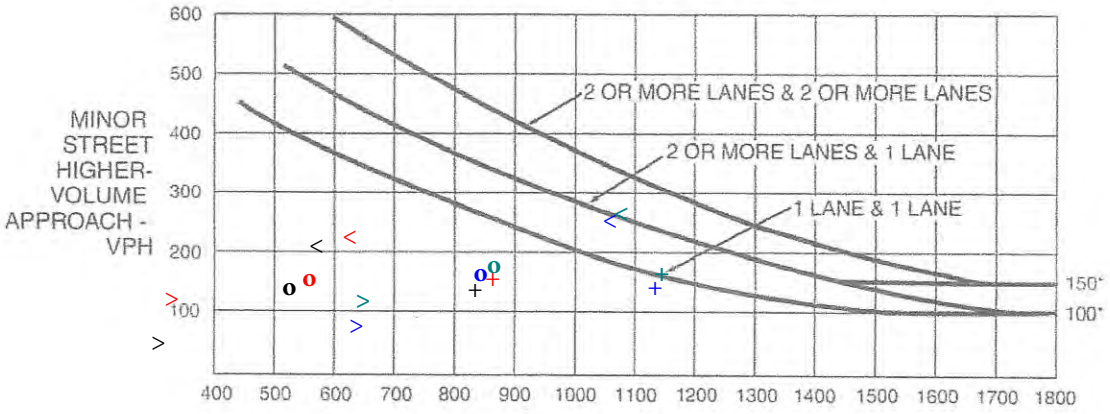


*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Exist AM +	E+P AM +	Cum AM +	**CPP AM +**
Exist PM **o**	E+P PM **o**	Cum PM **o**	**CPP PM o**
Exist Midday <	E+P Midday <	Cum Midday <	**CPP Midday <**
Exist Sunday >	E+P Sunday >	Cum Sunday >	**CPP Sunday >**

EL MARGARITA RD / SPIRIT WAY

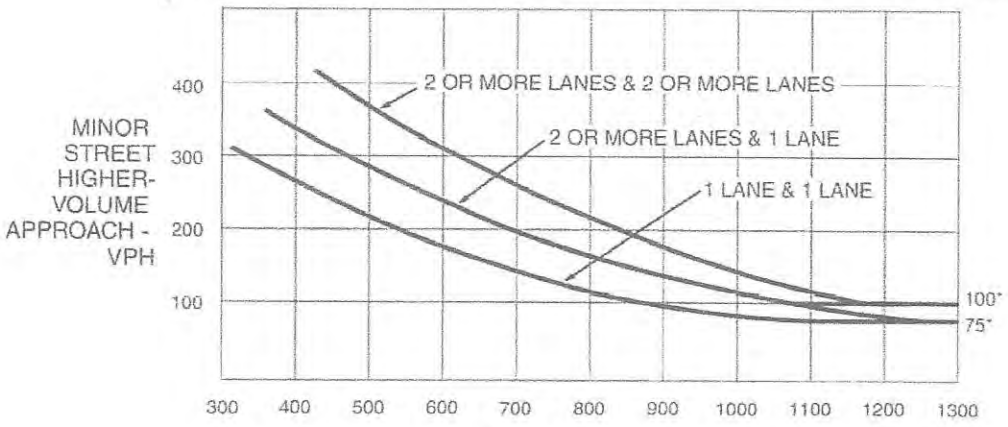
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

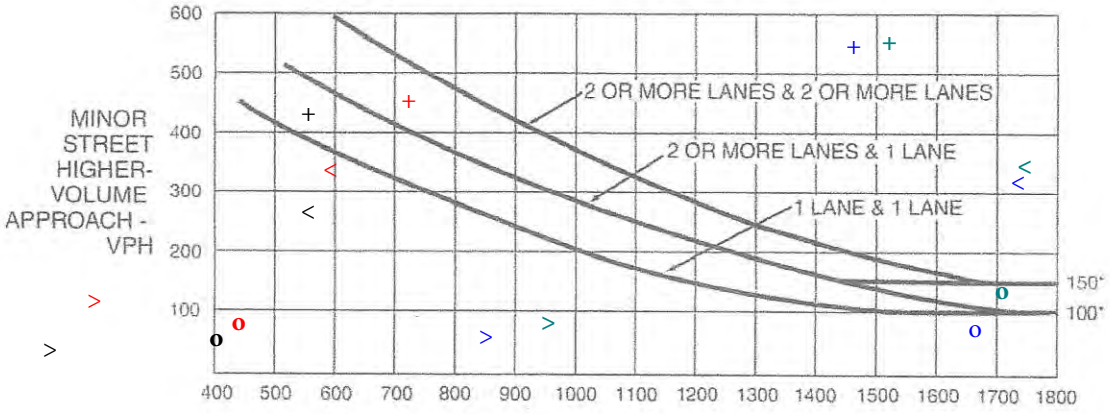


*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Exist AM +	E+P AM +	Cum AM +	**CPP AM +**
Exist PM o	E+P PM o	Cum PM o	**CPP PM o**
Exist Midday <	E+P Midday <	Cum Midday <	**CPP Midday <**
Exist Sunday >	E+P Sunday >	Cum Sunday >	**CPP Sunday >**

