APPENDIX E

TRAFFIC IMPACT STUDY

NORTHWEST NEWMAN MASTER PLAN
TRAFFIC IMPACT STUDY

Newman, CA

Prepared for:

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4720-04

NW Newman Mstr Plan TIS 4-29-14.doc

NORTHWEST NEWMAN MASTER PLAN
TRAFFIC IMPACT STUDY

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INTRODUCTION

This study summarizes **KD Anderson & Associates'** analysis of the potential traffic impacts associated with development of the proposed Northwest Newman Master Plan project. This section of the study presents a description of: the proposed project, the scope of this study, and a summary of the conclusions of this study.

PROJECT DESCRIPTION

The following is a description of the proposed Northwest Newman Master Plan project.

Location and Existing Conditions

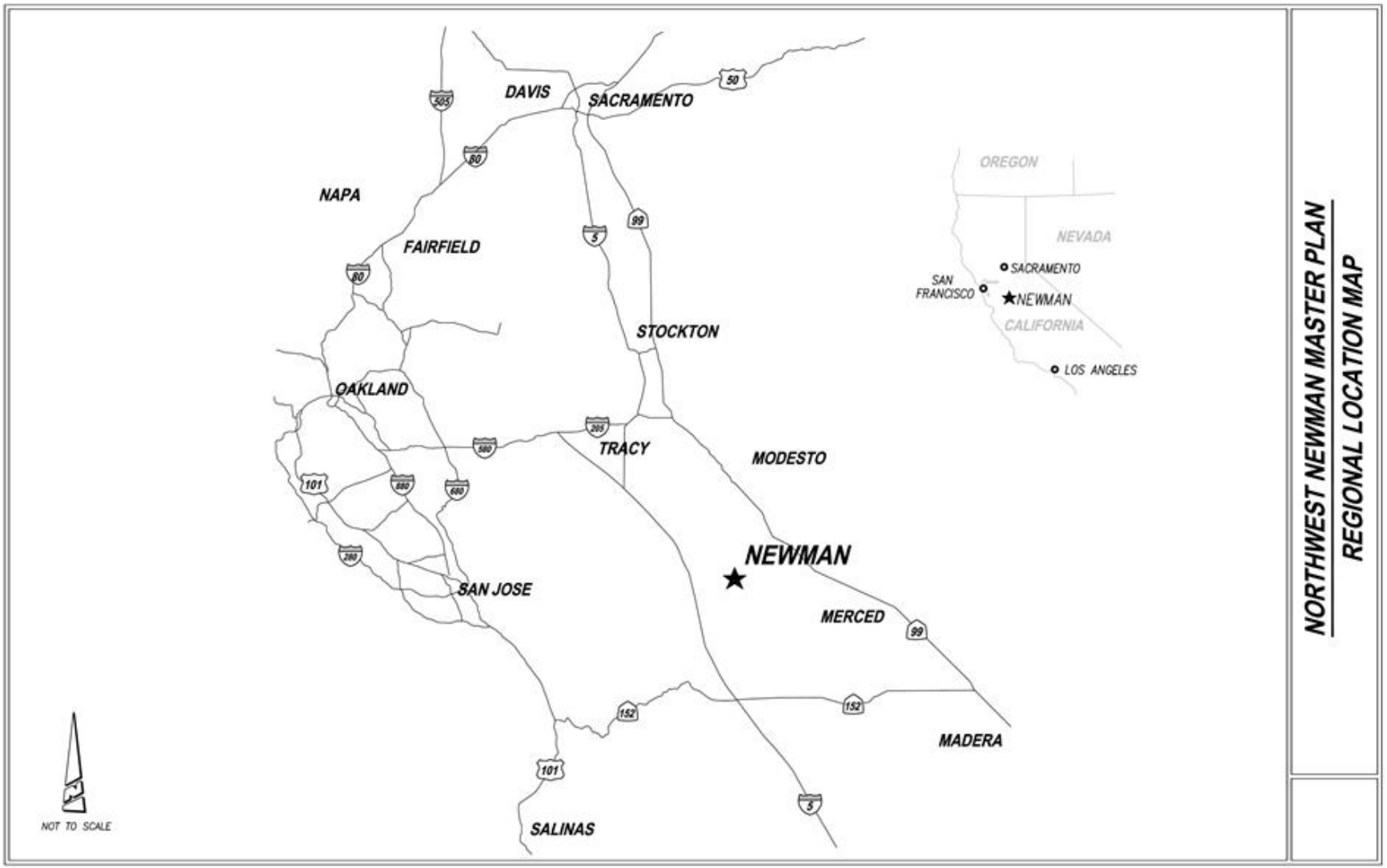
The City of Newman is located in the southern portion of Stanislaus County, west of Merced, south of Modesto, and southeast of Tracy (see **Figure 1**). The Northwest Newman Master Plan (Plan) area is located north of the current boundary of Newman, but is within the City's primary Sphere of Influence. The Plan area includes approximately 351 acres of land bounded by Stuhr Road to the north, Stare Route (SR) 33 to the east, the Central California Irrigation District (CCID) canal to the west, and the existing City boundary and Jensen Road to the south, as shown in **Figure 2**.

The Plan area is generally flat. Properties within the Plan area currently contain a mix of agricultural uses, primarily row crops, ranchettes and single family residences, highway-oriented commercial and light industrial land uses. Agricultural uses predominate in the central, northern and western portions of the study area. Residential ranchettes and single family dwellings are generally located in the southern and central portions of the area with a mix of residential, high-way serving commercial and light industrial uses fronting along SR 33.

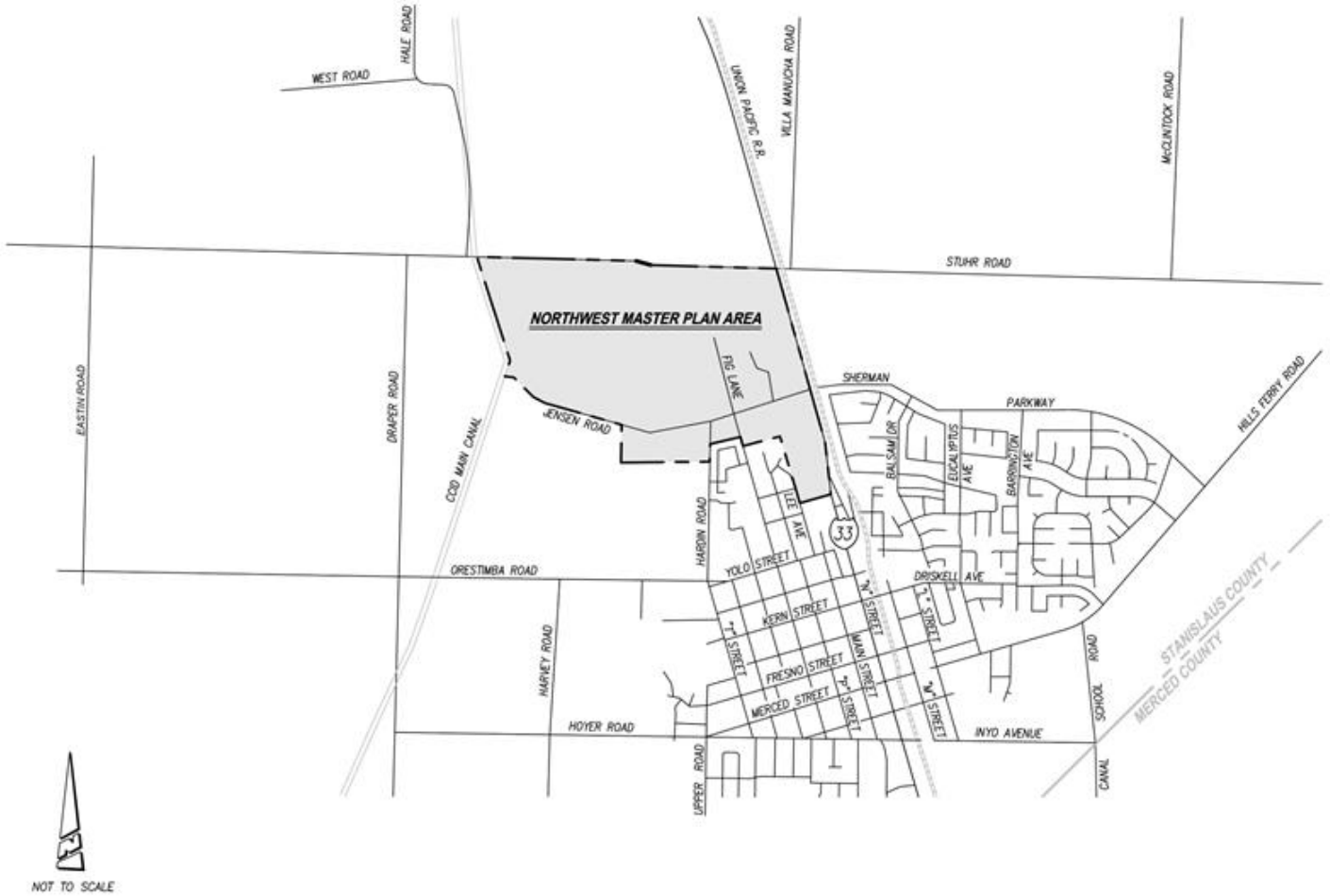
The nearby unincorporated areas are predominately agricultural with a few ranchettes. Nearby properties within the City of Newman are mostly single family homes, with Orestimba High School just south of the Plan area on Hardin Road, and some commercial/industrial uses along SR 33.

Proposed Land Uses

The preliminary land use plan for the Plan area is shown in **Figure 3**. The Plan is intended to meet the purposes, goals, and objectives of the General Plan for the long-term development of this portion of the Newman planning area and could undergo minor modifications as planning progresses. The following is a description of the proposed land uses.



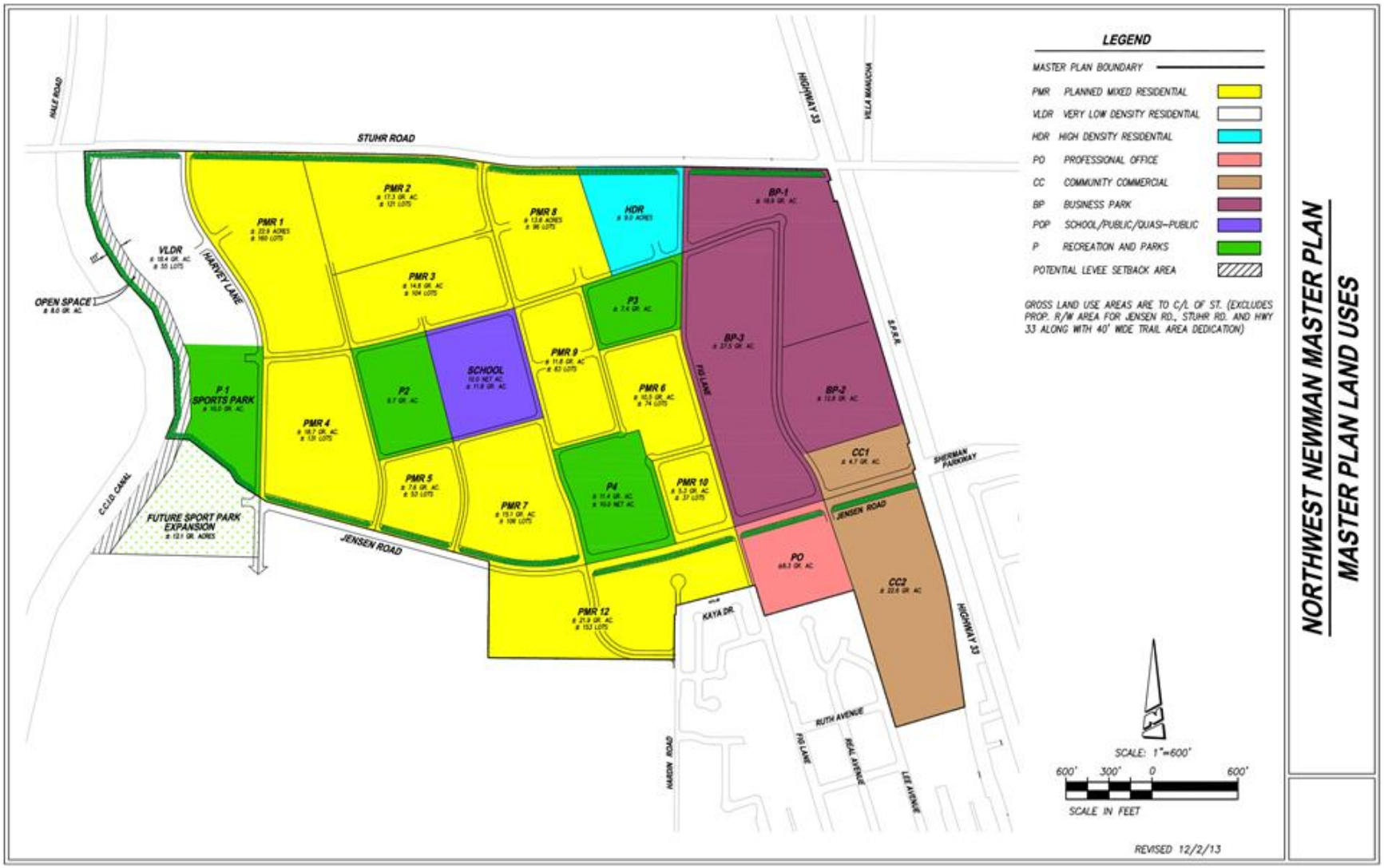
REGIONAL LOCATION MAP



NORTHWEST NEWMAN MASTER PLAN

MASTER PLAN AREA

MASTER PLAN AREA MAP



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MASTER PLAN LAND USES

The Plan area includes 59.2 acres of Business Park (BP) uses, located in the northeast portion of the Plan area fronting on SR 33. Business Park uses allow for office, research and development, wholesale businesses, limited regional commercial uses, and public and quasi-public uses.

The Plan area includes 27.3 acres of Community Commercial (CC) land use. This land use designation is intended for land-extensive commercial uses rather than intensive uses that are programmed for the Downtown area. Allowed uses include retail and wholesale establishments, professional offices (subject to discretionary approval), public and quasi-public and similar uses. The Plan designates properties fronting on the west side of SR 33 north and south of the extension of Jensen Road for CC uses.

The Plan area includes 8.3 acres of Professional Office (PO) land use. The Plan includes this land use in an area south of Jensen Road and west of the Community Commercial land uses.

High Density Residential (HDR) uses are located west of the Business Park area and south of Stuhr Road. Allowed residential product types include single-family attached and multi-family residences, assisted living quarters, as well as public and quasi-public and similar land uses.

Planned Mixed Residential (PMR) is the predominant land use within the Master Plan area and is located in the central, northern, southern and western portions of the area. The PMR land use allows for a range of residential building types, including single family attached and detached dwellings, secondary dwellings, parks, open spaces, public uses and similar uses. The General Plan requirement for residential development in this land use category is for a maximum of 75 percent of the dwellings in a PMR subarea to be at a density of 6 dwellings or less per gross acre. At least 10 percent of the total number of dwelling units are to be developed at a density of 12 dwellings per gross acre or greater.

An area for Very Low Density Residential (VLDR) use is proposed on the northwest portion of the Plan area. The VLDR land use designation allows for single-family detached dwellings on larger lots, accessory uses, public and similar uses.

One elementary school site is provided in the central portion of the Plan area.

Proposed parks are distributed throughout the Plan area, ranging in size between 7 to 11 acres, including a sports park located on the western edge of the Plan area. A 12.1 acre expansion to the proposed sports park is envisioned to the south of the Plan area.

Circulation System

The Northwest Newman Master Plan includes the circulation system shown in **Figure 4**. In general, the circulation system includes minor and major collector roadways in the interior of the Plan area, and arterial roadways and SR 33 near the periphery of the Plan area. The circulation system shows SR 33 and Jensen Road/Sherman Parkway east of Collector Road B as four-lane roadways. All other roadways are shown as two-lane roadways.

As shown in **Figure 4**, the circulation system includes roundabouts at three project site intersections. For this traffic impact study, the Northwest Newman Master Plan is also assumed to include signalization of some existing and future intersections:

- SR 33 & Stuhr Road (existing),
- SR 33 & Jensen Road/Sherman Parkway (existing),
- Jensen Road & Fig Lane (existing),
- Stuhr Road & Harvey Lane (future),
- Stuhr Road & Fig Lane (future),
- SR 33 & the Business Park Industrial Access (future), and
- SR 33 & the Southern Community Commercial Access (future).

Pedestrian and Bicycle System

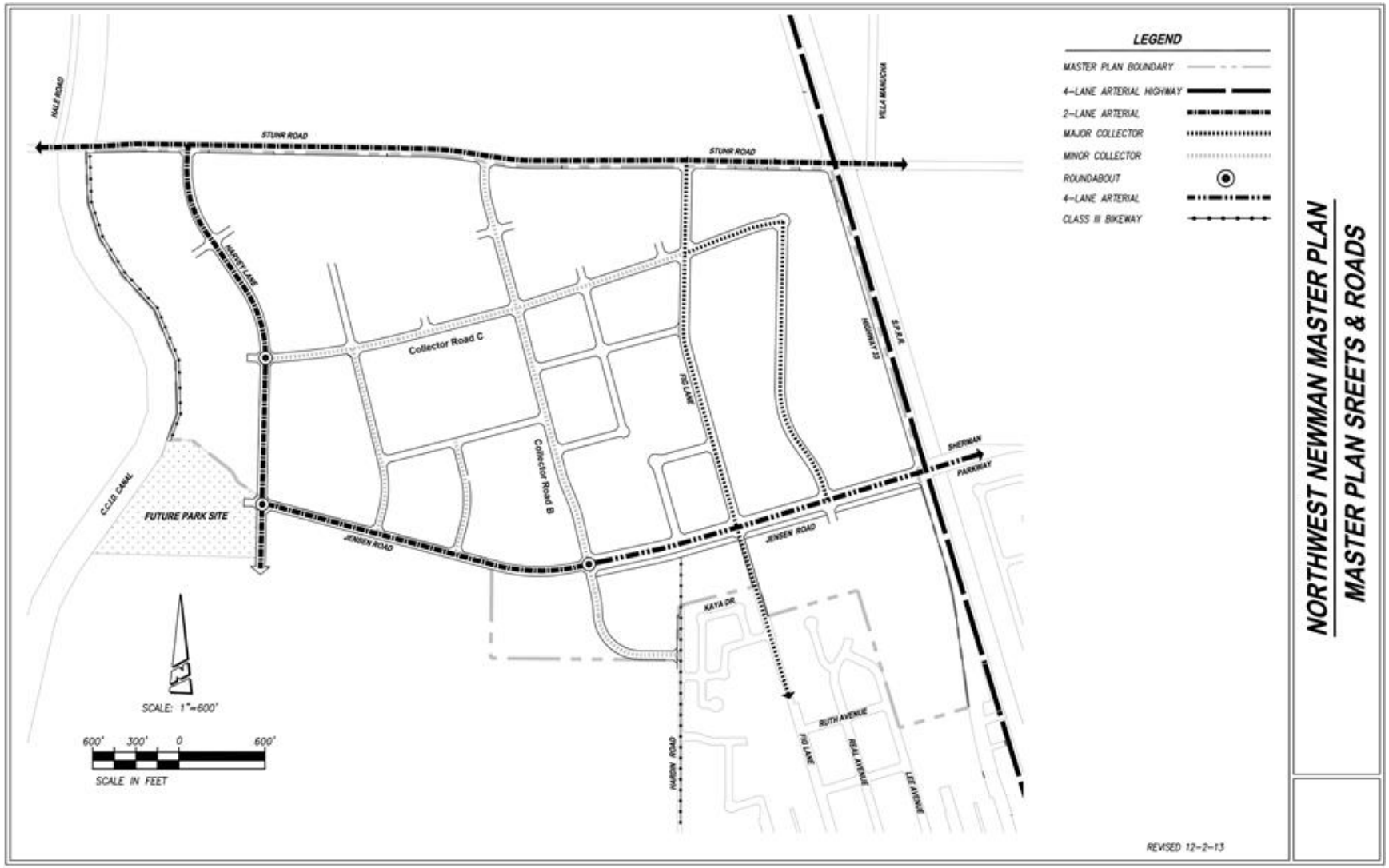
The Northwest Newman Master Plan includes a pedestrian and bicycle plan, shown in **Figure 5**. The plan includes Class I bikeways, Class II bikeways, and pedestrian walkways. Class I bikeways (bike paths) are completely separate facilities designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized. Class II bikeways (bike lanes) are striped lanes designated for the use of bicycles on a street or highway. Vehicle parking and vehicle/pedestrian cross-flow are permitted at designated locations.

The Northwest Newman Master Plan pedestrian and bicycle plan includes:

- Class I bikeways on SR 33 and Jensen Road;

- Class II bikeways on Stuhr Road, Harvey Lane, and Fig Lane; and

- pedestrian walkways on Harvey Lane, Fig Lane, Collector Road B, Collector Road C, and other minor and major collector roads within the proposed project site.



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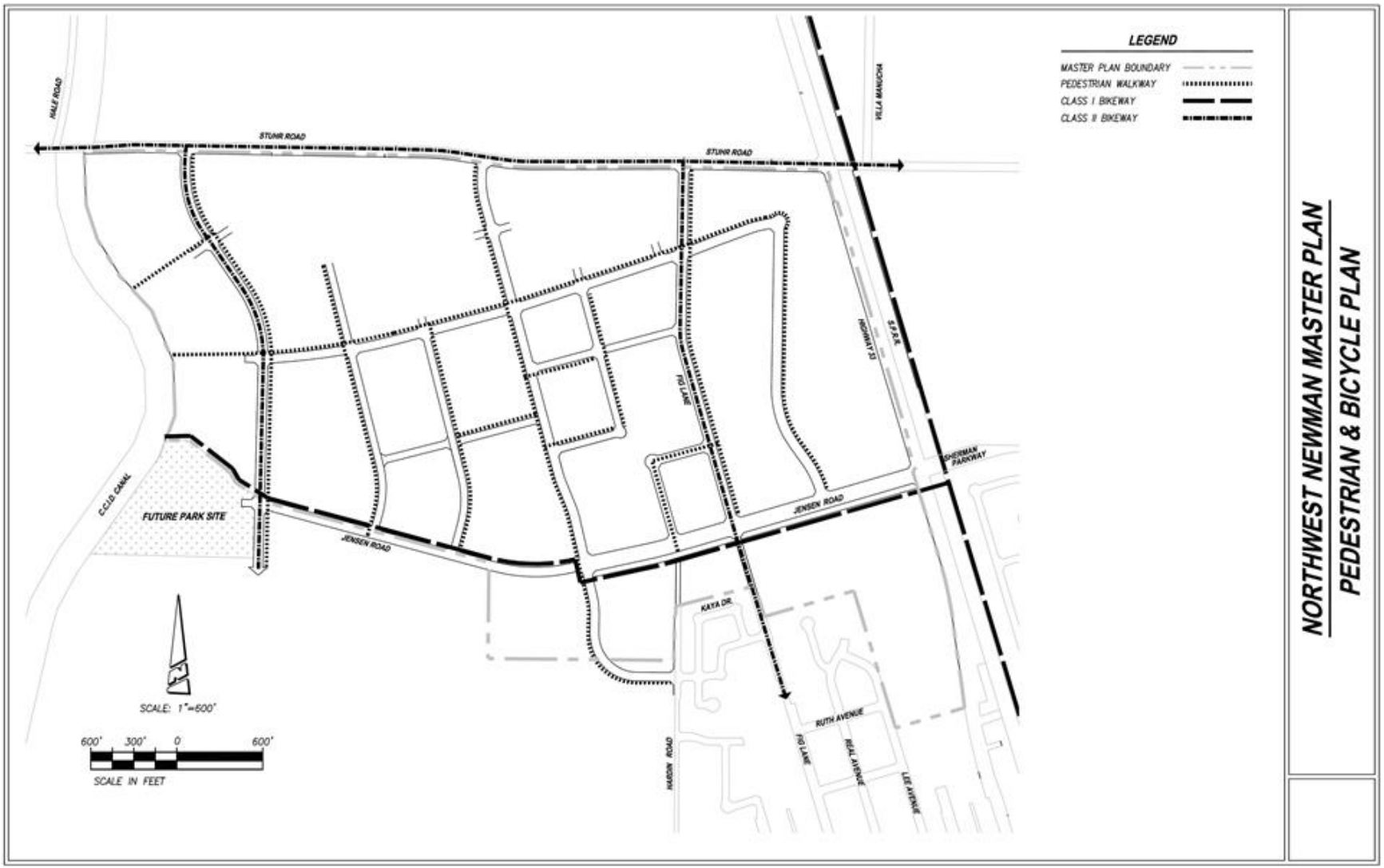
MASTER PLAN STREETS & ROADS

Northwest Newman Master Plan Traffic Impact Study

figure 4


LEGEND
MASTER PLAN BOUNDARY
PEDESTRIAN WALKWAY
CLASS I BIKEWAY
CLASS II BIKEWAY
HALE ROAD
STUHR ROAD
STUHR ROAD
VILLA MANICHE
HIGHWAY 33
S.P.R.R.
FIG LANE
SHERMAN PARKWAY
C.C.I.D. CANAL
FUTURE PARK SITE
JENSEN ROAD
JENSEN ROAD
KAYA DR.
RUTH AVENUE
HARDIN ROAD
FIG LANE
REAL AVENUE
LEE AVENUE
SCALE: 1"=600'
600' 300' 0 600'
SCALE IN FEET
NORTHWEST NEWMAN MASTER PLAN
PEDESTRIAN & BICYCLE PLAN

STUDY SCOPE

The purpose of this study is to identify potential project-specific and cumulative traffic impacts due to implementation of the proposed project.

Study Scenarios

The analysis includes an evaluation of existing circulation conditions in the area based on recent data. Project impacts have been evaluated within the context of existing background traffic and under a near-term future "Existing Plus Approved Projects" (EPAP) scenario that assumes other proposed and approved land use development projects.

To assess traffic-related impacts, the characteristics of the proposed project have been determined, including estimated trip generation, and the directional distribution and assignment of the project-related traffic. "Existing plus Project" and "EPAP Plus Project" conditions were then evaluated.

To address cumulative impacts, this study considers long term conditions occurring in year 2030 under the Newman 2030 General Plan (City of Newman 2006a). The long term cumulative analysis is based on the results of the travel demand forecasting model developed for the *Newman 2030 General Plan EIR* (City of Newman 2006b).

Study Facilities

This traffic impact study presents analysis of the impacts of the proposed project on intersections and roadway segments in the vicinity of the project site. Both existing and future facilities were analyzed for this study.

Study Intersections. This traffic impact study presents analysis of the following 16 study intersections.

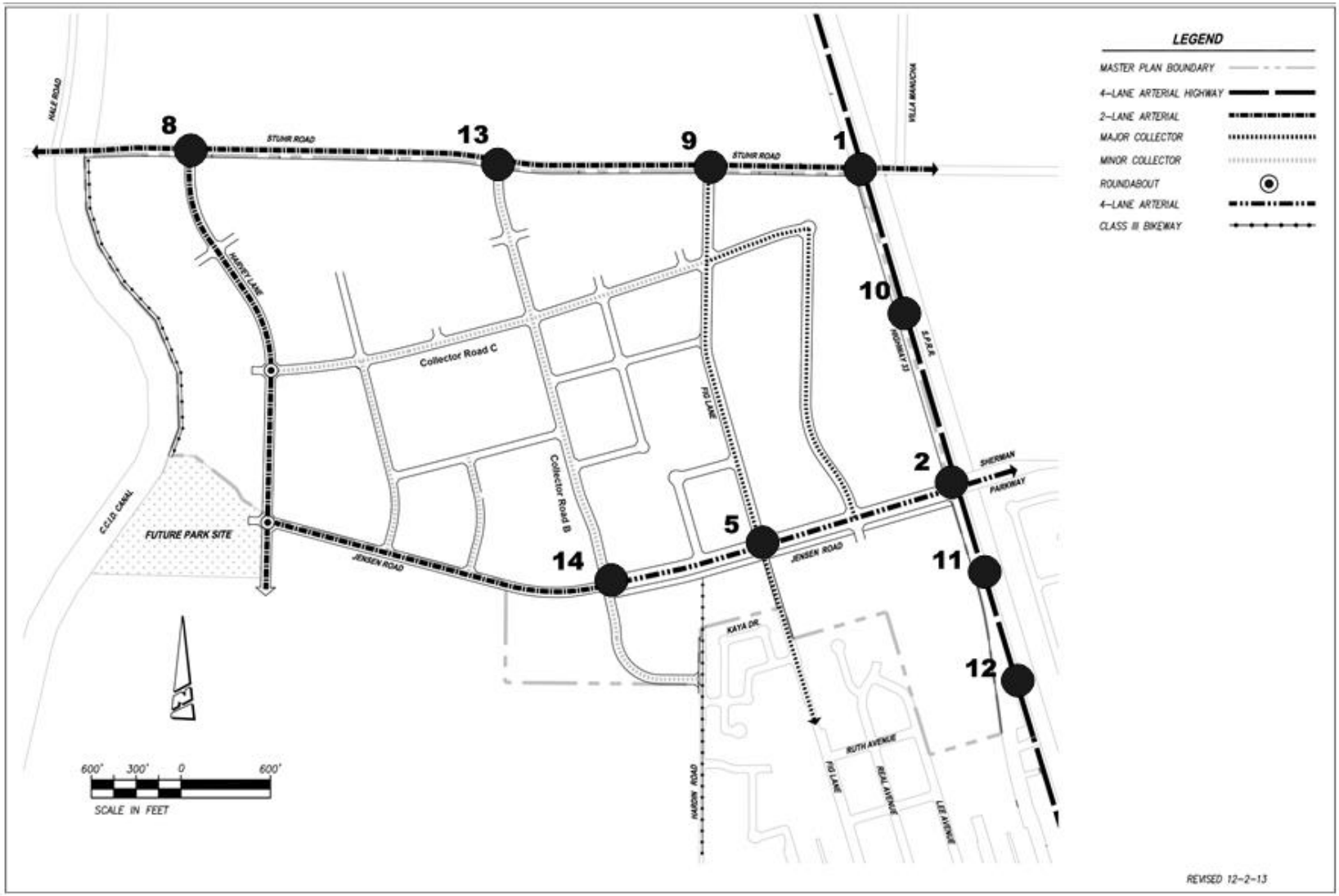
1. SR 33 & Stuhr Road (existing)
2. SR 33 & Jensen Road / Sherman Parkway (existing)
3. SR 33 & Yolo Street (existing)
4. Stuhr Road & Draper Road (existing)
5. Jensen Road & Fig Lane (existing)
6. Orestimba Road / Yolo Street & Hardin Road (existing)
7. Fig Lane / Q Street & Yolo Street (existing)
8. Stuhr Road & Harvey Lane (future)
9. Stuhr Road & Fig Lane (future)
10. SR 33 & Business Park Industrial Access (future)
11. SR 33 & North Commercial Access (future)
12. SR 33 & South Commercial Access (future)
13. Stuhr Road & Collector Road B (future)

14. Jensen Road & Collector Road B (future)
15. Stuhr Road & Eastin Road (existing)
16. Stuhr Road & Villa Manucha Road (existing)

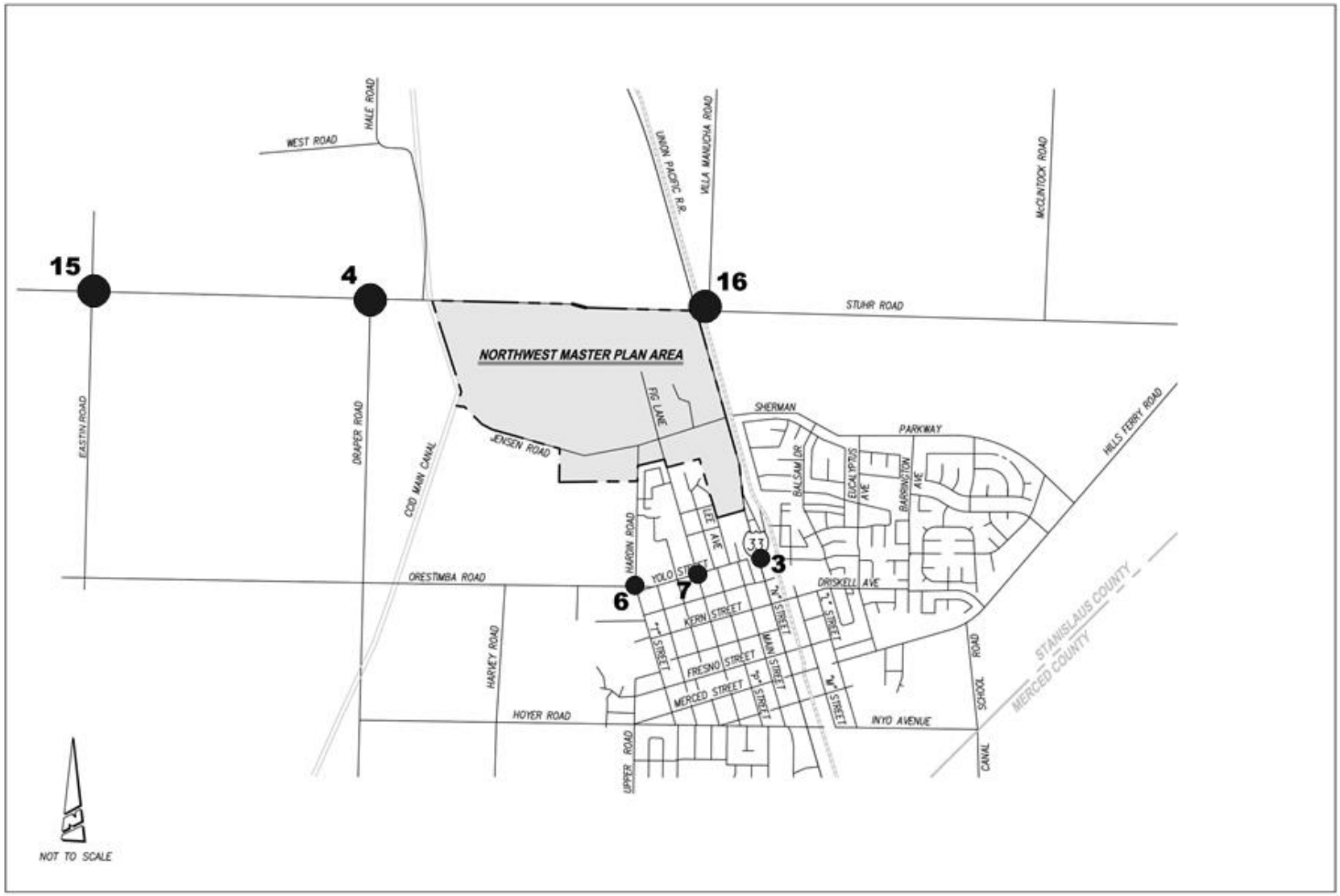
Figure 6 and **Figure 7** show the location of the study intersections. **Figure 6** shows study intersections within or adjacent to the Plan area. **Figure 7** shows off-site study intersections. The study intersection numbers listed above correspond to the numbers shown in **Figure 6** and **Figure 7.**

Study Roadway Segments. This traffic impact study presents analysis of the following 28 study roadway segments.

1. SR 33 - Lundy Road to Stuhr Road (existing)
2. SR 33 - Stuhr Road to Jensen Road (existing)
3. SR 33 - Jensen Road to Yolo Street (existing)
4. Stuhr Road - Fig Lane to SR 33 (existing)
5. Stuhr Road - SR 33 to Hills Ferry Road (existing)
6. Draper Road - Stuhr Road to Orestimba Road (existing)
7. Fig Lane - Jensen Road to Yolo Street (existing)
8. Jensen Road - Fig Lane to SR 33 (existing)
9. Sherman Parkway - SR 33 to Balsam Drive (existing)
10. Orestimba Road - Draper Road to Hardin Road (existing)
11. Yolo Street - Hardin Road to Fig Lane (existing)
12. Yolo Street - Fig Lane to SR 33 (existing)
13. Hardin Road - Orestimba Road to Angelina Avenue (existing)
14. Stuhr Road - Harvey Lane to Collector Road B (future)
15. Stuhr Road - Collector Road B to Fig Lane (future)
16. Harvey Lane - Stuhr Road to Collector Road C (future)
17. Collector Road B - Stuhr Road to Collector Road C (future)
18. Fig Lane - Stuhr Road to Collector Road C (future)
19. Collector Road C - Harvey Lane to Collector Road B (future)
20. Collector Road C - Collector Road B to Fig Lane (future)
21. Harvey Lane - Collector Road C to Jensen Road (future)
22. Collector Road B - Collector Road C to Jensen Road (future)
23. Fig Lane - Collector Road C to Jensen Road (future)
24. Jensen Road - Harvey Lane to Collector Road B (future)
25. Jensen Road - Collector Road B to Fig Lane (future)
26. Eastin Road - Stuhr Road to Anderson Road (existing)
27. Stuhr Road - Draper Road to Eastin Road (existing)
28. Stuhr Road - Eastin Road to Interstate 5 (existing)



STUDY INTERSECTIONS - ON-SITE



STUDY INTERSECTIONS - OFF-SITE

Figure 8 and **Figure 9** show the location of the study roadway segments. **Figure 8** shows study roadway segments within or adjacent to the Plan area. **Figure 9** shows off-site study roadway segments. The study roadway segment numbers listed above correspond to the numbers shown in **Figure 8** and **Figure 9.**

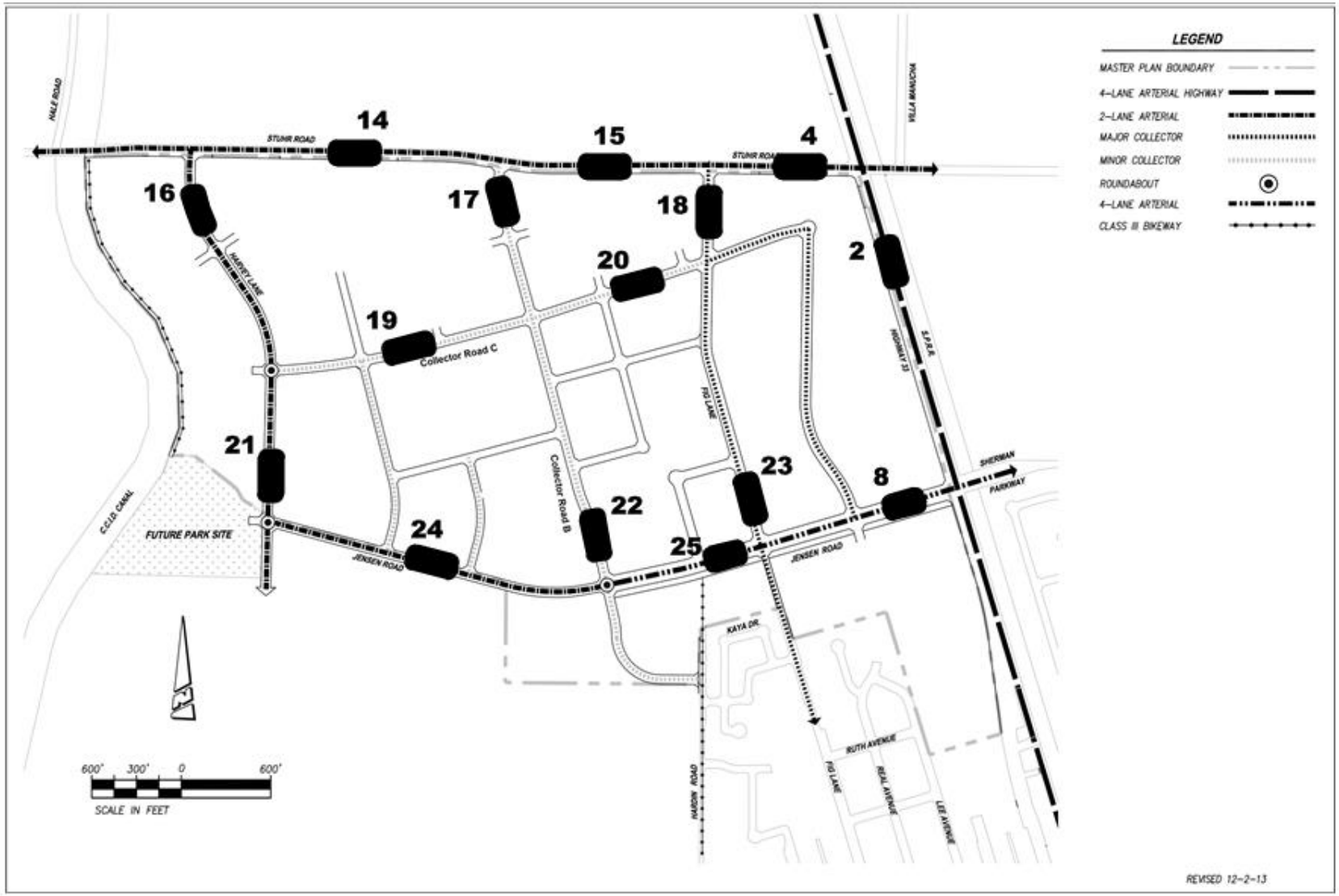
SUMMARY CONCLUSIONS

The following is a brief overview of the analysis presented in this traffic impact study. It is not intended to be a comprehensive description of the analysis. For more details, the reader is referred to the full description presented in the traffic impact study.

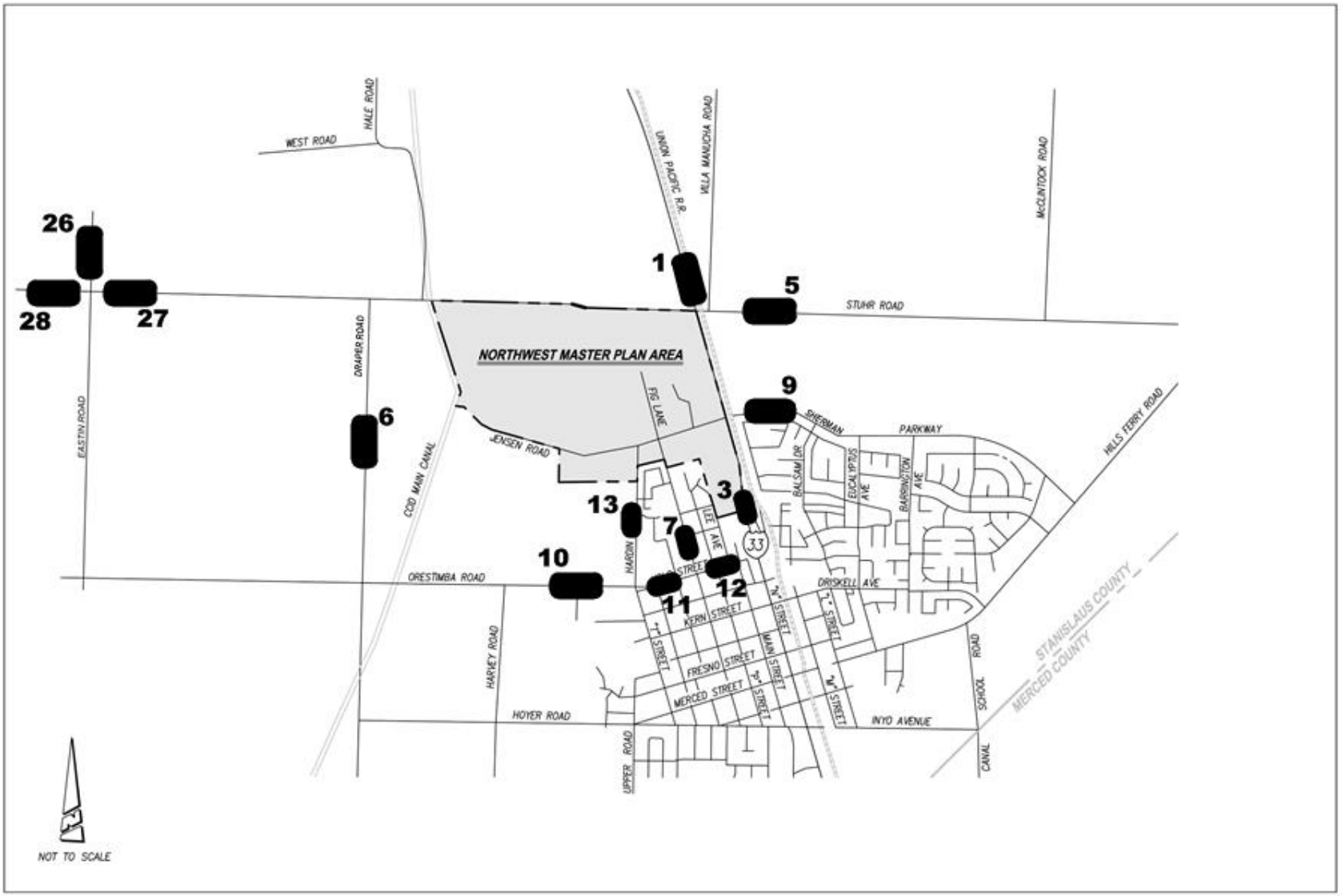
Implementation of the Northwest Newman Master Plan project with existing background conditions would result in significant impacts at four study intersections and one study roadway segment. Mitigation measures needed to reduce the impacts to a less-than-significant level are identified in this traffic impact study.

Implementation of the proposed project with near-term future EPAP background conditions would result in significant impacts at four study intersections and one study roadway segment. Mitigation measures needed to reduce the impacts to a less-than-significant level are identified in this traffic impact study.

Implementation of the proposed project with long-term future Cumulative background conditions would result in significant impacts at five study intersections and three study roadway segment. Mitigation measures needed to reduce the impacts to a less-than-significant level at three study intersections are identified in this traffic impact study. Significant impacts are considered unavoidable at two study intersections and three study roadway segments.



STUDY ROADWAY SEGMENTS - ON-SITE



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STUDY ROADWAY SEGMENTS – OFF-SITE

Northwest Newman Master Plan Traffic Impact Study

figure 9

EXISTING SETTING

The following is a description of existing transportation conditions in the vicinity of the project site, and analysis methods used for this traffic impact study.

EXISTING STREET SYSTEM

Regional access to Newman is provided by SR 33, Stuhr Road and Hills Ferry Road. Primary local access to the Northwest Newman Master Plan project site would be provided by N Street (SR 33), Stuhr Road, and extensions of Harvey Lane, Jensen Road / Sherman Parkway, Hardin Road, and Fig Lane.

The text that follows describes these existing and proposed facilities. Functionally, the *Circulation Element* of the *Newman 2030 General Plan* (City of Newman 2006a) classifies study area streets as Arterials, Collectors or Local Streets.

N Street (State Route 33)

SR 33 is a major roadway providing important north/south circulation through Newman while also linking the community with the City of Patterson to the north and the Merced County community of Gustine to the south. Inside the Newman City limits, SR 33 is N Street and is a two-lane arterial street with a center left-turn lane and parallel on-street parking. The Newman General Plan indicates that SR 33 will eventually need to be widened to four lanes, and in 1996 the City adopted the *Highway 33 Specific Plan* which identified the limits of planned improvements.

The most recent daily traffic counts reported by the California Department of Transportation (Caltrans) indicate that SR 33 carried an Annual Average Daily Traffic (AADT) volume of 6,300 vehicles per day south of Jensen Road, 6,500 vehicles per day between Jensen Road and Stuhr Road, and 3,650 vehicles per day north of Stuhr Road (California Department of Transportation 2014).

Stuhr Road

Stuhr Road is an east-west two-lane roadway that provides both regional access and local access to the project site. The western terminus is at an interchange with Interstate 5 (I-5). The eastern terminus is at Hills Ferry Road. Stuhr Road is the northern boundary of the Northwest Newman Master Plan area, and the intersection of Stuhr Road and SR 33 is the northeast corner of the Plan area. The *Newman 2030 General Plan* (City of Newman 2006a) designates Stuhr Road as a two-lane arterial.

Hills Ferry Road

Hills Ferry Road is a roadway aligned in a southwest-northeast direction that provides the City of Newman with regional access across the San Joaquin River to the northeast. The southwest terminus is at SR 33, where it continues as Merced Street. The northeast terminus is at a crossing of the San Joaquin River, where it splits into River Road and Kelly Road. Hills Ferry Road is two lanes wide, with a center two-way left-turn lane (CTWLTL) along some portions. The *Newman 2030 General Plan* designates Hills Ferry Road as a four-lane arterial.

Harvey Lane

Harvey Lane is currently a narrow unpaved roadway west of the City of Newman. It is aligned in a north-south direction with a northern terminus at Hoyer Road and a southern terminus at Hallowell Road. The Northwest Newman Master Plan shows Harvey Lane traversing the western portion of the Plan area. The *Newman 2030 General Plan* designates Harvey Lane as a two-lane arterial. Portions of this roadway are referred to as Harvey Road.

Jensen Road / Sherman Parkway

Jensen Road is currently a narrow paved roadway west of SR 33, with a varying pavement width of 12 to 14 feet. It is generally aligned in an east-west direction with some horizontal curves. The western terminus is near the CCID canal and the eastern terminus is at SR 33. Jensen Road extends east of SR 33 as Sherman Parkway. The eastern terminus of Sherman Parkway is at Hills Ferry Road. Sherman Parkway is a recently-paved roadway with a pavement width of 30 to 40 feet. The Northwest Newman Master Plan shows Jensen Road traversing the southern portion of the Plan area. The *Newman 2030 General Plan* designates Jensen Road and Sherman Parkway as four-lane arterials.

Hardin Road

Hardin Road is a two-lane north-south roadway south of the Plan area. The northern terminus of Hardin Road is approximately 450 feet south of Jensen Road. The southern terminus is at Yolo Street. Hardin Road extends south of Yolo Street as T Street. Hardin Road provides direct access to Orestimba High School. The Northwest Newman Master Plan shows Collector Road B as a north-south roadway traversing the central portion of the Plan area. The southern terminus of Collector Road B would be at Hardin Road; the northern terminus would be at Stuhr Road. The *Newman 2030 General Plan* designates Hardin Road and T Street as major collector roadways.

Fig Lane

Fig Lane is a two-lane roadway with a generally north-south alignment. The northern terminus of Fig Lane is approximately 600 feet north of Jensen Road. The southern terminus is at Yolo Street. Fig Lane extends south of Yolo Street as Q Street. The Northwest Newman Master Plan shows Fig Lane traversing the eastern portion of the Plan area, with a northern terminus at Stuhr

Road. The *Newman 2030 General Plan* designates Fig Lane and Q Street as major collector roadways.

EXISTING STUDY INTERSECTIONS

The geometric lane configuration and traffic controls at the following existing study intersections are shown in **Figure 10.** The numbers listed below correspond to the numbers shown in **Figure 10**.

1. SR 33 & Stuhr Road
2. SR 33 & Jensen Road / Sherman Parkway
3. SR 33 & Yolo Street
4. Stuhr Road & Draper Road
5. Jensen Road & Fig Lane
6. Orestimba Road / Yolo Street & Hardin Road
7. Fig Lane / Q Street & Yolo Street
15. Stuhr Road & Eastin Road
16. Stuhr Road & Villa Manucha Road

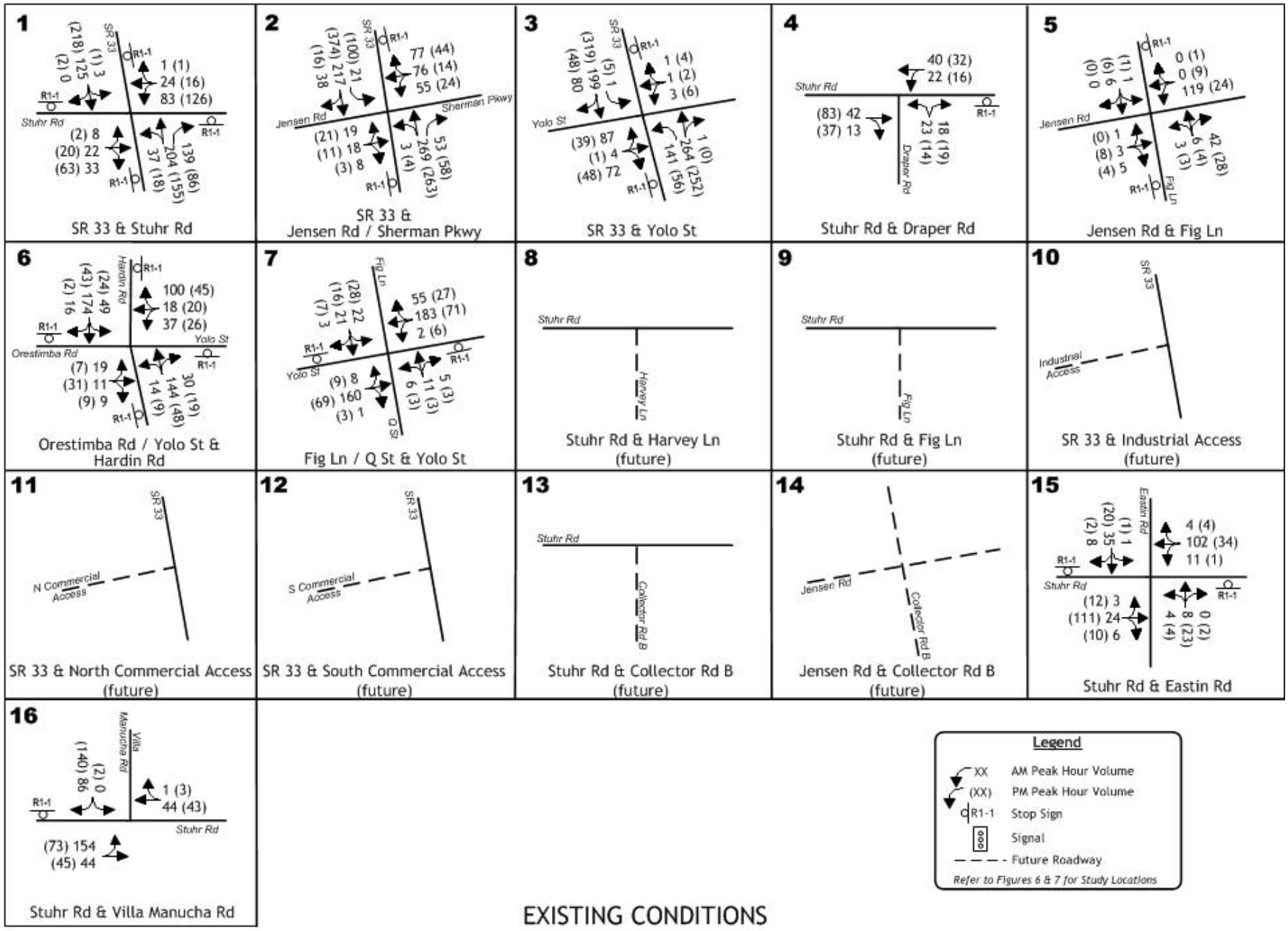
PUBLIC TRANSIT

Public transit service in the Newman area is provided by Stanislaus Regional Transit (StaRT). StaRT provides both fixed route and dial-a-ride service Monday through Saturday (Stanislaus Regional Transit 2014). Fixed route service is provided by Route 45 West, which operates from 5:30 a.m. to 9:18 p.m. on weekdays, and 5:45 a.m. to 8:37 p.m. on Saturday. The Newman Dial-a-Ride service operate from 7:00 a.m. to 6:00 p.m. on weekdays, and 8:00 a.m. to 4:30 p.m. on Saturday.

BICYCLE FACILITIES

The Newman 2030 General Plan (City of Newman 2006a) denotes the planned bicycle system to serve the community of Newman. The GP bicycle plan identifies both Class I (separated path) and Class II (bicycle lanes) facilities. Class I paths are planned in the following locations:

- Jensen Road,
- Sherman Parkway from the CCIG Canal to McClintock Road,
- along the CCID canal,
- Hoyer Road between Harvey Road and Upper Road,
- Prince Street between Inyo Avenue and Shiells Road,
- along the railroad corridor east of SR 33, and
- Canal School Road south of Hills Ferry Road.



EXISTING CONDITIONS

Intersection Traffic Volumes and Lane Configurations

On street bicycle lanes (Class II) are planned along new collector / arterial streets and along major streets through Newman, including Kern Street, Driskell Avenue, Inyo Avenue, Fig Lane, and T Street.

EXISTING TRAFFIC VOLUMES

To quantify existing traffic conditions, traffic volume count data were collected at study intersections and study roadway segments. Traffic volume count data reports are presented in the *Technical Appendix* of this traffic impact study.

Study Intersections

Weekday a.m. and p.m. peak hour intersection turning movement count data were collected at study intersections. **Figure 10** shows weekday a.m. and p.m. peak hour traffic volume at the study intersection.

At the following seven study intersections, a.m. peak hour and p.m. peak hour traffic count data were collected in May 2011 when seasonal agricultural traffic occurred and area schools were in session. These peak hours were selected as being representative of "worst case' background traffic conditions, based on review of daily traffic counts in the City of Newman, and based on the highest hour of project trip generation.

1. SR 33 & Stuhr Road
2. SR 33 & Jensen Road / Sherman Parkway
3. SR 33 & Yolo Street
4. Stuhr Road & Draper Road
5. Jensen Road & Fig Lane
6. Orestimba Road / Yolo Street & Hardin Road
7. Fig Lane / Q Street & Yolo Street

At the following two study intersections, traffic count data were collected in January 2014.

15. Stuhr Road & Eastin Road
16. Stuhr Road & Villa Manucha Road

Annual traffic count data reported by Caltrans (California Department of Transportation 2014) were reviewed to determine whether traffic count data from 2011 were still valid. During a relatively long-term 18-year period from 1994 to 2012, the traffic volume on SR 33 has decreased 12 percent to 19 percent. During a relatively short-term three-year period from 2009 to 2012, the traffic volume on SR 33 has decreased six percent to 21 percent. The Caltrans data indicate both long-term and short-term trends in traffic volume are decreasing. Therefore, the use of traffic volume count data from 2011 is considered valid for this traffic impact study.

Study Roadway Segments

Weekday daily roadway segment traffic volume count data were collected at study roadway segments. **Table 1** shows weekday daily traffic volume at the study roadway segments.

Traffic volume count data for the following three roadway segments are from Caltrans (California Department of Transportation 2014):

1. SR 33 - Lundy Road to Stuhr Road
2. SR 33 - Stuhr Road to Jensen Road
3. SR 33 - Jensen Road to Yolo Street

At the following six study roadway segments, traffic count data were collected in May 2011. As noted earlier in this traffic impact study, these data were collected when seasonal agricultural traffic occurred and area schools were in session.

4. Stuhr Road - Fig Lane to SR 33
5. Stuhr Road - SR 33 to Hills Ferry Road
6. Draper Road - Stuhr Road to Orestimba Road
9. Sherman Parkway - SR 33 to Balsam Drive
11. Yolo Street - Hardin Road to Fig Lane
13. Hardin Road - Orestimba Road to Angelina Avenue

At the following four study roadway segments, traffic count data were collected in May 2005.

7. Fig Lane - Jensen Road to Yolo Street
8. Jensen Road - Fig Lane to SR 33
10. Orestimba Road - Draper Road to Hardin Road
12. Yolo Street - Fig Lane to SR 33

At the following three study roadway segments, traffic count data were collected in January 2014.

26. Eastin Road - Stuhr Road to Anderson Road
27. Stuhr Road - Draper Road to Eastin Road
28. Stuhr Road - Eastin Road to Interstate 5

As noted earlier in this traffic impact study, annual traffic count data reported by Caltrans indicate both long-term and short-term trends in traffic volume are decreasing. Therefore, the use of roadway segment traffic volume count data listed above is considered valid for this traffic impact study.

Table 1. Roadway Segment Level of Service - Existing Conditions & Existing Plus Project

	Roadway Segment	Existing Conditions						Existing Plus Project					
		Typ	Ln	Cap	Volume	V/C	LOS	Typ	Ln	Cap	Volume	V/C	LOS
1	SR 33- Lundy Road to Stuhr Road	SH	4	40,000	3,650	0.09	A	SH	2	20,000	4,938	0.25	A
2	SR 33 - Stuhr Road to Jensen Road	SH	4	40,000	6,500	0.16	A	SH	2	20,000	9,841	0.49	A
3	SR 33 - Jensen Road to Yolo Street	SH	4	40,000	6,300	0.16	A	SH	2	20,000	20,814	1.04	**F**
4	Stuhr Road - Fig Lane to SR 33	Art	2	19,000	2,023	0.11	A	Art	2	19,000	5,519	0.29	A
5	Stuhr Road - SR 33 to Hills Ferry Road	Art	2	19,000	761	0.04	A	Art	2	19,000	3,557	0.19	A
6	Draper Road - Stuhr Road to Orestimba Road	Art	2	19,000	894	0.05	A	Art	2	19,000	955	0.05	A
7	Fig Lane - Jensen Road to Yolo Street	Coll	2	15,000	751	0.05	A	Coll	2	15,000	5,798	0.39	A
8	Jensen Road - Fig Lane to SR 33	Art	2	19,000	350	0.02	A	Art	4	38,000	13,544	0.36	A
9	Sherman Parkway - SR 33 to Balsam Drive	Art	2	19,000	2,846	0.15	A	Art	2	19,000	7,656	0.40	A
10	Orestimba Road - Draper Road to Hardin Road	Art	2	19,000	590	0.03	A	Art	2	19,000	2,152	0.11	A
11	Yolo Street - Hardin Road to Fig Lane	Coll	2	15,000	1,857	0.12	A	Coll	2	15,000	4,515	0.30	A
12	Yolo Street - Fig Lane to SR 33	Coll	2	15,000	3,906	0.26	A	Coll	2	15,000	7,102	0.47	A
13	Hardin Road - Orestimba Road to Angelina Ave	Coll	2	15,000	1,832	0.12	A	Coll	2	15,000	3,541	0.24	A
14	Stuhr Road - Harvey Lane to Collector B	- -	- -	--	- -	--	- -	Art	2	19,000	2,880	0.15	A
15	Stuhr Road - Collector B to Fig Lane	- -	- -	--	- -	--	- -	Art	2	19,000	3,291	0.17	A
16	Harvey Lane - Stuhr Road to Collector C	- -	- -	--	- -	--	- -	Art	2	19,000	1,209	0.06	A

Table 1. Roadway Segment Level of Service - Existing Conditions & Existing Plus Project (Continued)

		Existing Conditions						Existing Plus Project					
	Roadway Segment	Typ	Ln	Cap	Volume	V/C	LOS	Typ	Ln	Cap	Volume	V/C	LOS
17	Collector B - Stuhr Road to Collector C	- -	- -	--	- -	--	- -	Coll	2	15,000	814	0.05	A
18	Fig Lane - Stuhr Road to Collector C	- -	- -	--	- -	--	- -	Coll	2	15,000	2,605	0.17	A
19	Collector C - Harvey Lane to Collector B	- -	- -	--	- -	--	- -	Coll	2	15,000	1,302	0.09	A
20	Collector C - Collector B to Fig Lane	- -	- -	--	- -	--	- -	Coll	2	15,000	1,935	0.13	A
21	Harvey Lane - Collector C to Jensen Road	- -	- -	--	- -	--	- -	Art	2	19,000	1,571	0.08	A
22	Collector B - Collector C to Jensen Road	- -	- -	--	- -	--	- -	Coll	2	15,000	3,428	0.23	A
23	Fig Lane - Collector C to Jensen Road	- -	- -	--	- -	--	- -	Coll	2	15,000	8,068	0.54	A
24	Jensen Road - Harvey Lane to Collector B	- -	- -	--	- -	--	- -	Art	2	19,000	2,036	0.11	A
25	Jensen Road - Collector B to Fig Lane	- -	- -	--	- -	--	- -	Art	4	38,000	5,138	0.14	A
26	Eastin Road - Stuhr Road to Anderson Road	ND	2	15,000	595	0.04	A	ND	2	15,000	595	0.04	A
27	Stuhr Road - Draper Road to Eastin Road	Art	2	19,000	1,699	0.09	A	Art	2	19,000	3,077	0.16	A
28	Stuhr Road - Eastin Road to Interstate 5	Art	2	19,000	1,705	0.09	A	Art	2	19,000	3,083	0.16	A

Notes: "Typ" = Roadway Type. "Ln" = Number of Lanes. "Cap" = Daily Capacity. "V/C" = Volume-to-Capacity Ratio. "LOS" = Level of Service. "SR" = State Route. Dashes ("- -") indicate roadway segment not present under this scenario. Roadway Types: "SH" = State Highway. "Art" = City Street Arterial. "Coll" = Collector Street. "ND" = Not Designated. Bold font indicates unacceptable LOS.

Sources: City of Newman 2006a, and KD Anderson & Associates 2014.

METHODOLOGY

To quantitatively evaluate traffic conditions and to provide a basis for comparison of operating conditions with and without project-Generated traffic, "level of service" (LOS) was determined at study intersections and roadway segments.

Intersection Level of Service

Level of service is a quantitative measure of traffic operating conditions. 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 2**. LOS E and F are associated with severe congestion and delay, and are unacceptable to most motorists.

Caltrans District 10, which is responsible for SR 33, specifies that intersection LOS analysis be conducted using the *Synchro* software package (Trafficware 2014), and be based on methods presented in the *Highway Capacity Manual 2010* (Transportation Research Board 2010). Therefore, *Synchro* and the *Highway Capacity Manual 2010* were used in the analysis of the following study intersections on SR 33. These methods were applied to both unsignalized and signalized intersections.

1. SR 33 & Stuhr Road (existing)
2. SR 33 & Jensen Road / Sherman Parkway (existing)
3. SR 33 & Yolo Street (existing)
10. SR 33 & Business Park Industrial Access (future)
11. SR 33 & North Commercial Access (future)
12. SR 33 & South Commercial Access (future)

Consistent with methods used in the traffic analysis presented in the *Newman 2030 General Plan EIR* (City of Newman 2006b), methods presented in the *Highway Capacity Manual 2000* (Transportation Research Board 2000) were applied to the remaining following intersections using the *Traffix* software package. These methods were applied to both unsignalized and signalized intersections.

4. Stuhr Road & Draper Road (existing)
5. Jensen Road & Fig Lane (existing)
6. Orestimba Road / Yolo Street & Hardin Road (existing)
7. Fig Lane / Q Street & Yolo Street (existing)
8. Stuhr Road & Harvey Lane (future)
9. Stuhr Road & Fig Lane (future)
13. Stuhr Road & Collector Road B (future)
14. Jensen Road & Collector Road B (future)
15. Stuhr Road & Eastin Road (existing)
16. Stuhr Road & Villa Manucha Road (existing)

Table 2. Level of Service Definitions - Highway Capacity Manual 2010

Level of Service	Signalized Intersections	Unsignalized Intersections
A	Vehicle progression is exceptionally favorable or the cycle length is very short. Delay ≤ 10.0 seconds/vehicle	Little or no delay. Delay ≤ 10 seconds/vehicle
B	Vehicle progression is highly favorable or the cycle length is short. Delay > 10 seconds/vehicle and ≤ 20 seconds/vehicle	Short traffic delays. Delay > 10 seconds/vehicle and ≤ 15 seconds/vehicle
C	Vehicle progression is favorable or the cycle length is moderate. Individual cycle failures may begin to appear at this level. Delay > 20 seconds/vehicle and ≤ 35 seconds/vehicle	Average traffic delays. Delay > 15 seconds/vehicle and ≤ 25 seconds/vehicle
D	Vehicle progression is ineffective or the cycle length is long. Many vehicles stop and the individual cycle failures are noticeable. Delay > 35 seconds/vehicle and ≤ 55 seconds/vehicle	Long traffic delays. Delay > 25 seconds/vehicle and ≤ 35 seconds/vehicle
E	Vehicle progression is unfavorable and the cycle length is long. Individual cycle failures are frequent. Delay > 55 seconds/vehicle and ≤ 80 seconds/vehicle	Very long traffic delays, failure, extreme congestion. Delay > 35 seconds/vehicle and ≤ 50 seconds/vehicle
F	Vehicle progression is very poor and the cycle length is long. Most cycles fail to clear the vehicle queue. Delay > 80 seconds/vehicle	Intersection blocked by external causes. Delay > 50 seconds/vehicle

Source: Transportation Research Board 2010.

Intersection LOS calculation worksheets for all intersections under all scenarios analyzed for this traffic impact study are presented in the *Technical Appendix*.

Signal Warrants

Traffic signal warrants are a series of standards which provide guidelines for determining if a traffic signal is appropriate. Signal warrant analyses are typically conducted at intersections of uncontrolled major streets and stop sign-controlled minor streets. If one or more signal warrants are met, signalization of the intersection may be appropriate. However, a signal should not be installed if none of the warrants are met, because installation of signals would increase delays on the previously-uncontrolled major street, resulting in an undesirable increase in overall vehicle delay at the intersection. Signalization may also increase the occurrence of certain types of accidents. Therefore, if signals are installed where signal warrants are not met, the detriment of increased accidents and overall delay may be greater than the benefit in traffic operating conditions on the single worst movement at the intersection. Signal warrants, then, provide an industry-standard basis for identifying when the adverse effect on the worst movement is substantial enough to warrant signalization.

For the analysis conducted for this traffic impact study, available data at unsignalized intersections are limited to a.m. and p.m. peak hour volumes. Thus, unsignalized intersections were evaluated using the Peak Hour Warrant (Warrant Number 3) from the California Department of Transportation document *California Manual on Uniform Traffic Control Devices - FHWA's MUTCD 2009 Edition as amended for use in California – 2012 Edition* (MUTCD) (California Department of Transportation 2012). This warrant was applied where the minor street experiences long delays in entering or crossing the major street for at least one hour of the day. The Peak Hour Warrant itself includes several components. Some of the components involve comparison of traffic volumes and vehicle delay to a series of standards. Another component involves comparison of traffic volumes to a nomograph.

Even if the Peak Hour Warrant is met, a more detailed signal warrant study is recommended before a signal is installed. The more detailed study should consider volumes during the eight highest hours of the day, volumes during the four highest hours of the day, pedestrian traffic, and accident histories.

Roadway Segment Level of Service

Levels of service on roadway segments were calculated for this traffic impact study using methods applied in the *Newman 2030 General Plan* (City of Newman 2006a). These methods are based on daily roadway segment traffic volume capacities for various types of facilities and numbers of lanes. The methods identify traffic volume thresholds for each LOS. The ranges of traffic volumes, and volume-to-capacity (V/C) ratios, associated with each LOS for each type of facility is shown in **Table 3**.

Table 3. Roadway Segment Level of Service Volume Ranges

Level of Service	Volume to Capacity Ratio	Arterial Street				2 Lane Collector Street
		State Highway		City Street		
		4 Lane	2 Lane	4 Lane	2 Lane	
A	< 0.60	24,000 or less	12,000 or less	22,800 or less	11,400 or less	9,000 or less
B	> 0.60 to 0.70	24,001 - 28,000	12,001 - 14,000	22,801 - 26,600	11,401 - 13,300	9,001 - 10,500
C	> 0.70 to 0.80	28,001 - 32,000	14,001 - 16,000	26,601 - 30,400	13,301 - 15,200	10,501 - 12,000
D	> 0.80 to 0.90	32,001 - 36,000	16,001 - 18,000	30,401 - 34,200	15,201 - 17,100	12,001 - 13,500
E	> 0.90 to 1.00	36,001 - 40,000	18,001 - 20,000	34,201 - 38,000	17,101 - 19,000	13,501 - 15,000
F	> 1.00	> 40,000	> 20,000	> 38,000	> 19,000	> 15,000

Source: City of Newman 2006a.
Notes: "<" = less than. ">" = greater than.

REGULATORY SETTING

The following describes state and local transportation and circulation policies which apply to the study area.

California Department of Transportation

In its *Guide for the Preparation of Traffic Impact Studies* (California Department of Transportation 2002), Caltrans establishes an operational objective of the transition from LOS C to LOS D. In instances where a facility is operating worse than LOS C, Caltrans seeks to maintain the existing measure of effectiveness.

Caltrans plans and polices for state highways are also presented in a series of "transportation concept report" (TCR) documents. Each TCR document is specific to a state route in an individual Caltrans district. The *State Route 33 Transportation Concept Report* (California Department of Transportation 2003) applies to SR 33 in Newman**.** As described in the SR 33 TCR, the "2020 Concept Level of Service" for SR 33 through Stanislaus County is LOS D.

Stanislaus Council of Governments

The *2011 Regional Transportation Plan* (RTP) (Stanislaus Council of Governments 2010) for Stanislaus County is a federally-mandated, long-range transportation plan for the nine incorporated cities and the unincorporated county. The RTP specifies the policies, projects, and programs necessary over a 20-plus year period to maintain, manage, and improve the region's transportation systems. It establishes goals and objectives for the future system. It identifies the actions necessary to achieve these goals and describes a funding strategy and options for implementing the actions. The RTP is updated every three years. The present 2011 update concerns the period from 2011 to 2035.

To coordinate local planning efforts with other regional, state, and federal agencies, and to monitor and respond to policies that will affect the development and implementation of the RTP, the Stanislaus Council of Governments (StanCOG) prioritizes transportation projects in a Transportation Improvement Program (TIP) for federal and state funding. The process is based on each project for need, feasibility, and adherence to federal transportation policies.

The RTP's Regional Road network includes SR 33 through Newman. Newman area Tier I projects (i.e., projects that have a funding source) include traffic signals at various locations and improving the north portion of SR 33 to four lanes for 2,700 feet north of the Yolo Street intersection. Unfunded Tier II projects include reconstruction of Inyo Avenue from L Street to Canal School Road and widening of Inyo Avenue to four lanes for 1,750 feet south of Inyo Avenue to Yolo Street. Tier I bicycle projects are limited to a Class I bike lane on Canal School Road.

StanCOG administers the Regional Transportation Impact Fee (RTIF).

Stanislaus County

The Stanislaus County General Plan notes that Stanislaus County is directly responsible for the construction and maintenance of all roads in the county except for those within the nine incorporated cities (including Newman), interstate highways, and state routes. Caltrans is responsible for all state routes and interstates.

Level of Service Standards. Stanislaus County strives to maintain LOS C on all facilities located within rural areas of the County. LOS D has been identified as an acceptable LOS within urban areas within the sphere of influence of cities with an LOS D standard.

Plan Lines. Official Plan Lines have been prepared for a number of roads in the County and adopted by the Board of Supervisors. Adoption of Official Plan Lines shows the intent of the County to widen these streets to a specified width along a specified alignment or build a new road at some future time. Official Plan Lines are often used when it is undesirable or impractical to widen a road by requiring legal dedication on both sides of the existing center line. Official Plan Lines are established to prevent any unnecessary removal of buildings or important natural features when the County is ready to build the road. Once adopted, building activity is prohibited inside the established setback lines although existing buildings may remain. Identified ultimate road widths and alignments for the eventual widening or construction of a road have the important advantage of minimizing the cost to the County in the future. If new structures are permitted to be constructed in the proposed right-of-way, the County will be obligated to purchase portions of buildings and land lying within the proposed street line. It is also hoped that the disruption and dislocation of privately-owned improvements would be minimized to reduce impacts on property owners. Adoption of Official Plan Lines or identification of ultimate street width requires foresight because the entire process of developing a transportation corridor is a slow one. A number of years may elapse before the last building, or even a majority of the buildings, are set back to the adopted line. Building setbacks may cause hardships to the first buildings that are required to be set back of the new line because they appear to be placed at the back of a parcel with old buildings projecting in front of them on both sides.

In the Newman area, a plan line has been adopted for Stuhr Road from I-5 to SR 33.

City of Newman

The *Newman 2030 General Plan* (City of Newman 2006a) includes the following goals, policies and actions related to transportation and circulation.

Roadways. The following are goals, policies and actions related to roadways.

Goal TC-1 Create and maintain a roadway network that provides for the safe and efficient movement of people and goods throughout the City while maintaining the quality of life for residents.

Policy TC-1.1 The City shall endeavor to maintain a LOS "C" as defined by the 2000 *Highway Capacity Manual* or subsequent revisions, on all streets and signalized intersections within the City except on Merced Street downtown, Kern Street between Main Street and Highway 33, and Highway 33, where a level of service lower than "C" is acceptable.

Policy TC-1.2 To identify the potential impacts of new development on traffic service levels, the City shall require the preparation of traffic impact analyses at the sole expense of the developer for developments determined to be large enough to have potentially significant traffic impacts. All development proposals shall be reviewed to assure consistency with the circulation policies and standards contained in the *General Plan.*

Policy TC-1.3 Streets shall be dedicated, widened, extended and constructed according to City standards as shown in Sections B, C, D and E of this Transportation and Circulation Element. Dedication and improvements of full right-of-ways shall not be required in existing developed areas where the City determines that such improvements are either infeasible or undesirable. The City may allow other deviations if the City Engineer determines that safe and adequate public access and circulation are preserved by such deviations.

Policy TC-1.4 The City shall encourage the development of a grid pattern of collector and local streets in newly developing areas. Development of paved alleys may be allowed in conjunction with grid street patterns. Development of cul-de-sacs that do not provide for through bicycle and pedestrian connections shall be discouraged.

Policy TC-1.5 The City shall provide for the phased development of an arterial grid street system to facilitate travel around the existing developed portion of the City and ensure access to new areas of the city as it expands. The arterial street system shall be constructed with a sufficient number of lanes to satisfy traffic volumes through 2030, although right-of-way may be reserved for traffic volumes beyond 2030. Arterial streets may be widened subsequently (after 2030) to respond to increased traffic volumes.

Policy TC-1.6 Street widths for new or improved arterials, collector and local streets shall be limited to the minimum width necessary to adequately carry the volume of anticipated traffic and meet the City's Level of Service Policy of C while allowing for adequate bicycle and pedestrian facilities and emergency access.

Policy TC-1.7 Traffic calming measures shall be incorporated into the design and construction of new roadways to discourage speeding of motor vehicles. On arterials and collectors, traffic calming measures could include intersection and mid-block bulb-outs, large canopy street trees, pedestrian refuge islands, and narrower street widths, consistent with Policy TC-1.5 above. On local streets, traffic calming measures could include also include street trees, bulb-outs and narrower streets widths or other measures approved by the City.

Policy TC-1.8 The City shall cooperate with the County and Caltrans in monitoring traffic volumes on Highway 33 and at the Stuhr Road interchange at Interstate 5. The City shall support

appropriate actions and improvements to maintain adequate levels of service on Highway 33 to the extent feasible and adequate levels of service at the Stuhr Road/I-5 interchange.

Policy TC-1.9 The City shall provide for the southern extension of Main Street south of Inyo Avenue into the West Side shopping center as shown in Figure TC-5, with an additional connection to Prince Street. As an interim measure a pedestrian only connection might be established from Prince Street to the shopping center.

Policy TC-1.10 The City shall prohibit development of private streets in new residential projects, except in extraordinary circumstances.

Policy TC-1.11 On-street truck parking shall be prohibited in residential areas and where such parking restricts adequate sight distances or otherwise poses a potentially hazardous situation. The City shall maintain appropriate truck routes. Industrial and commercial development shall be planned so that truck access through residential areas is minimized.

Policy TC-1.12 New development shall ensure that safe and efficient emergency vehicle access is provided.

Policy TC-1.13 The City shall ensure through a combination of traffic impact fees and other funding mechanisms that new development pays its share of the costs of circulation improvements. The total cost of required improvements shall be paid for by new development.

Action TC-1.1 Establish plan lines for the arterial roadways included in the Circulation Plan Diagram.

Action TC-1.2 Develop and adopt a Street Master Plan for arterial, collector and local streets. The Plan will include standard cross sections for each category that, in addition to curb to curb standards, will include standards for sidewalks and planting or park strips.

Action TC-1.3 Establish and maintain a master list of the most recent available traffic counts. The master list shall be updated with traffic counts taken in conjunction with project traffic studies and special counts conducted by the City.

Action TC-1.4 Update the Municipal Code to reflect the truck routes shown on Figure TC-3.

Action TC-1.5 Work with the Public Utilities Commission (PUC) and the Union Pacific Railroad (UP) to develop the grade crossings at Driskell Avenue and Merced Street into four vehicle lane grade crossings with bicycle lanes in each direction. Also work with the UPRR and the PUC to improve the existing grade crossing at Stanislaus Street and develop a new grade crossing for the future South Parkway.

Action TC-1.6 As part of the planning process for Master Plan Subareas 1 and 2, work with the PUC and the UP to explore the possibility of developing an additional grade crossings between

Sherman Parkway and Stuhr Road to serve the planned business park uses on the eastern side of the railroad.

Action TC-1.7 As the City grows, evaluate the need for improvements and/or the need to redesign the intersection of Merced Street/Inyo Avenue/Upper Road/Hoyer Road to improve traffic flow. Improvements could include making Inyo Avenue, at the intersection with Merced Street, right turn only in the westbound direction, in conjunction with development of a connection from westbound Inyo Avenue to westbound Merced Avenue at "S" Street. A traffic signal or roundabout intersection will be needed to accommodate left turns.

Action TC-1.8 Update the traffic fee mitigation program to provide a mechanism by which new development will pay for identified needed traffic and circulation improvements. This update shall include the costs of improving railroad grade crossings and will include improvements needed to Merced and Stanislaus County roadways that are impacted by growth within Newman.

Public Transit. The following are goals, policies and actions related to public transit.

Goal TC-2 Promote and maintain public and private transit systems that are responsive to the needs of Newman residents.

Action TC-2.1 The City shall work with the Stanislaus Regional Transit (START) to maintain and expand van and bus service to Newman.

Action TC-2.2 Periodically evaluate the need for the establishment of private taxi service in Newman and shall encourage such establishment when sufficient demand exists.

Action TC-2.3 Cooperate with Stanislaus County and other transportation agencies in exploring the long-term possibility of developing commuter rail service on the West Side.

Ridesharing and Telecommuting. The following are goals, policies and actions related to ridesharing and telecommuting.

Goal TC-3 Promote ridesharing and telecommuting.

Policy TC-3.1 The City shall encourage and support programs which will increase ridesharing.

Policy TC-3.2 The City shall cooperate with Caltrans and local agencies in the development of park-and-ride facilities.

Policy TC-3.3 New residential development in the Master Plan Subareas and areas designated with a Planned Mixed Residential Land Use Designation shall be developed with a structured cabling system to allow for modern telephone and computer connections as a means to promote and facilitate telecommuting.

Roadway Impacts to Air Quality and Noise. The following are goals, policies and actions related to roadway impacts to air quality and noise.

Goal TC-4 Minimize air quality and noise impacts on surrounding land uses resulting from new roadway projects and improvements to existing roadways.

Policy TC-4.1 To the extent feasible, the City shall provide for separation of residential and other noise sensitive land uses from major roadways to reduce noise and air pollution impacts.

Intergovernmental Coordination and Communication. The following are goals, policies and actions related to intergovernmental coordination and communication.

Goal TC-5 Promote intergovernmental communication and cooperation concerning transportation-related issues.

Policy TC-5.1 The City shall continue to participate in state, regional, and local transportation planning efforts to ensure coordination of the expansion and improvement of the region's transportation system.

Policy TC-5.2 The City shall continue to maintain formal and informal lines of communication between adjacent jurisdictions to ensure cooperation in the development of transportation systems that cross jurisdictional boundaries. In particular, the City will work with Merced County to develop improvements to Canal School Road, Brazo Road and Highway 33 north of its intersection with Canal School Road. Potential intersection improvements specifically include signalization of the intersections of Highway 33 and Brazo Road, Brazo Road and Canal School Road, Highway 33 and Sanchez Road and Sanchez Road and Canal School Road. Potential roadway improvements specifically include development of Brazo Road and Canal School Road into arterial roads in Merced County.

Policy TC-5.3 The City shall continue to work with Stanislaus County and other cities in the county to maintain and implement the County's Congestion Management Plan.

Action TC-5.1 Request that the County update the Regional Traffic Mitigation Fee to reflect needed improvements to regional facilities, including capital improvements that could be needed to ensure adequate access between Newman and Interstate 5 as the City and the region grows.

Parking. The following are goals, policies and actions related to parking.

Goal TC-6 Ensure the adequate provision of both on- and off street parking.

Policy TC-6.1 If future growth in traffic volumes necessitates removal of on-street parking places to provide additional traffic lanes, the City should ensure that the lost on-street spaces are replaced with an equal number of off-street spaces within the same vicinity.

Policy TC-6.2 The City shall require provision of adequate off-street parking in conjunction with all new developments. Shared parking arrangements shall be encouraged. To the maximum extent possible, downtown parking shall be located behind buildings, out of direct view from Main Street. Primary access to parking shall be via "N," Kern, Tulare, Fresno, Merced and Stanislaus Streets. For a conceptual diagram illustrating where parking shall be located in the downtown refer to Figure TC-6.

Policy TC-6.3 In the design of new or reconfiguration of existing streets, the City shall balance the need for improved traffic flow with need for on-street parking. On-street parking not only provides public parking opportunities, but also provides a barrier between pedestrians and through vehicular traffic, thereby creating a more pedestrian friendly environment. The Street Master Plan shall develop criteria for developing on-street parking by street type.

Action TC-6.1 Review and revise, as necessary, the parking requirements of the Zoning Ordinance to ensure adequate parking for new development.

Action TC-6.2 Investigate, as the downtown grows and additional parking is needed, the purchase of vacant lots downtown for the development of additional public parking lots.

Action TC-6.3 Explore the creation of a parking assessment district in the downtown commercial core.

Bicycles and Pedestrians. The following are goals, policies and actions related to bicycles and pedestrians.

Goal TC-7 Provide a bicycle and pedestrian network to encourage bicycling and walking for both transportation and recreation.

Policy TC-7.1 The City shall create and maintain a safe and convenient system of pedestrian and bicycle facilities that encourages walking or bicycling as an alternative to driving. These routes should directly link residential neighborhoods, parks, schools, downtown, neighborhood shopping centers public facilities and employment centers. New development shall be required to develop and/or contribute to the development of these facilities.

Policy TC-7.2 The City shall promote development and street patterns that encourage walking, bicycling and other forms of non-motorist transportation.

Policy TC-7.3 The City shall require installation of sidewalks and/or walking paths along all city streets in newly developing areas.

Policy TC-7.4 New development shall meet the requirements of the ADA to further facilitate the mobility of persons with accessibility needs.

Policy TC-7.5 Within the Master Plan Subareas a system of pedestrian trails shall be developed within linear open space corridors linking residential neighborhoods, downtown, shopping areas, employment centers, and parks, schools and other public facilities.

Policy TC-7.6 Bicycle facilities shall be developed on all new arterials and collectors and on all existing arterials and collectors, where feasible. Bicycle facilities on arterials should consist of either Class I (Bike Path) or Class II (Bike Lane) facilities. On collector streets, Bicycle facilities should consist of Class II bike lanes. Figure TC-2, the Bicycle Network Diagram, shows the ultimate location of Class I and Class II bicycle facilities in Newman.

Policy TC-7.7 The City shall require inclusion of bicycle parking facilities at all new major public facilities and commercial and employment sites.

Policy TC-7.8 Bicycle and pedestrian safety shall be considered when designing and implementing improvements for automobile traffic operations. Improvements for motor vehicle circulation shall not detract from or degrade the pedestrian and bicycle circulation systems.

Policy TC-7.9 The City shall work with Stanislaus County, Merced County, the cities of Patterson and Gustine, the community of Crows Landing and other West Side communities in an effort to develop a regional bike path along the railroad right-of-way, the CCID canal and the Delta Mendota Canal linking Newnan with other West Side communities.

Action TC-7.1 Prepare and adopt a Bikeways and Trails Master Plan that identifies the general location and design of multi-use and pedestrian trails within the Master Plan Subareas and identifies specific improvements that are needed to implement the Class I and Class II Bikeway Network shown in Figure TC-2.

Action TC-7.2 Evaluate the need to the existing street and sidewalk system to be ADA responsive. Prioritize identified improvements needed, identify funding and implement improvements as funding becomes available.

Action TC-7.3 Continue to coordinate with the Newman-Crows Landing Unified School District in developing a program for school crossings and safe routes to schools.

STANDARDS OF SIGNIFICANCE

The following describes the standards of significance applied in this traffic impact study.

Minimum Acceptable Level of Service

As noted above in the *Regulatory Setting* section of this traffic impact study, agencies adopt minimum acceptable LOS standards for their roadway facilities. In the Northwest Newman Master Plan project study area, three different agencies are responsible for the study facilities:

- Caltrans has set LOS D as the "concept LOS" for SR 33 (California Department of Transportation 2003). The concept LOS will be used in this traffic impact study as the minimum acceptable LOS.

- LOS C has been set as the minimum acceptable LOS by the County of Stanislaus (County of Stanislaus 2012) and the City of Newman (City of Newman 2006a).

Because Caltrans has set LOS D as the minimum acceptable LOS for SR 33, LOS D is used in this traffic impact study as the minimum acceptable LOS for the following intersections:

1. SR 33 & Stuhr Road (existing)
2. SR 33 & Jensen Road / Sherman Parkway (existing)
3. SR 33 & Yolo Street (existing)
10. SR 33 & Industrial Access (future)
11. SR 33 & North Commercial Access (future)
12. SR 33 & South Commercial Access (future)

LOS D is also applied to the following roadway segments:

1. SR 33 - Lundy Road to Stuhr Road
2. SR 33 - Stuhr Road to Jensen Road
3. SR 33 - Jensen Road to Yolo Street

Because the County of Stanislaus and City of Newman have set LOS C as the minimum acceptable LOS, LOS C is used in this traffic impact study as the minimum acceptable LOS for all other study facilities.

Significance Thresholds

The minimum acceptable LOS described immediately above, LOS analysis, signal warrants analysis, and the change due to the proposed project is used in this traffic impact study to determine the significance of impacts associated with the project (Ocasio pers. comm.).

Signalized Intersections. The project will be considered to have a significant impact on signalized intersections when the project would:

- result in a signalized intersection operating at an acceptable LOS without the project to deteriorate to an unacceptable LOS with the project, or

- increase the delay by more than five seconds at a signalized intersection that is operating at an unacceptable LOS without the project.

Unsignalized Intersections. The project will be considered to have a significant impact on unsignalized intersections when the project would:

- result in an unsignalized intersection movement or approach operating at an acceptable LOS without the project to deteriorate to an unacceptable LOS with the project, and also cause the intersection to meet a peak hour signal warrant; or

- for an unsignalized intersection that meets a peak hour signal warrant, increase the delay by more than five seconds at a movement/approach that is operating at an unacceptable LOS without the project.

Roadway Segments. The project will be considered to have a significant impact on roadway segments when the project would:

- result in a roadway segment operating at an acceptable LOS without the project to deteriorate to an unacceptable LOS with the project, or

- increase the V/C ratio by more than 0.05 at a roadway segment that is operating at an unacceptable LOS without the project.

EXISTING LEVEL OF SERVICE

Based on the traffic volumes and methods described above, existing LOS at study intersections is presented in **Table 4**, and existing LOS on study roadway segments is presented in **Table 1**.

Intersection Level of Service

As shown in **Table 4**, the following eight of the nine existing study intersections operate at LOS A, B, or C during both the a.m. peak hour and p.m. peak hour. LOS A, B, and C are good operating conditions and, as noted above in the *Standards of Significance* section, are considered acceptable.

1. SR 33 & Stuhr Road
3. SR 33 & Yolo Street
4. Stuhr Road & Draper Road
5. Jensen Road & Fig Lane
6. Orestimba Road / Yolo Street & Hardin Road
7. Fig Lane / Q Street & Yolo Street
15. Stuhr Road & Eastin Road
16. Stuhr Road & Villa Manucha Road

Table 4. Intersection Level of Service - Existing and Existing Plus Project Conditions

	Study Intersections	Existing Conditions						Existing Plus Project					
		Inters Contr	Sig Warr Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay	Inters Contr	Sig Warr Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
1	SR 33 & Stuhr Road	AWSC	No	B	11.7	B	11.0	Signal		C	25.3	C	24.9
2	SR 33 & Jensen Rd/ Sherman Parkway	Unsig	No	C	25.0	D	30.7	Signal		**F**	85.8	**F**	174.1
3	SR 33 & Yolo Street	Unsig	No	C	22.7	C	17.7	Unsig	Yes	**F**	Ovrflw	**F**	Ovrflw
4	Stuhr Road & Draper Road	Unsig	No	A	9.2	A	9.3	Unsig	No	A	9.7	B	10.0
5	Jensen Road & Fig Lane	Unsig	No	A	9.4	A	9.1	Signal		C	30.7	C	32.7
6	Orestimba Rd/Yolo St & Hardin Rd	AWSC	No	A	9.5	A	7.7	AWSC	No	B	12.0	A	9.4
7	Fig Lane / Q Street & Yolo Street	Unsig	No	B	12.5	B	10.2	Unsig	Yes	**F**	54.1	**F**	60.9
8	Stuhr Road & Harvey Lane	- -		- -		- -		Signal		B	13.8	B	13.6
9	Stuhr Road & Fig Lane	- -		- -		- -		Signal		C	22.6	C	24.3
10	SR 33 & Industrial Access	- -		- -		- -		Signal		A	2.6	A	4.6
11	SR 33 & North Commercial Access	- -		- -		- -		Unsig	Yes	**E**	47.7	**F**	300.3
12	SR 33 & South Commercial Access	- -		- -		- -		Signal		A	5.8	C	23.9
13	Stuhr Road & Collector Road B	- -		- -		- -		Unsig	No	A	9.1	A	9.1
14	Jensen Road & Collector Road B	- -		- -		- -		Round		A	3.3	A	2.8
15	Stuhr Road & Eastin Road	Unsig	No	B	10.2	B	10.3	Unsig	No	B	11.0	B	11.5
16	Stuhr Road & Villa Manucha Road	Unsig	No	A	8.9	A	9.2	Unsig	No	A	9.7	B	10.2

Notes: SR = State Route. LOS = Level of Service. "Inters Contr" = Type of intersection control. "Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control. "AWSC" = All-way stop-sign control. "Sig Warr" = Signal Warrants. "Round" = Roundabout. At unsignalized stop-sign controlled intersections, delay and LOS are shown for the worst approach, not the intersection average. "Ovrflw" = Overflow, indicates demand exceeds capacity. **Bold** font indicates unacceptable level of service. Dashes (- -) indicate the intersection would not be present under this scenario. Delay is measured in seconds per vehicle.

The intersection of SR 33 & Jensen Road/Sherman Parkway operates at LOS D during both the a.m. peak hour and the p.m. peak hour. As noted above in the *Standards of Significance* section, LOS D is considered acceptable at this intersection.

No intersection improvements are recommended under Existing conditions.

Roadway Segment Level of Service

As shown in **Table 1**, all 16 existing study roadway segments operate at LOS A. This operating condition is considered to be excellent.

No roadway segment improvements are recommended under Existing conditions.

PROJECT CHARACTERISTICS

The following describes the trip generation and trip distribution characteristics of the Northwest Newman Master Plan project.

TRIP GENERATION

Development of the proposed project would generate new vehicle trips and potentially affect traffic operations at the study intersections and study roadway segments. The number of vehicle trips that are expected to be generated by development of the proposed project has been estimated using typical trip generation rates that have been developed based on the nature and size of project land uses.

To quantify the amount of vehicular traffic generated by the proposed project, daily and a.m. peak hour, and p.m. peak hour trip generation rates presented in the Institute of Transportation Engineers (ITE) publication *Trip Generation Manual 9th Edition* (Institute of Transportation Engineers 2012), were employed. These rates are presented in **Table 5**.

Trip generation rates presented in *Trip Generation Manual 9th Edition* include vehicle trips drawn to retail commercial land uses from the stream of traffic passing the project site. These trips are referred to as "pass-by" trips. An adjustment to reflect "pass-by" trips has been applied to the trip generation estimates for retail commercial land use. Pass-by trips involve vehicles that would drive on roadways adjacent to the project site, even under No Project conditions. With implementation of the proposed project, these vehicles would enter and exit the project site while "passing-by" on the adjacent roadway. Pass-by trips are, therefore, not new trips added to the roadway network. Rather, these trips are already present on the roadway system under No Project conditions. The analysis presented in this traffic impact study assume the gross level of trip generation (without the pass-by adjustment) enters and exits the project site, but assumes the net level of trip generation (with the pass-by adjustment) is added to the surrounding roadway system. Methods described in the ITE *Trip Generation Handbook* (Institute of Transportation Engineers 2004) were used in applying the pass-by adjustment.

The *Trip Generation Handbook* identifies a 34% p.m. peak hour pass-by adjustment for the retail commercial land use category. This adjustment is applied in this traffic impact study. The *Trip Generation Handbook* does not contain a.m. peak hour or daily period pass-by adjustments for retail commercial land use category. For this traffic impact study, the Caltrans *Guide for the Preparation of Traffic Impact Studies* (California Department of Transportation 2002) was used as a source for a.m. peak hour and daily period pass-by adjustments. A pass-by adjustment of 15% was applied to the a.m. peak hour and daily period for the retail commercial land use category. This rate is considered conservatively low, but is considered appropriate in light of the absence of other, potentially better, estimates.

As shown in **Table 6**, the proposed project is expected to generate 35,661 new trips on a daily basis, with 2,664 new trips in the a.m. peak hour, and 3,337 trips in the p.m. peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

Project-related trips were geographically distributed over the study area roadway network. The geographical distribution of trips is based on the relative attractiveness or utility of possible destinations. Trip distribution percentages applied in this traffic impact study are presented in **Table 7**.

The travel demand forecasting model developed for the City General Plan was used to estimate trip distribution percentages. The travel demand model is considered to be a valid source for the trip distribution percentages because it directly addresses:

- the location of destinations of project-related trips,
- the magnitude of land uses that would attract project-related trips, and
- the quality of access to the destinations via the roadway network.

A "select link" analysis was conducted using the travel demand model to determine the geographic distribution of project-related travel. The select link analysis identifies vehicle trips associated with the proposed project site, and identifies the direction of travel to and from the project site. Adjustment of the raw results from the travel demand models was needed, in particular to appropriately distribute trips to schools. As shown in **Table 7**, more trips were distributed to schools in the a.m. peak hour than in the p.m. peak hour.

Using the trip generation and distribution assumptions described above, the trips generated by the proposed project were assigned to the study area street system. **Figure 11** presents peak hour volumes associated with development of the proposed project.

Table 5. Northwest Newman Master Plan Trip Generation Rates

Institute of Transportation Engineers Land Use Category and Land Use Code	Independent Variable	Vehicle Trip Rates						
			AM Peak Hour			PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
Single Family Detached Housing - 210	Dwelling Units	9.52	0.19	0.56	0.75	0.63	0.37	1.00
Apartment - 220	Dwelling Units	6.65	0.10	0.41	0.51	0.40	0.22	0.62
Shopping Center - 820	1,000 Sq. Ft	42.70	0.60	0.36	0.96	1.78	1.93	3.71
Business Park - 770	1,000 Sq. Ft	12.44	1.19	0.21	1.40	0.33	0.93	1.26
Office Park - 750	Acres	195.11	23.60	2.05	25.65	4.24	24.04	28.28

Note: Totals may not equal the sum of the components due to rounding.
Source: Institute of Transportation Engineers 2012.

Table 6. Northwest Newman Master Plan Trip Generation Estimates

Master Plan Area and ITE Land Use Category and Code	Amount of Land Use	Vehicle Trips						
			AM Peak Hour			PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
Very Low Density Residential Single Family Detached Housing - 210	55 Dwelling Units	524	10	31	41	35	20	55
Planned Mixed Residential 1 Single Family Detached Housing - 210	144 Dwelling Units	1,371	27	81	108	91	53	144
Planned Mixed Residential 1 Apartment - 220	16 Dwelling Units	106	2	7	9	6	4	10
Planned Mixed Residential 2 Single Family Detached Housing - 210	108 Dwelling Units	1,028	21	60	81	68	40	108
Planned Mixed Residential 2 Apartment - 220	13 Dwelling Units	86	1	5	6	5	3	8
Planned Mixed Residential 3 Single Family Detached Housing - 210	93 Dwelling Units	885	18	52	70	59	34	93
Planned Mixed Residential 3 Apartment - 220	11 Dwelling Units	73	1	5	6	4	2	6
Planned Mixed Residential 4 Single Family Detached Housing - 210	117 Dwelling Units	1,114	22	66	88	74	43	117
Planned Mixed Residential 4 Apartment - 220	14 Dwelling Units	93	1	6	7	6	3	9
Planned Mixed Residential 5 Single Family Detached Housing - 210	47 Dwelling Units	447	9	26	35	30	17	47
Planned Mixed Residential 5 Apartment - 220	6 Dwelling Units	40	1	2	3	2	1	3
Planned Mixed Residential 6 Single Family Detached Housing - 210	66 Dwelling Units	628	13	37	50	42	24	66
Planned Mixed Residential 6 Apartment - 220	8 Dwelling Units	53	1	3	4	3	2	5
Planned Mixed Residential 7 Single Family Detached Housing - 210	95 Dwelling Units	904	18	53	71	60	35	95
Planned Mixed Residential 7 Apartment - 220	11 Dwelling Units	73	1	5	6	4	2	6
Planned Mixed Residential 8 Single Family Detached Housing - 210	86 Dwelling Units	819	16	48	64	54	32	86
Planned Mixed Residential 8 Apartment - 220	10 Dwelling Units	67	1	4	5	4	2	6

Table 6. Northwest Newman Master Plan Trip Generation Estimates (Continued)

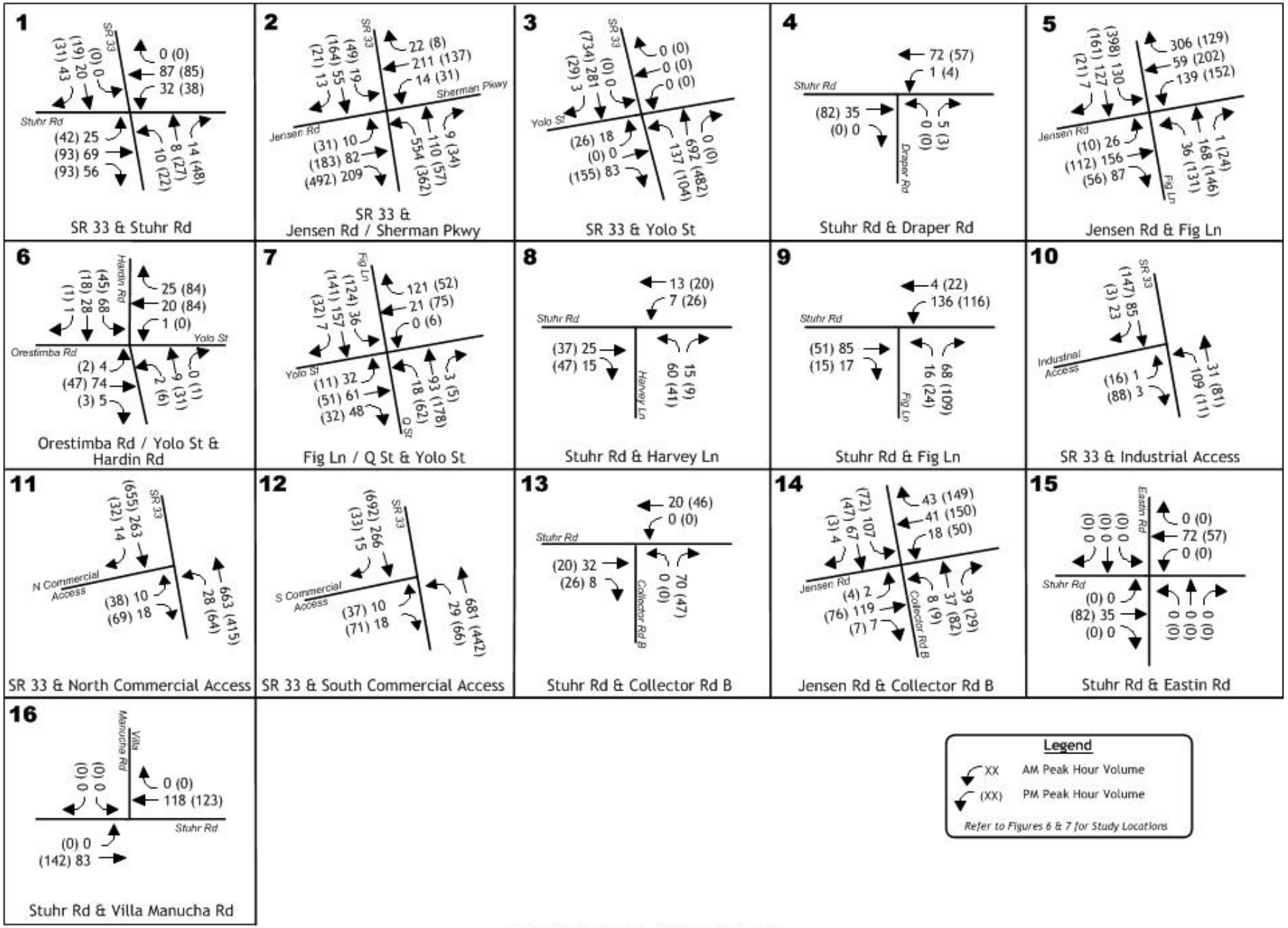
Master Plan Area and ITE Land Use Category and Code	Amount of Land Use	Vehicle Trips						
			AM Peak Hour			PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
Planned Mixed Residential 9 Single Family Detached Housing - 210	74 Dwelling Units	704	14	41	55	47	27	74
Planned Mixed Residential 9 Apartment - 220	9 Dwelling Units	60	1	4	5	4	2	6
Planned Mixed Residential 10 Single Family Detached Housing - 210	33 Dwelling Units	314	6	18	24	21	12	33
Planned Mixed Residential 10 Apartment - 220	4 Dwelling Units	27	0	2	2	2	1	3
Planned Mixed Residential 12 Single Family Detached Housing - 210	137 Dwelling Units	1,304	26	77	103	86	51	137
Planned Mixed Residential 12 Apartment - 220	16 Dwelling Units	106	2	7	9	6	4	10
Professional Office Office Park - 750	8 Acres	1,619	196	17	213	35	200	235
Business Park 1 Business Park - 770	288.15 1,000 Sq. Ft	3,585	343	61	404	95	268	363
Business Park 2 Business Park - 770	195.15 1,000 Sq. Ft	2,428	232	41	273	64	181	245
Business Park 3 Business Park - 770	419.27 1,000 Sq. Ft	5,216	499	88	587	138	390	528
Community Commercial 1 Shopping Center - 820	51.18 1,000 Sq. Ft	2,185	31	18	49	91	99	190
Pass-By Trip Adjustment		-328	-5	-3	-8	-31	-34	-65
Community Commercial 2 Shopping Center - 820	246.11 1,000 Sq. Ft	10,509	148	89	237	438	475	913
Pass-By Trip Adjustment		-1,576	-22	-13	-35	-149	-162	-311
High Density Residential Apartment - 220	180 Dwelling Units	1,197	18	74	92	72	40	112
Total		35,661	1,652	1,012	2,664	1,466	1,871	3,337

Notes: Totals may not equal the sum of the components due to rounding.
Source: California Department of Transportation 2002, Institute of Transportation Engineers 2004.

Table 7. Northwest Newman Master Plan Trip Distribution Percentages

	Direction of Travel or Destination	Residential Land Uses			Non-Residential Land Uses		
		AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour	Daily
1	West on Stuhr Road	10%	10%	10%	1%	1%	1%
2	North on State Route 33	3%	3%	3%	4%	4%	4%
3	East on Stuhr Road	9%	10%	10%	7%	7%	7%
4	East on Sherman Parkway	9%	9%	9%	16%	16%	16%
5	South on Draper Road	1%	1%	1%	4%	4%	4%
6	South on Harvey Road	0%	1%	1%	5%	5%	5%
7	South on Hardin Road	5%	5%	5%	0%	0%	0%
8	South on Fig Lane	28%	29%	28%	4%	4%	4%
9	South on State Route 33	29%	29%	29%	54%	54%	54%
10	North on Eastin Road	0%	0%	0%	0%	0%	0%
11	South on Eastin Road	0%	0%	0%	0%	0%	0%
15	On-Site School	2%	0%	1%	0%	0%	0%
16	Orestimba High School	1%	0%	0%	0%	0%	0%
17	Internal Trips to Residential Land Uses	0%	0%	0%	2%	2%	2%
18	Internal Trips to Industrial Land Uses	1%	1%	1%	1%	1%	1%
19	Internal Trips to Commercial and Office Land Uses	2%	2%	2%	2%	2%	2%
	TOTAL	100%	100%	100%	100%	100%	100%

Source: Select link analysis using the Newman Travel Demand Model, and KD Anderson & Associates.



PROJECT RELATED TRIPS

EXISTING PLUS PROJECT CONDITIONS

This section of the traffic impact study describes traffic operating conditions under Existing Plus Project conditions. Comparing these conditions to Existing conditions shows the impact of the Northwest Newman Master Plan project in the context of near-term existing background conditions.

TRAFFIC VOLUME FORECASTS

Project-related trips were added to existing background traffic volumes to create the Existing Plus Project traffic volumes. Peak hour Existing Plus Project volumes at study intersections are shown in **Figure 12**. Daily volumes on study roadway segments are shown in **Table 1**.