EL MARGARITA RD / FRANKLIN RD

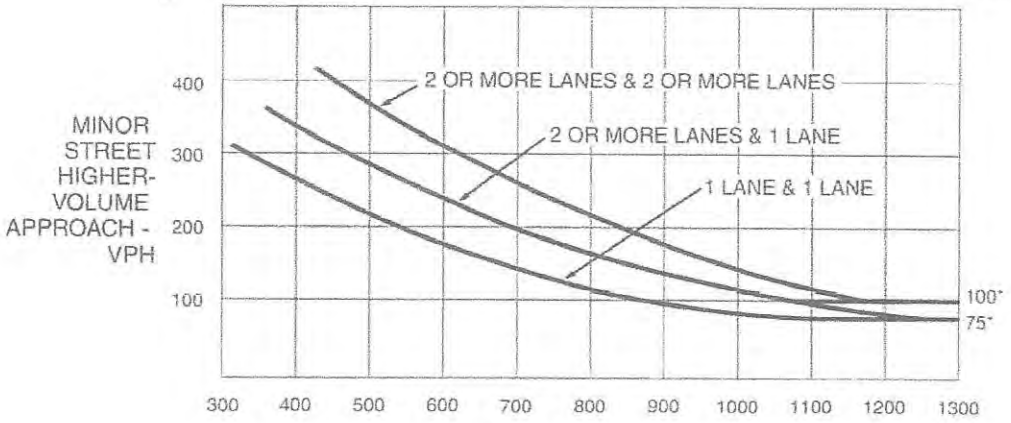
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Exist AM +	E+P AM +	Cum AM +	**CPP AM +**
Exist PM o	E+P PM o	Cum PM o	**CPP PM o**
Exist Midday <	E+P Midday <	Cum Midday <	**CPP Midday <**
Exist Sunday >	E+ P Sunday >	Cum Sunday >	**CPP Sunday >**

HARTER PARKWAY / SPIRIT WAY

AM / PM PEAK HOUR TRIP GENERATION RATES MILNER C-STORE / GAS STATION								
Land Use	**Quantity / Unit**	**Trip Per Unit**						
		Daily	**AM Peak Hour**			**PM Peak Hour**		
			Total	**In**	**Out**	**Total**	**In**	**Out**
Gas Station with Convenience Store[1]	9 VFP	265.12	16.06	50%	50%	18.42	50%	50%
Gas Station with Convenience Store (LU 945)		2386	145	72	72	166	83	83
Sub-Total		**2386**	**145**	72	72	**166**	83	83
Pass-By Trips								
C-Store / Gas Station *(59% Daily, 62% AM, 56% PM)[2]*		(1408)	(90)	(45)	(45)	(93)	(46)	(46)
Total Pass-By Trips		**(1408)**	**(90)**	(45)	(45)	**(93)**	(46)	(46)
Net New Trips		**978**	**55**	**27**	**27**	**73**	**36**	**36**

numbers may not equal due to rounding

[1]*ITE Trip Generation*, 11th Edition

[2]*ITE Trip Generation Handbook*, 3rd Ed

MIDDAY / SUNDAY PEAK HOUR TRIP GENERATION RATES MILNER C-STORE / GAS STATION							
Land Use	**Quantity / Unit**	**Trip Per Unit**					
		Midday Peak Hour			**Sunday Peak Hour**		
		Total	**In**	**Out**	**Total**	**In**	**Out**
Gas Station with Convenience Store[1]	9 VFP	6.5%[2]	50%	50%	5.04	50%	50%
Gas Station with Convenience Store		154[3]	78	76	45	23	23
Sub-Total		**154**	78	76	**45**	23	23
Pass-By Trips							
C-Store / Gas Station *(59% Daily, 62% AM)[4]*		(91)	(46)	(45)	(28)	(14)	(14)
Total Internal Trips		**(91)**	(46)	(45)	**(28)**	(14)	(14)
Net New Trips		**63**	**32**	**31**	**17**	**9**	**9**

ksf – thousand square feet

numbers may not equal due to rounding

[1]*ITE Trip Generation*, 11th Edition

[2]Time of Day Distribution for Vehicles , *ITE Trip Generation Appendix, 11th Edition*

[3](quantity) x (daily rate, Table 7) x (trip rate) x (inbound/outbound)

[4]*ITE Trip Generation Handbook*, 3rd Ed (daily trip rate used for midday)

Harter Parkway / Spirit Way
Fair Share Percentage

$$\frac{(\text{Cumulative + Project})^1 - \text{Cumulative}^1}{\text{Cumulative plus Project} - \text{Existing}^1}$$

AM	2259-2153 / 2259-1128
	9.37%
PM	1914-1870 / 1914-474
	3.06%
Midday	2178-2079 / 2178-858
	7.50%
Avg	**6.64%**

[1]peak hour intersection traffic volumes