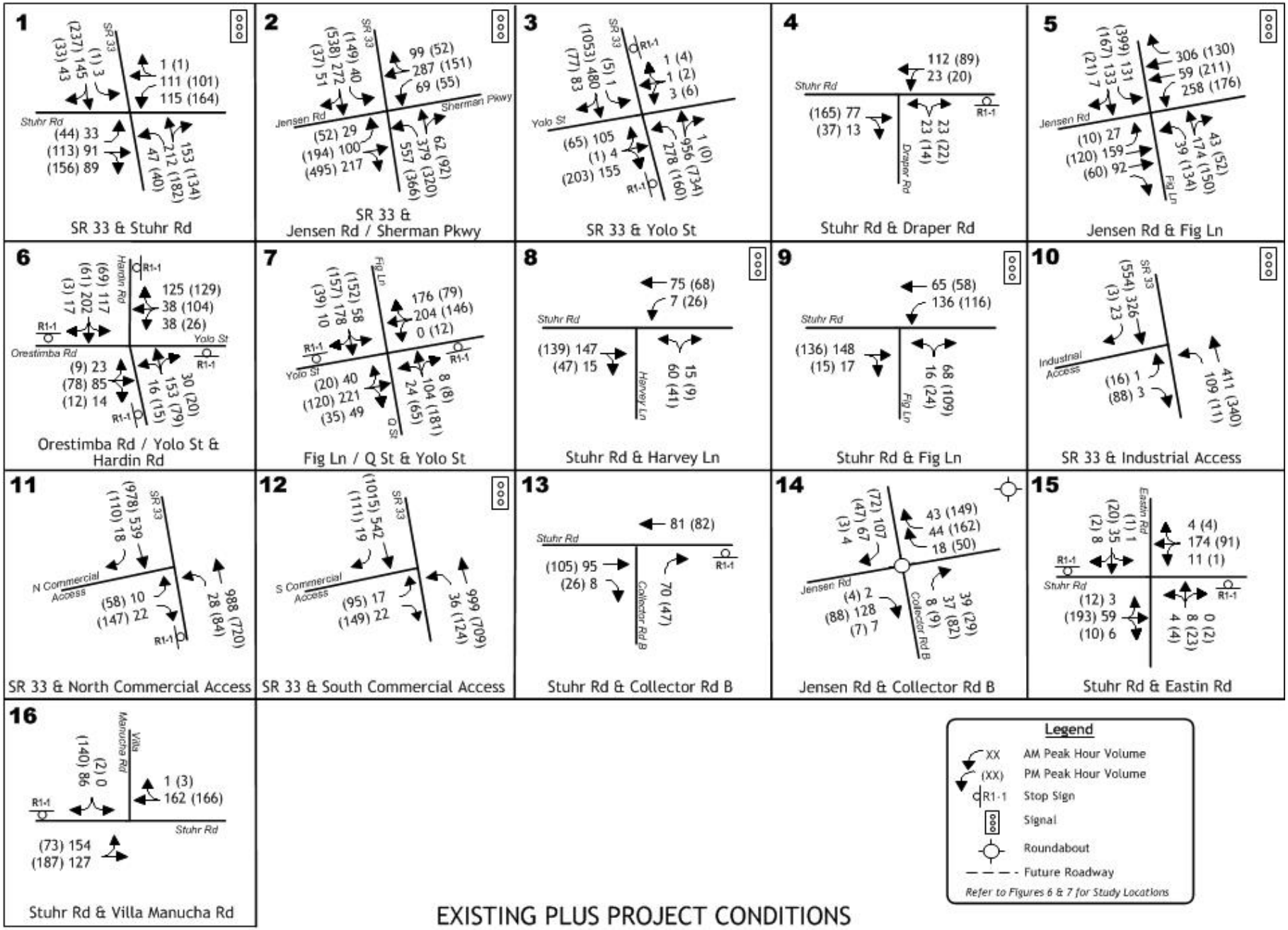
CIRCULATION SYSTEM IMPROVEMENTS

The analysis of Existing Plus Project conditions assumes improvements associated with the Northwest Newman Master Plan project. These improvements are described in the *Project Description* section of this traffic impact study. Specific lane geometric improvements assumed at project site intersections at shown in **Figure 12**.

INTERSECTION LEVELS OF SERVICE

Table 4 shows the results of LOS calculations for study intersections under Existing plus Project conditions. The following 12 study intersections would operate at LOS C or better during both the a.m. peak hour and p.m. peak hour. These LOS are considered acceptable. The impact of the proposed project at these intersections is considered less than significant, and no mitigation measures are required.

1. SR 33 & Stuhr Road
4. Stuhr Road & Draper Road
5. Jensen Road & Fig Lane
6. Orestimba Road / Yolo Street & Hardin Road
8. Stuhr Road & Harvey Lane
9. Stuhr Road & Fig Lane
10. SR 33 & Business Park Industrial Access
12. SR 33 & South Commercial Access
13. Stuhr Road & Collector Road B
14. Jensen Road & Collector Road B (future)
15. Stuhr Road & Eastin Road
16. Stuhr Road & Villa Manucha Road



EXISTING PLUS PROJECT CONDITIONS

Intersection Traffic Volumes and Lane Configurations

Intersection 2. SR 33 & Jensen Road / Sherman Parkway

Under Existing Plus Project conditions, the intersection of SR 33 & Jensen Road / Sherman Parkway would operate at LOS F with 85.8 seconds of delay during the a.m. peak hour and LOS F with 174.1 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Add an exclusive northbound through lane.
- Add an exclusive southbound through lane.
- Split the eastbound combined through/right-turn lane into an exclusive eastbound through lane and an exclusive eastbound-to-southbound right-turn lane.
- Set the signal timing of the eastbound-to-southbound right-turn movement to overlap.
- Prohibit northbound-to-southbound U-turns.

The addition of northbound and southbound through lanes at this intersection would be consistent with the roadway segment mitigation measure described below.

As shown in **Table 8**, with these improvements, this intersection would operate at LOS D during the a.m. peak hour and LOS C during the p.m. peak hour. LOS D and C are considered acceptable.

Intersection 3. SR 33 & Yolo Street

Under Existing Plus Project conditions, the intersection of SR 33 & Yolo Street would operate at LOS F with overflow conditions during both the a.m. peak hour and p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Signalize the intersection.
- Add an exclusive northbound through lane.
- Add an exclusive southbound through lane.

Table 8. Intersection Level of Service - Existing and Existing Plus Project Conditions With Mitigation Measures

	Study Intersections	Existing Conditions					Existing Plus Project				
		Inters Contr	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay	Inters Contr	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
2	SR 33 & Jensen Rd/ Sherman Parkway						Signal	D	47.4	C	31.9
3	SR 33 & Yolo Street						Signal	C	22.3	C	24.7
7	Fig Lane / Q Street & Yolo Street						Signal	B	10.7	B	11.0
11	SR 33 & North Commercial Access						Unsig	B	10.3	C	15.8
12	SR 33 & South Commercial Access						Signal	A	4.4	B	13.3

Notes: SR = State Route. LOS = Level of Service. "Inters Contr" = Type of intersection control. "Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control. "AWSC" = All-way stop-sign control. At unsignalized stop-sign controlled intersections, delay and LOS are shown for the worst approach, not the intersection average. **Bold** font indicates unacceptable level of service.

The addition of northbound and southbound through lanes at this intersection would be consistent with the roadway segment mitigation measure described below.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.).

As shown in **Table 8**, with these improvements, this intersection would operate at LOS C during both the a.m. peak hour and p.m. peak hour. LOS C is considered acceptable.

Intersection 7. Fig Lane / Q Street & Yolo Street

Under Existing Plus Project conditions, the intersection of Fig Lane / Q Street & Yolo Street would operate at LOS F with 54.1 seconds of delay during the a.m. peak hour and LOS F with 60.9 seconds of delay during the p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Signalize the intersection.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.). Additional approach lanes would not be needed.

As shown in **Table 8**, with this improvement, this intersection would operate at LOS B during both the a.m. peak hour and the p.m. peak hour. LOS B is considered acceptable.

Intersection 11. SR 33 & North Commercial Access

Under Existing Plus Project conditions, the intersection of SR 33 & North Commercial Access would operate at LOS F with 47.7 seconds of delay during the a.m. peak hour and LOS F with 300.3 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable, and this is considered a significant impact.

This intersection would meet peak hour signal warrants, and signalization of this intersection was considered as a mitigation measure. However, signalization is not recommended because this intersection is approximately 400 feet south of the signalized intersection of SR 33 & Jensen Road/Sherman Parkway. Signalizing the intersection of SR 33 & North Commercial Access would result in distances between signalized intersections which are considered inadequate. With inadequate distances between signalized intersections, queues from one intersection may interfere with the operation of other intersections.

To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Prohibit eastbound-to-northbound left-turn movements at this intersection.
- Add an exclusive northbound through lane.
- Add an exclusive southbound through lane.

The addition of northbound and southbound through lanes at this intersection would be consistent with the roadway segment mitigation measure described below.

As shown in **Table 8**, with this mitigation measure, this intersection would operate at LOS B during the a.m. peak hour and LOS C during the p.m. peak hour. LOS B and C are considered acceptable.

ROADWAY SEGMENT LEVELS OF SERVICE

Table 1 shows the daily traffic volume and LOS that would occur on study roadway segments under Existing Plus Project conditions. The following 27 of the 28 study roadway segments would operate at LOS A. This LOS is considered acceptable, the impact of the proposed project on these roadway segments is considered less than significant, and no mitigation measures are required.

1. SR 33 - Lundy Road to Stuhr Road
2. SR 33 - Stuhr Road to Jensen Road
3. SR 33 - Jensen Road to Yolo Street
4. Stuhr Road - Fig Lane to SR 33
5. Stuhr Road - SR 33 to Hills Ferry Road
6. Draper Road - Stuhr Road to Orestimba Road
7. Fig Lane - Jensen Road to Yolo Street
8. Jensen Road - Fig Lane to SR 33
9. Sherman Parkway - SR 33 to Balsam Drive
10. Orestimba Road - Draper Road to Hardin Road
11. Yolo Street - Hardin Road to Fig Lane
12. Yolo Street - Fig Lane to SR 33
13. Hardin Road - Orestimba Road to Angelina Avenue
14. Stuhr Road - Harvey Lane to Collector Road B
15. Stuhr Road - Collector Road B to Fig Lane
16. Harvey Lane - Stuhr Road to Collector Road C
17. Collector Road B - Stuhr Road to Collector Road C
18. Fig Lane - Stuhr Road to Collector Road C
19. Collector Road C - Harvey Lane to Collector Road B
20. Collector Road C - Collector Road B to Fig Lane
21. Harvey Lane - Collector Road C to Jensen Road
22. Collector Road B - Collector Road C to Jensen Road
23. Fig Lane - Collector Road C to Jensen Road
24. Jensen Road - Harvey Lane to Collector Road B
25. Jensen Road - Collector Road B to Fig Lane
26. Eastin Road - Stuhr Road to Anderson Road
27. Stuhr Road - Draper Road to Eastin Road
28. Stuhr Road - Eastin Road to Interstate 5

Roadway Segment 3. SR 33 - Jensen Road to Yolo Street

Under Existing Plus Project conditions, the roadway segment of SR 33 from Jensen Road to Yolo Street would operate at LOS F with a V/C ratio of 1.04. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. Widen the roadway segment of SR 33 from Jensen Road to Yolo Street to four lanes (two lanes in each direction). Widening this roadway segment to four lanes would be consistent with the *Newman 2030 General Plan* (City of Newman 2006a.).

As shown in **Table 9**, with this improvement, this roadway segment would operate at LOS A and a V/C ratio of 0.52.

PEDESTRIAN AND BICYCLE FACILITIES

Implementation of land use development included in the Northwest Newman Master Plan would result in an increase in demand for pedestrian and bicycle facilities. The Plan also includes:

- Class I bikeways on SR 33 and Jensen Road;
- Class II bikeways on Stuhr Road, Harvey Lane, and Fig Lane; and
- pedestrian walkways on, Harvey Lane, Fig Lane, Collector Road B, Collector Road C, and other minor and major collector roads within the proposed project site.

Construction of the pedestrian and bicycle facilities listed above is considered to adequately serve the project-related increase in demand for pedestrian and bicycle facilities. Therefore, this is considered a less-than-significant impact. No mitigation measures are needed.

Table 9. Roadway Segment Level of Service - Existing & Existing Plus Project Conditions With Mitigation Measures

		Existing Conditions						Existing Plus Project					
	Roadway Segment	Typ	Ln	Cap	Volume	V/C	LOS	Typ	Ln	Cap	Volume	V/C	LOS
3	SR 33 - Jensen Road to Yolo Street	- -	- -	--	- -	--	- -	SH	4	40,000	20,814	0.52	A

Notes: "Typ" = Roadway Type. "Ln" = Number of Lanes. "Cap" = Daily Capacity. "V/C" = Volume-to-Capacity Ratio.
"LOS" = Level of Service. "SR" = State Route. Dashes ("- -") indicate mitigation measures are not needed under this scenario.
Roadway Types: "SH" = State Highway. "Art" = City Street Arterial. "Coll" = Collector Street. "ND" = Not Designated.

Sources: City of Newman 2006a, and KD Anderson & Associates 2014.

EXISTING PLUS APPROVED PROJECTS (EPAP) NO PROJECT CONDITIONS

This section of the traffic impact study describes traffic operating conditions under Existing Plus Approved Projects (EPAP) No Project conditions. This development scenario serves as a background condition for determining the impacts of the Northwest Newman Master Plan in the near-term future.

BACKGROUND CHARACTERISTICS

For the purposes of this traffic impact study, other land use development projects already approved, under construction, or likely to be considered for approval in the near-term future, are assumed to have been occupied under the EPAP No Project condition. This scenario includes projects in the Newman area that may have an effect on study intersections and study roadway segment. This scenario is intended to provide information on the extent of roadway improvements that might be needed in the near-term future.

The selection of projects to include in the EPAP No Project condition was made in consultation with City of Newman staff (Ocasio pers. comm.). Where available, trip generation and trip distribution estimates for each of the projects was based on information from traffic impact studies prepared for each project; detailed information on each project is available in the traffic impact studies. The following describes the projects assumed in the EPAP No Project condition.

Souza Industrial Park

In 2008 the City of Newman approved the Souza Industrial Park, and this development has been assumed in the EPAP No Project condition. This 50-acre project is located south of Inyo Avenue near the intersection of Canal School Road and Brazo Road. This project would generate 2,988 daily trips, with 380 trips generated in the a.m. peak hour and 386 trips in the p.m. peak hour (KD Anderson & Associates 2008).

AutoZone Project

The AutoZone project is a 6,700 square feet automobile parts retail store. The project is located northwest of the intersection of SR 33 and Inyo Avenue. The project is estimated to generate 353 net new vehicles trips per day, with 13 trips generated in the a.m. peak hour and 63 trips in the p.m. peak hour (KD Anderson & Associates 2011). The estimate of net new trips does not include pass-by trips.

Dollar General Project

The Dollar General project is located southeast of the intersection of SR 33 and Inyo Avenue. A traffic impact study specific to this project site was not available. Trip generation estimates for this project were based on traffic impact studies prepared for other Dollar General projects located in the Central Valley (KD Anderson & Associates 2012).

Riddle Surface Mining Project

The Riddle Surface Mining project is a proposed project under consideration by the County of Stanislaus. The project is on a 463-acre site south of Stuhr Road between the City of Newman and I-5. The project is estimated to generate 581 vehicles trips per day, with 130 trips generated in the a.m. peak hour and 9 trips in the p.m. peak hour (County of Stanislaus 2012).

TRAFFIC VOLUME FORECASTS

Vehicle trips related to the four projects described immediately above were added to existing background traffic volumes to create the EPAP No Project traffic volumes. Peak hour EPAP No Project volumes at study intersections are shown in **Figure 13**. Daily volumes on study roadway segments are shown in **Table 10**.

INTERSECTION LEVELS OF SERVICE

Based on the traffic volumes described immediately above, LOS under EPAP No Project conditions at study intersections is presented in **Table 11**.

As shown in **Table 11**, the following eight of the nine study intersections would operate at LOS A, B, or C during both the a.m. peak hour and p.m. peak hour. LOS A, B, and C are good operating conditions and, as noted above in the *Standards of Significance* section of this traffic impact study, are considered acceptable.

1. SR 33 & Stuhr Road
3. SR 33 & Yolo Street
4. Stuhr Road & Draper Road
5. Jensen Road & Fig Lane
6. Orestimba Road / Yolo Street & Hardin Road
7. Fig Lane / Q Street & Yolo Street
15. Stuhr Road & Eastin Road
16. Stuhr Road & Villa Manucha Road

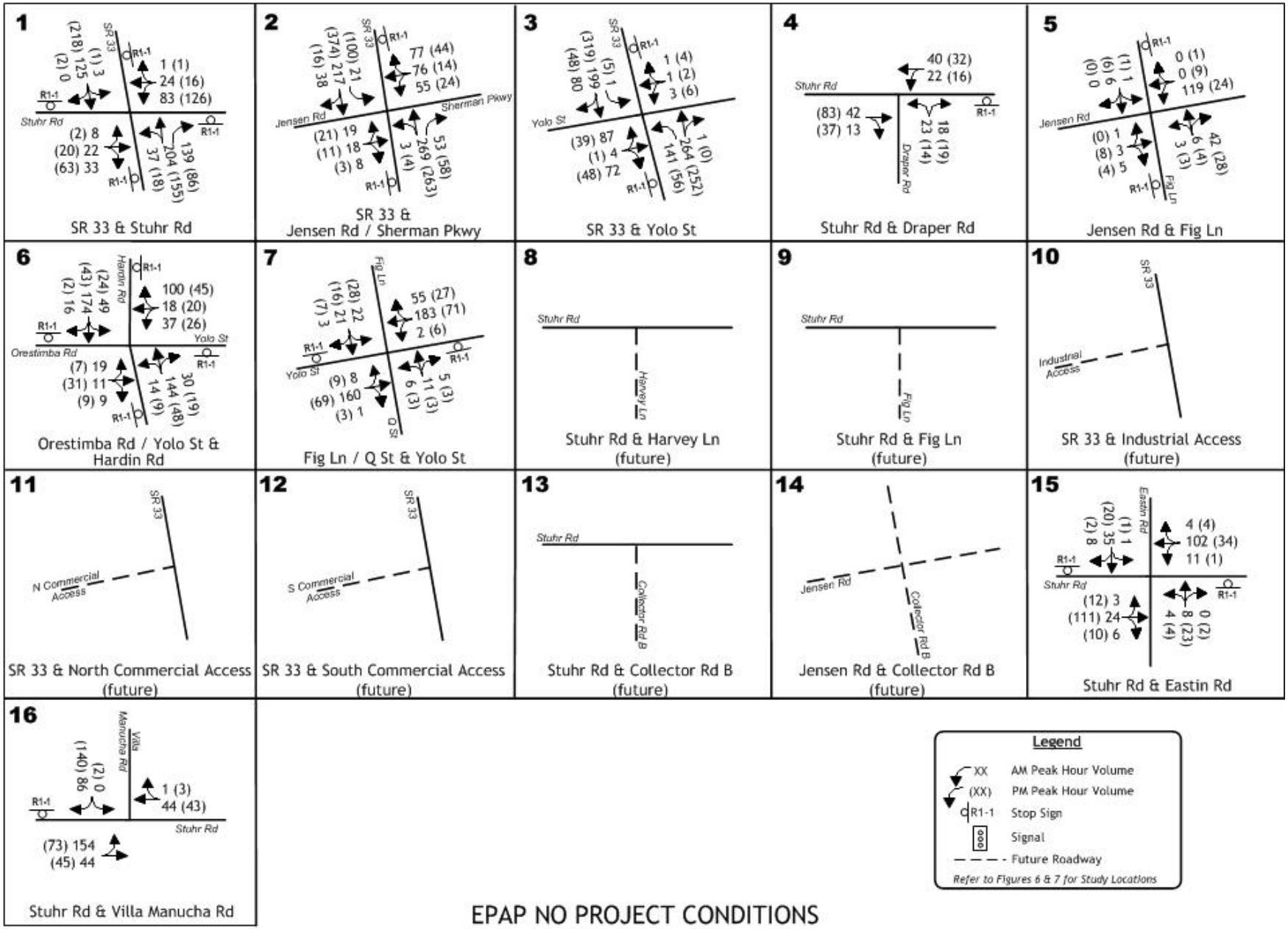
The intersection of SR 33 and Jensen Road/Sherman Parkway would operate at LOS D during both the a.m. peak hour and the p.m. peak hour under EPAP No Project conditions. As noted above in the *Standards of Significance* section, LOS D or better is considered acceptable at these intersections.

No intersection improvements are recommended under EPAP No Project conditions.

ROADWAY SEGMENT LEVELS OF SERVICE

As shown in **Table 10**, all 16 existing study roadway segments would operate at LOS A. This operating condition is considered to be excellent.

No roadway segment improvements are recommended under EPAP No Project conditions.



EPAP NO PROJECT CONDITIONS

Intersection Traffic Volumes and Lane Configurations

Table 10. Roadway Segment Level of Service - EPAP No Project and EPAP Plus Project Conditions

		EPAP No Project						EPAP Plus Project					
	Roadway Segment	Typ	Ln	Cap	Volume	V/C	LOS	Typ	Ln	Cap	Volume	V/C	LOS
1	SR 33- Lundy Road to Stuhr Road	SH	4	40,000	5,606	0.14	A	SH	2	20,000	6,894	0.34	A
2	SR 33 - Stuhr Road to Jensen Road	SH	4	40,000	8,485	0.21	A	SH	2	20,000	11,826	0.59	A
3	SR 33 - Jensen Road to Yolo Street	SH	4	40,000	8,285	0.21	A	SH	2	20,000	22,800	1.14	**F**
4	Stuhr Road - Fig Lane to SR 33	Art	2	19,000	2,197	0.12	A	Art	2	19,000	5,693	0.30	A
5	Stuhr Road - SR 33 to Hills Ferry Road	Art	2	19,000	849	0.04	A	Art	2	19,000	3,645	0.19	A
6	Draper Road - Stuhr Road to Orestimba Road	Art	2	19,000	894	0.05	A	Art	2	19,000	955	0.05	A
7	Fig Lane - Jensen Road to Yolo Street	Coll	2	15,000	751	0.05	A	Coll	2	15,000	5,798	0.39	A
8	Jensen Road - Fig Lane to SR 33	Art	2	19,000	350	0.02	A	Art	4	38,000	13,544	0.36	A
9	Sherman Parkway - SR 33 to Balsam Drive	Art	2	19,000	2,846	0.15	A	Art	2	19,000	7,656	0.40	A
10	Orestimba Road - Draper Road to Hardin Road	Art	2	19,000	590	0.03	A	Art	2	19,000	2,152	0.11	A
11	Yolo Street - Hardin Road to Fig Lane	Coll	2	15,000	1,857	0.12	A	Coll	2	15,000	4,515	0.30	A
12	Yolo Street - Fig Lane to SR 33	Coll	2	15,000	3,906	0.26	A	Coll	2	15,000	7,102	0.47	A
13	Hardin Road - Orestimba Road to Angelina Ave	Coll	2	15,000	1,832	0.12	A	Coll	2	15,000	3,541	0.24	A
14	Stuhr Road - Harvey Lane to Collector B	- -	- -	--	- -	--	- -	Art	2	19,000	3,055	0.16	A
15	Stuhr Road - Collector B to Fig Lane	- -	- -	--	- -	--	- -	Art	2	19,000	3,467	0.18	A
16	Harvey Lane - Stuhr Road to Collector C	- -	- -	--	- -	--	- -	Art	2	19,000	1,209	0.06	A

Table 10. Roadway Segment Level of Service - EPAP No Project and EPAP Plus Project Conditions (Continued)

	Roadway Segment	EPAP No Project						EPAP Plus Project					
		Typ	Ln	Cap	Volume	V/C	LOS	Typ	Ln	Cap	Volume	V/C	LOS
17	Collector B - Stuhr Road to Collector C	- -	- -	--	- -	--	- -	Coll	2	15,000	814	0.05	A
18	Fig Lane - Stuhr Road to Collector C	- -	- -	--	- -	--	- -	Coll	2	15,000	2,605	0.17	A
19	Collector C - Harvey Lane to Collector B	- -	- -	--	- -	--	- -	Coll	2	15,000	1,302	0.09	A
20	Collector C - Collector B to Fig Lane	- -	- -	--	- -	--	- -	Coll	2	15,000	1,935	0.13	A
21	Harvey Lane - Collector C to Jensen Road	- -	- -	--	- -	--	- -	Art	2	19,000	1,571	0.08	A
22	Collector B - Collector C to Jensen Road	- -	- -	--	- -	--	- -	Coll	2	15,000	3,428	0.23	A
23	Fig Lane - Collector C to Jensen Road	- -	- -	--	- -	--	- -	Coll	2	15,000	8,068	0.54	A
24	Jensen Road - Harvey Lane to Collector B	- -	- -	--	- -	--	- -	Art	2	19,000	2,036	0.11	A
25	Jensen Road - Collector B to Fig Lane	- -	- -	--	- -	--	- -	Art	4	38,000	5,138	0.14	A
26	Eastin Road - Stuhr Road to Anderson Road	ND	2	15,000	741	0.05	A	ND	2	15,000	741	0.05	A
27	Stuhr Road - Draper Road to Eastin Road	Art	2	19,000	1,873	0.10	A	Art	2	19,000	3,251	0.17	A
28	Stuhr Road - Eastin Road to Interstate 5	Art	2	19,000	1,961	0.10	A	Art	2	19,000	3,339	0.18	A

Notes: "Typ" = Roadway Type. "Ln" = Number of Lanes. "Cap" = Daily Capacity. "V/C" = Volume-to-Capacity Ratio.
"LOS" = Level of Service. "SR" = State Route. Dashes ("- -") indicate roadway segment not present under this scenario.
"EPAP" = Existing Plus Approved Projects.
Roadway Types: "SH" = State Highway. "Art" = City Street Arterial. "Coll" = Collector Street. "ND" = Not Designated.
Bold font indicates unacceptable LOS.

Sources: City of Newman 2006a, and KD Anderson & Associates 2014.

Table 11. Intersection Level of Service - EPAP No Project and EPAP Plus Project Conditions

	Study Intersections	EPAP No Project						EPAP Plus Project					
		Inters Contr	Sig Warr Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay	Inters Contr	Sig Warr Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
1	SR 33 & Stuhr Road	AWSC	No	B	11.7	B	11.0	Signal		C	23.1	C	30.7
2	SR 33 & Jensen Rd/ Sherman Parkway	Unsig	No	C	25.0	D	30.7	Signal		**F**	117.4	**F**	183.4
3	SR 33 & Yolo Street	Unsig	No	C	22.7	C	17.7	Unsig	Yes	**F**	Ovrflw	**F**	Ovrflw
4	Stuhr Road & Draper Road	Unsig	No	A	9.4	A	9.3	Unsig	No	A	9.9	B	10.1
5	Jensen Road & Fig Lane	Unsig	No	A	9.4	A	9.1	Signal		C	30.7	C	32.7
6	Orestimba Rd/Yolo St & Hardin Rd	AWSC	No	A	9.5	A	7.7	AWSC	No	B	12.0	A	9.4
7	Fig Lane / Q Street & Yolo Street	Unsig	No	B	12.5	B	10.2	Unsig	Yes	**F**	54.1	**F**	60.9
8	Stuhr Road & Harvey Lane	- -		- -		- -		Signal		B	12.9	B	13.5
9	Stuhr Road & Fig Lane	- -		- -		- -		Signal		C	21.7	C	24.3
10	SR 33 & Industrial Access	- -		- -		- -		Signal		A	3.3	A	3.9
11	SR 33 & North Commercial Access	- -		- -		- -		Unsig	Yes	**F**	67.8	**F**	576.4
12	SR 33 & South Commercial Access	- -		- -		- -		Signal		A	6.1	C	28.1
13	Stuhr Road & Collector Road B	- -		- -		- -		Unsig	No	A	9.2	A	9.1
14	Jensen Road & Collector Road B	- -		- -		- -		Round		A	3.3	A	2.8
15	Stuhr Road & Eastin Road	Unsig	No	B	10.9	B	10.4	Unsig	No	B	12.0	B	11.6
16	Stuhr Road & Villa Manucha Road	Unsig	No	A	8.9	A	9.2	Unsig	No	A	9.7	B	10.2

Notes: SR = State Route. LOS = Level of Service. "Inters Contr" = Type of intersection control. "Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control. "AWSC" = All-way stop-sign control. "Sig Warr" = Signal Warrants. "Round" = Roundabout. At unsignalized stop-sign controlled intersections, delay and LOS are shown for the worst approach, not the intersection average. "Ovrflw" = Overflow, indicates demand exceeds capacity. **Bold** font indicates unacceptable level of service. "EPAP" = Existing Plus Approved Projects. Dashes (- -) indicate the intersection would not be present under this scenario. Delay is measured in seconds per vehicle.

EXISTING PLUS APPROVED PROJECTS (EPAP) PLUS PROJECT CONDITIONS

This section of the traffic impact study describes traffic operating conditions under EPAP Plus Project conditions. Comparing these conditions to EPAP No Project conditions shows the impact of the Northwest Newman Master Plan project in the context of near-term future background conditions.

TRAFFIC VOLUME FORECASTS

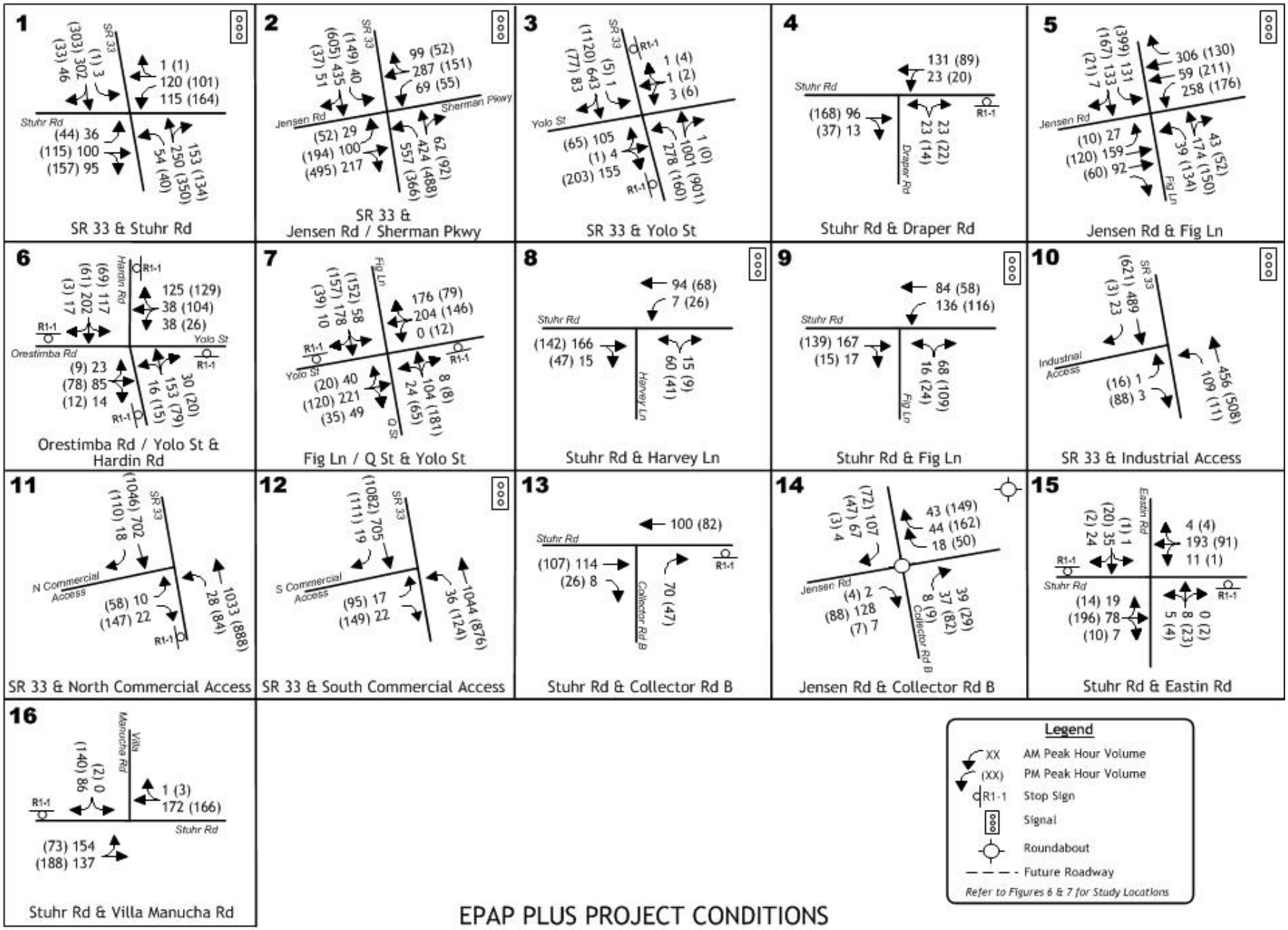
Project-related trips were added to EPAP No Project background traffic volumes to create the EPAP Plus Project traffic volumes. Peak hour EPAP Plus Project volumes at study intersections are shown in **Figure 14**. Daily volumes on study roadway segments are shown in **Table 10.** Project-related trips are described in the *Project Characteristics* section of this traffic impact study. Background EPAP traffic volumes are described in the *Existing Plus Approved Projects (EPAP) No Project Conditions* section.

CIRCULATION SYSTEM IMPROVEMENTS

The analysis of EPAP Plus Project conditions assumes improvements associated with the Northwest Newman Master Plan project. These improvements are described in the *Project Description* section of this traffic impact study. Specific lane geometric improvements assumed at project site intersections at shown in **Figure 14**.

INTERSECTION LEVELS OF SERVICE

Table 11 shows the results of LOS calculations for study intersections under EPAP Plus Project conditions. The following 12 study intersections would operate at LOS C or better during both the a.m. peak hour and p.m. peak hour. These LOS are considered acceptable, the impact of the proposed project at these intersections is considered less than significant, and no mitigation measures are required.



EPAP PLUS PROJECT CONDITIONS

Intersection Traffic Volumes and Lane Configurations

1. SR 33 & Stuhr Road
4. Stuhr Road & Draper Road
5. Jensen Road & Fig Lane
6. Orestimba Road / Yolo Street & Hardin Road
8. Stuhr Road & Harvey Lane
9. Stuhr Road & Fig Lane
10. SR 33 & Business Park Industrial Access
12. SR 33 & South Commercial Access
13. Stuhr Road & Collector Road B
14. Jensen Road & Collector Road B
15. Stuhr Road & Eastin Road
16. Stuhr Road & Villa Manucha Road

Intersection 2. SR 33 & Jensen Road/Sherman Parkway

Under EPAP Plus Project conditions, the intersection of SR 33 & Jensen Road/Sherman Parkway would operate at LOS F with 117.4 seconds of delay during the a.m. peak hour and LOS F with 183.4 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Add an exclusive northbound through lane.
- Add an exclusive southbound through lane.
- Split the eastbound combined through/right-turn lane into an exclusive eastbound through lane and an exclusive eastbound-to-southbound right-turn lane.
- Set the signal timing of the eastbound-to-southbound right-turn movement to overlap.
- Prohibit northbound-to-southbound U-turns.
- Split the westbound combined through/right-turn lane into an exclusive westbound through lane and an exclusive westbound-to-northbound right-turn lane.

The addition of northbound and southbound through lanes at this intersection would be consistent with the roadway segment mitigation measure described below.

As shown in **Table 12**, with these improvements, this intersection would operate at LOS D during the a.m. peak hour and LOS C during the p.m. peak hour. LOS D and C are considered acceptable.

Table 12. Intersection Level of Service - EPAP No Project and EPAP Plus Project Conditions With Mitigation Measures

Study Intersections	EPAP No Project					EPAP Plus Project				
	Inters Contr	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay	Inters Contr	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
2 SR 33 & Jensen Rd/ Sherman Parkway						Signal	D	46.3	C	30.7
3 SR 33 & Yolo Street						Signal	C	23.2	C	26.3
7 Fig Lane / Q Street & Yolo Street						Signal	B	10.7	B	11.0
11 SR 33 & North Commercial Access						Unsig	B	11.1	C	16.7
12 SR 33 & South Commercial Access						Signal	A	3.9	B	14.2

Notes: SR = State Route. LOS = Level of Service. "Inters Contr" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.
At unsignalized stop-sign controlled intersections, delay and LOS are shown for the worst approach, not the intersection average. **Bold** font indicates unacceptable level of service.
"EPAP" = Existing Plus Approved Projects.

Intersection 3. SR 33 & Yolo Street

Under EPAP Plus Project conditions, the intersection of SR 33 & Yolo Street would operate at LOS F with overflow conditions during both the a.m. peak hour and p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Signalize the intersection.
- Add an exclusive northbound through lane.
- Add an exclusive southbound through lane.

The addition of northbound and southbound through lanes at this intersection would be consistent with the roadway segment mitigation measure described below.

As shown in **Table 12**, with these improvements, this intersection would operate at LOS C during both the a.m. peak hour and p.m. peak hour. LOS C is considered acceptable.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.).

Intersection 7. Fig Lane/Q Street & Yolo Street

Under EPAP Plus Project conditions, the intersection of Fig Lane/Q Street & Yolo Street would operate at LOS F with 54.1 seconds of delay during the a.m. peak hour and LOS F with 60.9 seconds of delay during the p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Signalize the intersection.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.). Additional approach lanes would not be needed.

As shown in **Table 12**, with these improvements, this intersection would operate at LOS B during both the a.m. peak hour and the p.m. peak hour. LOS B is are considered acceptable.

Intersection 11. SR 33 & North Commercial Access

Under EPAP Plus Project conditions, the intersection of SR 33 & North Commercial Access would operate at LOS F with 67.8 seconds of delay during the a.m. peak hour and LOS F with 576.4 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable, and this is considered a significant impact.

This intersection would meet peak hour signal warrants, and signalization of this intersection was considered as a mitigation measure. However, signalization is not recommended because this intersection is approximately 400 feet south of the signalized intersection of SR 33 & Jensen Road/Sherman Parkway. Signalizing the intersection of SR 33 & North Commercial Access would result in distances between signalized intersections which are considered inadequate. With inadequate distances between signalized intersections, queues from one intersection may interfere with the operation of other intersections.

To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Prohibit eastbound-to-northbound left-turn movements at this intersection.
- Add an exclusive northbound through lane.
- Add an exclusive southbound through lane.

The addition of northbound and southbound through lanes at this intersection would be consistent with the roadway segment mitigation measure described below.

As shown in **Table 12**, with this mitigation measure, this intersection would operate at LOS B during the a.m. peak hour and LOS C during the p.m. peak hour. LOS B and C are considered acceptable.

ROADWAY SEGMENT LEVELS OF SERVICE

Table 10 shows the daily traffic volume and LOS that would occur on study roadway segments under EPAP Plus Project conditions. The following 27 of the 28 study roadway segments would operate at LOS A. This LOS is considered acceptable, the impact of the proposed project on these roadway segments is considered less than significant, and no mitigation measures are required.

1. SR 33 - Lundy Road to Stuhr Road
2. SR 33 - Stuhr Road to Jensen Road
4. Stuhr Road - Fig Lane to SR 33
5. Stuhr Road - SR 33 to Hills Ferry Road
6. Draper Road - Stuhr Road to Orestimba Road
7. Fig Lane - Jensen Road to Yolo Street
8. Jensen Road - Fig Lane to SR 33
9. Sherman Parkway - SR 33 to Balsam Drive
10. Orestimba Road - Draper Road to Hardin Road
11. Yolo Street - Hardin Road to Fig Lane
12. Yolo Street - Fig Lane to SR 33
13. Hardin Road - Orestimba Road to Angelina Avenue
14. Stuhr Road - Harvey Lane to Collector Road B
15. Stuhr Road - Collector Road B to Fig Lane
16. Harvey Lane - Stuhr Road to Collector Road C
17. Collector Road B - Stuhr Road to Collector Road C
18. Fig Lane - Stuhr Road to Collector Road C
19. Collector Road C - Harvey Lane to Collector Road B
20. Collector Road C - Collector Road B to Fig Lane

21. Harvey Lane - Collector Road C to Jensen Road
22. Collector Road B - Collector Road C to Jensen Road
23. Fig Lane - Collector Road C to Jensen Road
24. Jensen Road - Harvey Lane to Collector Road B
25. Jensen Road - Collector Road B to Fig Lane
26. Eastin Road - Stuhr Road to Anderson Road
27. Stuhr Road - Draper Road to Eastin Road
28. Stuhr Road - Eastin Road to Interstate 5

Roadway Segment 3. SR 33 - Jensen Road to Yolo Street

Under EPAP Plus Project conditions, the roadway segment of SR 33 from Jensen Road to Yolo Street would operate at LOS F with a V/C ratio of 1.14. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. Widen the roadway segment of SR 33 from Jensen Road to Yolo Street to four lanes (two lanes in each direction). Widening this roadway segment to four lanes would be consistent with the *Newman 2030 General Plan* (City of Newman 2006a.).

As shown in **Table 13**, with this improvement, this roadway segment would operate at LOS A and a V/C ratio of 0.57.

Table 13. Roadway Segment Level of Service - EPAP No Project & EPAP Plus Project With Mitigation Measures

		EPAP No Project						EPAP Plus Project					
	Roadway Segment	Typ	Ln	Cap	Volume	V/C	LOS	Typ	Ln	Cap	Volume	V/C	LOS
3	SR 33 - Jensen Road to Yolo Street	- -	- -	--	- -	--	- -	SH	4	40,000	22,800	0.57	A

Notes: "Typ" = Roadway Type. "Ln" = Number of Lanes. "Cap" = Daily Capacity. "V/C" = Volume-to-Capacity Ratio.
"LOS" = Level of Service. "SR" = State Route. Dashes ("- -") indicate mitigation measures are not needed under this scenario.
"EPAP" = Existing Plus Approved Projects.
Roadway Types: "SH" = State Highway. "Art" = City Street Arterial. "Coll" = Collector Street. "ND" = Not Designated.
Sources: City of Newman 2006a, and KD Anderson & Associates 2014.

CUMULATIVE NO PROJECT CONDITIONS

This section of the traffic impact study describes traffic operating conditions under Cumulative No Project conditions. This development scenario serves as a background condition for determining the impacts of the Northwest Newman Master Plan in the long-term future.

TRAFFIC VOLUME FORECASTS

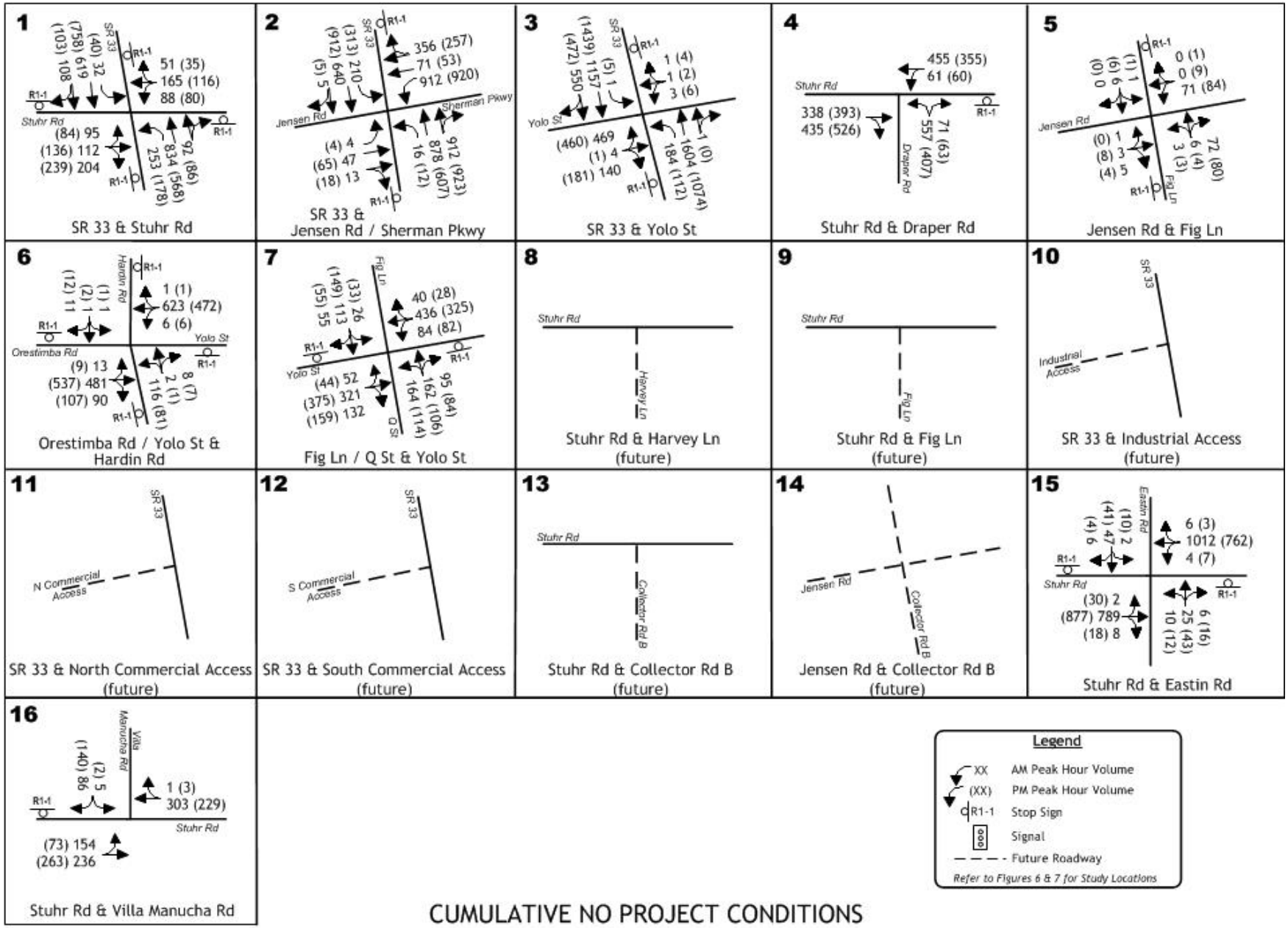
Long-term future traffic volume forecasts for Cumulative conditions were developed using the travel demand forecasting traffic simulation model developed for the *Newman 2030 General Plan* (City of Newman 2006a). This travel demand model uses land use data and roadway network configurations consistent with the General Plan to forecast traffic volumes on roadways throughout the City.

Peak hour traffic volumes under Cumulative No Project conditions at study intersections are shown in **Figure 15**. Daily volumes on study roadway segments are shown in **Table 14**.

The City's General Plan travel demand model produces forecasts of daily traffic volumes. The forecasts of daily volumes generated by the model are adequate for use in the analysis of roadway segment LOS, and are used for daily volume forecasts in this traffic impact study. However, the daily volumes generated by the traffic model are not, by themselves, adequate for use in the peak hour LOS analysis of study intersections.

Two methods were used to develop forecasts of future year peak hour intersection turning movement traffic volumes for this traffic impact study:

> **Method #1** was used at existing intersections that would not have legs added to the intersection in the future, and would not experience substantial unbalanced increases in traffic volumes (substantial increases in traffic volumes on some legs of the intersection, but not on other legs of the intersection). At these intersections, existing turning movement count data are available, and can be increased by application of model-generated growth factors.
>
> **Method #2** was used at new intersections, intersections that would have added legs in the future, or would experience substantial unbalanced increases in traffic volumes. At these intersections, existing turning movement count data are not available, or cannot be validly increased by application of model-generated growth factors.



CUMULATIVE NO PROJECT CONDITIONS

Intersection Traffic Volumes and Lane Configurations

Table 14. Roadway Segment LOS - Cumulative No Project and Cumulative Plus Project Conditions

		Cumulative No Project						Cumulative Plus Project					
	Roadway Segment	Typ	Ln	Cap	Volume	V/C	LOS	Typ	Ln	Cap	Volume	V/C	LOS
1	SR 33- Lundy Road to Stuhr Road	SH	4	40,000	15,508	0.39	A	SH	4	40,000	16,772	0.42	A
2	SR 33 - Stuhr Road to Jensen Road	SH	4	40,000	19,607	0.49	A	SH	4	40,000	21,309	0.53	A
3	SR 33 - Jensen Road to Yolo Street	SH	4	40,000	33,854	0.85	D	SH	4	40,000	45,354	1.13	**F**
4	Stuhr Road - Fig Lane to SR 33	Art	2	19,000	8,354	0.44	A	Art	2	19,000	10,213	0.54	A
5	Stuhr Road - SR 33 to Hills Ferry Road	Art	2	19,000	4,632	0.24	A	Art	2	19,000	7,754	0.41	A
6	Draper Road - Stuhr Road to Orestimba Road	Art	2	19,000	10,145	0.53	A	Art	2	19,000	2,979	0.16	A
7	Fig Lane - Jensen Road to Yolo Street	Coll	2	15,000	4,028	0.27	A	Coll	2	15,000	8,643	0.58	A
8	Jensen Road - Fig Lane to SR 33	Art	2	19,000	1,461	0.08	A	Art	4	38,000	19,268	0.51	A
9	Sherman Parkway - SR 33 to Balsam Drive	Art	4	38,000	23,835	0.63	B	Art	4	38,000	30,010	0.79	C
10	Orestimba Road - Draper Road to Hardin Road	Art	2	19,000	11,914	0.63	B	Art	2	19,000	9,819	0.52	A
11	Yolo Street - Hardin Road to Fig Lane	Coll	2	15,000	10,419	0.69	B	Coll	2	15,000	10,252	0.68	B
12	Yolo Street - Fig Lane to SR 33	Coll	2	15,000	11,254	0.75	C	Coll	2	15,000	11,752	0.78	C
13	Hardin Road - Orestimba Road to Angelina Ave	Coll	2	15,000	250	0.02	A	Coll	2	15,000	2,124	0.14	A
14	Stuhr Road - Harvey Lane to Collector B	- -	- -	--	- -	--	- -	Art	2	19,000	7,574	0.40	A
15	Stuhr Road - Collector B to Fig Lane	- -	- -	--	- -	--	- -	Art	2	19,000	7,985	0.42	A
16	Harvey Lane - Stuhr Road to Collector C	- -	- -	--	- -	--	- -	Art	2	19,000	8,496	0.45	A

Table 14. Roadway Segment LOS - Cumulative No Project and Cumulative Plus Project Conditions (Continued)

	Roadway Segment	Cumulative No Project						Cumulative Plus Project					
		Typ	Ln	Cap	Volume	V/C	LOS	Typ	Ln	Cap	Volume	V/C	LOS
17	Collector B - Stuhr Road to Collector C	- -	- -	--	- -	--	- -	Coll	2	15,000	814	0.05	A
18	Fig Lane - Stuhr Road to Collector C	- -	- -	--	- -	--	- -	Coll	2	15,000	2,605	0.17	A
19	Collector C - Harvey Lane to Collector B	- -	- -	--	- -	--	- -	Coll	2	15,000	1,302	0.09	A
20	Collector C - Collector B to Fig Lane	- -	- -	--	- -	--	- -	Coll	2	15,000	1,935	0.13	A
21	Harvey Lane - Collector C to Jensen Road	- -	- -	--	- -	--	- -	Art	2	19,000	8,858	0.47	A
22	Collector B - Collector C to Jensen Road	- -	- -	--	- -	--	- -	Coll	2	15,000	3,428	0.23	A
23	Fig Lane - Collector C to Jensen Road	- -	- -	--	- -	--	- -	Coll	2	15,000	8,068	0.54	A
24	Jensen Road - Harvey Lane to Collector B	- -	- -	--	- -	--	- -	Art	2	19,000	8,880	0.47	A
25	Jensen Road - Collector B to Fig Lane	- -	- -	--	- -	--	- -	Art	4	38,000	11,628	0.31	A
26	Eastin Road - Stuhr Road to Anderson Road	ND	2	15,000	3,049	0.20	A	ND	2	15,000	3,049	0.20	A
27	Stuhr Road - Draper Road to Eastin Road	Art	2	19,000	16,074	0.85	**D**	Art	2	19,000	17,396	0.92	**E**
28	Stuhr Road - Eastin Road to Interstate 5	Art	2	19,000	16,074	0.85	**D**	Art	2	19,000	17,396	0.92	**E**

Notes: "Typ" = Roadway Type. "Ln" = Number of Lanes. "Cap" = Daily Capacity. V/C = Volume-to-Capacity Ratio.
LOS = Level of Service. "SR" = State Route. Dashes ("- -") indicate roadway segment not present under this scenario.
Roadway Types: "SH" = State Highway. "Art" = City Street Arterial. "Coll" = Collector Street. "ND" = Not Designated.
Bold font indicates unacceptable LOS.

Sources: City of Newman 2006a, and KD Anderson & Associates 2014.

Method #1

In Method #1, daily traffic volumes from the travel models 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 255, *Highway Traffic Data for Urbanized Area Project Planning and Design*. The NCHRP 255 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.

Method #2

Method #1 cannot be applied where existing turning movement traffic volumes for each leg of the intersection are not available. Also, at some intersections, the traffic model forecasts growth factors that are substantially different on each intersection leg. In these cases, the NCHRP 255 method by itself is not able to develop valid "balanced" turning movement forecast. In these cases, Method #2 was applied. Method #2 involves three steps:

- applying peak hour ratios to convert travel model-generated daily volumes into peak hour volumes;
- applying directional ratios to estimate, separately for each peak hour, how many vehicles travel in each direction, and
- applying the NCHRP 255 method to balance intersection turning movement volumes.

Traffic count data from 13 roadway segments in Newman were used to determine the percent of daily traffic that travels during the a.m. peak hour, and during the p.m. peak hour. These measured percentages were applied to the City's model-estimated daily traffic volume to estimate, separately, a.m. peak hour volumes and p.m. peak hour volumes.

Measured traffic count data from six intersections in Newman were used to determine the direction of travel in each of the two peak hours. The count data were used to determine the "directional split", that is, the percent of traffic traveling in one direction as opposed to the other. Eastbound versus westbound directional splits, and northbound versus southbound directional splits, were determined separately for the a.m. peak hour and the p.m. peak hour.

The NCHRP 255 method was then applied to "balance" the directional peak hour traffic volumes at the intersection. In some cases, manual adjustment of the forecasted peak hour volumes was needed to develop reasonable intersection turning movement volumes.

Project Site Development

In consultation with City of Newman staff, traffic volume forecasts for the Cumulative No Project condition assumes no development on the project site (Ocasio per. comm.). This approach was applied because the Cumulative No Project condition is used to describe background conditions with the Northwest Newman Master Plan project.

CIRCULATION SYSTEM IMPROVEMENTS

Because the Cumulative No Project condition is a long-term future scenario, it assumes future circulation system improvements in Newman. Consistent with the *Newman 2030 General Plan* (City of Newman 2006a), and in consultation with City staff (Ocasio pers. comm.), the Cumulative No Project conditions assumes SR 33 and Sherman Parkway will be widened to four lanes (two lanes in each direction).

As noted immediately above, the Cumulative No Project condition assumes no development on the project site (Ocasio pers. comm.).

Specific lane geometric improvements assumed at project site intersections at shown in **Figure 15**.

INTERSECTION LEVELS OF SERVICE

Based on the traffic volumes and circulation system described above, LOS under Cumulative No Project conditions at study intersections is presented in **Table 15**.

As shown in **Table 15**, the following two study intersections would operate at LOS A or B during both the a.m. peak hour and p.m. peak hour. LOS A and B are very good operating conditions and, as noted above in the *Standards of Significance* section of this traffic impact study, are considered acceptable.

5. Jensen Road & Fig Lane
16. Stuhr Road & Villa Manucha Road

No improvements at these intersections are recommended under Cumulative No Project conditions.

Table 15. Intersection Level of Service - Cumulative No Project and Cumulative Plus Project Conditions

	Study Intersections	Cumulative No Project						Cumulative Plus Project					
		Inters Contr	Sig Warr Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay	Inters Contr	Sig Warr Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
1	SR 33 & Stuhr Road	AWSC	Yes	**F**	77.5	**F**	67.5	Signal		**E**	55.3	**E**	58.6
2	SR 33 & Jensen Rd/ Sherman Parkway	Unsig	Yes	**F**	Ovrflw	**F**	Ovrflw	Signal		**F**	278.6	**F**	276.2
3	SR 33 & Yolo Street	Unsig	Yes	**F**	Ovrflw	**E**	47.0	Unsig	Yes	**F**	Ovrflw	**F**	Ovrflw
4	Stuhr Road & Draper Road	Unsig	Yes	**F**	Ovrflw	**F**	769.3	Unsig	Yes	**F**	677.7	**F**	324.1
5	Jensen Road & Fig Lane	Unsig	No	A	9.3	A	9.5	Signal		C	28.7	C	34.2
6	Orestimba Rd/Yolo St & Hardin Rd	AWSC	No	**E**	46.9	**D**	33.2	AWSC	No	**D**	25.1	C	24.5
7	Fig Lane / Q Street & Yolo Street	Unsig	Yes	**F**	Ovrflw	**F**	Ovrflw	Unsig	Yes	**F**	Ovrflw	**F**	Ovrflw
8	Stuhr Road & Harvey Lane	- -		- -		- -		Signal		C	30.3	C	30.0
9	Stuhr Road & Fig Lane	- -		- -		- -		Signal		B	13.8	B	16.6
10	SR 33 & Industrial Access	- -		- -		- -		Signal		A	1.0	A	1.8
11	SR 33 & North Commercial Access	- -		- -		- -		Unsig	Yes	**F**	Ovrflw	**F**	Ovrflw
12	SR 33 & South Commercial Access	- -		- -		- -		Signal		A	6.1	C	29.3
13	Stuhr Road & Collector Road B	- -		- -		- -		Unsig	No	B	11.2	B	11.2
14	Jensen Road & Collector Road B	- -		- -		- -		Round		A	4.0	A	3.8
15	Stuhr Road & Eastin Road	Unsig	No	**F**	451.0	**F**	333.1	Unsig	No	**F**	Ovrflw	**F**	680.0
16	Stuhr Road & Villa Manucha Road	Unsig	No	B	11.5	B	10.8	Unsig	No	B	13.5	B	12.5

Notes: SR = State Route. LOS = Level of Service. "Inters Contr" = Type of intersection control. "Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control. "AWSC" = All-way stop-sign control. "Sig Warr" = Signal Warrants. "Round" = Roundabout. At unsignalized stop-sign controlled intersections, delay and LOS are shown for the worst approach, not the intersection average. "Ovrflw" = Overflow, indicates demand exceeds capacity. **Bold** font indicates unacceptable level of service. Dashes (- -) indicate the intersection would not be present under this scenario. Delay is measured in seconds per vehicle.

Intersection 1. SR 33 & Stuhr Road

Under Cumulative No Project conditions, the intersection of SR 33 & Stuhr Road would operate at LOS F with 77.5 seconds of delay during the a.m. peak hour and LOS F with 67.5 seconds of delay during the p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable. To improve LOS at this intersection to an acceptable level, the following recommended improvement should be implemented.

Recommended Improvement. The intersection should be improved as described below:

- Signalize the intersection.
- Split the westbound single lane approach into an exclusive westbound-to-southbound left-turn lane, and a westbound combined through/right-turn lane.
- Split the eastbound single lane approach into an exclusive eastbound-to-northbound left-turn lane, and an eastbound combined through/right-turn lane.

As shown in **Table 16**, with these improvements, this intersection would operate at LOS D during both the a.m. peak hour and p.m. peak hour. LOS D is considered acceptable.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.).

Intersection 2. SR 33 & Jensen Road/Sherman Parkway

Under Cumulative No Project conditions, the intersection of SR 33 & Jensen Road/Sherman Parkway would operate at LOS F with overflow conditions during both the a.m. peak hour and p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable. To improve LOS at this intersection, but not to an acceptable level, the following recommended improvement should be implemented.

Table 16. Intersection Level of Service - Cumulative No Project and Cumulative Plus Project Conditions With Recommended Improvements and Mitigation Measures

	Study Intersections	Cumulative No Project					Cumulative Plus Project				
		Inters Contr	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay	Inters Contr	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
1	SR 33 & Stuhr Road	Signal	D	43.8	D	49.2	Signal	D	48.5	C	30.5
2	SR 33 & Jensen Rd/ Sherman Parkway	Signal	**E**	58.6	D	54.3	Signal	**F**	114.2	**F**	83.3
3	SR 33 & Yolo Street	Signal	**F**	92.2	**F**	85.7	Unsig	**F**	123.3	**F**	175.3
4	Stuhr Road & Draper Road	Signal	C	24.3	B	20.0	Signal	B	11.2	A	9.6
6	Orestimba Rd/Yolo St & Hardin Rd	Signal	A	7.0	A	5.8	Signal	A	8.4	A	7.6
7	Fig Lane / Q Street & Yolo Street	Signal	B	16.8	B	13.3	Signal	C	24.6	C	26.6
11	SR 33 & North Commercial Access	- -	- -		- -		Unsig	A	0.0	A	0.0
12	SR 33 & South Commercial Access	- -	- -		- -		Signal	A	4.6	D	39.1

Notes: SR = State Route. LOS = Level of Service. "Inters Contr" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.
At unsignalized stop-sign controlled intersections, delay and LOS are shown for the worst approach, not the intersection average. **Bold** font indicates unacceptable level of service.
Dashes (- -) indicate the intersection would not be present under this scenario. Delay is measured in seconds per vehicle.

Recommended Improvement. The intersection should be improved as described below:

- Signalize the intersection.
- Add a second westbound-to-southbound left-turn lane.
- Change the westbound combined through/right-turn lane into an exclusive westbound-to-northbound right-turn lane.
- Split the northbound combined through/right-turn lane to include an exclusive northbound through lane and a free northbound-to-eastbound right-turn lane.
- Remove the exclusive eastbound through lane to allow the free northbound-to-eastbound free right-turn lane to have its own eastbound departure lane.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.).

As shown in **Table 16**, with these improvements, this intersection would operate at LOS E during the a.m. peak hour and LOS D during the p.m. peak hour. LOS E is considered unacceptable. No other improvements at this intersection are considered feasible. Therefore, this would be an unacceptable but unavoidable condition.

Intersection 3. SR 33 & Yolo Street

Under Cumulative No Project conditions, the intersection of SR 33 & Yolo Street would operate at LOS F with overflow conditions during the a.m. peak hour and LOS E with 47.0 seconds of delay during the p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS E and F are considered unacceptable. To improve LOS at this intersection, but not to an acceptable level, the following recommended improvement should be implemented.

Recommended Improvement. The intersection should be improved as described below:

- Signalize the intersection.
- Split the eastbound single lane approach into an exclusive eastbound-to-northbound left-turn lane and an eastbound combined through/right-turn lane.
- Split the southbound combined through/right-turn lane into an exclusive southbound-through lane and an exclusive southbound-to-westbound right-turn lane.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.).

As shown in **Table 16**, with these improvements, this intersection would operate at LOS F during both the a.m. peak hour and p.m. peak hour. LOS F is considered unacceptable. No other improvements at this intersection are considered feasible. Therefore, this would be an unacceptable but unavoidable condition.

Intersection 4. Stuhr Road & Draper Road

Under Cumulative No Project conditions, the intersection of Stuhr Road & Draper Road would operate at LOS F with overflow conditions during the a.m. peak hour and LOS F with 769.3 seconds of delay during the p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable. To improve LOS at this intersection to an acceptable level, the following recommended improvement should be implemented.

Recommended Improvement. The intersection should be improved as described below:

- Signalize the intersection.
- Split the westbound combined through/left-turn lane into an exclusive westbound-to-southbound left-turn lane, and an exclusive westbound through lane.
- Split the eastbound combined through/right-turn lane into an exclusive eastbound-to-southbound right-turn lane, and an exclusive eastbound through lane.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.).

As shown in **Table 16**, with these improvements, this intersection would operate at LOS C during the a.m. peak hour and LOS B during the p.m. peak hour. LOS C and B are considered acceptable.

Intersection 6. Orestimba Road/Yolo Street & Hardin Road

Under Cumulative No Project conditions, the intersection of Orestimba Road/Yolo Street & Hardin Road would operate at LOS E with 46.9 seconds of delay during the a.m. peak hour and LOS D with 33.2 seconds of delay during the p.m. peak hour. LOS D and E are considered unacceptable. To improve LOS at this intersection to an acceptable level, the following recommended improvement should be implemented.

Recommended Improvement. The intersection should be improved as described below:

- Signalize the intersection.
- Split the northbound single lane approach into an exclusive northbound-to-westbound left-turn lane, and a combined through/right-turn lane.

- Split the southbound single lane approach into an exclusive southbound-to-eastbound left-turn lane, and a combined through/right-turn lane.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.). Signalization is also recommended at this intersection to facilitate pedestrian and bicycle travel associated with Orestimba High School, which is northwest of the intersection.

As shown in **Table 16**, with these improvements, this intersection would operate at LOS A during both the a.m. peak hour and the p.m. peak hour. LOS A is considered acceptable.

Intersection 7. Fig Lane/Q Street & Yolo Street

Under Cumulative No Project conditions, the intersection of Fig Lane/Q Street & Yolo Street would operate at LOS F with overflow conditions during both the a.m. peak hour and p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable. To improve LOS at this intersection to an acceptable level, the following recommended improvement should be implemented.

Recommended Improvement. The intersection should be improved as described below:

- Signalize the intersection.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.). Additional approach lanes would not be needed.

As shown in **Table 16**, with these improvements, this intersection would operate at LOS B during both the a.m. peak hour and the p.m. peak hour. LOS B is considered acceptable.

Intersection 15. Stuhr Road & Eastin Road

Under Cumulative No Project conditions, the intersection of Stuhr Road & Eastin Road would operate at LOS F with 451.0 seconds of delay during the a.m. peak hour and LOS F with 333.1 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable. This intersection would not meet peak hour signal warrants. Traffic volumes on the Eastin Road approaches to this intersection are below the levels which would be needed to meet peak hour signal warrants. Therefore, signalization of this intersection is not recommended.

No improvements at this intersection are considered feasible. Therefore, this would be an unacceptable but unavoidable condition.

ROADWAY SEGMENT LEVEL OF SERVICE

Table 14 shows the daily traffic volume and LOS that would occur on study roadway segments under Cumulative No Project conditions. The following 14 of the 16 study roadway segments would operate at LOS A, B, or C. LOS A, B, and C are considered acceptable, and no improvements are recommended.

1. SR 33 - Lundy Road to Stuhr Road
2. SR 33 - Stuhr Road to Jensen Road
4. Stuhr Road - Fig Lane to SR 33
5. Stuhr Road - SR 33 to Hills Ferry Road
6. Draper Road - Stuhr Road to Orestimba Road
7. Fig Lane - Jensen Road to Yolo Street
8. Jensen Road - Fig Lane to SR 33
9. Sherman Parkway - SR 33 to Balsam Drive
10. Orestimba Road - Draper Road to Hardin Road
11. Yolo Street - Hardin Road to Fig Lane
12. Yolo Street - Fig Lane to SR 33
13. Hardin Road - Orestimba Road to Angelina Avenue
14. Stuhr Road - Harvey Lane to Collector Road B
15. Stuhr Road - Collector Road B to Fig Lane
16. Harvey Lane - Stuhr Road to Collector Road C
17. Collector Road B - Stuhr Road to Collector Road C
18. Fig Lane - Stuhr Road to Collector Road C
19. Collector Road C - Harvey Lane to Collector Road B
20. Collector Road C - Collector Road B to Fig Lane
21. Harvey Lane - Collector Road C to Jensen Road
22. Collector Road B - Collector Road C to Jensen Road
23. Fig Lane - Collector Road C to Jensen Road
24. Jensen Road - Harvey Lane to Collector Road B
25. Jensen Road - Collector Road B to Fig Lane
26. Eastin Road - Stuhr Road to Anderson Road

Roadway Segment 3. SR 33 - Jensen Road to Yolo Street

Under Cumulative No Project conditions, the roadway segment of SR 33 from Jensen Road to Yolo Street would operate at LOS D with a V/C ratio of 0.85. As noted in the *Standards of Significance* section of this traffic impact study, LOS D is considered acceptable on this roadway segment. No improvements are recommended.

Roadway Segment 27. Stuhr Road - Draper Road to Eastin Road and Roadway Segment 28. Stuhr Road - Eastin Road to Interstate 5

Under Cumulative No Project conditions, the roadway segment of Stuhr Road from Draper Road to Eastin Road and the roadway segment of Stuhr Road from Eastin Road to Interstate 5 would operate at LOS D with a V/C ratio of 0.85. As noted in the *Standards of Significance* section of this traffic impact study, LOS D is considered unacceptable on these roadway segments.

The *Newman 2030 General Plan EIR* (City of Newman 2006b) describes these roadway segments as being part of the inter-regional street system, and forecasts these roadway segments operating at an unacceptable LOS. The General Plan EIR notes,

> "While the inter-regional street system is not the sole responsibility of the City of Newman, the City should investigate mechanisms for City development to participate on a "fair share" basis in the costs of maintaining and improving roads outside of the City limits. Stanislaus County and east-side communities such as Oakdale, Riverbank, Hughson and Waterford are currently working towards a mechanism to address impacts to roads in that end of the County. However, while a similar mechanism should be pursued by the City of Newman, Merced County and Stanislaus County, and Caltrans, because no mechanism currently exists, this impact is considered significant and unavoidable."

CUMULATIVE PLUS PROJECT CONDITIONS

This section of the traffic impact study describes traffic operating conditions under Cumulative Plus Project conditions. Comparing these conditions to Cumulative No Project conditions shows the impact of the Northwest Newman Master Plan project in the context of long-term future background conditions.

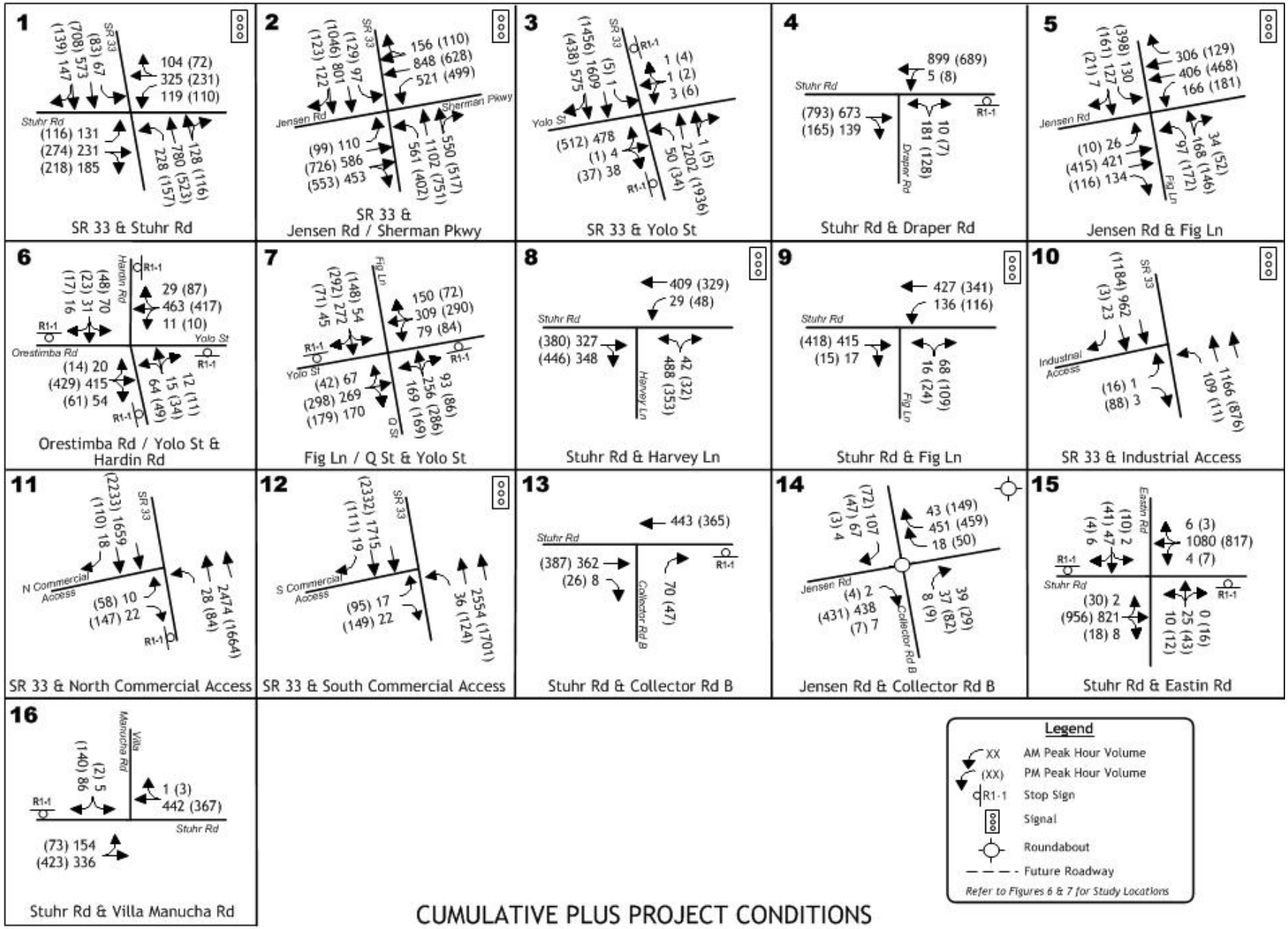
TRAFFIC VOLUME FORECASTS

In general, project-related trips were added to Cumulative No Project background traffic volumes to create the Cumulative Plus Project traffic volumes. Peak hour Cumulative Plus Project volumes at study intersections are shown in **Figure 16**. Daily volumes on study roadway segments are shown in **Table 14**. Project-related trips are described in the *Project Characteristics* section of this traffic impact study. Background Cumulative traffic volumes are described in the *Cumulative No Project Conditions* section.

Traffic volume forecasts for the Cumulative No Project condition, shown in **Figure 15** and **Table 14** did not assume development of roadways within the Northwest Newman Master Plan project site. Traffic volume forecasts for the Cumulative Plus Project condition, shown in **Figure 16** and **Table 14** did assume development of roadways in the Plan area. Use of roadways within the Plan area was not limited to project-related trips. That is, some travel generated from parts of Newman outside of the Plan area would pass through the Plan area, using Plan area roadways. For example, trips from the near the intersection of Orestimba Road & Hardin Road traveling to SR 33 north of Newman would travel on SR 33 south of Stuhr Road under Cumulative No Project conditions. Under Cumulative Plus Project conditions, the same trips could travel on Fig Lane through the Plan area, rather than SR 33. As a result, simply adding the project-related trips shown in **Figure 11** to the Cumulative No Project traffic volumes shown in **Figure 15** may not replicate the Cumulative Plus Project volumes shown in **Figure 16**. The difference would be due to travel generated from parts of Newman outside of the Plan area passing through the Plan area, using Plan area roadways.

CIRCULATION SYSTEM IMPROVEMENTS

The analysis of Cumulative Plus Project conditions assumes improvements associated with both the City General Plan and the Northwest Newman Master Plan project. The General Plan circulation system improvements are described in the *Cumulative No Project Conditions* section of this traffic impact study. Plan area improvements are described in the *Project Description* section of this traffic impact study. Specific lane geometric improvements assumed at project site intersections at shown in **Figure 16**.



CUMULATIVE PLUS PROJECT CONDITIONS

Intersection Traffic Volumes and Lane Configurations

INTERSECTION LEVELS OF SERVICE

Table 13 shows the results of LOS calculations for study intersections under Cumulative Plus Project conditions. The following eight study intersections would operate at LOS C or better during both the a.m. peak hour and p.m. peak hour. These LOS are considered acceptable, the impact of the proposed project at these intersections is considered less than significant, and no mitigation measures are required.

5. Jensen Road & Fig Lane
8. Stuhr Road & Harvey Lane
9. Stuhr Road & Fig Lane
10. SR 33 & Business Park Industrial Access
12. SR 33 & South Commercial Access
13. Stuhr Road & Collector Road B
14. Jensen Road & Collector Road B (future)
16. Stuhr Road & Villa Manucha Road

Intersection 1. SR 33 & Stuhr Road

Under Cumulative Plus Project conditions, the intersection of SR 33 & Stuhr Road would operate at LOS E with 55.3 seconds of delay during the a.m. peak hour and LOS E with 58.6 seconds of delay during the p.m. peak hour. As noted in the *Standards of Significance* section of this traffic impact study, LOS E is considered unacceptable at this intersection, and this is considered a significant impact. To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Split the eastbound combined through/right-turn lane into an exclusive eastbound through lane and an exclusive eastbound-to-southbound right-turn lane.

    - Split the southbound combined through/right-turn lane into an exclusive southbound through lane and an exclusive southbound-to-westbound right-turn lane.

    - Split the northbound combined through/right-turn lane into an exclusive northbound through lane and an exclusive northbound-to-eastbound right-turn lane.

As shown in **Table 16**, with these improvements, this intersection would operate at LOS D during the a.m. peak hour and LOS C during the p.m. peak hour. LOS D and C are considered acceptable.

Intersection 2. SR 33 & Jensen Road/Sherman Parkway

Under Cumulative Plus Project conditions, the intersection of SR 33 & Jensen Road/Sherman Parkway would operate at LOS F with 278.6 seconds of delay during the a.m. peak hour and LOS F with 276.2 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact, but not to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Split the eastbound combined through/right-turn lane into an exclusive eastbound through lane and an exclusive eastbound-to-southbound right-turn lane.
- Split the southbound combined through/right-turn lane into an exclusive southbound through lane and an exclusive southbound-to-westbound right-turn lane.
- Add a second northbound-to-westbound left-turn lane.
- Split the northbound combined through/right-turn lane to include an exclusive northbound through lane and a free northbound-to-eastbound right-turn lane.
- For the free northbound-to-eastbound right-turn lane, add an eastbound departure lane that merges into the eastbound departure. The length of the departure lane should be per the California Manual on Uniform Traffic Control Devices - FHWA's MUTCD 2009 Edition as amended for use in California – 2012 Edition (California MUTCD) (California Department of Transportation 2012).
- Add a second westbound-to-southbound left-turn lane.

As shown in **Table 16**, with these improvements, this intersection would operate at LOS F during both the a.m. peak hour and p.m. peak hour. LOS F is considered unacceptable. No other improvements at this intersection are considered feasible. Therefore, this impact is considered significant and unavoidable.

Intersection 3. SR 33 & Yolo Street

Under Cumulative Plus Project conditions, the intersection of SR 33 & Yolo Street would operate at LOS F with overflow conditions during both the a.m. peak hour and p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact, but not to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Signalize the intersection.
- Split the southbound combined through/right-turn lane into an exclusive southbound through lane and an exclusive southbound-to-westbound right-turn lane.
- Split the eastbound single-lane approach into exclusive eastbound-to-northbound left-turn lane and an eastbound combined through/right-turn lane.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.).

As shown in **Table 16**, with these improvements, this intersection would operate at LOS F during both the a.m. peak hour and p.m. peak hour. LOS F is considered unacceptable. No other improvements at this intersection are considered feasible. Therefore, this impact is considered significant and unavoidable.

Intersection 4. Stuhr Road & Draper Road

Under Cumulative Plus Project conditions, the intersection of Stuhr Road & Draper Road would operate at LOS F with 677.7 seconds of delay during the a.m. peak hour and LOS F with 324.1 seconds of delay during the p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable. However, vehicle delay at this intersection under Cumulative Plus Project conditions would be lower than under Cumulative No Project conditions. Therefore, based on the approach described in the *Standards of Significance* section of this traffic impact study, the impact at this intersection is considered less-than-significant and no mitigation measures required.

LOS at this intersection could be improved to an acceptable level by implementing a portion of the recommended improvement identified at this intersection for the Cumulative No Project condition.

Recommended Improvement (under Cumulative No Project Conditions). The intersection should be improved as described below:

- Signalize the intersection.
- Split the westbound combined through/left-turn lane into an exclusive westbound-to-southbound left-turn lane, and an exclusive westbound through lane.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.). Unlike under Cumulative No Project conditions, no improvements would be needed to the eastbound approach.

As shown in **Table 16**, with these improvements, this intersection would operate at LOS B during the a.m. peak hour and LOS A during the p.m. peak hour. LOS A and B are considered acceptable.

Intersection 6. Orestimba Road/Yolo Street & Hardin Road

Under Cumulative Plus Project conditions, the intersection of Orestimba Road/Yolo Street & Hardin Road would operate at LOS D with 25.1 seconds of delay during the a.m. peak hour and LOS C with 24.5 seconds of delay during the p.m. peak hour. LOS D is considered unacceptable. However, vehicle delay at this intersection under Cumulative Plus Project conditions would be lower than under Cumulative No Project conditions. Therefore, based on the approach described in the *Standards of Significance* section of this traffic impact study, the impact at this intersection is considered less-than-significant and no mitigation measures required.

LOS at this intersection could be improved to an acceptable level by implementing the recommended improvement identified at this intersection for the Cumulative No Project condition.

Recommended Improvement (under Cumulative No Project Conditions). The intersection should be improved as described below:

- Signalize the intersection.
- Split the northbound single lane approach into an exclusive northbound-to-westbound left-turn lane, and a combined through/right-turn lane.
- Split the southbound single lane approach into an exclusive southbound-to-eastbound left-turn lane, and a combined through/right-turn lane.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.).

As shown in **Table 16**, with these improvements, this intersection would operate at LOS A during both the a.m. peak hour and the p.m. peak hour. LOS A is considered acceptable.

Intersection 7. Fig Lane/Q Street & Yolo Street

Under Cumulative Plus Project conditions, the intersection of Fig Lane/Q Street & Yolo Street would operate at LOS F with overflow conditions during both the a.m. peak hour and the p.m. peak hour. This unsignalized intersection would meet peak hour signal warrants. LOS F is considered unacceptable, and this is considered a significant impact. To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Signalize the intersection.

Signalization of this intersection would be consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b.). Additional approach lanes would not be needed. This mitigation measure is the same as the recommended improvement identified at this intersection for the Cumulative No Project condition.

As shown in **Table 16**, with these improvements, this intersection would operate at LOS C during both the a.m. peak hour and the p.m. peak hour. LOS C is considered acceptable.

Intersection 11. SR 33 & North Commercial Access

Under Cumulative Plus Project conditions, the intersection of SR 33 & North Commercial Access would operate at LOS F with overflow conditions during both the a.m. peak hour and the p.m. peak hour. LOS F is considered unacceptable, and this is considered a significant impact.

This intersection would meet peak hour signal warrants, and signalization of this intersection was considered as a mitigation measure. However, signalization is not recommended because this intersection is approximately 400 feet south of the signalized intersection of SR 33 & Jensen Road/Sherman Parkway. Signalizing the intersection of SR 33 & North Commercial Access would result in distances between signalized intersections which are considered inadequate. With inadequate distances between signalized intersections, queues from one intersection may interfere with the operation of other intersections.

To reduce this impact to a less than significant level, the following mitigation measure should be implemented.

Mitigation Measure. The intersection should be improved as described below:

- Restrict turn movements at this intersection to through movements and right-turn movements. Prohibit left-turn movements at this intersection.

- Convert the exclusive eastbound-to-southbound right-turn lane into a free eastbound-to-southbound right-turn lane. Add a southbound departure lane to accept vehicles from the free right-turn movement that merges into the southbound departure. The length of the departure lane should be per the California MUTCD.

As shown in **Table 16**, with this mitigation measure, this intersection would operate at LOS A during both the a.m. peak hour and p.m. peak hour. LOS A is considered acceptable.

Intersection 15. Stuhr Road & Eastin Road

Under Cumulative Plus Project conditions, the intersection of Stuhr Road & Eastin Road would operate at LOS F with overflow conditions during the a.m. peak hour and the LOS F with 680.0 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable and this is considered a significant impact. This intersection would not meet peak hour signal warrants. Traffic volumes on the Eastin Road approaches to this intersection are below the levels which would be needed to meet peak hour signal warrants. Therefore, signalization of this intersection is not recommended.

Because this intersection would not meet peak hour signal warrants, based on the approach described in the Significance Thresholds section of this traffic impact study, the impact of the proposed project at this intersection is considered less than significant. No mitigation measures are required.

ROADWAY SEGMENT LEVELS OF SERVICE

Table 14 shows the daily traffic volume and LOS that would occur on study roadway segments under Cumulative Plus Project conditions. The following 25 of the 28 study roadway segments would operate at LOS A, B, or C. LOS A, B, and C are considered acceptable, the impact of the proposed project on these roadway segments is considered less than significant, and no mitigation measures are required.

1. SR 33 - Lundy Road to Stuhr Road
2. SR 33 - Stuhr Road to Jensen Road
4. Stuhr Road - Fig Lane to SR 33
5. Stuhr Road - SR 33 to Hills Ferry Road
6. Draper Road - Stuhr Road to Orestimba Road
7. Fig Lane - Jensen Road to Yolo Street
8. Jensen Road - Fig Lane to SR 33
9. Sherman Parkway - SR 33 to Balsam Drive
10. Orestimba Road - Draper Road to Hardin Road
11. Yolo Street - Hardin Road to Fig Lane
12. Yolo Street - Fig Lane to SR 33
13. Hardin Road - Orestimba Road to Angelina Avenue
14. Stuhr Road - Harvey Lane to Collector Road B
15. Stuhr Road - Collector Road B to Fig Lane
16. Harvey Lane - Stuhr Road to Collector Road C
17. Collector Road B - Stuhr Road to Collector Road C
18. Fig Lane - Stuhr Road to Collector Road C
19. Collector Road C - Harvey Lane to Collector Road B
20. Collector Road C - Collector Road B to Fig Lane
21. Harvey Lane - Collector Road C to Jensen Road

22. Collector Road B - Collector Road C to Jensen Road
23. Fig Lane - Collector Road C to Jensen Road
24. Jensen Road - Harvey Lane to Collector Road B
25. Jensen Road - Collector Road B to Fig Lane
26. Eastin Road - Stuhr Road to Anderson Road

Roadway Segment 3. SR 33 - Jensen Road to Yolo Street

Under Cumulative Plus Project conditions, the roadway segment of SR 33 from Jensen Road to Yolo Street would operate at LOS F with a V/C ratio of 1.13. LOS F is considered unacceptable, and this is considered a significant impact.

Consistent with the *Newman 2030 General Plan EIR* (City of Newman 2006b), achieving acceptable LOS on this roadway segment would require widening the roadway to six lanes. Widening this roadway segment to six lanes would require demolition of existing land use development, and would be considered to result in this roadway dividing the City. Therefore, widening this roadway segment to six lanes is considered not feasible. As a result, this impact is considered to be significant and unavoidable.

Roadway Segment 27. Stuhr Road - Draper Road to Eastin Road and
Roadway Segment 28. Stuhr Road - Eastin Road to Interstate 5

Under Cumulative Plus Project conditions, the roadway segment of Stuhr Road from Draper Road to Eastin Road and the roadway segment of Stuhr Road from Eastin Road to Interstate 5 would operate at LOS D with a V/C ratio of 0.92. As noted in the *Standards of Significance* section of this traffic impact study, LOS D is considered unacceptable on these roadway segments.

The *Newman 2030 General Plan EIR* (City of Newman 2006b) describes these roadway segments as being part of the inter-regional street system, and forecasts these roadway segments operating at an unacceptable LOS. The General Plan EIR notes,

> "While the inter-regional street system is not the sole responsibility of the City of Newman, the City should investigate mechanisms for City development to participate on a "fair share" basis in the costs of maintaining and improving roads outside of the City limits. Stanislaus County and east-side communities such as Oakdale, Riverbank, Hughson and Waterford are currently working towards a mechanism to address impacts to roads in that end of the County. However, while a similar mechanism should be pursued by the City of Newman, Merced County and Stanislaus County, and Caltrans, because no mechanism currently exists, this impact is considered significant and unavoidable."

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PERSONAL COMMUNICATIONS

Ocasio, Stephanie. City Planner. City of Newman. December 18, 2013 E-mail message to Ken Anderson, KD Anderson & Associates; March 17, 2014 E-mail message to Ken Anderson, KD Anderson & Associates. April 15, 2014 telephone conversation with Ken Anderson, KD Anderson & Associates.

TRAFFIC VOLUME COUNTS

INTERSECTION PEAK HOUR COUNTS

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-002 SR 33-SHERMAN
Site Code : 00000000
Start Date : 5/10/2011
Page No : 1

Groups Printed- Unshifted

	SR 33 Southbound				SHERMAN PKWY. Westbound				SR 33 Northbound				JENSEN RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	8	35	4	47	8	3	28	39	0	60	6	66	3	1	0	4	156
07:15	2	44	5	51	15	6	23	44	1	60	6	67	1	3	1	5	167
07:30	6	54	16	76	20	36	25	81	0	90	9	99	3	2	1	6	262
07:45	7	57	14	78	15	30	18	63	1	63	26	90	12	7	4	23	254
Total	23	190	39	252	58	75	94	227	2	273	47	322	19	13	6	38	839
08:00	6	62	3	71	5	4	11	20	1	56	12	69	3	6	2	11	171
08:15	10	31	4	45	4	0	19	23	0	63	9	72	4	2	3	9	149
08:30	3	38	0	41	7	1	17	25	0	51	6	57	2	1	1	4	127
08:45	8	37	1	46	3	3	13	19	1	52	0	53	3	1	2	6	124
Total	27	168	8	203	19	8	60	87	2	222	27	251	12	10	8	30	571
16:00	30	129	4	163	8	2	19	29	0	85	16	101	6	3	2	11	304
16:15	24	101	3	128	6	6	9	21	0	70	12	82	2	2	0	4	235
16:30	19	61	2	82	4	4	8	16	1	64	17	82	5	4	1	10	190
16:45	27	83	7	117	6	2	8	16	3	44	13	60	8	2	0	10	203
Total	100	374	16	490	24	14	44	82	4	263	58	325	21	11	3	35	932
17:00	27	80	5	112	4	4	3	11	2	47	9	58	2	6	4	12	193
17:15	21	85	5	111	9	8	8	25	0	57	6	63	3	10	1	14	213
17:30	21	66	3	90	8	2	3	13	2	50	11	63	6	0	1	7	173
17:45	26	75	6	107	5	3	6	14	2	46	13	61	1	4	1	6	188
Total	95	306	19	420	26	17	20	63	6	200	39	245	12	20	7	39	767
Grand Total	245	1038	82	1365	127	114	218	459	14	958	171	1143	64	54	24	142	3109
Apprch %	17.9	76	6		27.7	24.8	47.5		1.2	83.8	15		45.1	38	16.9		
Total %	7.9	33.4	2.6	43.9	4.1	3.7	7	14.8	0.5	30.8	5.5	36.8	2.1	1.7	0.8	4.6	

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-002 SR 33-SHERMAN
Site Code : 00000000
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	SR 33 Southbound				SHERMAN PKWY. Westbound				SR 33 Northbound				JENSEN RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	2	44	5	51	15	6	23	44	**1**	60	6	67	1	3	1	5	167
07:30	6	54	**16**	76	**20**	**36**	**25**	**81**	0	**90**	9	**99**	3	2	1	6	**262**
07:45	**7**	57	14	**78**	15	30	18	63	1	63	**26**	90	**12**	**7**	**4**	**23**	254
08:00	6	**62**	3	71	5	4	11	20	1	56	12	69	3	6	2	11	171
Total Volume	21	217	38	276	55	76	77	208	3	269	53	325	19	18	8	45	854
% App. Total	7.6	78.6	13.8		26.4	36.5	37		0.9	82.8	16.3		42.2	40	17.8		
PHF	.750	.875	.594	.885	.688	.528	.770	.642	.750	.747	.510	.821	.396	.643	.500	.489	.815

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-002 SR 33-SHERMAN
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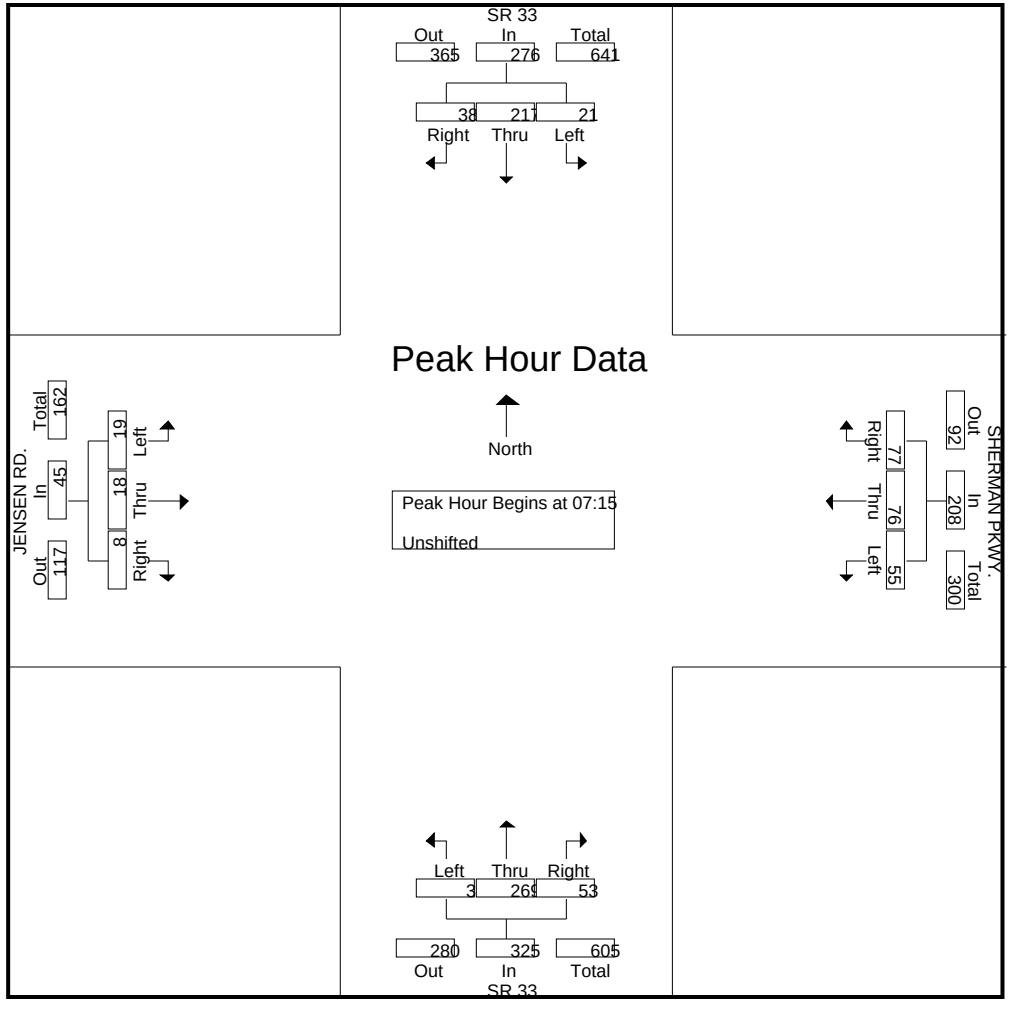

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-002 SR 33-SHERMAN
Site Code : 00000000
Start Date : 5/10/2011
Page No : 4

	SR 33 Southbound				SHERMAN PKWY. Westbound				SR 33 Northbound				JENSEN RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:00																	
16:00	**30**	**129**	4	**163**	**8**	2	**19**	**29**	0	**85**	16	**101**	6	3	**2**	**11**	**304**
16:15	24	101	3	128	6	**6**	9	21	0	70	12	82	2	2	0	4	235
16:30	19	61	2	82	4	4	8	16	1	64	**17**	82	5	**4**	1	10	190
16:45	27	83	**7**	117	6	2	8	16	**3**	44	13	60	**8**	2	0	10	203
Total Volume	100	374	16	490	24	14	44	82	4	263	58	325	21	11	3	35	932
% App. Total	20.4	76.3	3.3		29.3	17.1	53.7		1.2	80.9	17.8		60	31.4	8.6		
PHF	.833	.725	.571	.752	.750	.583	.579	.707	.333	.774	.853	.804	.656	.688	.375	.795	.766

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-002 SR 33-SHERMAN
Site Code : 00000000
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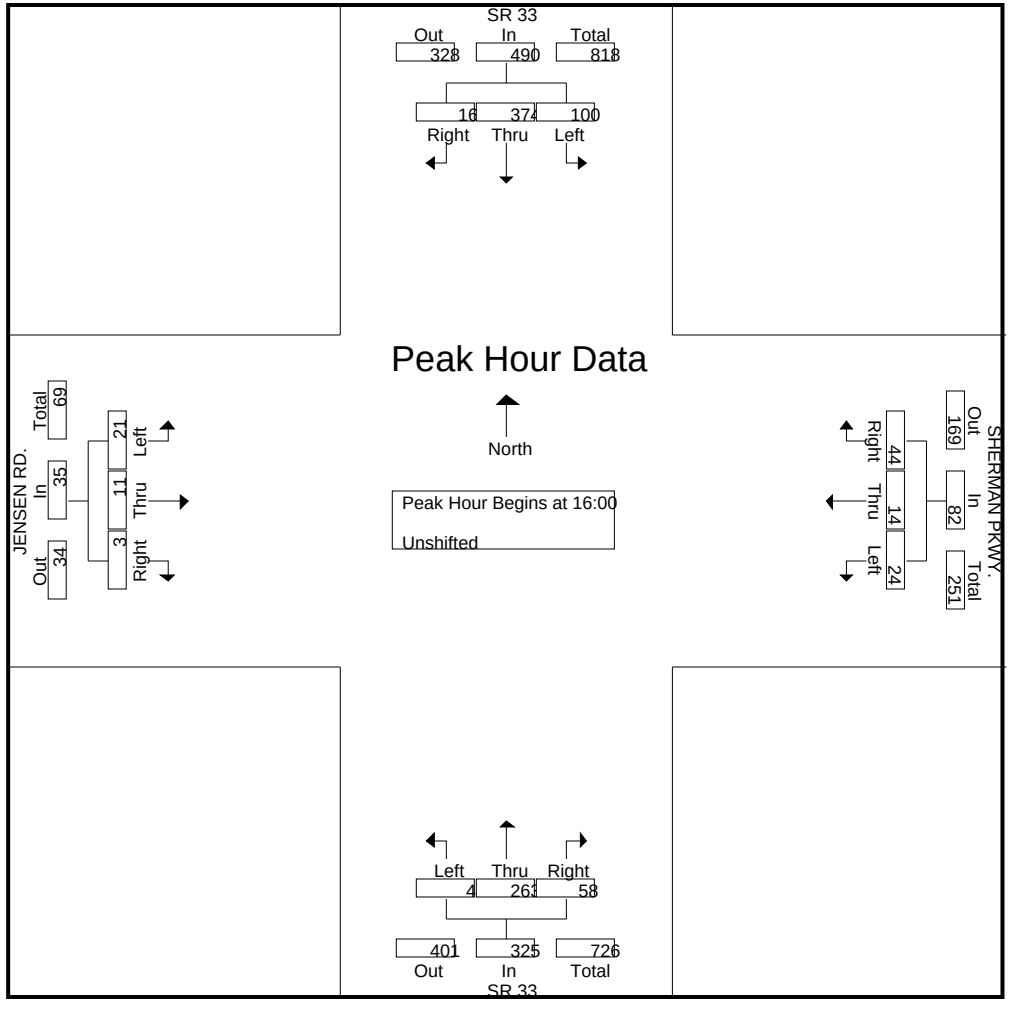

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-001 SR 33-STUHR
Site Code : 00000000
Start Date : 5/10/2011
Page No : 1

Groups Printed- Unshifted

	SR 33 Southbound				STUHR RD. Westbound				SR 33 Northbound				STUHR RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	1	22	0	23	8	6	1	15	11	39	39	89	1	5	9	15	142
07:15	1	26	0	27	19	7	0	26	9	50	28	87	0	5	4	9	149
07:30	0	35	0	35	30	5	0	35	13	68	38	119	2	4	10	16	205
07:45	1	42	0	43	26	6	0	32	4	47	34	85	5	8	10	23	183
Total	3	125	0	128	83	24	1	108	37	204	139	380	8	22	33	63	679
08:00	0	41	1	42	20	3	1	24	9	32	22	63	1	0	6	7	136
08:15	0	27	1	28	11	4	3	18	7	34	36	77	0	4	5	9	132
08:30	0	20	1	21	7	3	0	10	8	36	22	66	0	3	8	11	108
08:45	0	24	0	24	15	7	0	22	15	31	22	68	0	6	7	13	127
Total	0	112	3	115	53	17	4	74	39	133	102	274	1	13	26	40	503
16:00	2	50	0	52	28	4	2	34	7	36	24	67	0	3	8	11	164
16:15	1	46	0	47	28	4	0	32	3	43	28	74	0	2	15	17	170
16:30	0	50	0	50	23	2	0	25	11	45	21	77	0	6	13	19	171
16:45	0	58	0	58	31	2	1	34	7	37	27	71	1	8	8	17	180
Total	3	204	0	207	110	12	3	125	28	161	100	289	1	19	44	64	685
17:00	1	54	0	55	22	3	0	25	2	45	28	75	1	3	21	25	180
17:15	0	45	1	46	29	5	0	34	5	36	14	55	0	6	16	22	157
17:30	0	61	1	62	44	6	0	50	4	37	17	58	0	3	18	21	191
17:45	1	49	1	51	40	5	0	45	5	30	12	47	0	4	17	21	164
Total	2	209	3	214	135	19	0	154	16	148	71	235	1	16	72	89	692
Grand Total	8	650	6	664	381	72	8	461	120	646	412	1178	11	70	175	256	2559
Apprch %	1.2	97.9	0.9		82.6	15.6	1.7		10.2	54.8	35		4.3	27.3	68.4		
Total %	0.3	25.4	0.2	25.9	14.9	2.8	0.3	18	4.7	25.2	16.1	46	0.4	2.7	6.8	10	

All Traffic Data

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CITY OF NEWMAN

File Name : 11-7210-001 SR 33-STUHR
Site Code : 00000000
Start Date : 5/10/2011

	SR 33 Southbound				STUHR RD. Westbound				SR 33 Northbound				STUHR RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00																	
07:00	**1**	22	0	23	8	6	**1**	15	11	39	**39**	89	1	5	9	15	142
07:15	1	26	0	27	19	**7**	0	26	9	50	28	87	0	5	4	9	149
07:30	0	35	0	35	**30**	5	0	**35**	**13**	**68**	38	**119**	2	4	**10**	16	**205**
07:45	1	**42**	0	**43**	26	6	0	32	4	47	34	85	**5**	**8**	10	**23**	183
Total Volume	3	125	0	128	83	24	1	108	37	204	139	380	8	22	33	63	679
% App. Total	2.3	97.7	0		76.9	22.2	0.9		9.7	53.7	36.6		12.7	34.9	52.4		
PHF	.750	.744	.000	.744	.692	.857	.250	.771	.712	.750	.891	.798	.400	.688	.825	.685	.828

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-001 SR 33-STUHR
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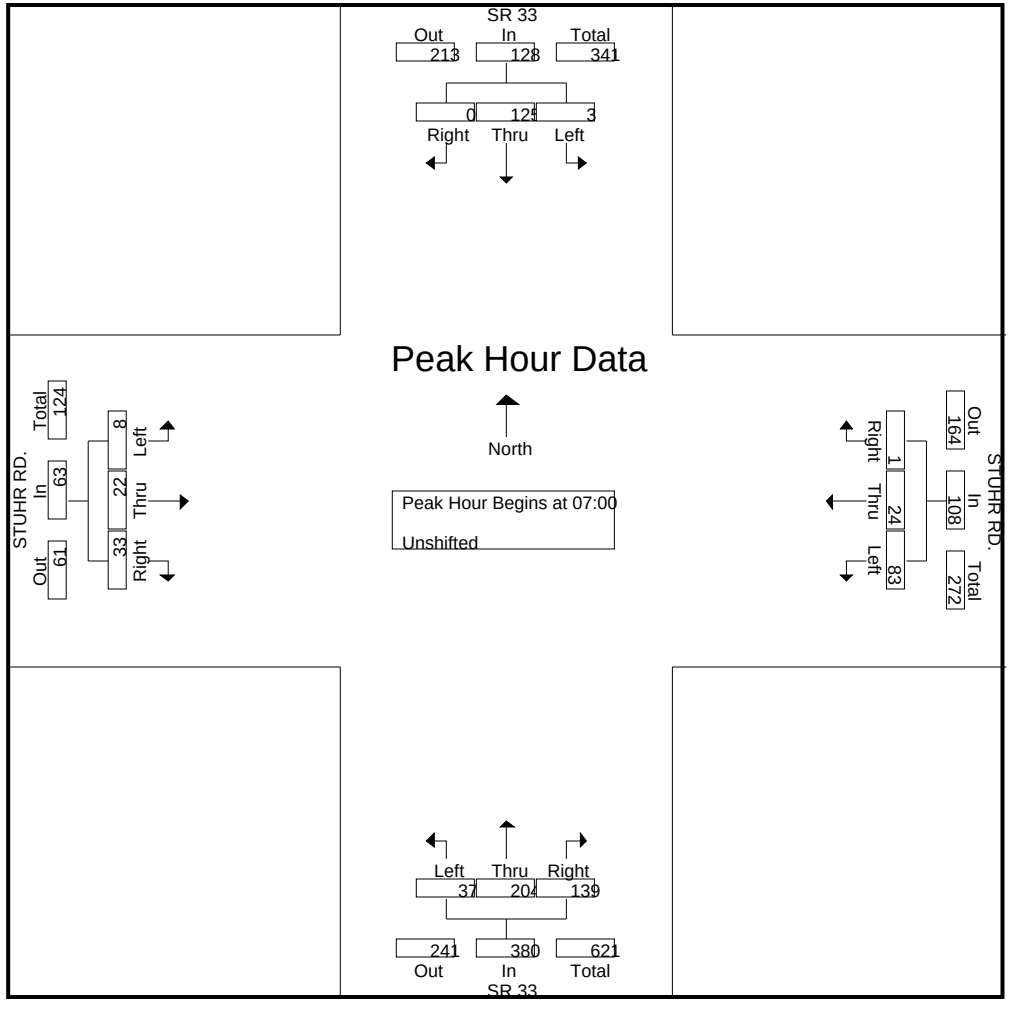

All Traffic Data

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CITY OF NEWMAN

File Name : 11-7210-001 SR 33-STUHR
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	SR 33 Southbound				STUHR RD. Westbound				SR 33 Northbound				STUHR RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	0	58	0	58	31	2	**1**	34	**7**	37	27	71	**1**	**8**	8	17	180
17:00	**1**	54	0	55	22	3	0	25	2	**45**	**28**	**75**	1	3	**21**	**25**	180
17:15	0	45	**1**	46	29	5	0	34	5	36	14	55	0	6	16	22	157
17:30	0	**61**	1	**62**	**44**	**6**	0	**50**	4	37	17	58	0	3	18	21	**191**
Total Volume	1	218	2	221	126	16	1	143	18	155	86	259	2	20	63	85	708
% App. Total	0.5	98.6	0.9		88.1	11.2	0.7		6.9	59.8	33.2		2.4	23.5	74.1		
PHF	.250	.893	.500	.891	.716	.667	.250	.715	.643	.861	.768	.863	.500	.625	.750	.850	.927

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-001 SR 33-STUHR
Site Code : 00000000
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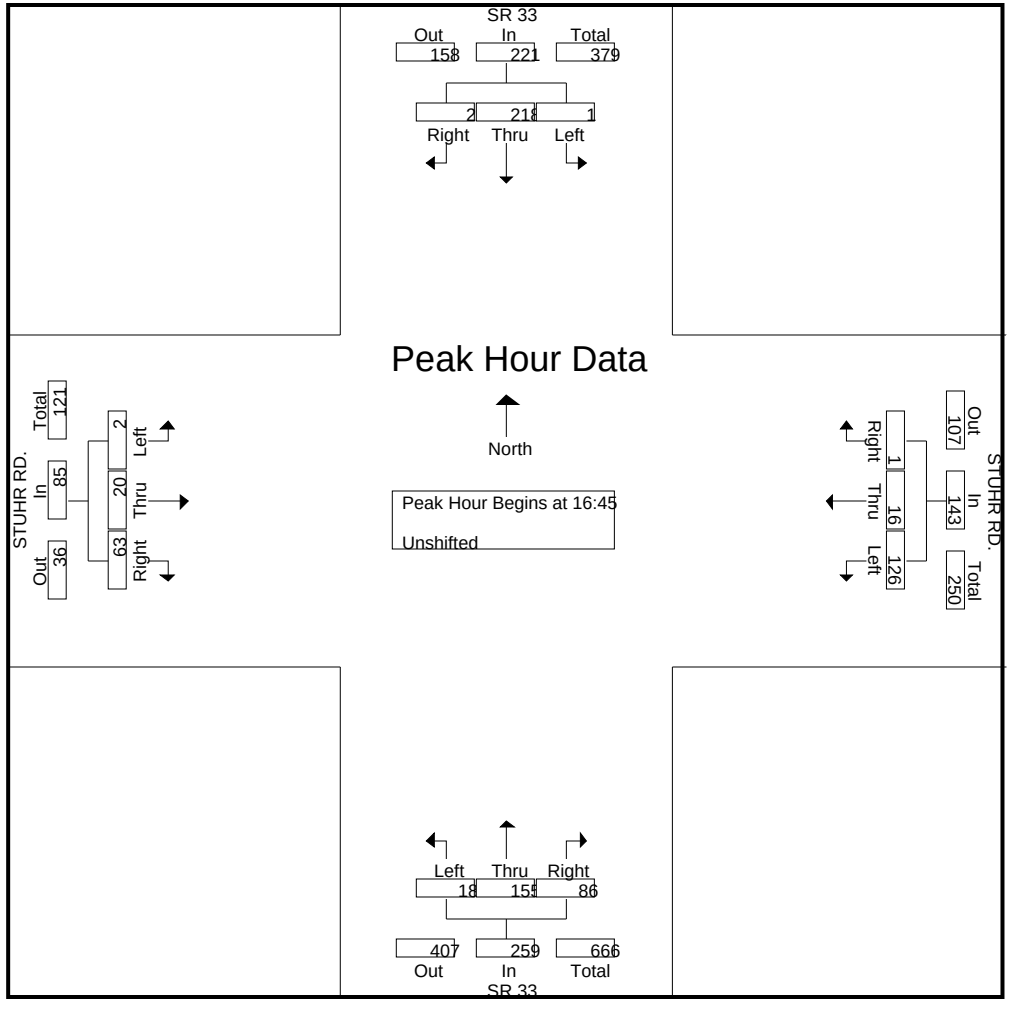


ALL TRAFFIC DATA

City of Newman
All Vehicles on Unshifted
Nothing on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 14-7037-002 Villa Manucha Road-Stuhr Road.ppd
Date : 1/15/2014

Unshifted Count = All Vehicles

	Villa Manucha Road Southbound					Stuhr Road Westbound					Northbound					Stuhr Road Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
06:00	0	0	5	0	5	0	3	0	0	3	0	0	0	0	0	21	6	0	0	27	35	0
06:15	1	0	6	0	7	0	7	0	0	7	0	0	0	0	0	15	6	0	0	21	35	0
06:30	1	0	12	0	13	0	6	0	0	6	0	0	0	0	0	36	3	0	0	39	58	0
06:45	1	0	16	0	17	0	9	0	0	9	0	0	0	0	0	24	9	0	0	33	59	0
Total	3	0	39	0	42	0	25	0	0	25	0	0	0	0	0	96	24	0	0	120	187	0
07:00	0	0	17	0	17	0	8	1	0	9	0	0	0	0	0	23	11	0	0	34	60	0
07:15	0	0	10	0	10	0	12	0	0	12	0	0	0	0	0	46	11	0	0	57	79	0
07:30	0	0	33	0	33	0	13	0	0	13	0	0	0	0	0	35	13	0	0	48	94	0
07:45	0	0	26	0	26	0	11	0	0	11	0	0	0	0	0	50	9	0	0	59	96	0
Total	0	0	86	0	86	0	44	1	0	45	0	0	0	0	0	154	44	0	0	198	329	0
16:00	1	0	21	0	22	0	7	1	0	8	0	0	0	0	0	32	15	0	0	47	77	0
16:15	0	0	33	0	33	0	9	0	0	9	0	0	0	0	0	26	4	0	0	30	72	0
16:30	0	0	42	0	42	0	11	1	0	12	0	0	0	0	0	19	9	0	0	28	82	0
16:45	1	0	22	0	23	0	6	0	0	6	0	0	0	0	0	16	16	0	0	32	61	0
Total	2	0	118	0	120	0	33	2	0	35	0	0	0	0	0	93	44	0	0	137	292	0
17:00	0	0	35	0	35	0	9	2	0	11	0	0	0	0	0	26	12	0	0	38	84	0
17:15	1	0	41	0	42	0	17	0	0	17	0	0	0	0	0	12	8	0	0	20	79	0
17:30	1	0	42	0	43	0	7	0	0	7	0	0	0	0	0	10	3	0	0	13	63	0
17:45	0	0	40	0	40	0	7	0	0	7	0	0	0	0	0	10	7	0	0	17	64	0
Total	2	0	158	0	160	0	40	2	0	42	0	0	0	0	0	58	30	0	0	88	290	0
Grand Total	7	0	401	0	408	0	142	5	0	147	0	0	0	0	0	401	142	0	0	543	1098	0
Apprch %	1.7%	0.0%	98.3%	0.0%		0.0%	96.6%	3.4%	0.0%		0.0%	0.0%	0.0%	0.0%		73.8%	26.2%	0.0%	0.0%			
Total %	0.6%	0.0%	36.5%	0.0%	37.2%	0.0%	12.9%	0.5%	0.0%	13.4%	0.0%	0.0%	0.0%	0.0%	0.0%	36.5%	12.9%	0.0%	0.0%	49.5%	100.0%	

AM PEAK HOUR	Villa Manucha Road Southbound					Stuhr Road Westbound					Northbound					Stuhr Road Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:00 to 08:00																					
Peak Hour For Entire Intersection Begins at 07:00																					
07:00	0	0	17	0	17	0	8	1	0	9	0	0	0	0	0	23	11	0	0	34	60
07:15	0	0	10	0	10	0	12	0	0	12	0	0	0	0	0	46	11	0	0	57	79
07:30	0	0	33	0	33	0	13	0	0	13	0	0	0	0	0	35	13	0	0	48	94
07:45	0	0	26	0	26	0	11	0	0	11	0	0	0	0	0	50	9	0	0	59	96
Total Volume	0	0	86	0	86	0	44	1	0	45	0	0	0	0	0	154	44	0	0	198	329
% App Total	0.0%	0.0%	100.0%	0.0%		0.0%	97.8%	2.2%	0.0%		0.0%	0.0%	0.0%	0.0%		77.8%	22.2%	0.0%	0.0%		
PHF	.000	.000	.652	.000	.652	.000	.846	.250	.000	.865	.000	.000	.000	.000	.000	.770	.846	.000	.000	.839	.857

PM PEAK HOUR	Villa Manucha Road Southbound					Stuhr Road Westbound					Northbound					Stuhr Road Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	42	0	42	0	11	1	0	12	0	0	0	0	0	19	9	0	0	28	82
16:45	1	0	22	0	23	0	6	0	0	6	0	0	0	0	0	16	16	0	0	32	61
17:00	0	0	35	0	35	0	9	2	0	11	0	0	0	0	0	26	12	0	0	38	84
17:15	1	0	41	0	42	0	17	0	0	17	0	0	0	0	0	12	8	0	0	20	79
Total Volume	2	0	140	0	142	0	43	3	0	46	0	0	0	0	0	73	45	0	0	118	306
% App Total	1.4%	0.0%	98.6%	0.0%		0.0%	93.5%	6.5%	0.0%		0.0%	0.0%	0.0%	0.0%		61.9%	38.1%	0.0%	0.0%		
PHF	.500	.000	.833	.000	.845	.000	.632	.375	.000	.676	.000	.000	.000	.000	.000	.702	.703	.000	.000	.776	.911

ALL TRAFFIC DATA

City of Newman
All Vehicles on Unshifted
Nothing on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 14-7037-001 Eastin Road-Stuhr Road.ppd
Date : 1/15/2014

Unshifted Count = All Vehicles

	Eastin Road Southbound					Stuhr Road Westbound					Eastin Road Northbound					Stuhr Road Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
06:00	0	2	0	0	2	1	20	0	0	21	0	2	0	0	2	0	4	0	0	4	29	0
06:15	0	1	1	0	2	0	11	0	0	11	3	3	0	0	6	1	7	0	0	8	27	0
06:30	0	7	4	0	11	4	39	1	0	44	0	0	0	0	0	0	3	1	0	4	59	0
06:45	0	13	2	0	15	4	25	0	0	29	2	2	0	0	4	1	6	4	0	11	59	0
Total	0	23	7	0	30	9	95	1	0	105	5	7	0	0	12	2	20	5	0	27	174	0
07:00	0	5	0	0	5	1	22	1	0	24	1	4	0	0	5	1	7	1	0	9	43	0
07:15	1	10	2	0	13	2	16	2	0	20	1	2	0	0	3	1	8	0	0	9	45	0
07:30	2	6	1	0	9	2	17	1	0	20	3	9	1	0	13	0	11	0	0	11	53	0
07:45	2	9	2	0	13	0	17	0	0	17	2	7	1	0	10	0	6	3	0	9	49	0
Total	5	30	5	0	40	5	72	4	0	81	7	22	2	0	31	2	32	4	0	38	190	0
16:00	1	8	0	0	9	0	16	1	0	17	6	2	1	0	9	1	24	1	0	26	61	0
16:15	0	6	0	0	6	1	10	0	0	11	1	2	0	0	3	0	27	0	0	27	47	0
16:30	0	5	0	0	5	0	8	2	0	10	1	12	0	0	13	4	18	4	0	26	54	0
16:45	1	8	0	0	9	0	9	1	0	10	0	4	1	0	5	3	19	1	0	23	47	0
Total	2	27	0	0	29	1	43	4	0	48	8	20	2	0	30	8	88	6	0	102	209	0
17:00	0	2	1	0	3	1	6	0	0	7	2	5	1	0	8	5	44	4	0	53	71	0
17:15	0	5	1	0	6	0	11	1	0	12	1	2	0	0	3	0	30	1	0	31	52	0
17:30	0	3	1	0	4	0	7	0	0	7	1	3	0	0	4	0	22	2	0	24	39	0
17:45	1	2	0	0	3	1	11	0	0	12	0	1	0	0	1	0	24	0	0	24	40	0
Total	1	12	3	0	16	2	35	1	0	38	4	11	1	0	16	5	120	7	0	132	202	0
Grand Total	8	92	15	0	115	17	245	10	0	272	24	60	5	0	89	17	260	22	0	299	775	0
Apprch %	7.0%	80.0%	13.0%	0.0%		6.3%	90.1%	3.7%	0.0%		27.0%	67.4%	5.6%	0.0%		5.7%	87.0%	7.4%	0.0%			
Total %	1.0%	11.9%	1.9%	0.0%	14.8%	2.2%	31.6%	1.3%	0.0%	35.1%	3.1%	7.7%	0.6%	0.0%	11.5%	2.2%	33.5%	2.8%	0.0%	38.6%	100.0%	

AM PEAK HOUR	Eastin Road Southbound					Stuhr Road Westbound					Eastin Road Northbound					Stuhr Road Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 06:30 to 07:30																					
Peak Hour For Entire Intersection Begins at 06:30																					
06:30	0	7	4	0	11	4	39	1	0	44	0	0	0	0	0	0	3	1	0	4	59
06:45	0	13	2	0	15	4	25	0	0	29	2	2	0	0	4	1	6	4	0	11	59
07:00	0	5	0	0	5	1	22	1	0	24	1	4	0	0	5	1	7	1	0	9	43
07:15	1	10	2	0	13	2	16	2	0	20	1	2	0	0	3	1	8	0	0	9	45
Total Volume	1	35	8	0	44	11	102	4	0	117	4	8	0	0	12	3	24	6	0	33	206
% App Total	2.3%	79.5%	18.2%	0.0%		9.4%	87.2%	3.4%	0.0%		33.3%	66.7%	0.0%	0.0%		9.1%	72.7%	18.2%	0.0%		
PHF	.250	.673	.500	.000	.733	.688	.654	.500	.000	.665	.500	.500	.000	.000	.600	.750	.750	.375	.000	.750	.873

PM PEAK HOUR	Eastin Road Southbound					Stuhr Road Westbound					Eastin Road Northbound					Stuhr Road Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	5	0	0	5	0	8	2	0	10	1	12	0	0	13	4	18	4	0	26	54
16:45	1	8	0	0	9	0	9	1	0	10	0	4	1	0	5	3	19	1	0	23	47
17:00	0	2	1	0	3	1	6	0	0	7	2	5	1	0	8	5	44	4	0	53	71
17:15	0	5	1	0	6	0	11	1	0	12	1	2	0	0	3	0	30	1	0	31	52
Total Volume	1	20	2	0	23	1	34	4	0	39	4	23	2	0	29	12	111	10	0	133	224
% App Total	4.3%	87.0%	8.7%	0.0%		2.6%	87.2%	10.3%	0.0%		13.8%	79.3%	6.9%	0.0%		9.0%	83.5%	7.5%	0.0%		
PHF	.250	.625	.500	.000	.639	.250	.773	.500	.000	.813	.500	.479	.500	.000	.558	.600	.631	.625	.000	.627	.789

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-011 FIG-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 1

Groups Printed- Unshifted

	FIG LANE Southbound				YOLO ST. Westbound				FIG LANE Northbound				YOLO ST. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	2	1	0	3	1	19	1	21	0	0	0	0	1	15	0	16	40
07:15	3	1	0	4	0	37	3	40	2	0	0	2	0	25	1	26	72
07:30	4	3	1	8	0	73	17	90	2	1	1	4	1	39	0	40	142
07:45	12	16	2	30	2	58	32	92	0	8	2	10	4	54	0	58	190
Total	21	21	3	45	3	187	53	243	4	9	3	16	6	133	1	140	444
08:00	3	1	0	4	0	15	3	18	2	2	2	6	3	42	0	45	73
08:15	3	1	1	5	0	7	2	9	0	1	0	1	3	11	1	15	30
08:30	1	0	1	2	0	9	3	12	0	0	1	1	1	8	0	9	24
08:45	0	0	1	1	0	9	2	11	1	1	1	3	3	13	0	16	31
Total	7	2	3	12	0	40	10	50	3	4	4	11	10	74	1	85	158
16:00	9	3	1	13	1	9	10	20	0	1	0	1	2	13	1	16	50
16:15	10	2	2	14	1	18	5	24	0	1	0	1	3	9	0	12	51
16:30	5	9	1	15	0	18	9	27	2	1	2	5	3	19	2	24	71
16:45	4	3	2	9	4	15	5	24	1	1	0	2	3	25	0	28	63
Total	28	17	6	51	6	60	29	95	3	4	2	9	11	66	3	80	235
17:00	9	2	2	13	1	20	8	29	0	0	1	1	0	16	1	17	60
17:15	3	3	0	6	0	18	6	24	0	3	0	3	2	15	0	17	50
17:30	0	4	0	4	0	15	2	17	4	5	2	11	5	19	2	26	58
17:45	5	2	1	8	2	13	3	18	1	1	2	4	1	9	0	10	40
Total	17	11	3	31	3	66	19	88	5	9	5	19	8	59	3	70	208
Grand Total	73	51	15	139	12	353	111	476	15	26	14	55	35	332	8	375	1045
Apprch %	52.5	36.7	10.8		2.5	74.2	23.3		27.3	47.3	25.5		9.3	88.5	2.1		
Total %	7	4.9	1.4	13.3	1.1	33.8	10.6	45.6	1.4	2.5	1.3	5.3	3.3	31.8	0.8	35.9	

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-011 FIG-YOLO
Site Code : 00000000
Start Date : 5/10/2011

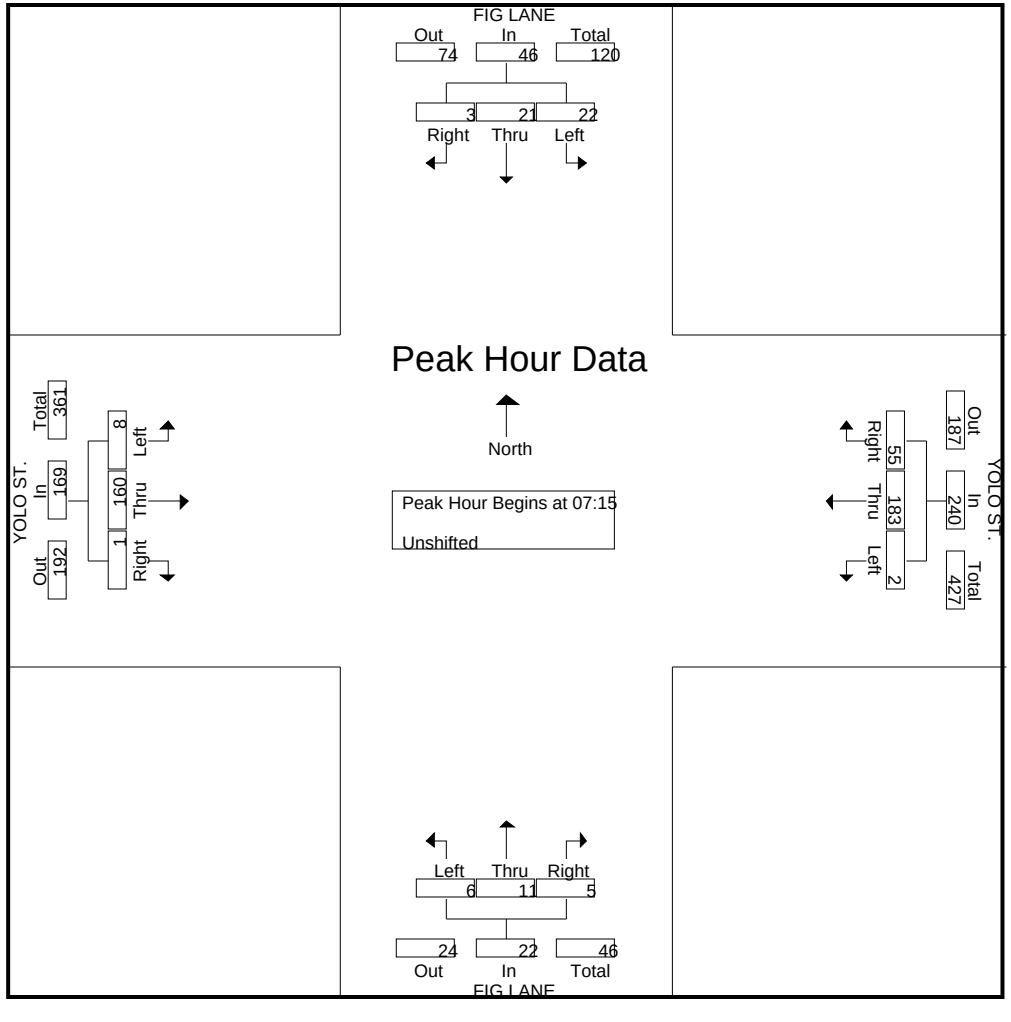
	FIG LANE Southbound				YOLO ST. Westbound				FIG LANE Northbound				YOLO ST. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	3	1	0	4	0	37	3	40	**2**	0	0	2	0	25	**1**	26	72
07:30	4	3	1	8	0	**73**	17	90	2	1	1	4	1	39	0	40	142
07:45	**12**	**16**	**2**	**30**	**2**	58	**32**	**92**	0	**8**	**2**	**10**	**4**	**54**	0	**58**	**190**
08:00	3	1	0	4	0	15	3	18	2	2	2	6	3	42	0	45	73
Total Volume	22	21	3	46	2	183	55	240	6	11	5	22	8	160	1	169	477
% App. Total	47.8	45.7	6.5		0.8	76.2	22.9		27.3	50	22.7		4.7	94.7	0.6		
PHF	.458	.328	.375	.383	.250	.627	.430	.652	.750	.344	.625	.550	.500	.741	.250	.728	.628

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-011 FIG-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 3



All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-011 FIG-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 4

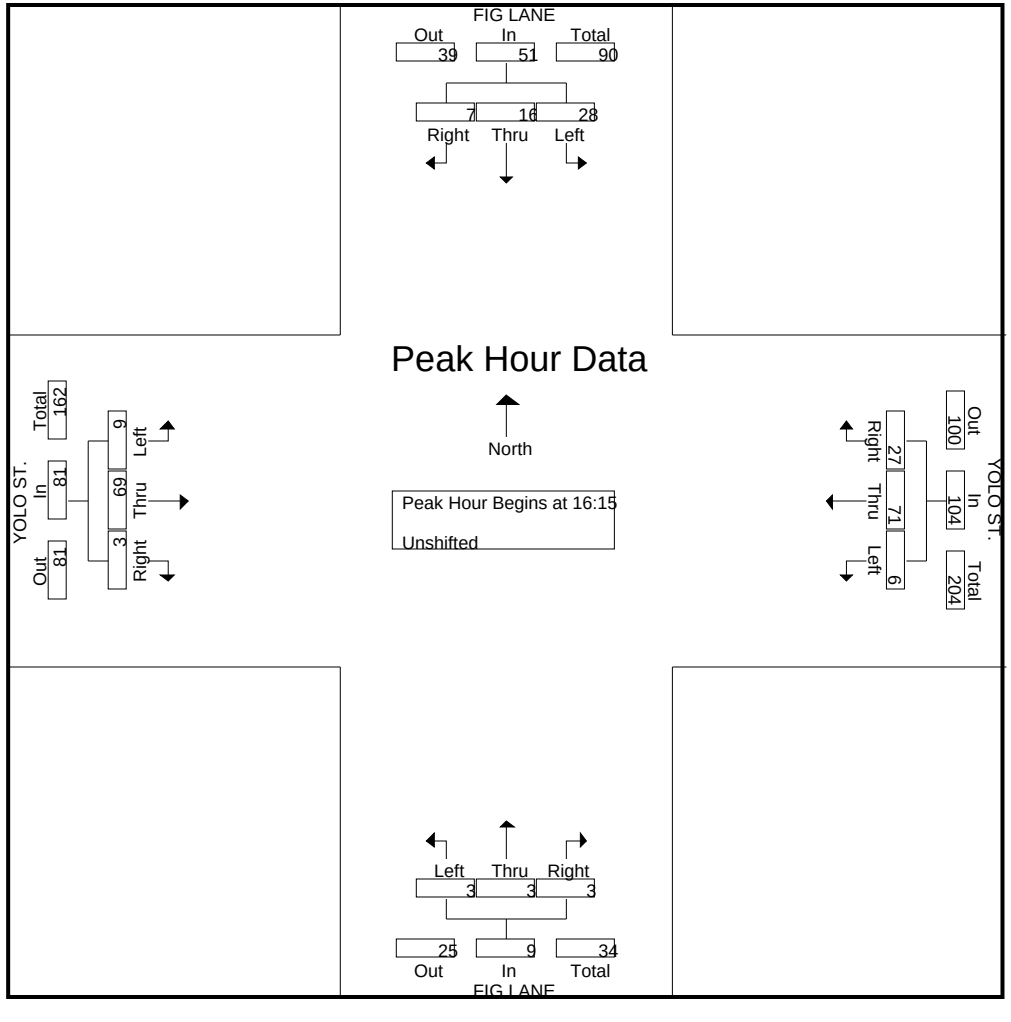
	FIG LANE Southbound				YOLO ST. Westbound				FIG LANE Northbound				YOLO ST. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:15																	
16:15	**10**	2	**2**	14	1	18	5	24	0	**1**	0	1	**3**	9	0	12	51
16:30	5	**9**	1	**15**	0	18	**9**	27	**2**	1	**2**	**5**	3	19	**2**	24	**71**
16:45	4	3	2	9	**4**	15	5	24	1	1	0	2	3	**25**	0	**28**	63
17:00	9	2	2	13	1	**20**	8	**29**	0	0	1	1	0	16	1	17	60
Total Volume	28	16	7	51	6	71	27	104	3	3	3	9	9	69	3	81	245
% App. Total	54.9	31.4	13.7		5.8	68.3	26		33.3	33.3	33.3		11.1	85.2	3.7		
PHF	.700	.444	.875	.850	.375	.888	.750	.897	.375	.750	.375	.450	.750	.690	.375	.723	.863

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-011 FIG-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 5



All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-010 HARDIN-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 1

Groups Printed- Unshifted

	HARDIN RD. Southbound				YOLO ST. Westbound				HARDIN RD. Northbound				ORESTIMBA RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	2	12	1	15	2	2	6	10	3	6	8	17	1	2	3	6	48
07:15	8	13	2	23	4	3	13	20	0	22	10	32	0	1	0	1	76
07:30	11	55	5	71	20	2	34	56	7	48	9	64	9	7	0	16	207
07:45	16	89	5	110	12	11	41	64	5	66	8	79	8	3	6	17	270
Total	37	169	13	219	38	18	94	150	15	142	35	192	18	13	9	40	601
08:00	14	17	4	35	1	2	12	15	2	8	3	13	2	0	3	5	68
08:15	6	6	1	13	2	1	2	5	0	5	7	12	0	3	1	4	34
08:30	3	6	0	9	3	3	0	6	1	5	2	8	0	2	3	5	28
08:45	3	5	0	8	1	1	5	7	0	6	11	17	0	1	1	2	34
Total	26	34	5	65	7	7	19	33	3	24	23	50	2	6	8	16	164
16:00	5	3	2	10	3	2	9	14	3	6	5	14	1	3	4	8	46
16:15	5	12	0	17	5	1	3	9	0	4	2	6	2	5	3	10	42
16:30	4	8	1	13	4	6	6	16	2	5	3	10	1	4	3	8	47
16:45	8	14	0	22	6	5	14	25	3	12	5	20	4	7	3	14	81
Total	22	37	3	62	18	14	32	64	8	27	15	50	8	19	13	40	216
17:00	6	13	1	20	7	3	8	18	1	9	7	17	0	9	2	11	66
17:15	5	2	1	8	8	6	10	24	2	10	2	14	1	8	3	12	58
17:30	5	14	0	19	5	6	13	24	3	17	5	25	2	7	1	10	78
17:45	8	13	2	23	5	4	9	18	0	8	3	11	1	0	0	1	53
Total	24	42	4	70	25	19	40	84	6	44	17	67	4	24	6	34	255
Grand Total	109	282	25	416	88	58	185	331	32	237	90	359	32	62	36	130	1236
Apprch %	26.2	67.8	6		26.6	17.5	55.9		8.9	66	25.1		24.6	47.7	27.7		
Total %	8.8	22.8	2	33.7	7.1	4.7	15	26.8	2.6	19.2	7.3	29	2.6	5	2.9	10.5	

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-010 HARDIN-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 2

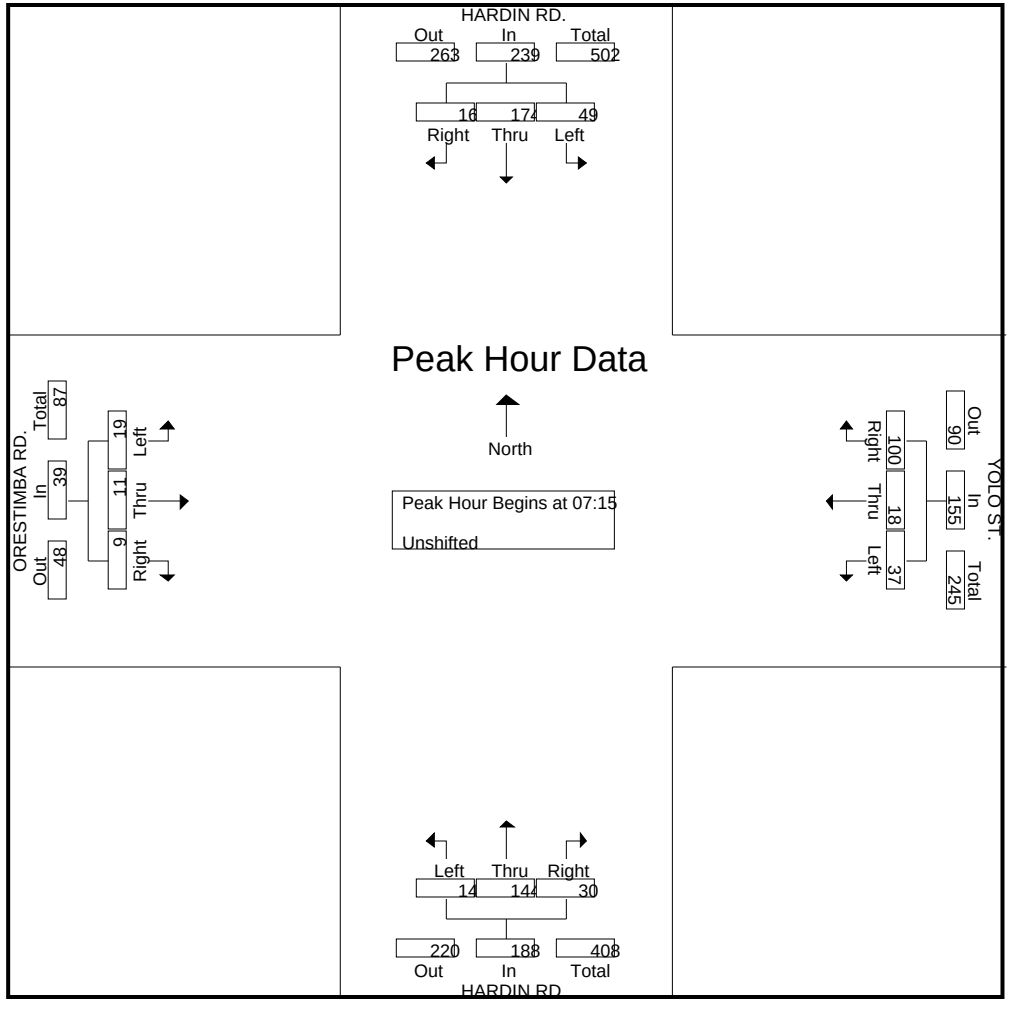
	HARDIN RD. Southbound				YOLO ST. Westbound				HARDIN RD. Northbound				ORESTIMBA RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	8	13	2	23	4	3	13	20	0	22	**10**	32	0	1	0	1	76
07:30	11	55	**5**	71	**20**	2	34	56	**7**	48	9	64	**9**	**7**	0	16	207
07:45	**16**	**89**	5	**110**	12	**11**	**41**	**64**	5	**66**	8	**79**	8	3	**6**	**17**	**270**
08:00	14	17	4	35	1	2	12	15	2	8	3	13	2	0	3	5	68
Total Volume	49	174	16	239	37	18	100	155	14	144	30	188	19	11	9	39	621
% App. Total	20.5	72.8	6.7		23.9	11.6	64.5		7.4	76.6	16		48.7	28.2	23.1		
PHF	.766	.489	.800	.543	.463	.409	.610	.605	.500	.545	.750	.595	.528	.393	.375	.574	.575

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-010 HARDIN-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 3



All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-010 HARDIN-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 4

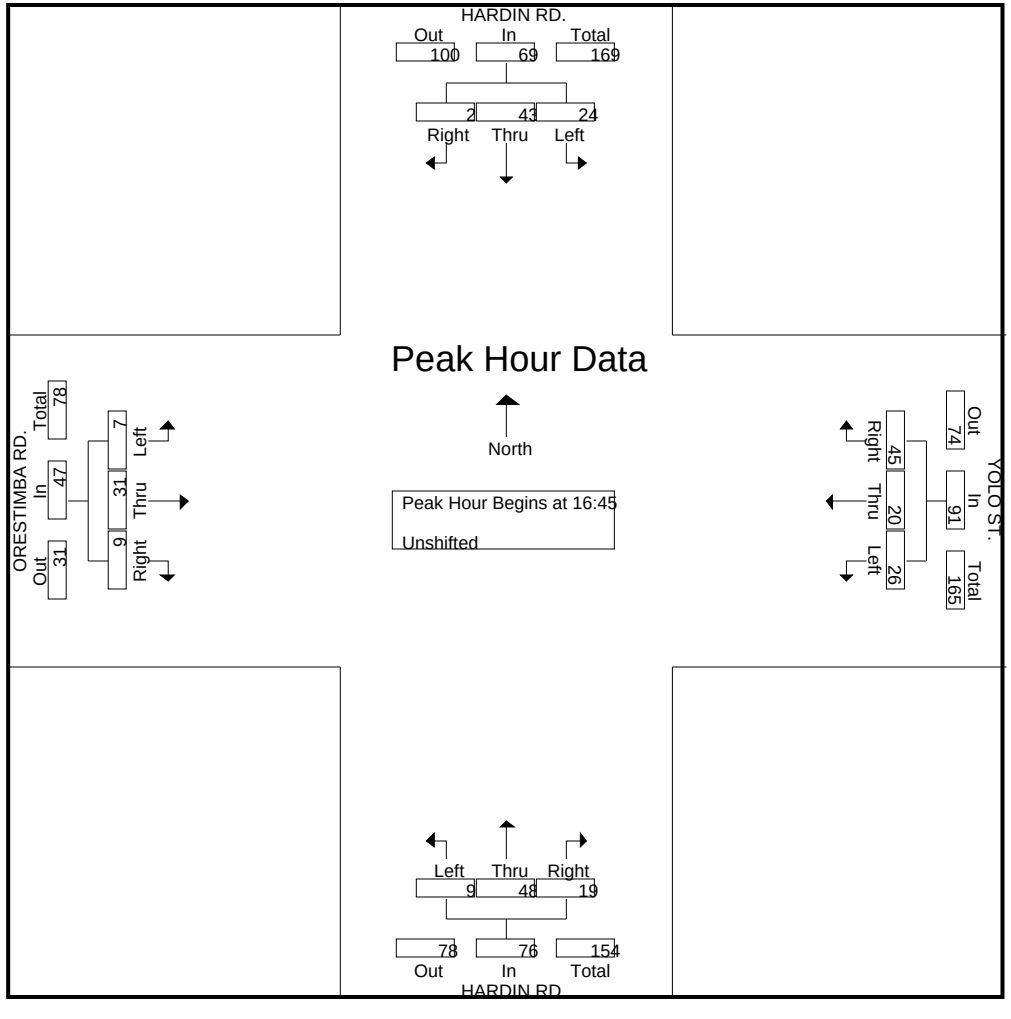
	HARDIN RD. Southbound				YOLO ST. Westbound				HARDIN RD. Northbound				ORESTIMBA RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	**8**	**14**	0	**22**	6	5	**14**	**25**	**3**	12	5	20	**4**	7	**3**	**14**	**81**
17:00	6	13	**1**	20	7	3	8	18	1	9	**7**	17	0	**9**	2	11	66
17:15	5	2	1	8	**8**	**6**	10	24	2	10	2	14	1	8	3	12	58
17:30	5	14	0	19	5	6	13	24	3	**17**	5	**25**	2	7	1	10	78
Total Volume	24	43	2	69	26	20	45	91	9	48	19	76	7	31	9	47	283
% App. Total	34.8	62.3	2.9		28.6	22	49.5		11.8	63.2	25		14.9	66	19.1		
PHF	.750	.768	.500	.784	.813	.833	.804	.910	.750	.706	.679	.760	.438	.861	.750	.839	.873

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-010 HARDIN-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 5



All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-009 FIG-JENSEN
Site Code : 00000000
Start Date : 5/10/2011
Page No : 1

Groups Printed- Unshifted

	FIG LANE Southbound				JENSEN RD. Westbound				FIG LANE Northbound				JENSEN RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	1	0	0	1	4	0	0	4	0	1	2	3	0	1	1	2	10
07:15	0	0	0	0	10	0	0	10	1	0	3	4	0	1	1	2	16
07:30	0	0	0	0	51	0	0	51	0	0	4	4	1	1	0	2	57
07:45	0	5	0	5	51	0	0	51	1	3	26	30	0	0	4	4	90
Total	1	5	0	6	116	0	0	116	2	4	35	41	1	3	6	10	173
08:00	1	1	0	2	7	0	0	7	1	3	9	13	0	1	0	1	23
08:15	0	1	0	1	1	1	0	2	2	0	9	11	0	0	0	0	14
08:30	0	0	0	0	1	0	0	1	0	0	2	2	0	0	0	0	3
08:45	0	1	0	1	5	1	0	6	0	1	6	7	0	1	0	1	15
Total	1	3	0	4	14	2	0	16	3	4	26	33	0	2	0	2	55
16:00	0	1	0	1	3	1	0	4	5	2	3	10	0	0	0	0	15
16:15	0	4	0	4	6	1	1	8	0	1	8	9	0	2	1	3	24
16:30	0	0	0	0	5	4	0	9	1	0	7	8	0	1	2	3	20
16:45	0	1	0	1	7	2	0	9	0	1	8	9	0	2	1	3	22
Total	0	6	0	6	21	8	1	30	6	4	26	36	0	5	4	9	81
17:00	1	1	0	2	6	2	0	8	2	2	5	9	0	3	0	3	22
17:15	1	0	0	1	7	2	0	9	0	1	8	9	0	1	1	2	21
17:30	0	0	0	0	3	0	0	3	2	0	4	6	0	3	1	4	13
17:45	0	0	0	0	9	0	1	10	0	1	3	4	0	0	0	0	14
Total	2	1	0	3	25	4	1	30	4	4	20	28	0	7	2	9	70
Grand Total	4	15	0	19	176	14	2	192	15	16	107	138	1	17	12	30	379
Apprch %	21.1	78.9	0		91.7	7.3	1		10.9	11.6	77.5		3.3	56.7	40		
Total %	1.1	4	0	5	46.4	3.7	0.5	50.7	4	4.2	28.2	36.4	0.3	4.5	3.2	7.9	

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-009 FIG-JENSEN
Site Code : 00000000
Start Date : 5/10/2011
Page No : 2

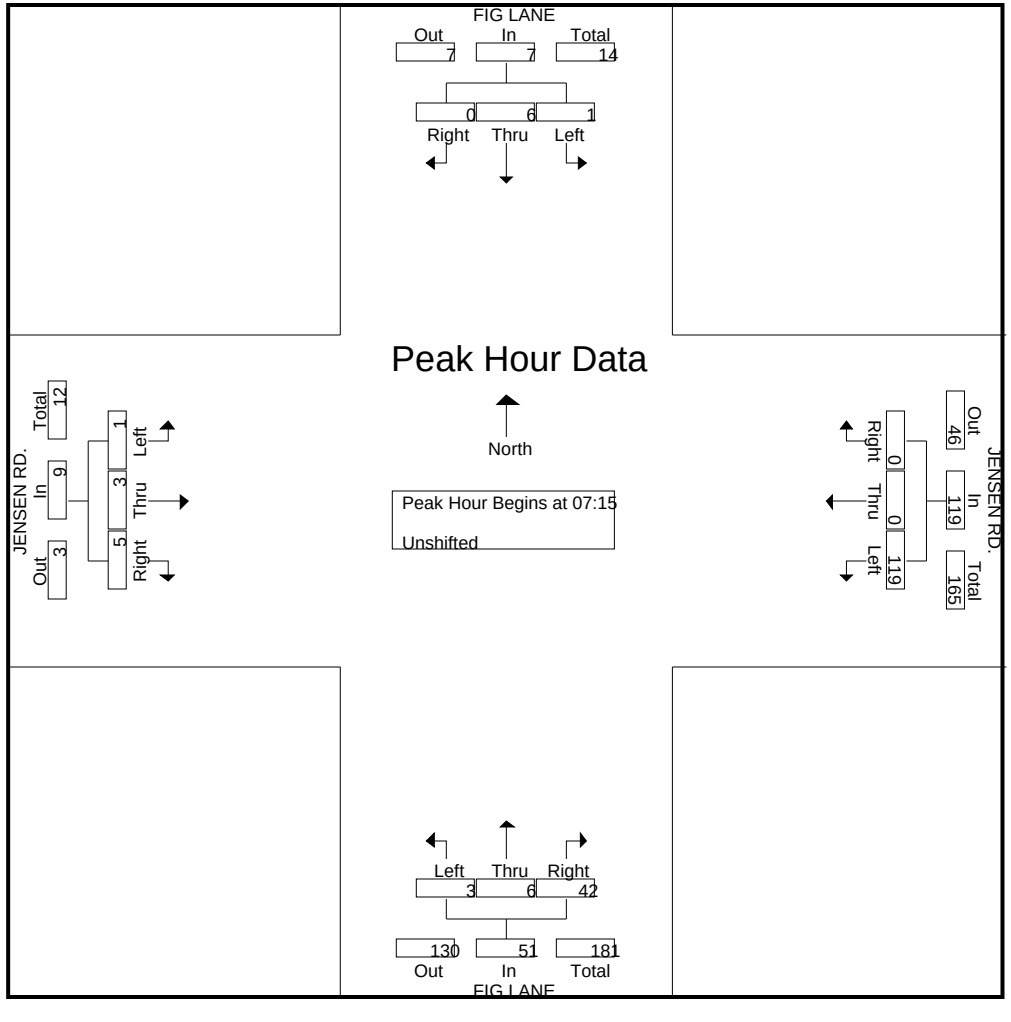
	FIG LANE Southbound				JENSEN RD. Westbound				FIG LANE Northbound				JENSEN RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	0	0	0	0	10	0	0	10	**1**	0	3	4	0	**1**	1	2	16
07:30	0	0	0	0	**51**	0	0	**51**	0	0	4	4	**1**	1	0	2	57
07:45	0	**5**	0	**5**	51	0	0	51	1	**3**	**26**	**30**	0	0	**4**	**4**	**90**
08:00	**1**	1	0	2	7	0	0	7	1	3	9	13	0	1	0	1	23
Total Volume	1	6	0	7	119	0	0	119	3	6	42	51	1	3	5	9	186
% App. Total	14.3	85.7	0		100	0	0		5.9	11.8	82.4		11.1	33.3	55.6		
PHF	.250	.300	.000	.350	.583	.000	.000	.583	.750	.500	.404	.425	.250	.750	.313	.563	.517

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-009 FIG-JENSEN
Site Code : 00000000
Start Date : 5/10/2011
Page No : 3



All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-009 FIG-JENSEN
Site Code : 00000000
Start Date : 5/10/2011
Page No : 4

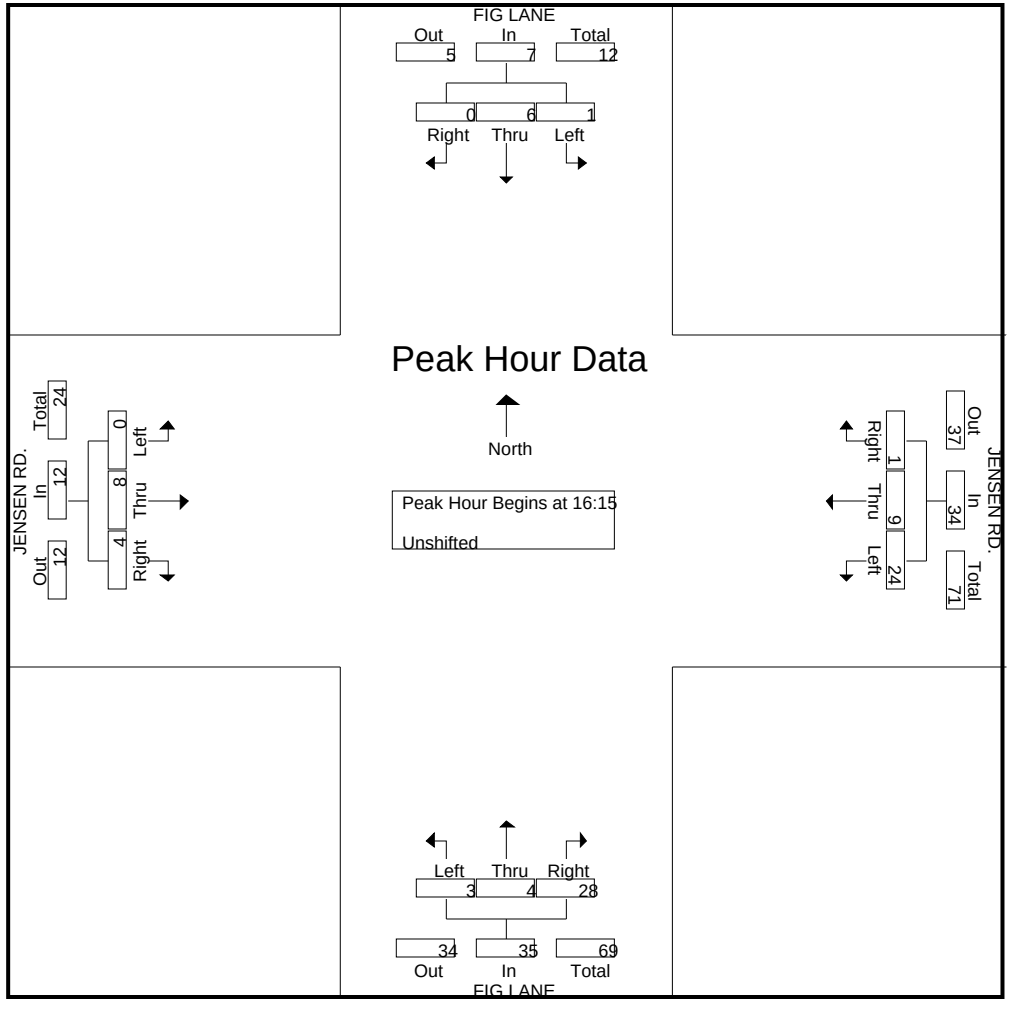
	FIG LANE Southbound				JENSEN RD. Westbound				FIG LANE Northbound				JENSEN RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:15																	
16:15	0	**4**	0	**4**	6	1	**1**	8	0	1	**8**	**9**	0	2	1	**3**	**24**
16:30	0	0	0	0	5	**4**	0	**9**	1	0	7	8	0	1	**2**	3	20
16:45	0	1	0	1	**7**	2	0	9	0	1	8	9	0	2	1	3	22
17:00	**1**	1	0	2	6	2	0	8	**2**	**2**	5	9	0	**3**	0	3	22
Total Volume	1	6	0	7	24	9	1	34	3	4	28	35	0	8	4	12	88
% App. Total	14.3	85.7	0		70.6	26.5	2.9		8.6	11.4	80		0	66.7	33.3		
PHF	.250	.375	.000	.438	.857	.563	.250	.944	.375	.500	.875	.972	.000	.667	.500	1.000	.917

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-009 FIG-JENSEN
Site Code : 00000000
Start Date : 5/10/2011
Page No : 5



All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-007 DRAPER-STUHR
Site Code : 00000000
Start Date : 5/10/2011
Page No : 1

Groups Printed- Unshifted

	Southbound				STUHR RD. Westbound				DRAPER RD. Northbound				STUHR RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	0	0	0	4	12	0	16	3	0	5	8	0	10	1	11	35
07:15	0	0	0	0	5	12	0	17	4	0	2	6	0	8	2	10	33
07:30	0	0	0	0	5	10	0	15	9	0	4	13	0	10	7	17	45
07:45	0	0	0	0	8	6	0	14	7	0	7	14	0	14	3	17	45
Total	0	0	0	0	22	40	0	62	23	0	18	41	0	42	13	55	158
08:00	0	0	0	0	0	13	0	13	7	0	2	9	0	5	1	6	28
08:15	0	0	0	0	2	12	0	14	3	0	2	5	0	7	2	9	28
08:30	0	0	0	0	0	8	0	8	2	0	0	2	0	8	0	8	18
08:45	0	0	0	0	1	16	0	17	1	0	2	3	0	8	0	8	28
Total	0	0	0	0	3	49	0	52	13	0	6	19	0	28	3	31	102
16:00	0	0	0	0	5	6	0	11	4	0	5	9	0	20	7	27	47
16:15	0	0	0	0	2	6	0	8	3	0	3	6	0	17	4	21	35
16:30	0	0	0	0	4	9	0	13	4	0	7	11	0	23	11	34	58
16:45	0	0	0	0	4	11	0	15	2	0	5	7	0	13	13	26	48
Total	0	0	0	0	15	32	0	47	13	0	20	33	0	73	35	108	188
17:00	0	0	0	0	3	6	0	9	4	0	3	7	0	29	9	38	54
17:15	0	0	0	0	5	6	0	11	4	0	4	8	0	18	4	22	41
17:30	0	0	0	0	6	6	0	12	4	0	5	9	0	22	8	30	51
17:45	0	0	0	0	8	6	0	14	2	0	9	11	0	22	5	27	52
Total	0	0	0	0	22	24	0	46	14	0	21	35	0	91	26	117	198
Grand Total	0	0	0	0	62	145	0	207	63	0	65	128	0	234	77	311	646
Apprch %	0	0	0		30	70	0		49.2	0	50.8		0	75.2	24.8		
Total %	0	0	0	0	9.6	22.4	0	32	9.8	0	10.1	19.8	0	36.2	11.9	48.1	

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-007 DRAPER-STUHR
Site Code : 00000000
Start Date : 5/10/2011
Page No : 2

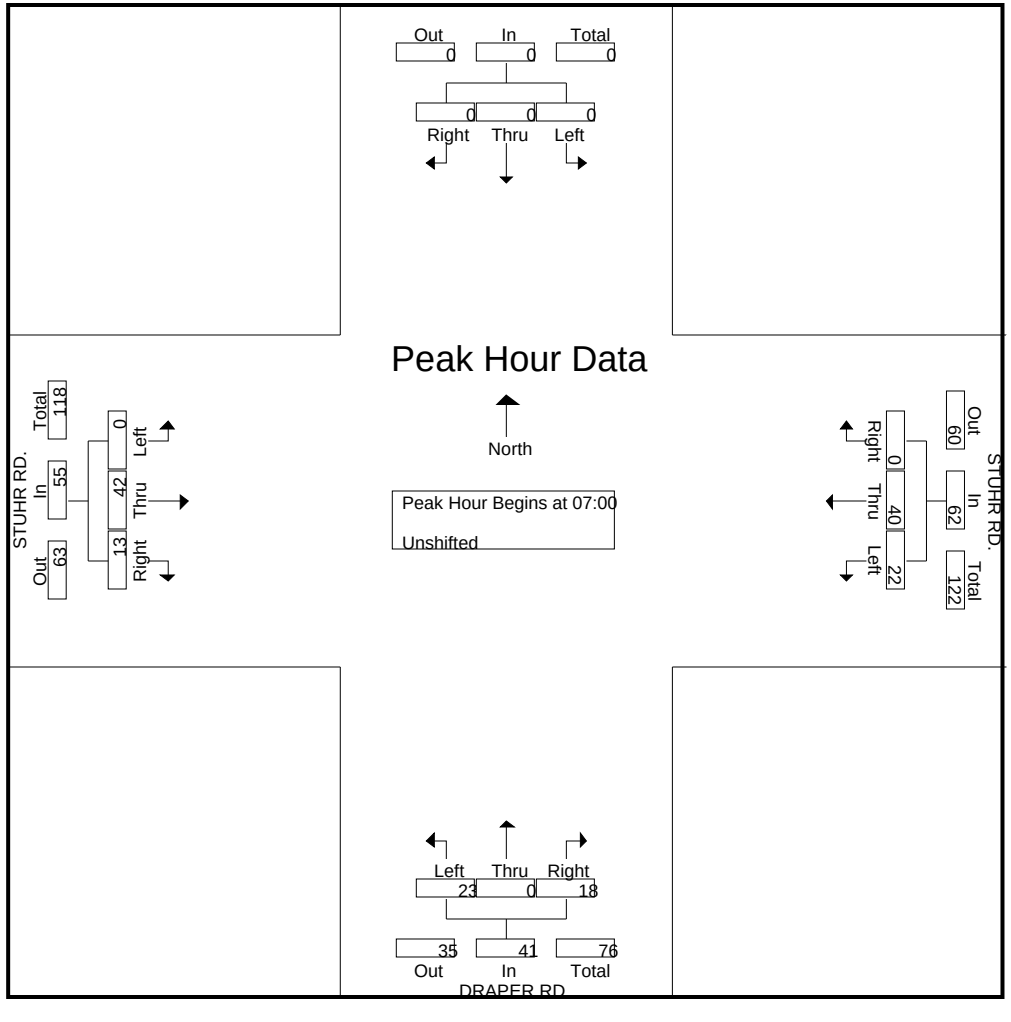
	Southbound				STUHR RD. Westbound				DRAPER RD. Northbound				STUHR RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00																	
07:00	0	0	0	0	4	**12**	0	16	3	0	5	8	0	10	1	11	35
07:15	0	0	0	0	5	12	0	**17**	4	0	2	6	0	8	2	10	33
07:30	0	0	0	0	5	10	0	15	**9**	0	4	13	0	10	**7**	**17**	**45**
07:45	0	0	0	0	**8**	6	0	14	7	0	**7**	**14**	0	**14**	3	17	45
Total Volume	0	0	0	0	22	40	0	62	23	0	18	41	0	42	13	55	158
% App. Total	0	0	0		35.5	64.5	0		56.1	0	43.9		0	76.4	23.6		
PHF	.000	.000	.000	.000	.688	.833	.000	.912	.639	.000	.643	.732	.000	.750	.464	.809	.878

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-007 DRAPER-STUHR
Site Code : 00000000
Start Date : 5/10/2011
Page No : 3



All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-007 DRAPER-STUHR
Site Code : 00000000
Start Date : 5/10/2011
Page No : 4

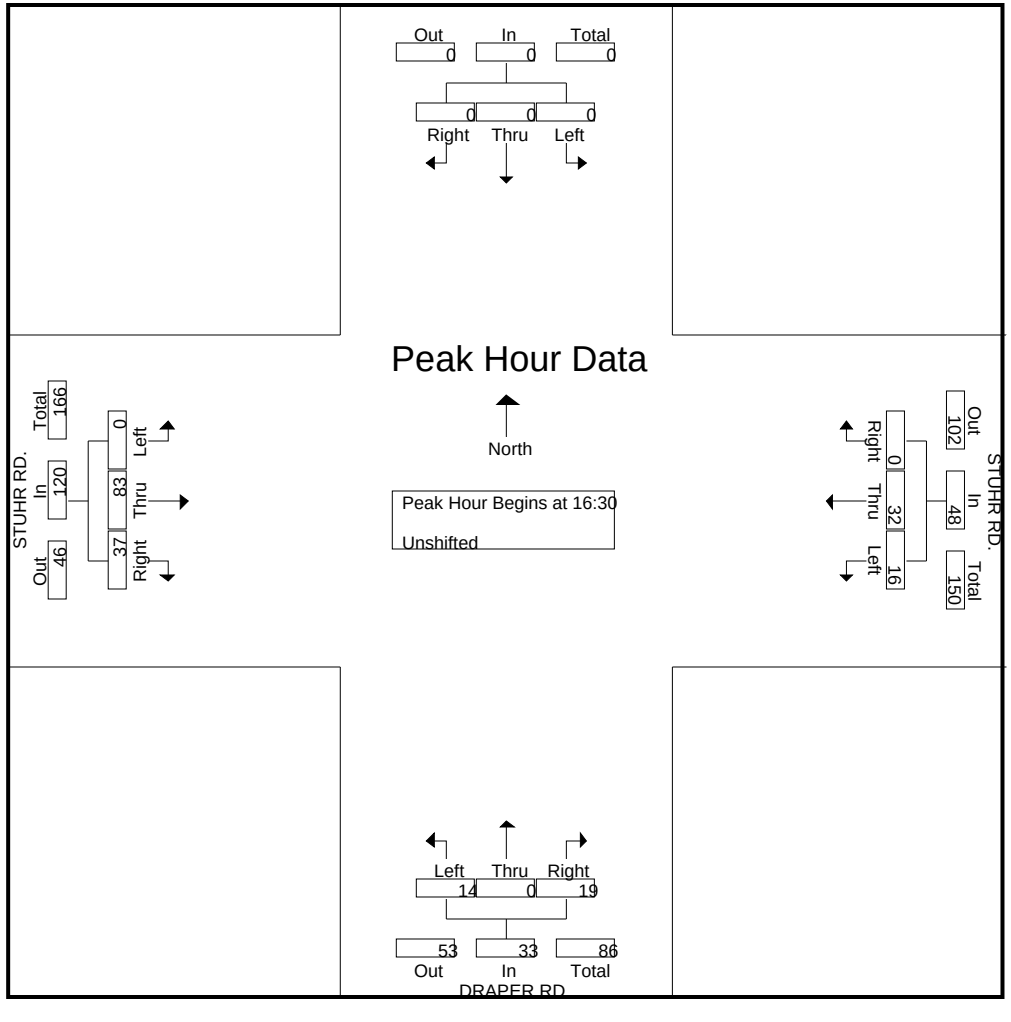
	Southbound				STUHR RD. Westbound				DRAPER RD. Northbound				STUHR RD. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	0	0	0	0	4	9	0	13	**4**	0	**7**	**11**	0	23	11	34	**58**
16:45	0	0	0	0	4	**11**	0	**15**	2	0	5	7	0	13	**13**	26	48
17:00	0	0	0	0	3	6	0	9	4	0	3	7	0	**29**	9	**38**	54
17:15	0	0	0	0	**5**	6	0	11	4	0	4	8	0	18	4	22	41
Total Volume	0	0	0	0	16	32	0	48	14	0	19	33	0	83	37	120	201
% App. Total	0	0	0		33.3	66.7	0		42.4	0	57.6		0	69.2	30.8		
PHF	.000	.000	.000	.000	.800	.727	.000	.800	.875	.000	.679	.750	.000	.716	.712	.789	.866

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-007 DRAPER-STUHR
Site Code : 00000000
Start Date : 5/10/2011
Page No : 5



All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-003 SR 33-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 1

Groups Printed- Unshifted

	SR 33 Southbound				YOLO ST. Westbound				SR 33 Northbound				YOLO ST. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	30	15	45	2	0	0	2	9	51	0	60	15	0	9	24	131
07:15	0	36	16	52	1	0	0	1	24	55	0	79	16	0	10	26	158
07:30	1	44	30	75	0	0	0	0	55	83	0	138	23	0	14	37	250
07:45	0	54	28	82	1	0	0	1	55	65	0	120	28	2	28	58	261
Total	1	164	89	254	4	0	0	4	143	254	0	397	82	2	61	145	800
08:00	0	65	6	71	1	1	1	3	7	61	1	69	20	2	20	42	185
08:15	0	42	5	47	1	0	2	3	2	66	0	68	8	0	5	13	131
08:30	1	37	5	43	0	0	0	0	3	48	3	54	7	0	5	12	109
08:45	0	40	6	46	0	0	0	0	7	50	1	58	7	0	8	15	119
Total	1	184	22	207	2	1	3	6	19	225	5	249	42	2	38	82	544
16:00	0	59	8	67	4	0	1	5	7	54	3	64	8	0	14	22	158
16:15	3	67	11	81	0	0	1	1	10	57	0	67	7	1	19	27	176
16:30	0	69	15	84	0	0	4	4	13	68	0	81	12	0	11	23	192
16:45	1	84	11	96	0	1	1	2	18	72	0	90	14	1	15	30	218
Total	4	279	45	328	4	1	7	12	48	251	3	302	41	2	59	102	744
17:00	1	70	4	75	1	1	3	5	9	50	0	59	7	0	8	15	154
17:15	1	74	21	96	3	0	0	3	10	77	0	87	11	0	13	24	210
17:30	2	91	12	105	2	0	0	2	19	53	0	72	7	0	12	19	198
17:45	2	83	24	109	0	0	1	1	21	50	0	71	13	0	8	21	202
Total	6	318	61	385	6	1	4	11	59	230	0	289	38	0	41	79	764
Grand Total	12	945	217	1174	16	3	14	33	269	960	8	1237	203	6	199	408	2852
Apprch %	1	80.5	18.5		48.5	9.1	42.4		21.7	77.6	0.6		49.8	1.5	48.8		
Total %	0.4	33.1	7.6	41.2	0.6	0.1	0.5	1.2	9.4	33.7	0.3	43.4	7.1	0.2	7	14.3	

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-003 SR 33-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 2

	SR 33 Southbound				YOLO ST. Westbound				SR 33 Northbound				YOLO ST. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	0	36	16	52	**1**	0	0	1	24	55	0	79	16	0	10	26	158
07:30	**1**	44	**30**	75	0	0	0	0	**55**	**83**	0	**138**	23	0	14	37	250
07:45	0	54	28	**82**	1	0	0	1	55	65	0	120	**28**	**2**	**28**	**58**	**261**
08:00	0	**65**	6	71	1	**1**	**1**	**3**	7	61	**1**	69	20	2	20	42	185
Total Volume	1	199	80	280	3	1	1	5	141	264	1	406	87	4	72	163	854
% App. Total	0.4	71.1	28.6		60	20	20		34.7	65	0.2		53.4	2.5	44.2		
PHF	.250	.765	.667	.854	.750	.250	.250	.417	.641	.795	.250	.736	.777	.500	.643	.703	.818

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-003 SR 33-YOLO
Site Code : 00000000
Start Date : 5/10/2011
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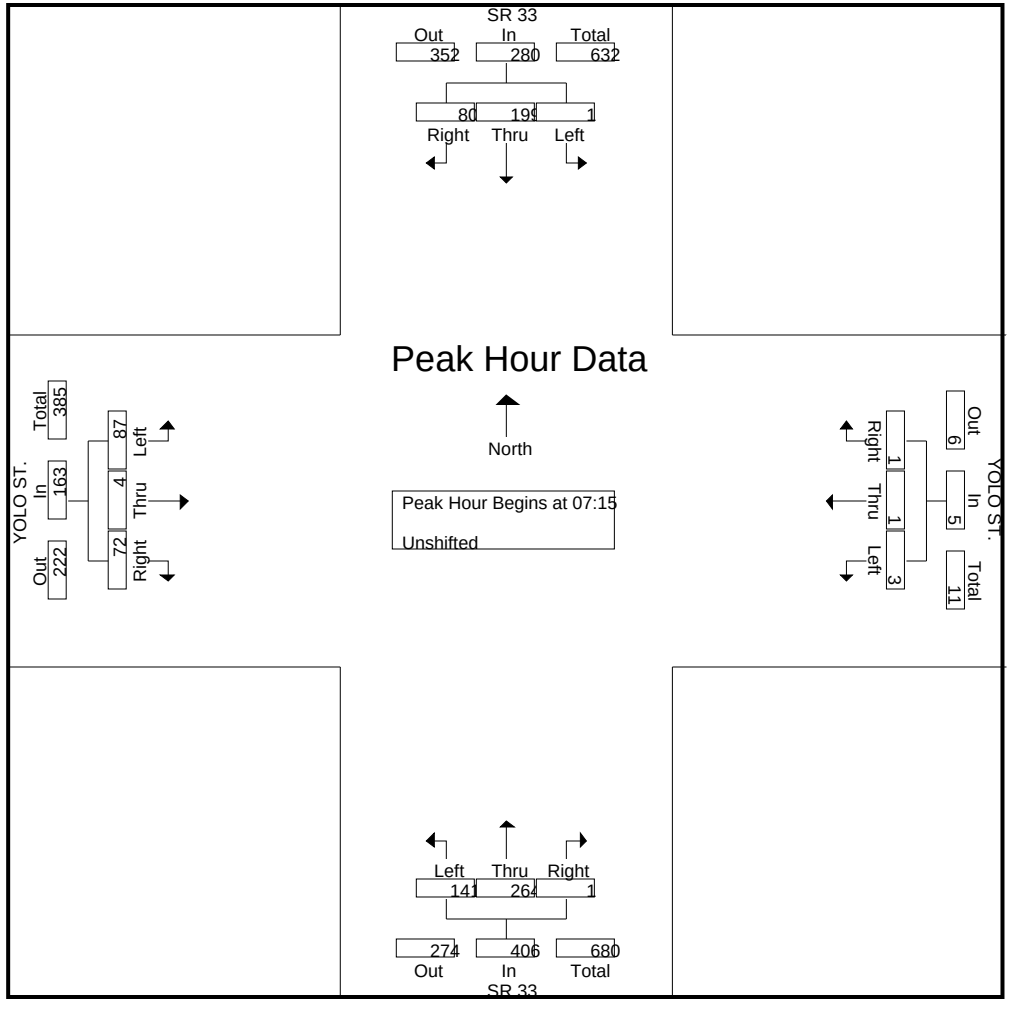


All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-003 SR 33-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 4

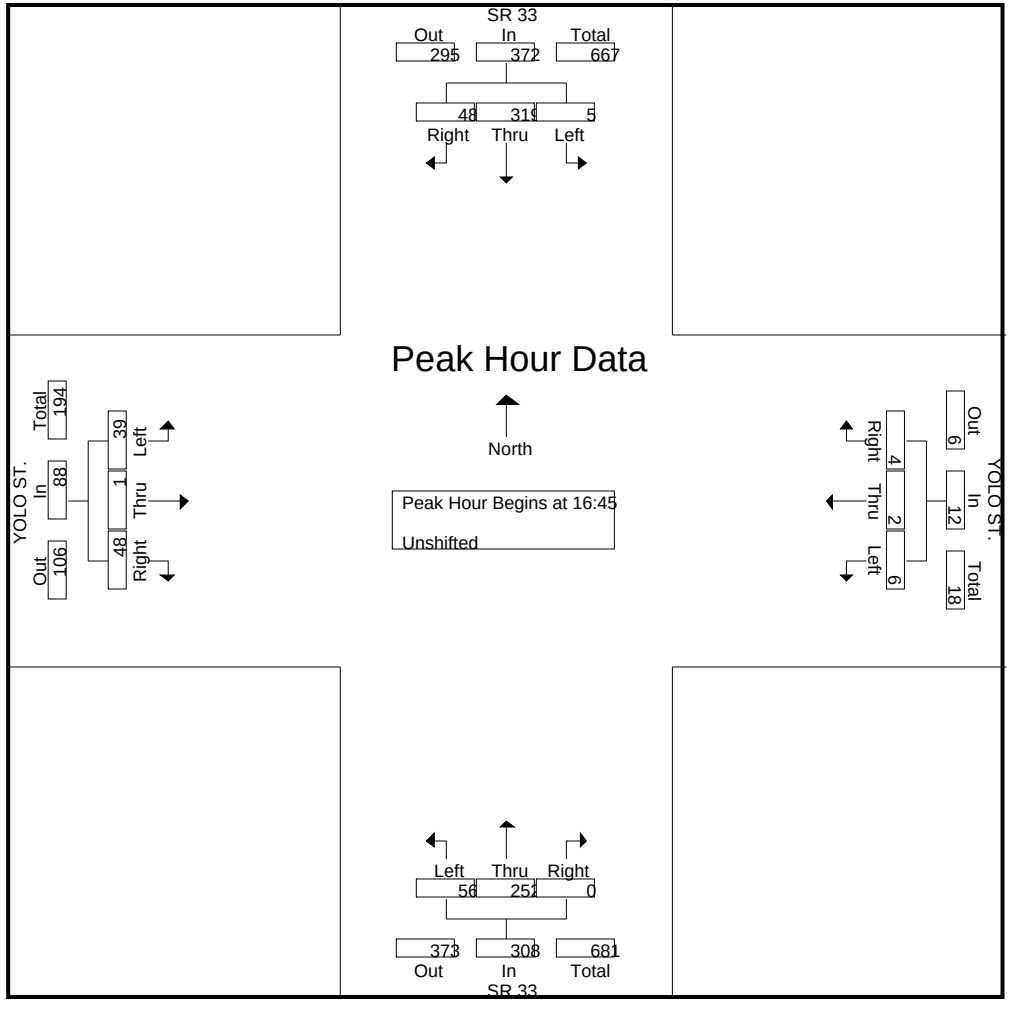
	SR 33 Southbound				YOLO ST. Westbound				SR 33 Northbound				YOLO ST. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	1	84	11	96	0	**1**	1	2	18	72	0	**90**	**14**	**1**	**15**	**30**	**218**
17:00	1	70	4	75	1	1	**3**	**5**	9	50	0	59	7	0	8	15	154
17:15	1	74	**21**	96	**3**	0	0	3	10	**77**	0	87	11	0	13	24	210
17:30	**2**	**91**	12	**105**	2	0	0	2	**19**	53	0	72	7	0	12	19	198
Total Volume	5	319	48	372	6	2	4	12	56	252	0	308	39	1	48	88	780
% App. Total	1.3	85.8	12.9		50	16.7	33.3		18.2	81.8	0		44.3	1.1	54.5		
PHF	.625	.876	.571	.886	.500	.500	.333	.600	.737	.818	.000	.856	.696	.250	.800	.733	.894

All Traffic Data

(916) 771-8700

CITY OF NEWMAN

File Name : 11-7210-003 SR 33-YOLO
Site Code : 00000000
Start Date : 5/10/2011
Page No : 5



TRAFFIC VOLUME COUNTS

ROADWAY SEGMENT 24-HOUR COUNTS

CITY OF NEWMAN

All Traffic Data
(916) 771-8700

Site Code : 000000000000
Start Date: 05/11/2005
File I.D. : NEW-07
Page : 1

YOLO STREET BETWEEN REAL AVENUE AND
LEE AVENUE

Direction 1

Begin Time	EB A.M.		EB P.M.		WB A.M.		WB P.M.		Combined A.M.		Combined P.M.		Wednesday
12:00 05/11	0		22		0		36		0		58		
12:15	0		19		3		36		3		55		
12:30	0		21		0		33		0		54		
12:45	0	*	27	89	0	3	43	148	0	3	70	237	
01:00	1		23		2		45		3		68		
01:15	0		17		0		40		0		57		
01:30	0		31		1		48		1		79		
01:45	0	1	25	96	2	5	31	164	2	6	56	260	
02:00	0		9		2		35		2		44		
02:15	0		22		0		37		0		59		
02:30	0		14		0		57		0		71		
02:45	3	3	42	87	2	4	60	189	5	7	102	276	
03:00	0		41		0		81		0		122		
03:15	0		55		1		66		1		121		
03:30	1		20		0		32		1		52		
03:45	3	4	29	145	2	3	32	211	5	7	61	356	
04:00	0		28		1		50		1		78		
04:15	1		21		0		35		1		56		
04:30	6		23		8		43		14		66		
04:45	1	8	19	91	0	9	53	181	1	17	72	272	
05:00	2		25		5		62		7		87		
05:15	3		23		4		54		7		77		
05:30	9		33		17		71		26		104		
05:45	5	19	22	103	10	36	58	245	15	55	80	348	
06:00	10		22		19		48		29		70		
06:15	13		12		22		52		35		64		
06:30	12		23		31		40		43		63		
06:45	14	49	18	75	24	96	44	184	38	145	62	259	
07:00	7		14		24		28		31		42		
07:15	21		17		49		35		70		52		
07:30	28		10		93		26		121		36		
07:45	29	85	8	49	93	259	18	107	122	344	26	156	
08:00	49		32		76		50		125		82		
08:15	25		23		37		34		62		57		
08:30	23		30		28		44		51		74		
08:45	13	110	7	92	26	167	10	138	39	277	17	230	
09:00	18		8		31		15		49		23		
09:15	19		7		35		13		54		20		
09:30	20		5		26		8		46		13		
09:45	9	66	7	27	14	106	18	54	23	172	25	81	
10:00	16		1		17		3		33		4		
10:15	14		2		29		6		43		8		
10:30	13		4		25		6		38		10		
10:45	12	55	0	7	25	96	3	18	37	151	3	25	
11:00	10		1		22		9		32		10		
11:15	18		5		33		8		51		13		
11:30	16		2		24		3		40		5		
11:45	23	67	2	10	42	121	4	24	65	188	6	34	
Totals	467		871		905		1663		1372		2534		
Day Totals		1338				2568				3906			
Split %	34.0%		34.3%		65.9%		65.6%						
Peak Hour	07:30		02:45		07:15		02:30		07:15		02:30		
Volume	131		158		311		264		438		416		
P.H.F.	.66		.71		.83		.81		.87		.85		

Volumes for: Wednesday, May 11, 2011 City: Newman Project #: 11-7211-005

Location: Yolo Street from Hardin Road to Fig Lane

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	2	14			0	15				
12:15	1	11			1	7				
12:30	0	32			0	13				
12:45	0	11	3	68	2	11	3	46	6	114
1:00	0	10			1	23				
1:15	0	16			0	12				
1:30	0	14			0	15				
1:45	0	12	0	52	1	11	2	61	2	113
2:00	0	11			0	11				
2:15	0	13			0	11				
2:30	1	9			0	15				
2:45	0	13	1	46	0	35	0	72	1	118
3:00	0	41			0	15				
3:15	0	19			0	18				
3:30	0	28			4	21				
3:45	0	12	0	100	0	20	4	74	4	174
4:00	1	11			0	16				
4:15	3	10			3	21				
4:30	0	22			0	12				
4:45	1	25	5	68	3	24	6	73	11	141
5:00	2	21			0	17				
5:15	8	14			7	9				
5:30	1	11			11	10				
5:45	9	24	20	70	3	21	21	57	41	127
6:00	5	29			3	29				
6:15	9	17			11	8				
6:30	13	20			7	6				
6:45	6	20	33	86	10	13	31	56	64	142
7:00	21	12			18	10				
7:15	29	4			27	12				
7:30	26	19			42	10				
7:45	28	13	104	48	33	9	120	41	224	89
8:00	26	8			23	10				
8:15	12	16			20	9				
8:30	9	9			16	4				
8:45	9	5	56	38	12	12	71	35	127	73
9:00	14	4			9	8				
9:15	8	10			10	5				
9:30	7	1			9	6				
9:45	12	8	41	23	6	4	34	23	75	46
10:00	7	2			6	1				
10:15	9	3			8	1				
10:30	13	1			7	1				
10:45	4	3	33	9	10	1	31	4	64	13
11:00	14	0			5	1				
11:15	11	1			5	1				
11:30	4	2			12	0				
11:45	21	1	50	4	9	1	31	3	81	7
Total	346	612	346	612	354	545	354	545	700	1157
Combined Total	958		958		899		899		1857	
AM Peak	7:15 AM				7:15 AM					
Vol.	109				125					
P.H.F.	0.940				0.744					
PM Peak		2:45 PM				2:45 PM				
Vol.		101				89				
P.H.F.		0.616				0.636				
Percentage	36.1%	63.9%			39.4%	60.6%				

CITY OF NEWMAN

All Traffic Data
(916) 771-8700

Site Code : 000000000000
Start Date: 05/10/2005
File I.D. : NEW-05

ORESTIMBA ROAD BETWEEN DRAPER ROAD AND HARDIN ROAD

Direction 1

Begin Time	<------ WB ------>				<------ EB ------>				<------ Combined ------>				Tuesday
	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00 05/10	0		4		1		5		1		9		
12:15	0		2		0		0		0		2		
12:30	0		6		0		5		0		11		
12:45	0	*	3	15	0	1	1	11	0	1	4	26	
01:00	0		8		0		8		0		16		
01:15	0		8		0		3		0		11		
01:30	0		6		0		1		0		7		
01:45	0	*	4	26	0	*	1	13	0	*	5	39	
02:00	0		6		0		3		0		9		
02:15	0		5		0		4		0		9		
02:30	0		1		1		2		1		3		
02:45	0	*	2	14	0	1	16	25	0	1	18	39	
03:00	0		3		0		5		0		8		
03:15	0		12		0		3		0		15		
03:30	2		5		0		7		2		12		
03:45	0	2	6	26	0	*	4	19	0	2	10	45	
04:00	2		5		2		4		4		9		
04:15	0		4		1		7		1		11		
04:30	0		8		0		7		0		15		
04:45	6	8	5	22	1	4	23	41	7	12	28	63	
05:00	2		9		1		7		3		16		
05:15	1		7		0		6		1		13		
05:30	9		4		3		5		12		9		
05:45	10	22	1	21	0	4	4	22	10	26	5	43	
06:00	7		4		1		1		8		5		
06:15	7		1		3		6		10		7		
06:30	6		7		4		0		10		7		
06:45	13	33	7	19	2	10	1	8	15	43	8	27	
07:00	10		4		3		0		13		4		
07:15	2		2		2		3		4		5		
07:30	2		6		5		2		7		8		
07:45	7	21	5	17	7	17	0	5	14	38	5	22	
08:00	10		3		11		1		21		4		
08:15	5		7		4		0		9		7		
08:30	6		3		1		3		7		6		
08:45	8	29	4	17	0	16	2	6	8	45	6	23	
09:00	3		3		1		2		4		5		
09:15	4		1		2		0		6		1		
09:30	0		1		2		0		2		1		
09:45	4	11	2	7	3	8	1	3	7	19	3	10	
10:00	5		2		2		1		7		3		
10:15	8		0		1		0		9		0		
10:30	3		1		4		1		7		2		
10:45	4	20	0	3	2	9	1	3	6	29	1	6	
11:00	3		2		5		0		8		2		
11:15	5		2		4		1		9		3		
11:30	3		0		2		0		5		0		
11:45	3	14	0	4	1	12	0	1	4	26	0	5	
Totals	160		191		82		157		242		348		
Day Totals		351				239				590			
Split %	66.1%		54.8%		33.8%		45.1%						
Peak Hour	06:15		04:30		07:30		04:15		07:30		04:30		
Volume	36		29		27		44		51		72		
P.H.F.	.69		.80		.61		.47		.60		.64		

Volumes for: Wednesday, May 11, 2011 City: Newman Project #: 11-7211-004

Location: Sherman Parkway from SR 33 to Balsam Drive

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	6	23			0	9				
12:15	3	11			2	10				
12:30	3	14			1	12				
12:45	5	23	17	71	6	17	9	48	26	119
1:00	1	24			1	25				
1:15	4	15			0	31				
1:30	1	38			1	24				
1:45	2	14	8	91	2	13	4	93	12	184
2:00	0	10			3	15				
2:15	2	25			0	17				
2:30	0	22			4	25				
2:45	1	22	3	79	3	22	10	79	13	158
3:00	0	46			2	17				
3:15	0	23			3	18				
3:30	0	25			4	14				
3:45	1	24	1	118	7	16	16	65	17	183
4:00	1	27			8	17				
4:15	2	30			12	17				
4:30	5	36			15	22				
4:45	1	43	9	136	14	16	49	72	58	208
5:00	2	35			19	16				
5:15	1	46			23	20				
5:30	3	35			29	22				
5:45	4	36	10	152	21	21	92	79	102	231
6:00	13	45			18	20				
6:15	5	38			19	16				
6:30	1	30			30	17				
6:45	7	31	26	144	13	21	80	74	106	218
7:00	11	34			34	11				
7:15	8	32			51	15				
7:30	20	25			83	18				
7:45	31	23	70	114	55	17	223	61	293	175
8:00	30	29			19	15				
8:15	5	27			20	11				
8:30	8	34			27	12				
8:45	8	27	51	117	18	11	84	49	135	166
9:00	5	18			22	5				
9:15	10	19			13	6				
9:30	11	11			15	6				
9:45	12	16	38	64	10	6	60	23	98	87
10:00	6	6			12	6				
10:15	10	9			15	2				
10:30	11	9			8	4				
10:45	4	8	31	32	11	1	46	13	77	45
11:00	12	12			14	2				
11:15	12	4			17	1				
11:30	11	1			18	2				
11:45	15	4	50	21	10	0	59	5	109	26
Total	314	1139	314	1139	732	661	732	661	1046	1800
Combined Total	1453		1453		1393		1393		2846	
AM Peak	7:15 AM				7:00 AM					
Vol.	89				223					
P.H.F.	0.718				0.672					
PM Peak		5:15 PM				12:45 PM				
Vol.		162				97				
P.H.F.		0.880				0.782				
Percentage	21.6%	78.4%			52.5%	47.5%				

CITY OF NEWMAN

All Traffic Data
(916) 771-8700

JENSEN ROAD BETWEEN FIG LANE AND SR-33

Site Code : 000000000000
Start Date: 05/10/2005
File I.D. : NEW-03
Page : 1

Direction 1

Begin	<------ EB ------>				<------ WB ------>				<------ Combined ------>				Tuesday
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00 05/10	1		2		0		1		1		3		
12:15	0		2		1		2		1		4		
12:30	0		0		1		0		1		0		
12:45	0	1	0	4	0	2	3	6	0	3	3	10	
01:00	0		2		0		4		0		6		
01:15	0		2		0		2		0		4		
01:30	0		3		0		3		0		6		
01:45	0	*	0	7	0	*	1	10	0	*	1	17	
02:00	0		0		0		1		0		1		
02:15	0		1		1		3		1		4		
02:30	0		3		0		3		0		6		
02:45	0	*	3	7	0	1	3	10	0	1	6	17	
03:00	0		2		0		3		0		5		
03:15	0		1		0		2		0		3		
03:30	0		2		0		2		0		4		
03:45	2	2	2	7	0	*	5	12	2	2	7	19	
04:00	1		4		0		6		1		10		
04:15	0		3		0		6		0		9		
04:30	1		0		0		1		1		1		
04:45	1	3	2	9	0	*	4	17	1	3	6	26	
05:00	1		4		1		10		2		14		
05:15	0		3		0		4		0		7		
05:30	4		3		1		7		5		10		
05:45	4	9	4	14	1	3	6	27	5	12	10	41	
06:00	4		1		2		9		6		10		
06:15	3		4		1		6		4		10		
06:30	4		3		0		3		4		6		
06:45	2	13	2	10	1	4	5	23	3	17	7	33	
07:00	2		2		1		3		3		5		
07:15	3		4		2		4		5		8		
07:30	4		3		1		2		5		5		
07:45	4	13	0	9	1	5	3	12	5	18	3	21	
08:00	7		1		2		2		9		3		
08:15	5		2		4		4		9		6		
08:30	1		1		1		1		2		2		
08:45	1	14	1	5	0	7	4	11	1	21	5	16	
09:00	0		1		1		3		1		4		
09:15	2		1		0		0		2		1		
09:30	0		1		1		3		1		4		
09:45	3	5	1	4	2	4	0	6	5	9	1	10	
10:00	1		1		0		1		1		2		
10:15	2		0		2		1		4		1		
10:30	2		0		2		2		4		2		
10:45	1	6	1	2	0	4	1	5	1	10	2	7	
11:00	2		0		2		0		4		0		
11:15	1		0		3		4		4		4		
11:30	7		0		2		0		9		0		
11:45	10	20	1	1	5	12	0	4	15	32	1	5	
Totals	86		79		42		143		128		222		
Day Totals		165				185				350			
Split %	67.1%		35.5%		32.8%		64.4%						
Peak Hour	07:30		05:00		11:00		05:30		11:00		05:00		
Volume	20		14		12		28		32		41		
P.H.F.	.71		.87		.6		.77		.53		.73		

CITY OF NEWMAN

All Traffic Data
(916) 771-8700

Site Code : 000000000000
Start Date: 05/10/2005
File I.D. : NEW-06
Page : 1

FIG LANE BETWEEN LUCILLE AVENUE AND
YOLO STREET

Direction 1

Begin Time	<------ SB A.M.		SB P.M.		------><------ NB A.M.		NB P.M.		------><------Combined A.M.		Combined P.M.		------> Tuesday
12:00 05/10	0		6		0		6		0		12		
12:15	1		2		0		1		1		3		
12:30	0		7		0		4		0		11		
12:45	0	1	5	20	0	*	5	16	0	1	10	36	
01:00	0		3		0		6		0		9		
01:15	0		3		0		2		0		5		
01:30	0		5		0		5		0		10		
01:45	0	*	2	13	0	*	2	15	0	*	4	28	
02:00	0		4		0		6		0		10		
02:15	0		2		0		6		0		8		
02:30	0		3		0		3		0		6		
02:45	0	*	6	15	0	*	5	20	0	*	11	35	
03:00	0		7		0		7		0		14		
03:15	0		4		0		6		0		10		
03:30	1		6		0		5		1		11		
03:45	3	4	5	22	0	*	3	21	3	4	8	43	
04:00	1		6		2		24		3		30		
04:15	0		5		0		9		0		14		
04:30	0		12		1		15		1		27		
04:45	0	1	14	37	0	3	12	60	0	4	26	97	
05:00	0		17		0		13		0		30		
05:15	1		24		0		6		1		30		
05:30	3		11		4		10		7		21		
05:45	3	7	9	61	0	4	8	37	3	11	17	98	
06:00	1		9		1		4		2		13		
06:15	3		15		1		2		4		17		
06:30	3		15		2		1		5		16		
06:45	0	7	7	46	2	6	4	11	2	13	11	57	
07:00	10		7		3		3		13		10		
07:15	6		9		5		5		11		14		
07:30	11		5		5		9		16		14		
07:45	14	41	7	28	4	17	2	19	18	58	9	47	
08:00	4		8		12		3		16		11		
08:15	6		8		5		4		11		12		
08:30	2		13		1		5		3		18		
08:45	5	17	8	37	3	21	3	15	8	38	11	52	
09:00	3		6		5		3		8		9		
09:15	3		9		0		0		3		9		
09:30	3		5		3		8		6		13		
09:45	2	11	2	22	0	8	1	12	2	19	3	34	
10:00	2		1		7		2		9		3		
10:15	4		5		2		0		6		5		
10:30	7		5		4		0		11		5		
10:45	3	16	0	11	3	16	1	3	6	32	1	14	
11:00	2		2		5		0		7		2		
11:15	3		1		2		0		5		1		
11:30	2		2		3		0		5		2		
11:45	4	11	2	7	2	12	0	*	6	23	2	7	
Totals	116		319		87		229		203		548		
Day Totals		435				316				751			
Split %	57.1%		58.2%		42.8%		41.7%			751			
Peak Hour	07:00		04:30		07:15		04:00		07:15		04:30		
Volume	41		67		26		60		61		113		
P.H.F.	.73		.69		.54		.62		.84		.94		

Volumes for: Wednesday, May 11, 2011 City: Newman Project #: 11-7211-001

Location: Draper Road from Stuhr Road to Orestimba Road

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	8			1	1				
12:15	0	3			0	3				
12:30	2	4			0	2				
12:45	0	5	2	20	1	3	2	9	4	29
1:00	0	7			0	6				
1:15	0	4			0	8				
1:30	1	6			0	9				
1:45	1	8	2	25	1	12	1	35	3	60
2:00	1	2			0	1				
2:15	1	7			0	5				
2:30	0	2			1	7				
2:45	2	10	4	21	2	7	3	20	7	41
3:00	2	9			1	8				
3:15	0	5			2	13				
3:30	0	4			1	9				
3:45	0	9	2	27	0	10	4	40	6	67
4:00	4	7			2	14				
4:15	3	8			1	8				
4:30	4	7			1	11				
4:45	8	10	19	32	0	4	4	37	23	69
5:00	11	5			3	15				
5:15	11	3			2	12				
5:30	18	5			6	13				
5:45	13	9	53	22	5	13	16	53	69	75
6:00	6	5			8	6				
6:15	13	1			8	9				
6:30	12	4			5	8				
6:45	11	3	42	13	7	11	28	34	70	47
7:00	7	4			5	11				
7:15	8	4			6	6				
7:30	10	2			9	4				
7:45	15	3	40	13	11	4	31	25	71	38
8:00	3	1			6	7				
8:15	8	1			4	2				
8:30	5	1			1	2				
8:45	5	2	21	5	6	4	17	15	38	20
9:00	8	1			1	4				
9:15	4	4			5	3				
9:30	5	0			7	1	0			
9:45	3	2	20	7	4	6	17	14	37	21
10:00	4	1			1	4				
10:15	5	3			2	2				
10:30	3	2			3	5				
10:45	5	2	17	8	3	2	9	13	26	21
11:00	3	0			6	0				
11:15	7	0			5	5				
11:30	8	1			4	2				
11:45	4	0	22	1	5	2	20	9	42	10
Total	244	194	244	194	152	304	152	304	396	498
Combined Total	438		438		456		456		894	
AM Peak	5:00 AM				7:15 AM					
Vol.	53				32					
P.H.F.	0.736				0.727					
PM Peak		4:00 PM				5:00 PM				
Vol.		32				53				
P.H.F.		0.906				0.883				
Percentage	55.7%	44.3%			33.3%	66.7%				

Volumes for: Wednesday, May 11, 2011 City: Newman Project #: 11-7211-003

Location: Stuhr Road from McClintock Road to Hills Ferry Road

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	0			0	3				
12:15	1	9			0	5				
12:30	2	4			0	5				
12:45	0	11	3	24	0	5	0	18	3	42
1:00	0	5			0	1				
1:15	2	7			1	5				
1:30	0	2			0	5				
1:45	1	15	3	29	0	6	1	17	4	46
2:00	0	10			0	6				
2:15	3	11			0	1				
2:30	1	11			1	1				
2:45	1	10	5	42	0	7	1	15	6	57
3:00	0	8			0	1				
3:15	0	8			0	3				
3:30	3	5			1	4				
3:45	0	8	3	29	2	4	3	12	6	41
4:00	1	10			1	4				
4:15	0	10			0	8				
4:30	0	5			1	7				
4:45	0	5	1	30	0	2	2	21	3	51
5:00	3	5			3	10				
5:15	4	8			1	9				
5:30	0	5			6	4				
5:45	1	7	8	25	9	6	19	29	27	54
6:00	1	6			6	4				
6:15	3	6			7	7				
6:30	6	6			5	5				
6:45	6	6	16	24	5	0	23	16	39	40
7:00	6	4			22	4				
7:15	5	2			6	5				
7:30	6	4			7	3				
7:45	6	6	23	16	15	3	50	15	73	31
8:00	5	7			7	2				
8:15	3	9			9	3				
8:30	4	3			7	2				
8:45	2	5	14	24	3	3	26	10	40	34
9:00	7	2			5	5				
9:15	3	3			3	2				
9:30	3	2			4	3				
9:45	2	1	15	8	2	0	14	10	29	18
10:00	11	2			2	1				
10:15	6	2			8	1				
10:30	11	3			3	2				
10:45	3	1	31	8	2	1	15	5	46	13
11:00	9	1			11	1				
11:15	4	0			4	0				
11:30	9	0			2	1				
11:45	14	1	36	2	1	0	18	2	54	4
Total	158	261	158	261	172	170	172	170	330	431
Combined Total	419		419		342		342		761	
AM Peak	11:00 AM				7:00 AM					
Vol.	36				50					
P.H.F.	0.643				0.568					
PM Peak		1:45 PM				5:00 PM				
Vol.		47				29				
P.H.F.		0.783				0.725				
Percentage	37.7%	62.3%			50.3%	49.7%				

Volumes for: Wednesday, May 11, 2011 City: Newman Project #: 11-7211-002

Location: Stuhr Road from Draper Road to SR 33

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	6	13			2	20				
12:15	6	20			0	10				
12:30	1	9			1	19				
12:45	3	15	16	57	1	6	4	55	20	112
1:00	4	12			0	6				
1:15	2	8			0	13				
1:30	0	10			0	12				
1:45	2	17	8	47	1	17	1	48	9	95
2:00	1	19			0	21				
2:15	1	12			1	7				
2:30	1	22			1	15				
2:45	2	14	5	67	5	10	7	53	12	120
3:00	0	17			1	13				
3:15	0	15			1	14				
3:30	3	22			2	11				
3:45	0	21	3	75	1	8	5	46	8	121
4:00	3	18			6	11				
4:15	2	17			12	21				
4:30	5	26			12	14				
4:45	4	29	14	90	12	10	42	56	56	146
5:00	9	26			16	11				
5:15	6	20			22	5				
5:30	7	26			20	16				
5:45	8	23	30	95	40	15	98	47	128	142
6:00	19	19			31	10				
6:15	12	23			31	9				
6:30	10	15			21	7				
6:45	11	12	52	69	38	11	121	37	173	106
7:00	13	15			23	3				
7:15	12	15			26	13				
7:30	13	13			14	1				
7:45	11	14	49	57	17	7	80	24	129	81
8:00	18	14			13	7				
8:15	6	5			18	5				
8:30	8	9			11	3				
8:45	16	10	48	38	8	8	50	23	98	61
9:00	12	8			8	5				
9:15	11	13			11	4				
9:30	16	3			15	4				
9:45	9	2	48	26	18	1	52	14	100	40
10:00	14	10			13	2				
10:15	14	3			3	2				
10:30	11	5			14	6				
10:45	5	3	44	21	12	5	42	15	86	36
11:00	19	6			20	3				
11:15	7	7			11	2				
11:30	14	3			10	2				
11:45	22	5	62	21	12	1	53	8	115	29
Total	379	663	379	663	555	426	555	426	934	1089
Combined Total	1042		1042		981		981		2023	
AM Peak	11:30 AM				5:45 AM					
Vol.	69				123					
P.H.F.	0.784				0.769					
PM Peak		4:30 PM				1:15 PM				
Vol.		101				63				
P.H.F.		0.871				0.750				
Percentage	36.4%	63.6%			56.6%	43.4%				

Volumes for: Tuesday, January 15, 2013 City: Newman Project #: 14-7038-001
Location: Stuhr Road between I-5 and Bell Road

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	3	7			2	13				
12:15	3	13			3	5				
12:30	4	15			0	7				
12:45	4	17	14	52	1	5	6	30	20	82
1:00	0	8			1	6				
1:15	2	9			3	10				
1:30	1	9			5	6				
1:45	4	11	7	37	3	12	12	34	19	71
2:00	0	17			1	12				
2:15	0	11			2	6				
2:30	1	18			3	7				
2:45	2	14	3	60	6	6	12	31	15	91
3:00	1	20			5	19				
3:15	3	19			7	9				
3:30	0	11			11	14				
3:45	2	13	6	63	10	9	33	51	39	114
4:00	0	20			9	13				
4:15	3	24			18	9				
4:30	1	16			25	8				
4:45	4	28	8	88	18	12	70	42	78	130
5:00	2	26			20	16				
5:15	0	26			23	9				
5:30	4	25			25	9				
5:45	6	25	12	102	20	7	88	41	100	143
6:00	5	23			24	6				
6:15	3	25			16	5				
6:30	7	21			16	2				
6:45	15	16	30	85	17	2	73	15	103	100
7:00	3	6			14	4				
7:15	13	5			20	1				
7:30	14	7			24	2				
7:45	9	14	39	32	14	1	72	8	111	40
8:00	12	9			9	4				
8:15	8	5			12	4				
8:30	11	9			17	4				
8:45	9	8	40	31	12	2	50	14	90	45
9:00	9	5			15	4				
9:15	5	6			9	3				
9:30	9	10			13	4				
9:45	12	2	35	23	10	8	47	19	82	42
10:00	7	5			13	2				
10:15	17	5			6	3				
10:30	9	1			9	2				
10:45	4	2	37	13	5	4	33	11	70	24
11:00	11	2			10	1				
11:15	6	6			12	0				
11:30	11	3			14	0				
11:45	10	4	38	15	6	0	42	1	80	16
Total	269	601	269	601	538	297	538	297	807	898
Combined Total	870		870		835		835		1705	
AM Peak	7:15 AM				5:15 AM					
Vol.	48				92					
P.H.F.	0.857				0.920					
PM Peak		4:45 PM				3:00 PM				
Vol.		105				51				
P.H.F.		0.938				0.671				
Percentage	30.9%	69.1%			64.4%	35.6%				

Volumes for: Tuesday, January 15, 2013 City: Newman Project #: 14-7038-003

Location: Stuhr Road between Eastin Road and Wagenheim Road

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	1	20			0	17				
12:15	3	16			1	8				
12:30	1	9			0	16				
12:45	1	12	6	57	0	10	1	51	7	108
1:00	0	10			0	17				
1:15	1	11			1	11				
1:30	1	10			2	10				
1:45	1	7	3	38	2	10	5	48	8	86
2:00	5	12			3	13				
2:15	1	12			2	12				
2:30	3	20			3	12				
2:45	2	13	11	57	1	8	9	45	20	102
3:00	0	22			5	8				
3:15	3	10			6	13				
3:30	3	17			8	11				
3:45	1	13	7	62	7	16	26	48	33	110
4:00	2	26			12	17				
4:15	4	28			16	10				
4:30	1	18			18	11				
4:45	3	20	10	92	13	10	59	48	69	140
5:00	1	46			19	8				
5:15	0	30			11	11				
5:30	0	22			19	8				
5:45	1	25	2	123	19	12	68	39	70	162
6:00	5	14			19	6				
6:15	6	18			11	6				
6:30	2	13			41	4				
6:45	6	12	19	57	32	7	103	23	122	80
7:00	7	9			24	5				
7:15	12	7			20	6				
7:30	11	6			20	6				
7:45	9	13	39	35	17	2	81	19	120	54
8:00	8	2			7	2				
8:15	4	5			13	1				
8:30	9	4			22	2				
8:45	12	6	33	17	13	2	55	7	88	24
9:00	12	12			16	5				
9:15	6	6			7	2				
9:30	8	2			12	1				
9:45	6	7	32	27	6	6	41	14	73	41
10:00	7	7			9	2				
10:15	9	1			11	1				
10:30	8	4			7	2				
10:45	7	6	31	18	14	2	41	7	72	25
11:00	5	4			11	1				
11:15	8	1			10	3				
11:30	12	2			9	1				
11:45	10	0	35	7	7	1	37	6	72	13
Total	228	590	228	590	526	355	526	355	754	945
Combined Total	818		818		881		881		1699	
AM Peak	11:30 AM				6:30 AM					
Vol.	58				117					
P.H.F.	0.725				0.713					
PM Peak		5:00 PM				3:15 PM				
Vol.		123				57				
P.H.F.		0.668				0.838				
Percentage	27.9%	72.1%			59.7%	40.3%				

Volumes for: Tuesday, January 15, 2013 City: Newman Project #: 14-7038-002
Location: Eastin Road north of Stuhr Road

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	1	6			0	3				
12:15	1	5			0	8				
12:30	0	3			4	4				
12:45	0	2	2	16	0	7	4	22	6	38
1:00	3	7			1	4				
1:15	1	4			0	3				
1:30	1	7			0	12				
1:45	0	4	5	22	0	5	1	24	6	46
2:00	0	4			0	4				
2:15	0	3			0	8				
2:30	0	7			0	0				
2:45	0	4	0	18	0	2	0	14	0	32
3:00	0	6			0	6				
3:15	1	3			0	6				
3:30	0	12			0	3				
3:45	0	16	1	37	0	2	0	17	1	54
4:00	0	7			0	11				
4:15	1	2			1	5				
4:30	1	19			0	4				
4:45	0	8	2	36	0	9	1	29	3	65
5:00	3	10			1	5				
5:15	0	3			0	6				
5:30	1	3			5	4				
5:45	2	1	6	17	1	5	7	20	13	37
6:00	2	1			2	4				
6:15	4	0			3	2				
6:30	1	3			10	3				
6:45	3	1	10	5	16	2	31	11	41	16
7:00	6	2			5	1				
7:15	6	1			13	3				
7:30	10	3			9	3				
7:45	8	0	30	6	14	3	41	10	71	16
8:00	6	2			5	1				
8:15	6	0			7	0				
8:30	2	1			2	0				
8:45	0	0	14	3	5	2	19	3	33	6
9:00	5	0			9	0				
9:15	5	0			2	1				
9:30	4	1			5	0	0			
9:45	1	3	15	4	6	0	22	1	37	5
10:00	4	0			5	1				
10:15	4	0			5	0				
10:30	7	0			3	0				
10:45	6	0	21	0	0	0	13	1	34	1
11:00	8	0			2	0				
11:15	6	1			2	1				
11:30	1	0			2	0				
11:45	6	1	21	2	4	0	10	1	31	3
Total	127	166	127	166	149	153	149	153	276	319
Combined Total	293		293		302		302		595	
AM Peak	7:00 AM				6:30 AM					
Vol.	30				44					
P.H.F.	0.750				0.688					
PM Peak		3:45 PM				1:30 PM				
Vol.		44				29				
P.H.F.		0.422				0.604				
Percentage	43.3%	56.7%			49.3%	50.7%				

Volumes for: Wednesday, May 11, 2011 City: Newman Project #: 11-7211-006

Location: Hardin Road from Orestimba Road to Angelina Avenue

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	9			1	15				
12:15	1	10			1	11				
12:30	0	38			0	13				
12:45	0	8	1	65	0	8	2	47	3	112
1:00	0	11			0	53				
1:15	0	11			0	17				
1:30	0	30			0	15				
1:45	0	11	0	63	0	12	0	97	0	160
2:00	0	21			0	11				
2:15	0	10			1	15				
2:30	0	13			0	10				
2:45	0	15	0	59	0	56	1	92	1	151
3:00	0	42			0	40				
3:15	1	25			0	22				
3:30	0	22			0	23				
3:45	0	20	1	109	1	28	1	113	2	222
4:00	0	16			0	23				
4:15	0	19			0	12				
4:30	1	17			0	15				
4:45	0	17	1	69	1	19	1	69	2	138
5:00	1	19			1	25				
5:15	3	13			3	22				
5:30	4	11			6	9				
5:45	8	9	16	52	4	12	14	68	30	120
6:00	0	10			1	8				
6:15	2	11			1	11				
6:30	5	9			2	14				
6:45	5	15	12	45	9	14	13	47	25	92
7:00	18	14			23	5				
7:15	24	9			32	8				
7:30	62	11			82	9				
7:45	30	6	134	40	85	3	222	25	356	65
8:00	20	20			17	3				
8:15	8	8			4	6				
8:30	5	5			3	7				
8:45	9	2	42	35	8	3	32	19	74	54
9:00	13	5			6	2				
9:15	4	4			10	6				
9:30	2	4			5	2	0			
9:45	10	2	29	15	6	0	27	10	56	25
10:00	6	0			7	1				
10:15	7	0			7	1				
10:30	8	0			8	2				
10:45	5	2	26	2	13	2	35	6	61	8
11:00	9	2			3	2				
11:15	4	0			5	0				
11:30	5	1			7	0				
11:45	26	1	44	4	10	0	25	2	69	6
Total	306	558	306	558	373	595	373	595	679	1153
Combined Total	864		864		968		968		1832	
AM Peak	7:15 AM				7:00 AM					
Vol.	136				222					
P.H.F.	0.548				0.653					
PM Peak		3:00 PM				2:45 PM				
Vol.		109				141				
P.H.F.		0.661				0.629				
Percentage	35.4%	64.6%			38.5%	61.5%				

LEVEL OF SERVICE CALCULATION WORKSHEETS

EXISTING NO PROJECT

Two Way Analysis cannot be performed on an All Way Stop Intersection.

Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	19	18	8	55	76	77	3	269	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	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	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	23	22	10	67	93	94	4	328	65

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	768	674	288	690	697	328	311	0	0
Stage 1	339	339	-	335	335	-	-	-	-
Stage 2	429	335	-	355	362	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	319	376	751	359	365	713	1249	-	-
Stage 1	676	640	-	679	643	-	-	-	-
Stage 2	604	643	-	662	625	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	217	367	751	332	356	713	1249	-	-
Mov Cap-2 Maneuver	217	367	-	332	356	-	-	-	-
Stage 1	673	626	-	676	640	-	-	-	-
Stage 2	447	640	-	617	612	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	19.3	25	0.1
HCM LOS	C	D	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1249	-	-	306	427	1232	-	-
HCM Lane V/C Ratio	0.003	-	-	0.179	0.594	0.021	-	-
HCM Control Delay (s)	7.9	0	-	19.3	25	8	-	-
HCM Lane LOS	A	A	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	3.7	0.1	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	21	217	38
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	415	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	26	265	46

Major/Minor	Major2		
Conflicting Flow All	328	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1232	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1232	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.6
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	87	4	72	3	1	1	141	264	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	106	5	88	4	1	1	172	322	1

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	962	961	291	1006	1009	323	340	0	0
Stage 1	294	294	-	666	666	-	-	-	-
Stage 2	668	667	-	340	343	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	235	256	748	220	240	718	1219	-	-
Stage 1	714	670	-	449	457	-	-	-	-
Stage 2	448	457	-	675	637	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	208	220	748	171	206	718	1219	-	-
Mov Cap-2 Maneuver	344	356	-	171	206	-	-	-	-
Stage 1	613	669	-	386	393	-	-	-	-
Stage 2	383	393	-	591	636	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	19.1	22.7	2.9
HCM LOS	C	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1219	-	-	452	210	1237	-	-
HCM Lane V/C Ratio	0.141	-	-	0.44	0.029	0.001	-	-
HCM Control Delay (s)	8.4	-	-	19.1	22.7	7.9	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	2.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	1	199	80
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	1	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	1	243	98

Major/Minor	Major2		
Conflicting Flow All	323	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1237	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1237	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	8	22	33	0	83	24	1	0	37	204	139
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	12	2
Mvmt Flow	0	10	27	40	0	100	29	1	0	45	246	167
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9	10.1	13.4
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	13%	77%	2%
Vol Thru, %	54%	35%	22%	98%
Vol Right, %	37%	52%	1%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	380	63	108	128
LT Vol	204	22	24	125
Through Vol	139	33	1	0
RT Vol	37	8	83	3
Lane Flow Rate	458	76	130	154
Geometry Grp	1	1	1	1
Degree of Util (X)	0.57	0.113	0.205	0.215
Departure Headway (Hd)	4.48	5.356	5.682	5.014
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	797	673	635	706
Service Time	2.554	3.36	3.685	3.113
HCM Lane V/C Ratio	0.575	0.113	0.205	0.218
HCM Control Delay	13.4	9	10.1	9.5
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	3.7	0.4	0.8	0.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	3	125	0
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	12	2
Mvmt Flow	0	4	151	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.5
HCM LOS	A

Lane

Existing Conditions AM Peak Hour

Scenario Report

Scenario:	Existing AM
Command:	Existing AM
Volume:	Existing AM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	AM Pk Hr
Trip Distribution:	AM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Existing Conditions AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 4 Stuhr Road & Draper Road	A	9.2	0.030	A	9.2	0.030	+ 0.000 D/V
# 5 Jensen Road & Fig Lane	A	9.4	0.137	A	9.4	0.137	+ 0.000 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	9.5	0.350	A	9.5	0.350	+ 0.000 V/C
# 7 Fig Lane & Yolo Street	B	12.5	0.046	B	12.5	0.046	+ 0.000 D/V
# 15 Stuhr & Eastin	B	10.2	0.054	B	10.2	0.054	+ 0.000 D/V
# 16 Stuhr & Villa Manucha	A	8.9	0.107	A	8.9	0.107	+ 0.000 D/V

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Existing Conditions AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	No / No	??? / ???
# 5 Jensen Road & Fig Lane	No / No	??? / ???
# 6 Orestimba/Yolo St & Hardin Rd	No	???
# 7 Fig Lane & Yolo Street	No / No	??? / ???
# 15 Stuhr & Eastin	No / No	??? / ???
# 16 Stuhr & Villa Manucha	No / No	??? / ???

Existing Conditions AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Stuhr Road & Draper Road

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	0	1	0 0
Initial Vol:	23	0	18	0	0	0	0	42	13	22	40	0
ApproachDel:	9.2			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=41]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=158]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Stuhr Road & Draper Road

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	0	0	1 0 0	0
Initial Vol:	23	0	18	0	0	0	0	42	13	22	40	0

Major Street Volume: 117
Minor Approach Volume: 41
Minor Approach Volume Threshold: 792

SIGNAL WARRANT DISCLAIMER
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Existing Conditions AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #5 Jensen Road & Fig Lane

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1!	0	0	1 0	0	0	0 1!	0	1	0 0	0
Initial Vol:	3	6	42	1	6	0	1	3	5	119	0	0
ApproachDel:	xxxxxx			xxxxxx			8.8			9.4		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=186]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=119]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=186]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #5 Jensen Road & Fig Lane

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 1	0	0 0	0 0 1!	0	0	1 0	0	0 0
Initial Vol:	3	6	42	1	6	0	1	3	5	119	0	0

Major Street Volume: 58
Minor Approach Volume: 119
Minor Approach Volume Threshold: 979

SIGNAL WARRANT DISCLAIMER
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Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #6 Orestimba/Yolo St & Hardin Rd

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	14	144	30	49	174	16	19	11	9	37	18	100

Major Street Volume: 427
Minor Approach Volume: 155
Minor Approach Volume Threshold: 446

SIGNAL WARRANT DISCLAIMER
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Existing Conditions AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Fig Lane & Yolo Street

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Initial Vol:	6	11	5	22	21	3	8	160	1	2	183	55
ApproachDel:	11.8			12.5			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=22]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=477]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=46]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=477]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Fig Lane & Yolo Street

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Initial Vol:	6	11	5	22	21	3	8	160	1	2	183	55

Major Street Volume: 409
Minor Approach Volume: 46
Minor Approach Volume Threshold: 458

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1! 0	0	0	0 1! 0	0		0 1! 0	0		0 1! 0	0	
Initial Vol:	4	8	0	1	35	8	3	24	6	11	102	4
ApproachDel:	10.1			10.2			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=12]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=206]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=44]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=206]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1! 0	0	0	0 1! 0	0		0 1! 0	0		0 1! 0	0	
Initial Vol:	4	8	0	1	35	8	3	24	6	11	102	4

Major Street Volume: 150
Minor Approach Volume: 44
Minor Approach Volume Threshold: 725

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #16 Stuhr & Villa Manucha

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1	0	1	0	0	0
Initial Vol:	0	0	0	0	0	86	154	44	0	0	44	1
ApproachDel:	xxxxxx			8.9			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=86]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=329]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #16 Stuhr & Villa Manucha

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1	0	1	0	0	0
Initial Vol:	0	0	0	0	0	86	154	44	0	0	44	1

Major Street Volume: 243

Minor Approach Volume: 86

Minor Approach Volume Threshold: 597

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: A[9.2]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 0	0	0	0 0 0	1	0	0 1	0	0 0
Volume Module: AM Peak Hour												
Base Vol:	23	0	18	0	0	0	0	42	13	22	40	0
Growth 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
Initial Bse:	23	0	18	0	0	0	0	42	13	22	40	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	25	0	20	0	0	0	0	46	14	24	43	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	0	20	0	0	0	0	46	14	24	43	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	144	144	53	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	60	xxxx	xxxxx
Potent Cap.:	849	747	1015	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1544	xxxx	xxxxx
Move Cap.:	838	735	1015	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1544	xxxx	xxxxx
Volume/Cap:	0.03	0.00	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	908	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	9.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:		9.2			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		A			*			*			*	

Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100 secs		
InitVolume:										0	62	
Saturation:										1900	1862	
ArrivalType:										0	3	
G/C:										0.00	0.91	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.000	0.910	
gq1:										0.00	0.30	
gq2:										0.00	0.01	
gq:										0.00	0.31	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										0	2	
vcg:										0	17	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:										0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	144	144	53	154	151	43	0	xxxxx	xxxxx	60	xxxxx	xxxxx
AdjCnflVol:	144	144	53	154	151	43	0	xxxxx	xxxxx	60	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	144	144	53	154	151	43	0	xxxxx	xxxxx	60	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	849	747	1015	818	744	1033	1623	xxxxx	xxxxx	1544	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	849	747	1015	818	744	1033	1623	xxxxx	xxxxx	1544	xxxxx	xxxxx

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Average Delay (sec/veh): 6.6 Worst Case Level Of Service: A[9.4]

Street Name:	Fig Lane						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 0			0 0 1! 0 0			1 0 0 0 0		
Volume Module:	AM Peak Hour											
Base Vol:	3	6	42	1	6	0	1	3	5	119	0	0
Growth 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
Initial Bse:	3	6	42	1	6	0	1	3	5	119	0	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	3	7	46	1	7	0	1	3	5	129	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	7	46	1	7	0	1	3	5	129	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	7	xxxx	xxxxx	52	xxxx	xxxxx	45	67	7	49	xxxx	xxxxx
Potent Cap.:	1614	xxxx	xxxxx	1554	xxxx	xxxxx	958	823	1076	951	xxxx	xxxxx
Move Cap.:	1614	xxxx	xxxxx	1554	xxxx	xxxxx	956	821	1076	942	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.01	0.14	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	11.9	xxxx	xxxxx
Control Del:	7.2	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	963	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	8.8	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.8			9.4		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.350
Loss Time (sec): 0 Average Delay (sec/veh): 9.5
Optimal Cycle: 0 Level Of Service: A

Street Name: Hardin Road Orestimba Road / Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:AM Peak Hour												
Base Vol:	14	144	30	49	174	16	19	11	9	37	18	100
Growth 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
Initial Bse:	14	144	30	49	174	16	19	11	9	37	18	100
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	15	157	33	53	189	17	21	12	10	40	20	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	157	33	53	189	17	21	12	10	40	20	109
PCE 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
MLF 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
FinalVolume:	15	157	33	53	189	17	21	12	10	40	20	109
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.07	0.77	0.16	0.20	0.73	0.07	0.49	0.28	0.23	0.24	0.12	0.64
Final Sat.:	55	567	118	152	540	50	307	178	146	170	82	458
Capacity Analysis Module:												
Vol/Sat:	0.28	0.28	0.28	0.35	0.35	0.35	0.07	0.07	0.07	0.24	0.24	0.24
Crit Moves:			****			****			****			
Delay/Veh:	9.3	9.3	9.3	10.0	10.0	10.0	8.5	8.5	8.5	9.0	9.0	9.0
Delay 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
AdjDel/Veh:	9.3	9.3	9.3	10.0	10.0	10.0	8.5	8.5	8.5	9.0	9.0	9.0
LOS by Move:	A	A	A	B	B	B	A	A	A	A	A	A
ApproachDel:	9.3			10.0			8.5			9.0		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.3			10.0			8.5			9.0		
LOS by Appr:	A			B			A			A		
AllWayAvgQ:	8.6	8.6	8.6	12.2	12.2	12.2	1.5	1.5	1.5	6.5	6.5	6.5

Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM 4-Way Stop Method
Base Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	1			1			1			1		
P[C1]:	0.49			0.54			0.38			0.46		
P[C2]:	0.25			0.19			0.11			0.03		
P[C3]:	0.17			0.19			0.33			0.40		
P[C4]:	0.09			0.08			0.16			0.11		
P[C5]:	0.00			0.00			0.02			0.01		
Padj[C1]:	0.009			0.008			0.013			0.012		
Padj[C2]:	0.001			0.002			0.006			0.006		
Padj[C3]:	-0.004			-0.005			-0.008			-0.011		
Padj[C4]:	-0.006			-0.005			-0.010			-0.007		
Padj[C5]:	-0.000			-0.000			-0.002			-0.001		
Lane:	L1			L1			L1			L1		
LaneType:	LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE		
HeadwayAdj:	-0.047			0.035			-0.007			-0.305		
Volume:	204			260			42			168		
Capacity:	740			741			631			710		
DegOfUtil:	0.26			0.34			0.06			0.22		
DepHeadway:	4.66			4.68			5.17			4.71		
ServiceTime:	2.7			2.7			3.2			2.7		
Delay:	9.3			10.0			8.5			9.0		
Queue:	0.3			0.5			0.1			0.3		
Approach:	North Bound			South Bound			East Bound			West Bound		
ApproachDel:	9.3			10.0			8.5			9.0		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.3			10.0			8.5			9.0		
LOS by Appr:	A			B			A			A		
OverallDel:						9.5						
OverallLOS:						A						

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[12.5]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: AM Peak Hour												
Base Vol:	6	11	5	22	21	3	8	160	1	2	183	55
Growth 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
Initial Bse:	6	11	5	22	21	3	8	160	1	2	183	55
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	7	12	5	24	23	3	9	174	1	2	199	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	7	12	5	24	23	3	9	174	1	2	199	60
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	438	455	174	434	426	229	259	xxxx	xxxxx	175	xxxx	xxxxx
Potent Cap.:	529	501	869	532	521	810	1306	xxxx	xxxxx	1401	xxxx	xxxxx
Move Cap.:	506	497	869	516	516	810	1306	xxxx	xxxxx	1401	xxxx	xxxxx
Volume/Cap:	0.01	0.02	0.01	0.05	0.04	0.00	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.5	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	554	xxxxx	xxxx	529	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.8	xxxxx	xxxxx	12.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.8			12.5			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: B[10.2]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module: AM Peak Hour												
Base Vol:	4	8	0	1	35	8	3	24	6	11	102	4
Growth 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
Initial Bse:	4	8	0	1	35	8	3	24	6	11	102	4
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	4	9	0	1	38	9	3	26	7	12	111	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	9	0	1	38	9	3	26	7	12	111	4
Critical Gap Module:												
Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	196	175	xxxxx	177	176	113	115	xxxx	xxxxx	33	xxxx	xxxxx
Potent Cap.:	763	718	xxxxx	785	717	940	1474	xxxx	xxxxx	1579	xxxx	xxxxx
Move Cap.:	720	711	xxxxx	772	710	940	1474	xxxx	xxxxx	1579	xxxx	xxxxx
Volume/Cap:	0.01	0.01	xxxx	0.00	0.05	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	0.6	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	7.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	714	xxxx	xxxxx	xxxx	745	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	10.1	xxxx	xxxxx	xxxxx	10.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	10.1			10.2			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Existing Conditions AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

```
********************************************************************************
Intersection #16 Stuhr & Villa Manucha
********************************************************************************
Average Delay (sec/veh):      5.9       Worst Case Level Of Service: A[  8.9]
********************************************************************************
Street Name:         Villa Manucha Road                  Stuhr Road
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:            Include          Include          Include          Include
Lanes:        0  0  0  0  0    0  0  0  0  1    0  1  0  0  0    0  0  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:AM Peak Hour
Base Vol:       0    0     0     0    0    86   154   44     0     0   44     1
Growth 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
Initial Bse:    0    0     0     0    0    86   154   44     0     0   44     1
User 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
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0    0     0     0    0    93   167   48     0     0   48     1
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     0     0    0    93   167   48     0     0   48     1
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  xxxx xxxx    48    49 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx  xxxx xxxx  1020  1558 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx  xxxx xxxx  1020  1558 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  xxxx xxxx  0.09  0.11 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx   7.5   9.0 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx   8.9   7.6 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     A     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   0.4 xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     A    *     *     *    *     *
ApproachDel:    xxxxxx              8.9           xxxxxx           xxxxxx
ApproachLOS:         *                A                *                *
********************************************************************************
Note: Queue reported is the distance per lane in feet.
********************************************************************************
```


Existing Conditions AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

```
********************************************************************************
Intersection #16 Stuhr & Villa Manucha
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:              2%               2%               2%               2%
Grade:               0%               0%               0%               0%
Peds/Hour:           0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
```

Existing Conditions AM Peak Hour

Base Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#4	[2Way95thQ]:	3.9	3.9	3.9	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1.2	1.2	xxxx
#5	[2Way95thQ]:	0.2	xxxx	xxxx	0.1	0.1	xxxx	0.8	0.8	0.8	11.9	xxxx	xxxx
#6	[AllWayAvgQ]	8.6	8.6	8.6	12.2	12.2	12.2	1.5	1.5	1.5	6.5	6.5	6.5
#7	[2Way95thQ]:	3.4	3.4	3.4	7.8	7.8	7.8	0.5	xxxx	xxxx	0.1	xxxx	xxxx
#15	[2Way95thQ]:	1.4	1.4	xxxx	5.1	5.1	5.1	0.2	xxxx	xxxx	0.6	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	7.5	9.0	9.0	xxxx	xxxx	xxxx	xxxx

Two Way Analysis cannot be performed on an All Way Stop Intersection.

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	21	11	3	24	14	44	4	263	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	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	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	26	13	4	29	17	54	5	321	71

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1076	1040	466	1048	1050	321	476	0	0
Stage 1	710	710	-	330	330	-	-	-	-
Stage 2	366	330	-	718	720	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	197	230	597	206	227	720	1086	-	-
Stage 1	424	437	-	683	646	-	-	-	-
Stage 2	653	646	-	420	432	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	157	206	597	179	203	720	1086	-	-
Mov Cap-2 Maneuver	157	206	-	179	203	-	-	-	-
Stage 1	421	394	-	679	642	-	-	-	-
Stage 2	585	642	-	364	389	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	30.7	22	0.1
HCM LOS	D	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1086	-	-	182	310	1239	-	-
HCM Lane V/C Ratio	0.004	-	-	0.235	0.323	0.098	-	-
HCM Control Delay (s)	8.3	0	-	30.7	22	8.2	-	-
HCM Lane LOS	A	A	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.9	1.4	0.3	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	100	374	16
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	415	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	122	456	20

Major/Minor	Major2		
Conflicting Flow All	321	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1239	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1239	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.7
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	39	1	48	6	2	4	56	252	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	48	1	59	7	2	5	68	307	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	878	874	418	904	904	307	448	0	0
Stage 1	430	430	-	444	444	-	-	-	-
Stage 2	448	444	-	460	460	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	268	288	635	258	277	733	1112	-	-
Stage 1	603	583	-	593	575	-	-	-	-
Stage 2	590	575	-	581	566	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	251	269	635	222	259	733	1112	-	-
Mov Cap-2 Maneuver	430	436	-	222	259	-	-	-	-
Stage 1	566	580	-	557	540	-	-	-	-
Stage 2	548	540	-	524	563	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	13.7	17.7	1.5
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1112	-	-	522	298	1254	-	-
HCM Lane V/C Ratio	0.061	-	-	0.206	0.049	0.005	-	-
HCM Control Delay (s)	8.4	-	-	13.7	17.7	7.9	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.8	0.2	0	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	5	319	48
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	1	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	6	389	59

Major/Minor	Major2		
Conflicting Flow All	307	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1254	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1254	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.1
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	2	20	63	0	126	16	1	0	18	155	86
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	12	2
Mvmt Flow	0	2	24	76	0	152	19	1	0	22	187	104
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.2	10.9	11.5
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	2%	88%	0%
Vol Thru, %	60%	24%	11%	99%
Vol Right, %	33%	74%	1%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	259	85	143	221
LT Vol	155	20	16	218
Through Vol	86	63	1	2
RT Vol	18	2	126	1
Lane Flow Rate	312	102	172	266
Geometry Grp	1	1	1	1
Degree of Util (X)	0.418	0.15	0.275	0.381
Departure Headway (Hd)	4.954	5.287	5.746	5.156
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	730	680	627	700
Service Time	2.954	3.31	3.765	3.176
HCM Lane V/C Ratio	0.427	0.15	0.274	0.38
HCM Control Delay	11.5	9.2	10.9	11.3
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	2.1	0.5	1.1	1.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	1	218	2
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	12	2
Mvmt Flow	0	1	263	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	11.3
HCM LOS	B

Lane

Existing Conditions PM Peak Hour

Scenario Report

Scenario:	Existing PM
Command:	Existing PM
Volume:	Existing PM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	PM Pk Hr
Trip Distribution:	PM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Existing Conditions PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 4 Stuhr Road & Draper Road	A	9.3	0.022	A	9.3	0.022	+ 0.000 D/V
# 5 Jensen Road & Fig Lane	A	9.1	0.027	A	9.1	0.027	+ 0.000 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	7.7	0.116	A	7.7	0.116	+ 0.000 V/C
# 7 Fig Lane & Yolo Street	B	10.2	0.041	B	10.2	0.041	+ 0.000 D/V
# 15 Stuhr & Eastin	B	10.3	0.036	B	10.3	0.036	+ 0.000 D/V
# 16 Stuhr & Villa Manucha	A	9.2	0.149	A	9.2	0.149	+ 0.000 D/V

Existing Conditions PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	No / No	??? / ???
# 5 Jensen Road & Fig Lane	No / No	??? / ???
# 6 Orestimba/Yolo St & Hardin Rd	No	???
# 7 Fig Lane & Yolo Street	No / No	??? / ???
# 15 Stuhr & Eastin	No / No	??? / ???
# 16 Stuhr & Villa Manucha	No / No	??? / ???

Existing Conditions PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Stuhr Road & Draper Road

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1 0	0 1	0	0 0
Initial Vol:	14	0	19	0	0	0	0	83	37	16	32	0
ApproachDel:	9.3			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=33]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=201]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Stuhr Road & Draper Road

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	0	0	1 0	0
Initial Vol:	14	0	19	0	0	0	0	83	37	16	32	0

Major Street Volume: 168
Minor Approach Volume: 33
Minor Approach Volume Threshold: 695

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #5 Jensen Road & Fig Lane

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1!	0	0	1 0	0	0	0 1	0	0	0 1!	0
Initial Vol:	3	4	28	1	6	0	0	8	4	24	9	1
ApproachDel:	xxxxxx			xxxxxx			9.0			9.1		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=12]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=88]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=34]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=88]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #5 Jensen Road & Fig Lane

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	1	0	0	0	0	0	1! 0	0	0
Initial Vol:	3	4	28	1	6	0	0	8	4	24	9	1

Major Street Volume: 42
Minor Approach Volume: 34
Minor Approach Volume Threshold: 1065

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	0	0	1! 0	0	0	0	1! 0	0	0
Initial Vol:	9	48	19	24	43	2	7	31	9	26	20	45

Major Street Volume: 145
Minor Approach Volume: 91
Minor Approach Volume Threshold: 734

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Fig Lane & Yolo Street

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	3	3	3	28	16	7	9	69	3	6	71	27
ApproachDel:	9.7			10.2			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=245]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=51]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=245]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Fig Lane & Yolo Street

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	3	3	3	28	16	7	9	69	3	6	71	27

Major Street Volume: 185
Minor Approach Volume: 51
Minor Approach Volume Threshold: 669

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	4	23	2	1	20	2	12	111	10	1	34	4
ApproachDel:	10.3			10.2			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=29]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=224]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=23]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=224]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	4	23	2	1	20	2	12	111	10	1	34	4

Major Street Volume: 172
Minor Approach Volume: 29
Minor Approach Volume Threshold: 689

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #16 Stuhr & Villa Manucha

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	45	0	0	43	3
ApproachDel:	xxxxxx			9.2			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=142]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=306]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Stuhr & Villa Manucha

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	45	0	0	43	3

Major Street Volume: 164
Minor Approach Volume: 142
Minor Approach Volume Threshold: 702

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

```
********************************************************************************
Intersection #4 Stuhr Road & Draper Road
********************************************************************************
Average Delay (sec/veh):      2.1       Worst Case Level Of Service: A[  9.3]
********************************************************************************
Street Name:            Draper Road                     Stuhr Road
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Rights:           Include          Include          Include          Include
Lanes:       0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    0  1  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:PM Peak Hour
Base Vol:      14    0    19     0    0     0     0   83    37    16   32     0
Growth 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
Initial Bse:   14    0    19     0    0     0     0   83    37    16   32     0
User 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
PHF Adj:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:    15    0    21     0    0     0     0   90    40    17   35     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   15    0    21     0    0     0     0   90    40    17   35     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4  6.5   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  180  180   110  xxxx xxxx xxxxx  xxxx xxxx xxxxx   130 xxxx xxxxx
Potent Cap.:  810  714   943  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1455 xxxx xxxxx
Move Cap.:    802  705   943  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1455 xxxx xxxxx
Volume/Cap:  0.02 0.00  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.9 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.5 xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  878 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   0.0 xxxx xxxxx
Shrd ConDel:xxxxx  9.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.5 xxxx xxxxx
Shared LOS:     *    A     *     *    *     *     *    *     *     A    *     *
ApproachDel:        9.3           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:          A              *                *                *
********************************************************************************
Note: Queue reported is the distance per lane in feet.
********************************************************************************
```


Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

```
********************************************************************************
Intersection #4 Stuhr Road & Draper Road
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:              2%               0%               2%               2%
Grade:               0%               0%               0%               0%
Peds/Hour:           0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
Upstream Signals:
Link Index:                                                            #78
Dist(miles):                                                         0.250
Speed (mph):                                                          1.00
SignalIndex:                                                           #8
Cycle Time:                                                             100 secs
InitVolume:                                                          0    48
Saturation:                                                       1900  1862
ArrivalType:                                                         0     3
G/C:                                                              0.00  0.91
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:                                                                0.000 0.910
gq1:                                                              0.00  0.23
gq2:                                                              0.00  0.01
gq:                                                               0.00  0.24
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:                                                                0.550
beta:                                                                 0.645
ta (secs):                                                          900.000
F:                                                                    0.003
f:                                                                1.000 1.000
vcmax:                                                               0     1
vcg:                                                                 0    13
vcmin:                                                            1000  1000
tp:                                                                0.0   0.0
p:                                                                    0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:                                          0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol: 180   180   110  190   200    35    0 xxxxx xxxxx  130 xxxxx xxxxx
AdjCnflVol:  180   180   110  190   200    35    0 xxxxx xxxxx  130 xxxxx xxxxx
UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
ConflictVol: 180   180   110  190   200    35    0 xxxxx xxxxx  130 xxxxx xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period
InitPotCap:  810   714   943  774   699  1044 1623 xxxxx xxxxx 1455 xxxxx xxxxx
UpstreamAdj:1.00 1.000 1.000 1.00 1.000 1.000 1.00 x.xxx x.xxx 1.00 x.xxx x.xxx
Potent Cap.: 810   714   943  774   699  1044 1623 xxxxx xxxxx 1455 xxxxx xxxxx
```

Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: A[9.1]

Street Name:	Fig Lane						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	3	4	28	1	6	0	0	8	4	24	9	1
Growth 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
Initial Bse:	3	4	28	1	6	0	0	8	4	24	9	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	3	4	30	1	7	0	0	9	4	26	10	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	4	30	1	7	0	0	9	4	26	10	1
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	7	xxxx	xxxxx	35	xxxx	xxxxx	xxxx	50	7	41	35	20
Potent Cap.:	1614	xxxx	xxxxx	1577	xxxx	xxxxx	xxxx	841	1076	962	858	1058
Move Cap.:	1614	xxxx	xxxxx	1577	xxxx	xxxxx	xxxx	839	1076	949	855	1058
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	0.01	0.00	0.03	0.01	0.00

Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.2	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	906	xxxx	925	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	0.0	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	9.0	xxxxx	9.1	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	A	*	A	*
ApproachDel:	xxxxxx			xxxxxx			9.0			9.1		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.116
Loss Time (sec): 0 Average Delay (sec/veh): 7.7
Optimal Cycle: 0 Level Of Service: A

Street Name: Hardin Road Orestimba Road / Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module: PM Peak Hour												
Base Vol:	9	48	19	24	43	2	7	31	9	26	20	45
Growth 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
Initial Bse:	9	48	19	24	43	2	7	31	9	26	20	45
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	10	52	21	26	47	2	8	34	10	28	22	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	52	21	26	47	2	8	34	10	28	22	49
PCE 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
MLF 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
FinalVolume:	10	52	21	26	47	2	8	34	10	28	22	49
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.12	0.63	0.25	0.35	0.62	0.03	0.15	0.66	0.19	0.29	0.22	0.49
Final Sat.:	98	523	207	277	496	23	121	534	155	243	187	421
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.10	0.09	0.09	0.09	0.06	0.06	0.06	0.12	0.12	0.12
Crit Moves:		****				****		****			****	
Delay/Veh:	7.6	7.6	7.6	7.8	7.8	7.8	7.6	7.6	7.6	7.6	7.6	7.6
Delay 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
AdjDel/Veh:	7.6	7.6	7.6	7.8	7.8	7.8	7.6	7.6	7.6	7.6	7.6	7.6
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		7.6			7.8			7.6			7.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.6			7.8			7.6			7.6	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	2.6	2.6	2.6	2.4	2.4	2.4	1.6	1.6	1.6	3.0	3.0	3.0

Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM 4-Way Stop Method
Base Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	1			1			1			1		
P[C1]:	0.76			0.75			0.73			0.77		
P[C2]:	0.08			0.08			0.09			0.05		
P[C3]:	0.14			0.14			0.15			0.16		
P[C4]:	0.02			0.02			0.03			0.02		
P[C5]:	0.00			0.00			0.00			0.00		
Padj[C1]:	0.004			0.004			0.005			0.004		
Padj[C2]:	0.001			0.001			0.001			0.001		
Padj[C3]:	-0.004			-0.004			-0.004			-0.005		
Padj[C4]:	-0.001			-0.001			-0.002			-0.001		
Padj[C5]:	-0.000			-0.000			-0.000			-0.000		
Lane:	L1			L1			L1			L1		
LaneType:	LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE		
HeadwayAdj:	-0.092			0.086			-0.051			-0.206		
Volume:	83			75			51			99		
Capacity:	828			795			809			850		
DegOfUtil:	0.10			0.09			0.06			0.11		
DepHeadway:	4.20			4.38			4.29			4.09		
ServiceTime:	2.2			2.4			2.3			2.1		
Delay:	7.6			7.8			7.6			7.6		
Queue:	0.1			0.1			0.1			0.1		
Approach:	North Bound			South Bound			East Bound			West Bound		
ApproachDel:	7.6			7.8			7.6			7.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.6			7.8			7.6			7.6		
LOS by Appr:	A			A			A			A		
OverallDel:						7.7						
OverallLOS:						A						

Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: B[10.2]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	3	3	3	28	16	7	9	69	3	6	71	27
Growth 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
Initial Bse:	3	3	3	28	16	7	9	69	3	6	71	27
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	3	3	3	30	17	8	10	75	3	7	77	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	3	3	30	17	8	10	75	3	7	77	29
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	214	216	77	204	203	92	107	xxxx	xxxxx	78	xxxx	xxxxx
Potent Cap.:	743	682	984	754	694	966	1484	xxxx	xxxxx	1520	xxxx	xxxxx
Move Cap.:	717	675	984	742	686	966	1484	xxxx	xxxxx	1520	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.04	0.03	0.01	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.5	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	771	xxxxx	xxxx	747	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	9.7	xxxxx	xxxxx	10.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	A	*	*	B	*	*	*	*	*	*	*
ApproachDel:	9.7			10.2			xxxxxx			xxxxxx		
ApproachLOS:	A			B			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: B[10.3]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	4	23	2	1	20	2	12	111	10	1	34	4
Growth 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
Initial Bse:	4	23	2	1	20	2	12	111	10	1	34	4
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	4	25	2	1	22	2	13	121	11	1	37	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	25	2	1	22	2	13	121	11	1	37	4
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	205	196	126	207	199	39	41	xxxx	xxxxx	132	xxxx	xxxxx
Potent Cap.:	752	700	924	750	697	1032	1568	xxxx	xxxxx	1454	xxxx	xxxxx
Move Cap.:	728	693	924	723	691	1032	1568	xxxx	xxxxx	1454	xxxx	xxxxx
Volume/Cap:	0.01	0.04	0.00	0.00	0.03	0.00	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.6	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	710	xxxxx	xxxx	712	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.3	xxxxx	xxxxx	10.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	10.3			10.2			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Existing Conditions PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 6.0 Worst Case Level Of Service: A[9.2]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module: PM Peak Hour												
Base Vol:	0	0	0	2	0	140	73	45	0	0	43	3
Growth 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
Initial Bse:	0	0	0	2	0	140	73	45	0	0	43	3
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	2	0	152	79	49	0	0	47	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	2	0	152	79	49	0	0	47	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	256	256	48	50	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	733	648	1020	1557	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	703	613	1020	1557	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.15	0.05	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	4.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1014	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.2			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Conditions PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #16 Stuhr & Villa Manucha

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Existing Conditions PM Peak Hour

Base Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[2Way95thQ]:	3.2	3.2	3.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.9	0.9	xxxx
#5	[2Way95thQ]:	0.2	xxxx	xxxx	0.1	0.1	xxxx	xxxx	1.1	1.1	3.1	3.1	3.1
#6	[AllWayAvgQ]	2.6	2.6	2.6	2.4	2.4	2.4	1.6	1.6	1.6	3.0	3.0	3.0
#7	[2Way95thQ]:	1.0	1.0	1.0	6.0	6.0	6.0	0.5	xxxx	xxxx	0.3	xxxx	xxxx
#15	[2Way95thQ]:	3.5	3.5	3.5	2.7	2.7	2.7	0.6	xxxx	xxxx	0.1	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	13.4	13.4	13.4	4.0	4.0	xxxx	xxxx	xxxx	xxxx

LEVEL OF SERVICE CALCULATION WORKSHEETS

EXISTING PLUS PROJECT

Two Way Analysis cannot be performed on Signalized Intersection.

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	573.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	105	4	155	3	1	1	278	956	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	128	5	189	4	1	1	339	1166	1

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2484	2483	636	2580	2534	1166	687	0	0
Stage 1	638	638	-	1845	1845	-	-	-	-
Stage 2	1846	1845	-	735	689	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	~ 20	30	478	17	27	236	907	-	-
Stage 1	465	471	-	96	125	-	-	-	-
Stage 2	~ 96	125	-	411	446	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	~ 13	19	478	6	17	236	907	-	-
Mov Cap-2 Maneuver	~ 13	19	-	6	17	-	-	-	-
Stage 1	291	470	-	60	78	-	-	-	-
Stage 2	~ 59	78	-	245	445	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	$ 4469.4	$ 689.1	2.5
HCM LOS	F	F	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	907	-	-	31	9	599	-	-
HCM Lane V/C Ratio	0.374	-	-	10.386	0.678	0.002	-	-
HCM Control Delay (s)	11.3	-	-	-$ 4469.4	$ 689.1	11	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	1.7	-	-	39.4	1.3	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	1	480	83
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	1	585	101

Major/Minor	Major2		
Conflicting Flow All	1167	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	599	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	599	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0
HCM LOS	

Minor Lane/Major Mvmt

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	0.6

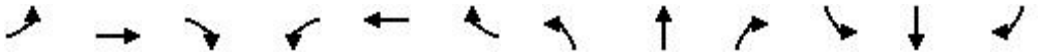
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	10	22	28	988	539	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	200	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	24	30	1074	586	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1721	586	586	0	-	0
Stage 1	586	-	-	-	-	-
Stage 2	1135	-	-	-	-	-
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	98	510	989	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	95	510	989	-	-	-
Mov Cap-2 Maneuver	95	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	298	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.4	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	989	-	95	510	-	-
HCM Lane V/C Ratio	0.031	-	0.114	0.047	-	-
HCM Control Delay (s)	8.8	-	47.7	12.4	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.1	-	-

Two Way Analysis cannot be performed on Signalized Intersection.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	91	89	115	111	1	47	212	153	3	145	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	176.2	190.0	186.3	173.2	190.0
Adj Flow Rate, veh/h	40	110	107	139	134	1	57	255	0	4	175	52
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	53	136	132	185	426	3	98	938	0	8	618	184
Arrive On Green	0.03	0.16	0.16	0.10	0.23	0.23	0.07	0.71	0.00	0.00	0.48	0.48
Sat Flow, veh/h	1774	869	845	1774	1847	14	1774	1762	0	1774	1283	381
Grp Volume(v), veh/h	40	0	217	139	0	135	57	255	0	4	0	227
Grp Sat Flow(s),veh/h/ln	1774	0	1714	1774	0	1860	1774	1762	0	1774	0	1665
Q Serve(g_s), s	1.8	0.0	9.6	6.0	0.0	4.7	2.5	4.1	0.0	0.2	0.0	6.5
Cycle Q Clear(g_c), s	1.8	0.0	9.6	6.0	0.0	4.7	2.5	4.1	0.0	0.2	0.0	6.5
Prop In Lane	1.00		0.49	1.00		0.01	1.00		0.00	1.00		0.23
Lane Grp Cap(c), veh/h	53	0	268	185	0	429	98	938	0	8	0	802
V/C Ratio(X)	0.76	0.00	0.81	0.75	0.00	0.31	0.58	0.27	0.00	0.53	0.00	0.28
Avail Cap(c_a), veh/h	135	0	413	337	0	660	180	938	0	90	0	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.98	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	32.1	34.3	0.0	25.2	35.7	6.0	0.0	39.2	0.0	12.3
Incr Delay (d2), s/veh	20.0	0.0	6.8	6.0	0.0	0.4	5.3	0.7	0.0	47.4	0.0	0.9
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(50%),veh/ln	1.1	0.0	5.1	3.2	0.0	2.5	1.4	2.1	0.0	0.2	0.0	3.2
LnGrp Delay(d),s/veh	58.0	0.0	39.0	40.4	0.0	25.6	41.0	6.7	0.0	86.6	0.0	13.1
LnGrp LOS	E		D	D		C	D	A		F		B
Approach Vol, veh/h		257			274			312			231	
Approach Delay, s/veh		41.9			33.1			13.0			14.4	
Approach LOS		D			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	63.1	12.2	16.3	25.5	42.0	6.3	22.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	42.0	15.0	19.0	8.0	38.0	6.0	28.0
Max Q Clear Time (g_c+I1), s	2.2	6.1	8.0	11.6	4.5	8.5	3.8	6.7
Green Ext Time (p_c), s	0.0	1.8	0.6	0.7	0.5	1.4	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	29	100	217	69	287	99	557	379	62	40	272	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	171.8	190.0	186.3	172.1	190.0
Adj Flow Rate, veh/h	35	122	265	84	350	121	679	462	76	49	332	62
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	45	115	249	92	325	112	628	759	125	63	294	55
Arrive On Green	0.03	0.22	0.22	0.05	0.25	0.25	0.35	0.53	0.53	0.01	0.07	0.07
Sat Flow, veh/h	1774	524	1138	1774	1324	458	1774	1440	237	1774	1411	263
Grp Volume(v), veh/h	35	0	387	84	0	471	679	0	538	49	0	394
Grp Sat Flow(s),veh/h/ln	1774	0	1662	1774	0	1782	1774	0	1676	1774	0	1674
Q Serve(g_s), s	1.9	0.0	21.0	4.5	0.0	23.6	34.0	0.0	21.5	2.6	0.0	20.0
Cycle Q Clear(g_c), s	1.9	0.0	21.0	4.5	0.0	23.6	34.0	0.0	21.5	2.6	0.0	20.0
Prop In Lane	1.00		0.68	1.00		0.26	1.00		0.14	1.00		0.16
Lane Grp Cap(c), veh/h	45	0	364	92	0	438	628	0	884	63	0	349
V/C Ratio(X)	0.78	0.00	1.06	0.91	0.00	1.08	1.08	0.00	0.61	0.78	0.00	1.13
Avail Cap(c_a), veh/h	74	0	364	92	0	438	628	0	884	111	0	349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	46.5	0.0	37.5	45.3	0.0	36.2	31.0	0.0	15.8	47.1	0.0	44.7
Incr Delay (d2), s/veh	24.7	0.0	65.3	64.7	0.0	65.0	59.7	0.0	3.1	18.2	0.0	87.5
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(50%),veh/ln	1.2	0.0	16.2	3.9	0.0	19.5	27.0	0.0	10.6	1.6	0.0	17.7
LnGrp Delay(d),s/veh	71.2	0.0	102.8	110.0	0.0	101.2	90.7	0.0	18.9	65.2	0.0	132.2
LnGrp LOS	E		F	F		F	F		B	F		F
Approach Vol, veh/h		422			555			1217			443	
Approach Delay, s/veh		100.2			102.6			58.9			124.8	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	54.6	9.0	25.0	38.0	24.0	6.4	27.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	48.0	5.0	21.0	34.0	20.0	4.0	22.0
Max Q Clear Time (g_c+I1), s	4.6	23.5	6.5	23.0	36.0	22.0	3.9	25.6
Green Ext Time (p_c), s	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	85.8
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	3	109	411	326	23
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	1	3	118	447	354	25
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	8	7	464	1669	1090	926
Arrive On Green	0.00	0.00	0.52	1.00	1.00	1.00
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	1	3	118	447	354	25
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	0.0	0.2	2.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.2	2.9	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	8	7	464	1669	1090	926
V/C Ratio(X)	0.13	0.45	0.25	0.27	0.32	0.03
Avail Cap(c_a), veh/h	353	315	464	1669	1090	926
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.79	0.79	0.92	0.92
Uniform Delay (d), s/veh	39.9	39.9	14.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	7.7	40.0	0.2	0.3	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	1.5	0.1	0.2	0.0
LnGrp Delay(d),s/veh	47.6	79.9	15.1	0.3	0.7	0.0
LnGrp LOS	D	E	B	A	A	A
Approach Vol, veh/h	4			565	379	
Approach Delay, s/veh	71.8			3.4	0.7	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		91.7		4.3	40.7	51.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		72.0		16.0	21.0	47.0		
Max Q Clear Time (g_c+I1), s		2.0		2.2	4.9	2.0		
Green Ext Time (p_c), s		3.5		0.0	2.9	2.5		

Intersection Summary	
HCM 2010 Ctrl Delay	2.6
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	22	36	999	542	19
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	18	24	39	1086	589	21
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	53	47	51	1626	1483	1260
Arrive On Green	0.03	0.03	0.03	0.87	0.80	0.80
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	18	24	39	1086	589	21
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	0.8	1.2	1.8	14.6	7.8	0.2
Cycle Q Clear(g_c), s	0.8	1.2	1.8	14.6	7.8	0.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	53	47	51	1626	1483	1260
V/C Ratio(X)	0.34	0.51	0.77	0.67	0.40	0.02
Avail Cap(c_a), veh/h	344	307	129	1626	1483	1260
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	39.2	39.4	39.8	1.6	2.5	1.7
Incr Delay (d2), s/veh	3.7	8.1	21.0	2.2	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	1.2	7.9	4.3	0.1
LnGrp Delay(d),s/veh	42.9	47.5	60.8	3.8	3.3	1.8
LnGrp LOS	D	D	E	A	A	A
Approach Vol, veh/h	42			1125	610	
Approach Delay, s/veh	45.5			5.8	3.3	
Approach LOS	D			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		89.5		6.5	6.4	83.2		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		72.0		16.0	6.0	62.0		
Max Q Clear Time (g_c+I1), s		16.6		3.2	3.8	9.8		
Green Ext Time (p_c), s		23.2		0.1	0.0	22.7		

Intersection Summary	
HCM 2010 Ctrl Delay	5.8
HCM 2010 LOS	A

Existing Plus Project AM Peak Hour

Scenario Report

Scenario:	Exist Plus Proj AM
Command:	Exist Plus Proj AM
Volume:	Existing AM
Geometry:	Exist Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	AM Pk Hr
Trip Distribution:	AM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Existing Plus Project AM Peak Hour

Trip Generation Report

Forecast for AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	VLDR	55.00	SFDUs	0.19	0.56	10	31	41	1.6
	Zone 1 Subtotal					10	31	41	1.6
2	PMR 1	144.00	SFDUs	0.19	0.56	27	81	108	4.1
2	PMR 1	16.00	MFDUs	0.10	0.41	2	7	9	0.3
	Zone 2 Subtotal					29	88	117	4.5
3	PMR 2	108.00	SFDUs	0.19	0.56	21	60	81	3.1
3	PMR 2	13.00	MFDUs	0.10	0.41	1	5	6	0.2
	Zone 3 Subtotal					22	65	87	3.3
4	PMR 3	93.00	SFDUs	0.19	0.56	18	52	70	2.7
4	PMR 3	11.00	MFDUs	0.10	0.41	1	5	6	0.2
	Zone 4 Subtotal					19	57	76	2.9
5	PMR 4	117.00	SFDUs	0.19	0.56	22	66	88	3.4
5	PMR 4	14.00	MFDUs	0.10	0.41	1	6	7	0.3
	Zone 5 Subtotal					23	72	95	3.6
6	PMR 5	47.00	SFDUs	0.19	0.56	9	26	35	1.3
6	PMR 5	6.00	MFDUs	0.10	0.41	1	2	3	0.1
	Zone 6 Subtotal					10	28	38	1.4
7	PMR 6	66.00	SFDUs	0.19	0.56	13	37	50	1.9
7	PMR 6	8.00	MFDUs	0.10	0.41	1	3	4	0.2
	Zone 7 Subtotal					14	40	54	2.1
8	PMR 7	95.00	SFDUs	0.19	0.56	18	53	71	2.7
8	PMR 7	11.00	MFDUs	0.10	0.41	1	5	6	0.2
	Zone 8 Subtotal					19	58	77	2.9
9	PMR 8	86.00	SFDUs	0.19	0.56	16	48	64	2.4
9	PMR 8	10.00	MFDUs	0.10	0.41	1	4	5	0.2
	Zone 9 Subtotal					17	52	69	2.6
10	PMR 9	74.00	SFDUs	0.19	0.56	14	41	55	2.1
10	PMR 9	9.00	MFDUs	0.10	0.41	1	4	5	0.2
	Zone 10 Subtotal					15	45	60	2.3
11	PMR 10	33.00	SFDUs	0.19	0.56	6	18	24	0.9
11	PMR 10	4.00	MFDUs	0.10	0.41	0	2	2	0.1
	Zone 11 Subtotal					6	20	26	1.0
12	PMR 12	137.00	SFDUs	0.19	0.56	26	77	103	3.9
12	PMR 12	16.00	MFDUs	0.10	0.41	2	7	9	0.3

Existing Plus Project AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
	Zone 12 Subtotal					28	84	112	4.3
14	Prof Office	8.30	Off Pk Acres	23.60	2.05	196	17	213	8.1
	Zone 14 Subtotal					196	17	213	8.1
15	BP-1	288.15	Busi Pk KSF	1.19	0.21	343	61	404	15.4
	Zone 15 Subtotal					343	61	404	15.4
16	BP-2	195.15	Busi Pk KSF	1.19	0.21	232	41	273	10.4
	Zone 16 Subtotal					232	41	273	10.4
17	BP-3	419.27	Busi Pk KSF	1.19	0.21	499	88	587	22.4
	Zone 17 Subtotal					499	88	587	22.4
18	CC 1	51.18	Shop Ctr KSF	0.51	0.33	26	17	43	1.6
	Zone 18 Subtotal					26	17	43	1.6
19	CC 2	246.11	Shop Ctr KSF	0.51	0.33	126	81	207	7.9
	Zone 19 Subtotal					126	81	207	7.9
20	HDR	180.00	MFDUs	0.10	0.41	18	74	92	3.5
	Zone 20 Subtotal					18	74	92	3.5
21	Exist LU for	36.00	Exist SFDUs	-0.19	-0.56	-7	-20	-27	-1.0
21	Exist LU for	11.00	Exist MFDUs	-0.10	-0.41	-1	-5	-6	-0.2
21	Exist LU for	54.50	Exist Wrhs KSF	-0.24	-0.06	-13	-3	-16	-0.6
	Zone 21 Subtotal					-21	-28	-49	-1.9
TOTAL						1631	991	2622	100.0

Existing Plus Project AM Peak Hour

Trip Distribution Report

Percent Of Trips AM Pk Hr

Zone	To Gates 1	2	3	4	5	6	7	8	9	15	16
1	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
2	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
3	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
4	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
5	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
6	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
7	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
8	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
9	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
10	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
11	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
12	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
13	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
14	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
15	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
16	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
17	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
18	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
19	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
20	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
21	10.0	3.0	9.0	9.0	1.0	0.0	5.0	33.0	29.0	0.0	1.0

Zone	To Gates 17	18	19
1	0.0	1.0	2.0
2	0.0	1.0	2.0
3	0.0	1.0	2.0
4	0.0	1.0	2.0
5	0.0	1.0	2.0
6	0.0	1.0	2.0
7	0.0	1.0	2.0
8	0.0	1.0	2.0
9	0.0	1.0	2.0
10	0.0	1.0	2.0
11	0.0	1.0	2.0
12	0.0	1.0	2.0
13	0.0	1.0	2.0
14	2.0	1.0	2.0
15	2.0	1.0	2.0
16	2.0	1.0	2.0
17	2.0	1.0	2.0
18	2.0	1.0	2.0
19	2.0	1.0	2.0
20	0.0	1.0	2.0

Existing Plus Project AM Peak Hour

Zone	To Gates 17	18	19
21	0.0	0.0	0.0

Existing Plus Project AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 4 Stuhr Road & Draper Road	A	9.2	0.030	A	9.7	0.035	+ 0.483 D/V
# 5 Jensen Road & Fig Lane	B	17.7	0.121	C	30.7	0.498	+13.031 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	9.5	0.350	B	12.0	0.552	+ 0.202 V/C
# 7 Fig Lane & Yolo Street	B	12.5	0.046	F	54.1	0.552	+41.632 D/V
# 8 Stuhr & Harvey	A	0.4	0.078	B	13.8	0.161	+13.342 D/V
# 9 Stuhr Road & Fig Lane	A	0.4	0.039	C	22.6	0.260	+22.125 D/V
# 13 Stuhr Road & Collector Rd B	A	0.0	0.000	A	9.1	0.080	+ 9.112 D/V
# 14 Jensen Road & Collector Rd B	A	2.6	0.008	A	3.3	0.167	+ 0.159 V/C
# 15 Stuhr & Eastin	B	10.2	0.054	B	11.0	0.062	+ 0.885 D/V
# 16 Stuhr & Villa Manucha	A	8.9	0.107	A	9.7	0.120	+ 0.773 D/V

Existing Plus Project AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	??? / ???	No / No
# 6 Orestimba/Yolo St & Hardin Rd	???	No
# 7 Fig Lane & Yolo Street	??? / ???	No / No
# 13 Stuhr Road & Collector Rd B	??? / ???	No / No
# 15 Stuhr & Eastin	??? / ???	No / No
# 16 Stuhr & Villa Manucha	??? / ???	No / No

Existing Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0 0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	23	0	23	0	0	0	0	77	13	23	112	0
ApproachDel:	9.7			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=46]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=271]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	0	1	0 0 0
Initial Vol:	23	0	23	0	0	0	0	77	13	23	112	0

Major Street Volume: 225
Minor Approach Volume: 46
Minor Approach Volume Threshold: 617

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	0	0	1! 0	0	0	0	1! 0 0
Initial Vol:	16	153	30	117	202	17	23	85	14	38	38	125

Major Street Volume: 535
Minor Approach Volume: 201
Minor Approach Volume Threshold: 386

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Fig Lane & Yolo Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1	0
Initial Vol:	24	104	8	58	178	10	40	221	49	0	204	176
ApproachDel:	30.4			54.1			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=136]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1072]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=3.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=246]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1072]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Fig Lane & Yolo Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1	0
Initial Vol:	24	104	8	58	178	10	40	221	49	0	204	176

Major Street Volume: 690
Minor Approach Volume: 246
Minor Approach Volume Threshold: 318

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	1	0	0	0	0	0	1	0
Initial Vol:	0	0	70	0	0	0	0	95	8	0	81	0
ApproachDel:	9.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=70]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=254]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	1	0	0	0	0	0	1	0
Initial Vol:	0	0	70	0	0	0	0	95	8	0	81	0

Major Street Volume: 184

Minor Approach Volume: 70

Minor Approach Volume Threshold: 868

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0	0 0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	4	8	0	1	35	8	3	59	6	11	174	4
ApproachDel:	11.0			11.0			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=12]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=313]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=44]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=313]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0	0 0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	4	8	0	1	35	8	3	59	6	11	174	4

Major Street Volume: 257
Minor Approach Volume: 44
Minor Approach Volume Threshold: 582

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #16 Stuhr & Villa Manucha

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1	0	1	0	0	0
Initial Vol:	0	0	0	0	0	86	154	127	0	0	162	1
ApproachDel:	xxxxxx			9.7			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=86]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=530]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Stuhr & Villa Manucha

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1	0	1	0	0	0
Initial Vol:	0	0	0	0	0	86	154	127	0	0	162	1

Major Street Volume: 444
Minor Approach Volume: 86
Minor Approach Volume Threshold: 436

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: A[9.7]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Volume Module: AM Peak Hour												
Base Vol:	23	0	18	0	0	0	0	42	13	22	40	0
Growth 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
Initial Bse:	23	0	18	0	0	0	0	42	13	22	40	0
Added Vol:	0	0	5	0	0	0	0	35	0	1	72	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	0	23	0	0	0	0	77	13	23	112	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	25	0	25	0	0	0	0	84	14	25	122	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	0	25	0	0	0	0	84	14	25	122	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	263	263	91	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	98	xxxx	xxxxx
Potent Cap.:	726	643	967	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1495	xxxx	xxxxx
Move Cap.:	717	632	967	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1495	xxxx	xxxxx
Volume/Cap:	0.03	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	823	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	9.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:		9.7		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		A		*			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100 secs		
InitVolume:										60	75	
Saturation:										1394	1862	
ArrivalType:										3	3	
G/C:										0.29	0.62	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.290	0.620	
gq1:										3.06	1.53	
gq2:										0.14	0.06	
gq:										3.19	1.59	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										14	9	
vcg:										17	21	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:										0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	263	263	91	275	270	122	0	xxxxx	xxxxx	98	xxxxx	xxxxx
AdjCnflVol:	263	263	91	275	270	122	0	xxxxx	xxxxx	98	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	263	263	91	275	270	122	0	xxxxx	xxxxx	98	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	726	643	967	681	640	935	1623	xxxxx	xxxxx	1495	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	726	643	967	681	640	935	1623	xxxxx	xxxxx	1495	xxxxx	xxxxx

Existing Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Cycle (sec):	100			Critical Vol./Cap.(X):			0.498						
Loss Time (sec):	12			Average Delay (sec/veh):			30.7						
Optimal Cycle:	41			Level Of Service:			C						

Street Name:	Fig Lane						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 2	0 1	1	0 2	0 1
Volume Module:AM Peak Hour													
Base Vol:	3	6	42	1	6	0	1	3	5	119	0	0	
Growth 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	
Initial Bse:	3	6	42	1	6	0	1	3	5	119	0	0	
Added Vol:	36	168	1	130	127	7	26	156	87	139	59	306	
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	39	174	43	131	133	7	27	159	92	258	59	306	
User 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	
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
PHF Volume:	42	189	47	142	145	8	29	173	100	280	64	333	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	42	189	47	142	145	8	29	173	100	280	64	333	
PCE 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	
MLF 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	
FinalVolume:	42	189	47	142	145	8	29	173	100	280	64	333	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.93	0.95	0.95	0.93	0.97	0.97	0.93	0.93	0.83	0.93	0.93	0.83	
Lanes:	1.00	0.80	0.20	1.00	0.95	0.05	1.00	2.00	1.00	1.00	2.00	1.00	
Final Sat.:	1769	1448	358	1769	1757	92	1769	3538	1583	1769	3538	1583	
Capacity Analysis Module:													
Vol/Sat:	0.02	0.13	0.13	0.08	0.08	0.08	0.02	0.05	0.06	0.16	0.02	0.21	
Crit Moves:		****		****			****					****	
Green/Cycle:	0.10	0.26	0.26	0.16	0.33	0.33	0.03	0.13	0.13	0.33	0.42	0.42	
Volume/Cap:	0.25	0.50	0.50	0.50	0.25	0.25	0.50	0.38	0.49	0.49	0.04	0.50	
Delay/Veh:	42.7	32.1	32.1	39.6	24.8	24.8	54.0	40.3	42.2	27.7	17.0	21.7	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	42.7	32.1	32.1	39.6	24.8	24.8	54.0	40.3	42.2	27.7	17.0	21.7	
LOS by Move:	D	C	C	D	C	C	D	D	D	C	B	C	
HCM2k95thQ:	73	312	312	223	171	171	83	146	173	341	31	365	

Note: Queue reported is the distance per lane in feet.

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 2	0 1	1	0 2	0 1
Lane Group:	L	RT		RT	L	RT	RT	L	T	R	L	T	R
#LnsInGrps:	1	1		1	1	1	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:													
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12	
CrsswalkWid:		8			8			8			8		
% Hev Veh:		2			2			2			2		
Grade:		0%			0%			0%			0%		
Parking/Hr:		No			No			No			No		
Bus Stp/Hr:		0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >												
Cnft Ped/Hr:		0			0			0			0		
ExclusiveRT:		Include			Include			Include			Include		
% RT Prtct:		0			0			0			0		
HCM Ops f(lt) Adj Case Module:													
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	
HCM Ops Saturation Adj Module:													
Ln Wid 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	
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Grade 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	
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	
Area 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	
RT Adj:	xxxx	0.97	0.97	xxxx	0.99	0.99	xxxx	xxxx	0.85	xxxx	xxxx	0.85	
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	
PedBike 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	
HCM Sat Adj:	0.93	0.95	0.95	0.93	0.97	0.97	0.93	0.98	0.83	0.93	0.98	0.83	
Usr Sat 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	
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Fnl Sat Adj:	0.93	0.95	0.95	0.93	0.97	0.97	0.93	0.93	0.83	0.93	0.93	0.83	
Delay Adjustment Factor Module:													
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >												
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >												
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.10	0.26	0.26	0.16	0.33	0.33	0.03	0.13	0.13	0.33	0.42	0.42
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.1	5.6	5.6	3.6	3.1	3.1	0.8	2.3	2.6	6.2	0.6	6.8
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.3	1.0	1.0	0.9	0.3	0.3	0.8	0.6	0.9	0.9	0.0	1.0
HCM2KQueue:	1.4	6.5	6.5	4.5	3.4	3.4	1.6	2.9	3.5	7.2	0.6	7.7
70th%Factor:	1.20	1.18	1.18	1.19	1.19	1.19	1.20	1.19	1.19	1.18	1.20	1.18
HCM2k70thQ:	1.7	7.7	7.7	5.4	4.1	4.1	1.9	3.5	4.1	8.5	0.7	9.1
85th%Factor:	1.59	1.54	1.54	1.56	1.57	1.57	1.58	1.57	1.57	1.54	1.59	1.53
HCM2k85thQ:	2.2	10.0	10.0	7.1	5.4	5.4	2.6	4.6	5.4	11.0	1.0	11.8
90th%Factor:	1.77	1.69	1.69	1.72	1.74	1.74	1.77	1.75	1.74	1.68	1.79	1.67
HCM2k90thQ:	2.5	11.0	11.0	7.8	5.9	5.9	2.9	5.1	6.0	12.0	1.1	12.9
95th%Factor:	2.05	1.92	1.92	1.97	2.00	2.00	2.05	2.01	1.99	1.90	2.08	1.89
HCM2k95thQ:	2.9	12.5	12.5	8.9	6.8	6.8	3.3	5.8	6.9	13.6	1.2	14.6
98th%Factor:	2.60	2.31	2.31	2.40	2.47	2.47	2.58	2.50	2.47	2.28	2.66	2.25
HCM2k98thQ:	3.7	15.0	15.0	10.9	8.5	8.5	4.2	7.2	8.6	16.3	1.6	17.4

Existing Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.552
Loss Time (sec):	0	Average Delay (sec/veh):	12.0
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:	AM Peak Hour											
Base Vol:	14	144	30	49	174	16	19	11	9	37	18	100
Growth 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
Initial Bse:	14	144	30	49	174	16	19	11	9	37	18	100
Added Vol:	2	9	0	68	28	1	4	74	5	1	20	25
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	153	30	117	202	17	23	85	14	38	38	125
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	17	166	33	127	220	18	25	92	15	41	41	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	166	33	127	220	18	25	92	15	41	41	136
PCE 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
MLF 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
FinalVolume:	17	166	33	127	220	18	25	92	15	41	41	136
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.08	0.77	0.15	0.35	0.60	0.05	0.19	0.70	0.11	0.19	0.19	0.62
Final Sat.:	51	486	95	230	398	33	106	393	65	118	118	388
Capacity Analysis Module:												
Vol/Sat:	0.34	0.34	0.34	0.55	0.55	0.55	0.24	0.24	0.24	0.35	0.35	0.35
Crit Moves:			****			****			****			****
Delay/Veh:	10.8	10.8	10.8	14.0	14.0	14.0	10.3	10.3	10.3	10.8	10.8	10.8
Delay 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
AdjDel/Veh:	10.8	10.8	10.8	14.0	14.0	14.0	10.3	10.3	10.3	10.8	10.8	10.8
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
ApproachDel:	10.8			14.0			10.3			10.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.8			14.0			10.3			10.8		
LOS by Appr:	B			B			B			B		
AllWayAvgQ:	10.9	10.9	10.9	26.5	26.5	26.5	6.0	6.0	6.0	10.8	10.8	10.8

Note: Queue reported is the distance per lane in feet.

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM 4-Way Stop Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	1			1			1			1		
P[C1]:	0.25			0.36			0.22			0.25		
P[C2]:	0.28			0.17			0.10			0.07		
P[C3]:	0.19			0.27			0.35			0.40		
P[C4]:	0.24			0.17			0.28			0.24		
P[C5]:	0.04			0.02			0.05			0.04		
Padj[C1]:	0.015			0.013			0.019			0.017		
Padj[C2]:	0.005			0.005			0.010			0.009		
Padj[C3]:	-0.002			-0.006			-0.007			-0.009		
Padj[C4]:	-0.014			-0.010			-0.016			-0.014		
Padj[C5]:	-0.004			-0.002			-0.005			-0.004		
Lane:	L1			L1			L1			L1		
LaneType:	LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE		
HeadwayAdj:	-0.040			0.073			0.003			-0.301		
Volume:	216			365			133			218		
Capacity:	632			662			564			624		
DegOfUtil:	0.32			0.53			0.21			0.32		
DepHeadway:	5.33			5.23			5.74			5.30		
ServiceTime:	3.3			3.2			3.7			3.3		
Delay:	10.8			14.0			10.3			10.8		
Queue:	0.4			1.1			0.2			0.4		
Approach:	North Bound			South Bound			East Bound			West Bound		
ApproachDel:	10.8			14.0			10.3			10.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.8			14.0			10.3			10.8		
LOS by Appr:	B			B			B			B		

OverallDel: 12.0
OverallLOS: B

Existing Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): 16.6 Worst Case Level Of Service: F[54.1]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0 1! 0	0	0	0 1! 0	0	0	0 1! 0	0	0	0 0 1	0
Volume Module:AM Peak Hour												
Base Vol:	6	11	5	22	21	3	8	160	1	2	183	55
Growth 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
Initial Bse:	6	11	5	22	21	3	8	160	1	2	183	55
Added Vol:	18	93	3	36	157	7	32	61	48	-2	21	121
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	104	8	58	178	10	40	221	49	0	204	176
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	26	113	9	63	193	11	43	240	53	0	222	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	26	113	9	63	193	11	43	240	53	0	222	191
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	773	767	267	732	698	317	413	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	316	333	772	372	337	364	723	1146	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	170	320	772	235	350	723	1146	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.15	0.35	0.01	0.27	0.55	0.02	0.04	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	285	xxxxx	xxxx	320	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	2.8	xxxxx	xxxxx	7.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	30.4	xxxxx	xxxxx	54.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	D	*	*	F	*	*	*	*	*	*	*
ApproachDel:		30.4			54.1			xxxxxx			xxxxxx	
ApproachLOS:		D			F			*			*	

Note: Queue reported is the distance per lane in feet.

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Existing Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Stuhr & Harvey

Cycle (sec):	100			Critical Vol./Cap.(X):			0.161					
Loss Time (sec):	9			Average Delay (sec/veh):			13.8					
Optimal Cycle:	22			Level Of Service:			B					

Street Name:	Harvey Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	0	1	0	1	0	0
Volume Module:AM Peak Hour												
Base Vol:	0	0	0	0	0	0	0	122	0	0	62	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	122	0	0	62	0
Added Vol:	60	0	15	0	0	0	0	25	15	7	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	60	0	15	0	0	0	0	147	15	7	75	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	65	0	16	0	0	0	0	160	16	8	82	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	0	16	0	0	0	0	160	16	8	82	0
PCE 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
MLF 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
FinalVolume:	65	0	16	0	0	0	0	160	16	8	82	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00
Lanes:	0.80	0.00	0.20	0.00	0.00	0.00	0.00	0.91	0.09	1.00	1.00	0.00
Final Sat.:	1394	0	349	0	0	0	0	1668	170	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.04	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.59	0.59	0.03	0.62	0.00
Volume/Cap:	0.16	0.00	0.16	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.07	0.00
Delay/Veh:	26.6	0.0	26.6	0.0	0.0	0.0	0.0	9.2	9.2	49.2	7.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.6	0.0	26.6	0.0	0.0	0.0	0.0	9.2	9.2	49.2	7.6	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	D	A	A
HCM2k95thQ:	96	0	96	0	0	0	0	121	121	20	50	0

Note: Queue reported is the distance per lane in feet.

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1! 0	0	0	0 0	0	0 0 1	0		1 0	1 0	0
Lane Group:	LTR		LTR	xxxx		xxxx	xxxx	RT		RT	L	T xxxx
#LnsInGrps:	1		1	0		0	0	1		1	1	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12		12	12		12	12		12	12		12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4 xxxx		4	xxxx xxxx		xxxx	xxxx xxxx		xxxx	1 xxxx		xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00 xxxx		1.00	xxxx xxxx		xxxxx	xxxx 1.00		1.00	1.00 1.00		xxxxx
Hev Veh Adj:	0.98 xxxx		0.98	xxxx xxxx		xxxxx	xxxx 0.98		0.98	0.98 0.98		xxxxx
Grade Adj:	1.00 xxxx		1.00	xxxx xxxx		xxxxx	xxxx 1.00		1.00	1.00 1.00		xxxxx
Parking Adj:	1.00 xxxx		1.00	xxxx xxxx		xxxxx	xxxx 1.00		1.00	xxxx 1.00		xxxxx
Bus Stp Adj:	1.00 xxxx		1.00	xxxx xxxx		xxxxx	xxxx 1.00		1.00	xxxx 1.00		xxxxx
Area Adj:	1.00 xxxx		1.00	xxxx xxxx		xxxxx	xxxx 1.00		1.00	1.00 1.00		xxxxx
RT Adj:	0.97 xxxx		0.97	xxxx xxxx		xxxxx	xxxx 0.99		0.99	xxxx xxxx		xxxxx
LT Adj:	0.96 xxxx		0.96	xxxx xxxx		xxxxx	xxxx xxxx		xxxxx	0.95 xxxx		xxxxx
PedBike 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
HCM Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.59	0.59	0.03	0.62	0.00
ArrivalType:	3			3			3			3		
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.7	0.0	1.7	0.0	0.0	0.0	0.0	2.2	2.2	0.2	0.9	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.0
HCM2KQueue:	1.9	0.0	1.9	0.0	0.0	0.0	0.0	2.4	2.4	0.4	1.0	0.0
70th%Factor:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.20	1.20	1.20
HCM2k70thQ:	2.2	0.0	2.2	0.0	0.0	0.0	0.0	2.9	2.9	0.5	1.2	0.0
85th%Factor:	1.58	1.60	1.58	1.60	1.60	1.60	1.60	1.58	1.58	1.60	1.59	1.60
HCM2k85thQ:	3.0	0.0	3.0	0.0	0.0	0.0	0.0	3.8	3.8	0.6	1.6	0.0
90th%Factor:	1.76	1.80	1.76	1.80	1.80	1.80	1.80	1.75	1.75	1.79	1.78	1.80
HCM2k90thQ:	3.3	0.0	3.3	0.0	0.0	0.0	0.0	4.2	4.2	0.7	1.7	0.0
95th%Factor:	2.04	2.10	2.04	2.10	2.10	2.10	2.10	2.03	2.03	2.09	2.07	2.10
HCM2k95thQ:	3.8	0.0	3.8	0.0	0.0	0.0	0.0	4.8	4.8	0.8	2.0	0.0
98th%Factor:	2.57	2.70	2.57	2.70	2.70	2.70	2.70	2.53	2.53	2.67	2.63	2.70
HCM2k98thQ:	4.8	0.0	4.8	0.0	0.0	0.0	0.0	6.1	6.1	1.0	2.6	0.0

Existing Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Stuhr Road & Fig Lane

Cycle (sec):	100					Critical Vol./Cap.(X):				0.260						
Loss Time (sec):	9					Average Delay (sec/veh):				22.6						
Optimal Cycle:	24					Level Of Service:				C						
Street Name:	Fig Lane								Stuhr Road							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Volume Module: AM Peak Hour																
Base Vol:	0	0	0		0	0	0		0	63	0		0	61	0	
Growth 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	
Initial Bse:	0	0	0		0	0	0		0	63	0		0	61	0	
Added Vol:	16	0	68		0	0	0		0	85	17		136	4	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	16	0	68		0	0	0		0	148	17		136	65	0	
User 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	
PHF Adj:	0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92	
PHF Volume:	17	0	74		0	0	0		0	161	18		148	71	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	17	0	74		0	0	0		0	161	18		148	71	0	
PCE 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	
MLF 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	
FinalVolume:	17	0	74		0	0	0		0	161	18		148	71	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.87	1.00	0.87		1.00	1.00	1.00		1.00	0.97	0.97		0.93	0.98	1.00	
Lanes:	0.19	0.00	0.81		0.00	0.00	0.00		0.00	0.90	0.10		1.00	1.00	0.00	
Final Sat.:	313	0	1331		0	0	0		0	1647	189		1769	1862	0	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.00	0.06		0.00	0.00	0.00		0.00	0.10	0.10		0.08	0.04	0.00	
Crit Moves:			****							****			****			
Green/Cycle:	0.21	0.00	0.21		0.00	0.00	0.00		0.00	0.38	0.38		0.32	0.70	0.00	
Volume/Cap:	0.26	0.00	0.26		0.00	0.00	0.00		0.00	0.26	0.26		0.26	0.05	0.00	
Delay/Veh:	33.2	0.0	33.2		0.0	0.0	0.0		0.0	21.8	21.8		25.4	4.8	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	33.2	0.0	33.2		0.0	0.0	0.0		0.0	21.8	21.8		25.4	4.8	0.0	
LOS by Move:	C		A		C	A	A		A	C	C		C	A	A	
HCM2k95thQ:	124		0		124	0	0		0	189	189		169	35	0	

Note: Queue reported is the distance per lane in feet.

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Stuhr Road & Fig Lane

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Lane Group:	LTR		LTR		LTR	xxxx		xxxx		xxxx	xxxx		RT		RT	L		T		xxxx
#LnsInGrps:	1		1		1	0		0		0	0		1		1	1		1		0
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12		12		12	12		12		12	12		12		12
CrsswalkWid:	8					8					8					8				
% Hev Veh:	2					2					2					2				
Grade:	0%					0%					0%					0%				
Parking/Hr:	No					No					No					No				
Bus Stp/Hr:	0					0					0					0				
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:	0					0					0					0				
ExclusiveRT:	Include					Include					Include					Include				
% RT Prtct:	0					0					0					0				
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	4	xxxx		4		xxxx	xxxx		xxxx		xxxx	xxxx		xxxx		1	xxxx		xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	1.00	xxxx		1.00		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		1.00	1.00		xxxxx	
Hev Veh Adj:	0.98	xxxx		0.98		xxxx	xxxx		xxxxx		xxxx	0.98		0.98		0.98	0.98		xxxxx	
Grade Adj:	1.00	xxxx		1.00		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		1.00	1.00		xxxxx	
Parking Adj:	1.00	xxxx		1.00		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		xxxx	1.00		xxxxx	
Bus Stp Adj:	1.00	xxxx		1.00		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		xxxx	1.00		xxxxx	
Area Adj:	1.00	xxxx		1.00		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		1.00	1.00		xxxxx	
RT Adj:	0.89	xxxx		0.89		xxxx	xxxx		xxxxx		xxxx	0.99		0.99		xxxx	xxxx		xxxxx	
LT Adj:	0.99	xxxx		0.99		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		0.95	xxxx		xxxxx	
PedBike 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	
HCM Sat Adj:	0.87	1.00		0.87		1.00	1.00		1.00		1.00	0.97		0.97		0.93	0.98		1.00	
Usr Sat 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	
MLF Sat 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	
Fnl Sat Adj:	0.87	1.00		0.87		1.00	1.00		1.00		1.00	0.97		0.97		0.93	0.98		1.00	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > >															
DelAdjFctr:	1.00	0.00		1.00		0.00	0.00		0.00		0.00	1.00		1.00		1.00	1.00		0.00	

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

****

Intersection #9 Stuhr Road & Fig Lane

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.21	0.00	0.21	0.00	0.00	0.00	0.00	0.38	0.38	0.32	0.70	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	2.1	0.0	2.1	0.0	0.0	0.0	0.0	3.4	3.4	3.0	0.6	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.1	0.0
HCM2KQueue:	2.5	0.0	2.5	0.0	0.0	0.0	0.0	3.8	3.8	3.4	0.7	0.0
70th%Factor:	1.19	1.20	1.19	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.20	1.20
HCM2k70thQ:	2.9	0.0	2.9	0.0	0.0	0.0	0.0	4.5	4.5	4.0	0.8	0.0
85th%Factor:	1.58	1.60	1.58	1.60	1.60	1.60	1.60	1.56	1.56	1.57	1.59	1.60
HCM2k85thQ:	3.9	0.0	3.9	0.0	0.0	0.0	0.0	5.9	5.9	5.3	1.1	0.0
90th%Factor:	1.75	1.80	1.75	1.80	1.80	1.80	1.80	1.73	1.73	1.74	1.79	1.80
HCM2k90thQ:	4.3	0.0	4.3	0.0	0.0	0.0	0.0	6.6	6.6	5.9	1.2	0.0
95th%Factor:	2.02	2.10	2.02	2.10	2.10	2.10	2.10	1.99	1.99	2.00	2.08	2.10
HCM2k95thQ:	5.0	0.0	5.0	0.0	0.0	0.0	0.0	7.5	7.5	6.8	1.4	0.0
98th%Factor:	2.53	2.70	2.53	2.70	2.70	2.70	2.70	2.45	2.45	2.47	2.65	2.70
HCM2k98thQ:	6.2	0.0	6.2	0.0	0.0	0.0	0.0	9.3	9.3	8.4	1.8	0.0

Existing Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #13 Stuhr Road & Collector Rd B

****

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: A[9.1]

****

Street Name:	Collector Rd B						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0 0 1	0	0	0 0 0	0	0	1 0 1	0	0	1 0 0
Volume Module:	AM Peak Hour											
Base Vol:	0	0	0	0	0	0	0	63	0	0	61	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	63	0	0	61	0
Added Vol:	0	0	70	0	0	0	0	32	8	0	20	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	70	0	0	0	0	95	8	0	81	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	76	0	0	0	0	103	9	0	88	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	76	0	0	0	0	103	9	0	88	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	103	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	952	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	952	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	6.5	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	9.1			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	A			*			*			*		

****

Note: Queue reported is the distance per lane in feet.

****

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

****

Intersection #13 Stuhr Road & Collector Rd B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HevVeh:		2%			2%			2%			2%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Existing Plus Project AM Peak Hour

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

****

Intersection #14 Jensen Road & Collector Rd B

****

Average Delay (sec/veh): 3.3 Level Of Service: A

****

Street Name:	Collector Rd B						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			2		
Volume Module:AM Peak Hour												
Base Vol:	0	0	0	0	0	0	0	9	0	0	3	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	9	0	0	3	0
Added Vol:	8	37	39	107	67	4	2	119	7	18	41	43
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	37	39	107	67	4	2	128	7	18	44	43
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	9	40	42	116	73	4	2	139	8	20	48	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	40	42	116	73	4	2	139	8	20	48	47
PCE 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
MLF 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
FinalVolume:	9	40	42	116	73	4	2	139	8	20	48	47
PCE Module:												
AutoPCE:	9	40	42	116	73	4	2	139	8	20	48	47
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	9	40	42	116	73	4	2	139	8	20	48	47
Delay Module: >> Time Period: 0.25 hours <<												
CircVolume:	258			76			209			51		
MaxVolume:	1061			1159			1087			2387		
PedVolume:	0			0			0			0		
AdjMaxVol:	1061			1159			1087			2387		
ApproachVol:	91			193			149			114		
ApproachV/C:	0.09			0.17			0.14			0.05		
ApproachDel:	3.7			3.7			3.8			1.6		
ApproachLOS:	A			A			A			A		
Queue:	0.3			0.6			0.5			0.2		

Existing Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: B[11.0]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module: AM Peak Hour												
Base Vol:	4	8	0	1	35	8	3	24	6	11	102	4
Growth 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
Initial Bse:	4	8	0	1	35	8	3	24	6	11	102	4
Added Vol:	0	0	0	0	0	0	0	35	0	0	72	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	8	0	1	35	8	3	59	6	11	174	4
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	4	9	0	1	38	9	3	64	7	12	189	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	9	0	1	38	9	3	64	7	12	189	4
Critical Gap Module:												
Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	313	291	xxxxx	293	292	191	193	xxxx	xxxxx	71	xxxx	xxxxx
Potent Cap.:	640	619	xxxxx	659	618	850	1380	xxxx	xxxxx	1530	xxxx	xxxxx
Move Cap.:	599	613	xxxxx	647	612	850	1380	xxxx	xxxxx	1530	xxxx	xxxxx
Volume/Cap:	0.01	0.01	xxxx	0.00	0.06	0.01	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	0.6	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	608	xxxx	xxxxx	xxxx	646	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	11.0	xxxx	xxxxx	xxxxx	11.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.0			11.0			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Existing Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: A[9.7]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 1 0 0 0			0 0 0 1 0		
Volume Module: AM Peak Hour												
Base Vol:	0	0	0	0	0	86	154	44	0	0	44	1
Growth 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
Initial Bse:	0	0	0	0	0	86	154	44	0	0	44	1
Added Vol:	0	0	0	0	0	0	0	83	0	0	118	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	86	154	127	0	0	162	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	0	0	93	167	138	0	0	176	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	93	167	138	0	0	176	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	177	177	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	866	1399	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	866	1399	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.11	0.12	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	9.0	10.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.7	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.7			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #16 Stuhr & Villa Manucha

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:							#91					
Dist(miles):							0.250					
Speed (mph):							1.00					
SignalIndex:							#1					
Cycle Time:							100 secs					
InitVolume:							3	91				
Saturation:							1612	872				
ArrivalType:							3	3				
G/C:							0.00	0.23				
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:							0.004	0.229				
gq1:							0.19	8.05				
gq2:							0.00	0.94				
gq:							0.19	8.99				
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:							0.550					
beta:							0.645					
ta (secs):							900.000					
F:							0.003					
f:							1.000	1.000				
vcmax:							1	24				
vcg:							1	27				
vcmin:							1000	1000				
tp:							0.0	0.0				
p:							0.000					
*** Computation 3: Platoon Event Periods												
pdom/psubo:							0.000/0.000/Unconstrained					
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	696	650	138	649	649	177	177	xxxxx	xxxxx	0	xxxxx	xxxxx
AdjCnflVol:	696	650	138	649	649	177	177	xxxxx	xxxxx	0	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	696	650	138	649	649	177	177	xxxxx	xxxxx	0	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	356	388	910	434	389	866	1399	xxxxx	xxxxx	1623	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	356	388	910	434	389	866	1399	xxxxx	xxxxx	1623	xxxxx	xxxxx

Existing Plus Project AM Peak Hour

Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#4	[2Way95thQ]:	4.8	4.8	4.8	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1.3	1.3	xxxx
#5	[HCM2k95thQ]:	73	312	312	223	171	171	83	146	173	341	31	365
#6	[AllWayAvgQ]	10.9	10.9	10.9	26.5	26.5	26.5	6.0	6.0	6.0	10.8	10.8	10.8
#7	[2Way95thQ]:	69.4	69.4	69.4	181	181	181	3.0	xxxx	xxxx	xxxx	xxxx	xxxx
#8	[HCM2k95thQ]:	96	0	96	0	0	0	0	121	121	20	50	0
#9	[HCM2k95thQ]:	124	0	124	0	0	0	0	189	189	169	35	0
#13	[2Way95thQ]:	xxxx	xxxx	6.5	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#14	[DesignQueue]:	0	7	0	0	15	0	0	12	0	0	4	0
#15	[2Way95thQ]:	1.6	1.6	xxxx	6.0	6.0	6.0	0.2	xxxx	xxxx	0.6	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	9.0	10.2	10.2	xxxx	xxxx	xxxx	xxxx

Two Way Analysis cannot be performed on Signalized Intersection.

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	513.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	65	1	203	6	2	4	160	734	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	79	1	248	7	2	5	195	895	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2632	2628	1331	2753	2675	895	1378	0	0
Stage 1	1343	1343	-	1285	1285	-	-	-	-
Stage 2	1289	1285	-	1468	1390	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	~ 16	24	~ 189	13	22	339	498	-	-
Stage 1	187	221	-	202	235	-	-	-	-
Stage 2	201	235	-	159	209	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	~ 9	14	~ 189	-	13	339	498	-	-
Mov Cap-2 Maneuver	~ 9	14	-	-	13	-	-	-	-
Stage 1	114	219	-	123	143	-	-	-	-
Stage 2	118	143	-	-	207	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	$ 4401.8		3
HCM LOS	F	-	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	498	-	-	32	-	758	-	-
HCM Lane V/C Ratio	0.392	-	-	10.252	-	0.008	-	-
HCM Control Delay (s)	16.8	-	-	-$ 4401.8	-	9.8	-	-
HCM Lane LOS	C	-	-	F	-	A	-	-
HCM 95th %tile Q(veh)	1.8	-	-	40.1	-	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	5	1053	77
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	6	1284	94

Major/Minor	Major2		
Conflicting Flow All	895	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	758	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	758	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0
HCM LOS	

Minor Lane/Major Mvmt

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	11.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	58	147	84	720	978	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	200	0	200	-	-	200
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	63	160	91	783	1063	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2028	1063	1063	0	-	0
Stage 1	1063	-	-	-	-	-
Stage 2	965	-	-	-	-	-
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	~ 63	271	655	-	-	-
Stage 1	332	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 54	271	655	-	-	-
Mov Cap-2 Maneuver	~ 54	-	-	-	-	-
Stage 1	332	-	-	-	-	-
Stage 2	319	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	110.6	1.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	655	-	54	271	-	-
HCM Lane V/C Ratio	0.139	-	1.167	0.59	-	-
HCM Control Delay (s)	11.4	-	$ 300.3	35.7	-	-
HCM Lane LOS	B	-	F	E	-	-
HCM 95th %tile Q(veh)	0.5	-	5.5	3.5	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Two Way Analysis cannot be performed on Signalized Intersection.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	44	113	156	164	101	1	40	182	134	1	237	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	176.3	190.0	186.3	171.5	190.0
Adj Flow Rate, veh/h	53	136	188	198	122	1	48	219	0	1	286	40
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	466	165	228	245	199	2	65	585	0	3	436	61
Arrive On Green	0.26	0.23	0.23	0.14	0.11	0.11	0.07	0.66	0.00	0.00	0.30	0.30
Sat Flow, veh/h	1774	709	980	1774	1845	15	1774	1763	0	1774	1473	206
Grp Volume(v), veh/h	53	0	324	198	0	123	48	219	0	1	0	326
Grp Sat Flow(s),veh/h/ln	1774	0	1690	1774	0	1860	1774	1763	0	1774	0	1679
Q Serve(g_s), s	1.2	0.0	9.8	5.8	0.0	3.4	1.4	3.0	0.0	0.0	0.0	9.2
Cycle Q Clear(g_c), s	1.2	0.0	9.8	5.8	0.0	3.4	1.4	3.0	0.0	0.0	0.0	9.2
Prop In Lane	1.00		0.58	1.00		0.01	1.00		0.00	1.00		0.12
Lane Grp Cap(c), veh/h	466	0	393	245	0	201	65	585	0	3	0	497
V/C Ratio(X)	0.11	0.00	0.82	0.81	0.00	0.61	0.74	0.37	0.00	0.30	0.00	0.66
Avail Cap(c_a), veh/h	466	0	501	263	0	620	131	585	0	131	0	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.98	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	19.7	22.6	0.0	23.0	24.8	6.6	0.0	26.9	0.0	16.6
Incr Delay (d2), s/veh	0.1	0.0	8.6	16.1	0.0	3.0	14.5	1.8	0.0	45.3	0.0	6.6
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(50%),veh/ln	0.6	0.0	5.5	4.0	0.0	1.9	1.0	1.6	0.0	0.1	0.0	5.2
LnGrp Delay(d),s/veh	15.2	0.0	28.3	38.6	0.0	26.0	39.2	8.4	0.0	72.2	0.0	23.2
LnGrp LOS	B		C	D		C	D	A		F		C
Approach Vol, veh/h		377			321			267			327	
Approach Delay, s/veh		26.5			33.8			13.9			23.4	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.1	27.9	11.5	16.6	12.0	20.0	18.2	9.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	6.0	18.0
Max Q Clear Time (g_c+I1), s	2.0	5.0	7.8	11.8	3.4	11.2	3.2	5.4
Green Ext Time (p_c), s	0.0	1.0	0.0	0.7	0.0	0.8	0.2	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	194	495	55	151	52	366	320	92	149	538	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	173.1	190.0	186.3	170.6	190.0
Adj Flow Rate, veh/h	63	237	604	67	184	63	446	390	112	182	656	45
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	81	151	386	59	415	142	325	485	139	237	513	35
Arrive On Green	0.05	0.32	0.32	0.03	0.31	0.31	0.18	0.38	0.38	0.27	0.65	0.65
Sat Flow, veh/h	1774	466	1187	1774	1328	455	1774	1294	372	1774	1579	108
Grp Volume(v), veh/h	63	0	841	67	0	247	446	0	502	182	0	701
Grp Sat Flow(s),veh/h/ln	1774	0	1653	1774	0	1783	1774	0	1665	1774	0	1687
Q Serve(g_s), s	4.2	0.0	39.0	4.0	0.0	13.3	22.0	0.0	32.4	11.4	0.0	39.0
Cycle Q Clear(g_c), s	4.2	0.0	39.0	4.0	0.0	13.3	22.0	0.0	32.4	11.4	0.0	39.0
Prop In Lane	1.00		0.72	1.00		0.26	1.00		0.22	1.00		0.06
Lane Grp Cap(c), veh/h	81	0	537	59	0	557	325	0	625	237	0	548
V/C Ratio(X)	0.78	0.00	1.57	1.13	0.00	0.44	1.37	0.00	0.80	0.77	0.00	1.28
Avail Cap(c_a), veh/h	133	0	537	59	0	557	325	0	625	237	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.91	0.00	0.91
Uniform Delay (d), s/veh	56.7	0.0	40.5	58.0	0.0	32.9	49.0	0.0	33.6	42.3	0.0	21.0
Incr Delay (d2), s/veh	14.7	0.0	263.3	158.0	0.0	0.6	185.5	0.0	10.6	13.1	0.0	137.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	57.1	4.6	0.0	6.6	27.5	0.0	16.6	6.4	0.0	38.7
LnGrp Delay(d),s/veh	71.3	0.0	303.8	216.6	0.0	33.5	234.5	0.0	44.1	55.4	0.0	158.8
LnGrp LOS	F		F	F		C	F		D	F		F
Approach Vol, veh/h		904			314			948			883	
Approach Delay, s/veh		287.6			72.5			133.7			137.5	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	49.0	8.0	43.0	26.0	43.0	9.5	41.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	45.0	4.0	39.0	22.0	39.0	9.0	34.0
Max Q Clear Time (g_c+I1), s	13.4	34.4	6.0	41.0	24.0	41.0	6.2	15.3
Green Ext Time (p_c), s	0.6	2.5	0.0	0.0	0.0	0.0	0.0	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	174.1
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	16	88	11	340	554	3
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	17	96	12	370	602	3
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	145	130	22	1399	1221	1038
Arrive On Green	0.08	0.08	0.01	0.75	1.00	1.00
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	17	96	12	370	602	3
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	0.4	2.8	0.3	3.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	2.8	0.3	3.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	145	130	22	1399	1221	1038
V/C Ratio(X)	0.12	0.74	0.55	0.26	0.49	0.00
Avail Cap(c_a), veh/h	592	529	148	1399	1221	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.56	0.56	0.77	0.77
Uniform Delay (d), s/veh	20.4	21.5	23.5	1.9	0.0	0.0
Incr Delay (d2), s/veh	0.4	8.0	11.6	0.3	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7	0.2	1.5	0.4	0.0
LnGrp Delay(d),s/veh	20.7	29.5	35.1	2.1	1.1	0.0
LnGrp LOS	C	C	D	A	A	A
Approach Vol, veh/h	113			382	605	
Approach Delay, s/veh	28.2			3.1	1.1	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.1		7.9	4.6	47.5		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		36.0		16.0	4.0	28.0		
Max Q Clear Time (g_c+I1), s		5.0		4.8	2.3	2.0		
Green Ext Time (p_c), s		7.5		0.2	0.0	7.1		

Intersection Summary	
HCM 2010 Ctrl Delay	4.6
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	95	149	124	709	1015	111
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	103	162	135	771	1103	121
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	211	188	180	1515	1263	1073
Arrive On Green	0.12	0.12	0.10	0.81	0.68	0.68
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	103	162	135	771	1103	121
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	6.4	11.9	8.7	15.6	55.2	3.1
Cycle Q Clear(g_c), s	6.4	11.9	8.7	15.6	55.2	3.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	211	188	180	1515	1263	1073
V/C Ratio(X)	0.49	0.86	0.75	0.51	0.87	0.11
Avail Cap(c_a), veh/h	240	215	180	1515	1263	1073
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	48.6	51.0	51.5	3.5	15.0	6.6
Incr Delay (d2), s/veh	1.7	25.7	15.8	1.2	8.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	11.3	5.1	8.4	30.9	1.4
LnGrp Delay(d),s/veh	50.4	76.8	67.3	4.7	23.6	6.8
LnGrp LOS	D	E	E	A	C	A
Approach Vol, veh/h	265			906	1224	
Approach Delay, s/veh	66.5			14.1	21.9	
Approach LOS	E			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		102.0		18.0	18.0	84.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		96.0		16.0	12.0	80.0		
Max Q Clear Time (g_c+I1), s		17.6		13.9	10.7	57.2		
Green Ext Time (p_c), s		7.5		0.2	0.7	11.0		

Intersection Summary	
HCM 2010 Ctrl Delay	23.9
HCM 2010 LOS	C

Existing Plus Project PM Peak Hour

Scenario Report

Scenario:	Exist Plus Proj PM
Command:	Exist Plus Proj PM
Volume:	Existing PM
Geometry:	Exist Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	PM Pk Hr
Trip Distribution:	PM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Existing Plus Project PM Peak Hour

Trip Generation Report

Forecast for PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	VLDR	55.00	SFDUs	0.63	0.37	35	20	55	1.7
	Zone 1 Subtotal					35	20	55	1.7
2	PMR 1	144.00	SFDUs	0.63	0.37	91	53	144	4.4
2	PMR 1	16.00	MFDUs	0.40	0.22	6	4	10	0.3
	Zone 2 Subtotal					97	57	154	4.7
3	PMR 2	108.00	SFDUs	0.63	0.37	68	40	108	3.3
3	PMR 2	13.00	MFDUs	0.40	0.22	5	3	8	0.2
	Zone 3 Subtotal					73	43	116	3.5
4	PMR 3	93.00	SFDUs	0.63	0.37	59	34	93	2.8
4	PMR 3	11.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 4 Subtotal					63	36	99	3.0
5	PMR 4	117.00	SFDUs	0.63	0.37	74	43	117	3.6
5	PMR 4	14.00	MFDUs	0.40	0.22	6	3	9	0.3
	Zone 5 Subtotal					80	46	126	3.8
6	PMR 5	47.00	SFDUs	0.63	0.37	30	17	47	1.4
6	PMR 5	6.00	MFDUs	0.40	0.22	2	1	3	0.1
	Zone 6 Subtotal					32	18	50	1.5
7	PMR 6	66.00	SFDUs	0.63	0.37	42	24	66	2.0
7	PMR 6	8.00	MFDUs	0.40	0.22	3	2	5	0.2
	Zone 7 Subtotal					45	26	71	2.2
8	PMR 7	95.00	SFDUs	0.63	0.37	60	35	95	2.9
8	PMR 7	11.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 8 Subtotal					64	37	101	3.1
9	PMR 8	86.00	SFDUs	0.63	0.37	54	32	86	2.6
9	PMR 8	10.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 9 Subtotal					58	34	92	2.8
10	PMR 9	74.00	SFDUs	0.63	0.37	47	27	74	2.3
10	PMR 9	9.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 10 Subtotal					51	29	80	2.4
11	PMR 10	33.00	SFDUs	0.63	0.37	21	12	33	1.0
11	PMR 10	4.00	MFDUs	0.40	0.22	2	1	3	0.1
	Zone 11 Subtotal					23	13	36	1.1
12	PMR 12	137.00	SFDUs	0.63	0.37	86	51	137	4.2
12	PMR 12	16.00	MFDUs	0.40	0.22	6	4	10	0.3

Existing Plus Project PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
	Zone 12 Subtotal					92	55	147	4.5
14	Prof Office	8.30	Off Pk Acres	4.24	24.04	35	200	235	7.2
	Zone 14 Subtotal					35	200	235	7.2
15	BP-1	288.15	Busi Pk KSF	0.33	0.93	95	268	363	11.1
	Zone 15 Subtotal					95	268	363	11.1
16	BP-2	195.15	Busi Pk KSF	0.33	0.93	64	181	245	7.5
	Zone 16 Subtotal					64	181	245	7.5
17	BP-3	419.27	Busi Pk KSF	0.33	0.93	138	390	528	16.1
	Zone 17 Subtotal					138	390	528	16.1
18	CC 1	51.18	Shop Ctr KSF	1.17	1.27	60	65	125	3.8
	Zone 18 Subtotal					60	65	125	3.8
19	CC 2	246.11	Shop Ctr KSF	1.17	1.27	288	313	601	18.3
	Zone 19 Subtotal					288	313	601	18.3
20	HDR	180.00	MFDUs	0.40	0.22	72	40	112	3.4
	Zone 20 Subtotal					72	40	112	3.4
21	Exist LU for	36.00	Exist SFDUs	-0.63	-0.37	-23	-13	-36	-1.1
21	Exist LU for	11.00	Exist MFDUs	-0.40	-0.22	-4	-2	-6	-0.2
21	Exist LU for	54.50	Exist Wrhs KSF	-0.08	-0.24	-4	-13	-17	-0.5
	Zone 21 Subtotal					-31	-28	-59	-1.8
TOTAL						1434	1843	3277	100.0

Existing Plus Project PM Peak Hour

Trip Distribution Report

Percent Of Trips PM Pk Hr

Zone	To Gates 1	2	3	4	5	6	7	8	9	17	18	19
1	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
2	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
3	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
4	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
5	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
6	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
7	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
8	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
9	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
10	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
11	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
12	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
13	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
14	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
15	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
16	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
17	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
18	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
19	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
20	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
21	10.0	3.0	10.0	9.0	1.0	1.0	5.0	32.0	29.0	0.0	0.0	2.0

Existing Plus Project PM Peak Hour

Zone	To Gates 19
21	0.0

Existing Plus Project PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 4 Stuhr Road & Draper Road	A	9.3	0.022	B	10.0	0.028	+ 0.759 D/V
# 5 Jensen Road & Fig Lane	C	22.8	0.045	C	32.7	0.583	+ 9.937 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	7.7	0.116	A	9.4	0.363	+ 0.247 V/C
# 7 Fig Lane & Yolo Street	B	10.2	0.041	F	60.9	0.537	+50.677 D/V
# 8 Stuhr & Harvey	A	0.4	0.065	B	13.6	0.175	+13.136 D/V
# 9 Stuhr Road & Fig Lane	A	0.4	0.055	C	24.3	0.273	+23.894 D/V
# 13 Stuhr Road & Collector Rd B	A	0.0	0.000	A	9.1	0.054	+ 9.057 D/V
# 14 Jensen Road & Collector Rd B	A	2.3	0.011	A	2.8	0.167	+ 0.156 V/C
# 15 Stuhr & Eastin	B	10.3	0.036	B	11.5	0.044	+ 1.211 D/V
# 16 Stuhr & Villa Manucha	A	9.2	0.149	B	10.2	0.177	+ 0.979 D/V

Existing Plus Project PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	??? / ???	No / No
# 6 Orestimba/Yolo St & Hardin Rd	???	No
# 7 Fig Lane & Yolo Street	??? / ???	Yes / No
# 13 Stuhr Road & Collector Rd B	??? / ???	No / No
# 15 Stuhr & Eastin	??? / ???	No / No
# 16 Stuhr & Villa Manucha	??? / ???	No / No

Existing Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1 0	0 1	0	0 0
Initial Vol:	14	0	22	0	0	0	0	165	37	20	89	0
ApproachDel:	10.0			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=36]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=347]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	0	1	0 0 0
Initial Vol:	14	0	22	0	0	0	0	165	37	20	89	0

Major Street Volume: 311
Minor Approach Volume: 36
Minor Approach Volume Threshold: 531

SIGNAL WARRANT DISCLAIMER

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Existing Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0 0
Initial Vol:	15	79	20	69	61	3	9	78	12	26	104	129

Major Street Volume: 358
Minor Approach Volume: 133
Minor Approach Volume Threshold: 493

SIGNAL WARRANT DISCLAIMER

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Existing Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Fig Lane & Yolo Street

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Initial Vol:	65	181	8	152	157	39	20	120	35	12	146	79
ApproachDel:	27.1			60.9			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=254]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1014]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=5.9]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=348]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1014]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Fig Lane & Yolo Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Initial Vol:	65	181	8	152	157	39	20	120	35	12	146	79

Major Street Volume: 412
Minor Approach Volume: 348
Minor Approach Volume Threshold: 456

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1	0	0	1	0
Initial Vol:	0	0	47	0	0	0	0	105	26	0	82	0
ApproachDel:	9.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=47]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=260]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	1	0	0	0	0	0	1	0
Initial Vol:	0	0	47	0	0	0	0	105	26	0	82	0

Major Street Volume: 213

Minor Approach Volume: 47

Minor Approach Volume Threshold: 818

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	4	23	2	1	20	2	12	193	10	1	91	4
ApproachDel:	11.5			11.4			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=29]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=363]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=23]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=363]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	4	23	2	1	20	2	12	193	10	1	91	4

Major Street Volume: 311
Minor Approach Volume: 29
Minor Approach Volume Threshold: 531

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #16 Stuhr & Villa Manucha

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	187	0	0	166	3
ApproachDel:	xxxxxx			10.2			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=142]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=571]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Stuhr & Villa Manucha

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	187	0	0	166	3

Major Street Volume: 429
Minor Approach Volume: 142
Minor Approach Volume Threshold: 445

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Existing Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[10.0]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0 0	0 0	0 1	0	0 1	0 0	0
Volume Module:	PM Peak Hour											
Base Vol:	14	0	19	0	0	0	0	83	37	16	32	0
Growth 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
Initial Bse:	14	0	19	0	0	0	0	83	37	16	32	0
Added Vol:	0	0	3	0	0	0	0	82	0	4	57	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	0	22	0	0	0	0	165	37	20	89	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	15	0	24	0	0	0	0	179	40	22	97	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	15	0	24	0	0	0	0	179	40	22	97	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	340	340	199	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	220	xxxx	xxxxx
Potent Cap.:	656	582	842	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1350	xxxx	xxxxx
Move Cap.:	648	572	842	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1350	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	754	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*
ApproachDel:		10.0		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		B		*			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100 secs		
InitVolume:										41	68	
Saturation:										1432	1862	
ArrivalType:										3	3	
G/C:										0.18	0.73	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.178	0.732	
gq1:										2.35	0.98	
gq2:										0.07	0.04	
gq:										2.42	1.01	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										11	6	
vcg:										12	18	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:									0.000/0.000/Unconstrained			
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	340	340	199	352	360	97	0	xxxxx	xxxxx	220	xxxxx	xxxxx
AdjCnflVol:	340	340	199	352	360	97	0	xxxxx	xxxxx	220	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	340	340	199	352	360	97	0	xxxxx	xxxxx	220	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	656	582	842	607	570	965	1623	xxxxx	xxxxx	1350	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	656	582	842	607	570	965	1623	xxxxx	xxxxx	1350	xxxxx	xxxxx

Existing Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Cycle (sec):	100			Critical Vol./Cap.(X):			0.583									
Loss Time (sec):	12			Average Delay (sec/veh):			32.7									
Optimal Cycle:	47			Level Of Service:			C									
Street Name:	Fig Lane							Jensen Road								
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Protected			Protected			Protected			Protected						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Lanes:	1	0 0	1 0	1	0 0	1 0	1	0 2	0 1	1	0 2	0 1				
Volume Module:	PM Peak Hour															
Base Vol:	3	4	28	1	6	0	0	8	4	24	9	1				
Growth 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				
Initial Bse:	3	4	28	1	6	0	0	8	4	24	9	1				
Added Vol:	131	146	24	398	161	21	10	112	56	152	202	129				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	134	150	52	399	167	21	10	120	60	176	211	130				
User 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				
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92				
PHF Volume:	146	163	57	434	182	23	11	130	65	191	229	141				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	146	163	57	434	182	23	11	130	65	191	229	141				
PCE 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				
MLF 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				
FinalVolume:	146	163	57	434	182	23	11	130	65	191	229	141				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.93	0.83	0.93	0.93	0.83				
Lanes:	1.00	0.74	0.26	1.00	0.89	0.11	1.00	2.00	1.00	1.00	2.00	1.00				
Final Sat.:	1769	1329	461	1769	1626	204	1769	3538	1583	1769	3538	1583				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.12	0.12	0.25	0.11	0.11	0.01	0.04	0.04	0.11	0.06	0.09				
Crit Moves:		****		****				****		****						
Green/Cycle:	0.27	0.21	0.21	0.42	0.36	0.36	0.02	0.06	0.06	0.19	0.23	0.23				
Volume/Cap:	0.31	0.58	0.58	0.58	0.31	0.31	0.38	0.58	0.65	0.58	0.28	0.38				
Delay/Veh:	29.6	37.8	37.8	23.4	23.1	23.1	57.1	49.4	60.0	39.9	31.7	33.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	29.6	37.8	37.8	23.4	23.1	23.1	57.1	49.4	60.0	39.9	31.7	33.0				
LOS by Move:	C	D	D	C	C	C	E	D	E	D	C	C				
HCM2k95thQ:	182	325	325	486	222	222	42	152	159	296	157	194				

Note: Queue reported is the distance per lane in feet.

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R				
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0 0	1 0	1	0 0	1 0	1	0 2	0 1	1	0 2	0 1				
Lane Group:	L	RT	RT	L	RT	RT	L	T	R	L	T	R				
#LnsInGrps:	1	1	1	1	1	1	1	2	1	1	2	1				
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12				
CrsswalkWid:	8			8			8			8						
% Hev Veh:	2			2			2			2						
Grade:	0%			0%			0%			0%						
Parking/Hr:	No			No			No			No						
Bus Stp/Hr:	0			0			0			0						
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:	0			0			0			0						
ExclusiveRT:	Include			Include			Include			Include						
% RT Prtct:	0			0			0			0						
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx				
HCM Ops Saturation Adj Module:																
Ln Wid 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				
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98				
Grade 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				
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00				
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00				
Area 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				
RT Adj:	xxxx	0.96	0.96	xxxx	0.98	0.98	xxxx	xxxx	0.85	xxxx	xxxx	0.85				
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx				
PedBike 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				
HCM Sat Adj:	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.98	0.83	0.93	0.98	0.83				
Usr Sat 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				
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00				
Fnl Sat Adj:	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.93	0.83	0.93	0.93	0.83				
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > >															
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

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Intersection #5 Jensen Road & Fig Lane

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.27	0.21	0.21	0.42	0.36	0.36	0.02	0.06	0.06	0.19	0.23	0.23
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	3.2	5.5	5.5	9.2	4.1	4.1	0.3	1.9	1.8	4.9	2.8	3.3
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.4	1.3	1.3	1.4	0.4	0.4	0.5	1.2	1.4	1.3	0.4	0.6
HCM2KQueue:	3.7	6.8	6.8	10.6	4.5	4.5	0.8	3.0	3.2	6.2	3.1	3.9
70th%Factor:	1.19	1.18	1.18	1.18	1.19	1.19	1.20	1.19	1.19	1.19	1.19	1.19
HCM2k70thQ:	4.4	8.1	8.1	12.5	5.4	5.4	1.0	3.6	3.8	7.3	3.7	4.7
85th%Factor:	1.57	1.54	1.54	1.51	1.56	1.56	1.59	1.57	1.57	1.54	1.57	1.56
HCM2k85thQ:	5.7	10.5	10.5	16.0	7.0	7.0	1.3	4.8	5.0	9.5	4.9	6.1
90th%Factor:	1.73	1.68	1.68	1.64	1.72	1.72	1.78	1.74	1.74	1.69	1.74	1.73
HCM2k90thQ:	6.4	11.5	11.5	17.3	7.8	7.8	1.4	5.3	5.5	10.4	5.5	6.8
95th%Factor:	1.99	1.91	1.91	1.83	1.97	1.97	2.07	2.01	2.00	1.93	2.00	1.98
HCM2k95thQ:	7.3	13.0	13.0	19.4	8.9	8.9	1.7	6.1	6.4	11.8	6.3	7.8
98th%Factor:	2.45	2.29	2.29	2.14	2.41	2.41	2.64	2.49	2.48	2.32	2.49	2.44
HCM2k98thQ:	9.0	15.6	15.6	22.7	10.9	10.9	2.1	7.5	7.9	14.3	7.8	9.6

Existing Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #6 Orestimba/Yolo St & Hardin Rd

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Cycle (sec):	100	Critical Vol./Cap.(X):	0.363	
Loss Time (sec):	0	Average Delay (sec/veh):	9.4	
Optimal Cycle:	0	Level Of Service:	A	

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Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:	PM Peak Hour											
Base Vol:	9	48	19	24	43	2	7	31	9	26	20	45
Growth 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
Initial Bse:	9	48	19	24	43	2	7	31	9	26	20	45
Added Vol:	6	31	1	45	18	1	2	47	3	0	84	84
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	79	20	69	61	3	9	78	12	26	104	129
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	16	86	22	75	66	3	10	85	13	28	113	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	86	22	75	66	3	10	85	13	28	113	140
PCE 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
MLF 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
FinalVolume:	16	86	22	75	66	3	10	85	13	28	113	140
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.13	0.69	0.18	0.52	0.46	0.02	0.09	0.79	0.12	0.10	0.40	0.50
Final Sat.:	89	471	119	345	305	15	63	547	84	78	311	386
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.22	0.22	0.22	0.15	0.15	0.15	0.36	0.36	0.36
Crit Moves:			****	****			****			****		
Delay/Veh:	8.9	8.9	8.9	9.4	9.4	9.4	8.7	8.7	8.7	9.8	9.8	9.8
Delay 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
AdjDel/Veh:	8.9	8.9	8.9	9.4	9.4	9.4	8.7	8.7	8.7	9.8	9.8	9.8
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	8.9			9.4			8.7			9.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.9			9.4			8.7			9.8		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	4.7	4.7	4.7	6.0	6.0	6.0	4.0	4.0	4.0	12.7	12.7	12.7

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Note: Queue reported is the distance per lane in feet.

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Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM 4-Way Stop Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	1			1			1			1		
P[C1]:	0.44			0.46			0.43			0.57		
P[C2]:	0.11			0.09			0.23			0.10		
P[C3]:	0.31			0.33			0.20			0.26		
P[C4]:	0.12			0.11			0.13			0.07		
P[C5]:	0.01			0.01			0.01			0.01		
Padj[C1]:	0.011			0.011			0.011			0.009		
Padj[C2]:	0.005			0.005			0.003			0.003		
Padj[C3]:	-0.008			-0.009			-0.004			-0.007		
Padj[C4]:	-0.007			-0.006			-0.008			-0.004		
Padj[C5]:	-0.001			-0.001			-0.001			-0.001		
Lane:	L1			L1			L1			L1		
LaneType:	LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE		
HeadwayAdj:	-0.045			0.124			-0.021			-0.245		
Volume:	124			145			108			282		
Capacity:	679			665			695			775		
DegOfUtil:	0.17			0.20			0.15			0.35		
DepHeadway:	4.93			5.07			4.87			4.46		
ServiceTime:	2.9			3.1			2.9			2.5		
Delay:	8.9			9.4			8.7			9.8		
Queue:	0.2			0.2			0.2			0.5		

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	8.9	9.4	8.7	9.8
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	8.9	9.4	8.7	9.8
LOS by Appr:	A	A	A	A

OverallDel: 9.4
OverallLOS: A

Existing Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): 27.9 Worst Case Level Of Service: F[60.9]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	3	3	3	28	16	7	9	69	3	6	71	27
Growth 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
Initial Bse:	3	3	3	28	16	7	9	69	3	6	71	27
Added Vol:	62	178	5	124	141	32	11	51	32	6	75	52
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	65	181	8	152	157	39	20	120	35	12	146	79
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	71	197	9	165	171	42	22	130	38	13	159	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	71	197	9	165	171	42	22	130	38	13	159	86
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	527	464	149	523	440	202	245	xxxx	xxxxx	168	xxxx	xxxxx
Potent Cap.:	462	496	897	464	511	839	1322	xxxx	xxxxx	1409	xxxx	xxxxx
Move Cap.:	316	483	897	308	498	839	1322	xxxx	xxxxx	1409	xxxx	xxxxx
Volume/Cap:	0.22	0.41	0.01	0.54	0.34	0.05	0.02	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.3	xxxx	xxxxx	0.7	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	431	xxxxx	xxxx	407	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	4.4	xxxxx	xxxxx	10.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	27.1	xxxxx	xxxxx	60.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	D	*	*	F	*	*	*	*	*	*	*
ApproachDel:		27.1			60.9			xxxxxx			xxxxxx	
ApproachLOS:		D			F			*			*	

Note: Queue reported is the distance per lane in feet.

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Existing Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Stuhr & Harvey

Cycle (sec):	100	Critical Vol./Cap.(X):	0.175
Loss Time (sec):	9	Average Delay (sec/veh):	13.6
Optimal Cycle:	22	Level Of Service:	B

Street Name:	Harvey Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	0	1	0	1	0	0
Volume Module:	PM Peak Hour											
Base Vol:	0	0	0	0	0	0	0	102	0	0	48	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	102	0	0	48	0
Added Vol:	41	0	9	0	0	0	0	37	47	26	20	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	41	0	9	0	0	0	0	139	47	26	68	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	45	0	10	0	0	0	0	151	51	28	74	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	0	10	0	0	0	0	151	51	28	74	0
PCE 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
MLF 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
FinalVolume:	45	0	10	0	0	0	0	151	51	28	74	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	0.82	0.00	0.18	0.00	0.00	0.00	0.00	0.75	0.25	1.00	1.00	0.00
Final Sat.:	1432	0	314	0	0	0	0	1344	455	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.11	0.11	0.02	0.04	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.18	0.00	0.18	0.00	0.00	0.00	0.00	0.64	0.64	0.09	0.73	0.00
Volume/Cap:	0.18	0.00	0.18	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.05	0.00
Delay/Veh:	35.2	0.0	35.2	0.0	0.0	0.0	0.0	7.3	7.3	42.5	3.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.2	0.0	35.2	0.0	0.0	0.0	0.0	7.3	7.3	42.5	3.7	0.0
LOS by Move:	D	A	D	A	A	A	A	A	A	D	A	A
HCM2k95thQ:	77	0	77	0	0	0	0	125	125	48	33	0

Note: Queue reported is the distance per lane in feet.

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1! 0	0	0	0 0	0	0 0 1	0		1 0	1 0	0
Lane Group:	LTR		LTR	xxxx		xxxx	xxxx	RT		RT	L	T	xxxx
#LnsInGrps:	1		1	0		0	0	1		1	1	1	0
HCM Ops Input Saturation Adj Module:													
Lane Width:	12		12	12		12	12		12	12		12	12
CrsswalkWid:		8			8			8			8		
% Hev Veh:		2			2			2			2		
Grade:		0%			0%			0%			0%		
Parking/Hr:		No			No			No			No		
Bus Stp/Hr:		0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >												
Cnft Ped/Hr:		0			0			0			0		
ExclusiveRT:		Include			Include			Include			Include		
% RT Prtct:		0			0			0			0		
HCM Ops f(lt) Adj Case Module:													
f(lt) Case:	4	xxxx	4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx	
HCM Ops Saturation Adj Module:													
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx	
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	0.98	0.98	xxxxx	
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx	
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx	
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx	
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx	
RT Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.97	0.97	xxxx	xxxx	xxxxx	
LT Adj:	0.96	xxxx	0.96	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	
PedBike 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	
HCM Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.95	0.95	0.93	0.98	1.00	
Usr Sat 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	
MLF Sat 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	
Fnl Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.95	0.95	0.93	0.98	1.00	
Delay Adjustment Factor Module:													
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >												
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > > >												
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.18	0.00	0.18	0.00	0.00	0.00	0.00	0.64	0.64	0.09	0.73	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.3	0.0	1.3	0.0	0.0	0.0	0.0	2.3	2.3	0.7	0.6	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.0
HCM2KQueue:	1.5	0.0	1.5	0.0	0.0	0.0	0.0	2.5	2.5	0.9	0.6	0.0
70th%Factor:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.20	1.20	1.20
HCM2k70thQ:	1.8	0.0	1.8	0.0	0.0	0.0	0.0	3.0	3.0	1.1	0.8	0.0
85th%Factor:	1.59	1.60	1.59	1.60	1.60	1.60	1.60	1.58	1.58	1.59	1.59	1.60
HCM2k85thQ:	2.4	0.0	2.4	0.0	0.0	0.0	0.0	3.9	3.9	1.5	1.0	0.0
90th%Factor:	1.77	1.80	1.77	1.80	1.80	1.80	1.80	1.75	1.75	1.78	1.79	1.80
HCM2k90thQ:	2.6	0.0	2.6	0.0	0.0	0.0	0.0	4.4	4.4	1.7	1.1	0.0
95th%Factor:	2.05	2.10	2.05	2.10	2.10	2.10	2.10	2.02	2.02	2.07	2.08	2.10
HCM2k95thQ:	3.1	0.0	3.1	0.0	0.0	0.0	0.0	5.0	5.0	1.9	1.3	0.0
98th%Factor:	2.59	2.70	2.59	2.70	2.70	2.70	2.70	2.53	2.53	2.63	2.65	2.70
HCM2k98thQ:	3.9	0.0	3.9	0.0	0.0	0.0	0.0	6.3	6.3	2.5	1.7	0.0

Existing Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Stuhr Road & Fig Lane

Cycle (sec):	100					Critical Vol./Cap.(X):				0.273						
Loss Time (sec):	9					Average Delay (sec/veh):				24.3						
Optimal Cycle:	25					Level Of Service:				C						

Street Name:	Fig Lane						Stuhr Road									
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase			Split Phase			Protected			Protected						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Volume Module:	PM Peak Hour															
Base Vol:	0	0	0	0	0	0	0	85	0	0	36	0				
Growth 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				
Initial Bse:	0	0	0	0	0	0	0	85	0	0	36	0				
Added Vol:	24	0	109	0	0	0	0	51	15	116	22	0				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	24	0	109	0	0	0	0	136	15	116	58	0				
User 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				
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92				
PHF Volume:	26	0	118	0	0	0	0	148	16	126	63	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	26	0	118	0	0	0	0	148	16	126	63	0				
PCE 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				
MLF 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				
FinalVolume:	26	0	118	0	0	0	0	148	16	126	63	0				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.86	1.00	0.86	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00				
Lanes:	0.18	0.00	0.82	0.00	0.00	0.00	0.00	0.90	0.10	1.00	1.00	0.00				
Final Sat.:	296	0	1344	0	0	0	0	1655	183	1769	1862	0				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.00	0.09	0.00	0.00	0.00	0.00	0.09	0.09	0.07	0.03	0.00				
Crit Moves:			****					****		****						
Green/Cycle:	0.32	0.00	0.32	0.00	0.00	0.00	0.00	0.33	0.33	0.26	0.59	0.00				
Volume/Cap:	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.27	0.27	0.27	0.06	0.00				
Delay/Veh:	25.5	0.0	25.5	0.0	0.0	0.0	0.0	25.1	25.1	29.7	8.8	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	25.5	0.0	25.5	0.0	0.0	0.0	0.0	25.1	25.1	29.7	8.8	0.0				
LOS by Move:	C	A	C	A	A	A	A	C	C	C	A	A				
HCM2k95thQ:	168	0	168	0	0	0	0	186	186	158	42	0				

Note: Queue reported is the distance per lane in feet.

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Stuhr Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Lane Group:	LTR		LTR		LTR	xxxx	xxxx	xxxx	xxxx	RT		RT	L		T	xxxx
#LnsInGrps:	1		1		1	0	0	0	0	1		1	1		1	0
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12		12		12		12	12		12	12
CrsswalkWid:	8					8				8					8	
% Hev Veh:	2					2				2					2	
Grade:	0%					0%				0%					0%	
Parking/Hr:	No					No				No					No	
Bus Stp/Hr:	0					0				0					0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:	0					0				0					0	
ExclusiveRT:	Include					Include				Include					Include	
% RT Prtct:	0					0				0					0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	4	xxxx		4		xxxx	xxxx	xxxx	xxxx	xxxx		xxxx	1	xxxx		xxxx
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	1.00	xxxx	1.00			xxxx	xxxx	xxxxx	xxxx	1.00		1.00	1.00	xxxx	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98			xxxx	xxxx	xxxxx	xxxx	0.98		0.98	0.98	xxxx	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00			xxxx	xxxx	xxxxx	xxxx	1.00		1.00	1.00	xxxx	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00			xxxx	xxxx	xxxxx	xxxx	1.00		1.00	xxxx	1.00	xxxx	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00			xxxx	xxxx	xxxxx	xxxx	1.00		1.00	xxxx	1.00	xxxx	xxxxx
Area Adj:	1.00	xxxx	1.00			xxxx	xxxx	xxxxx	xxxx	1.00		1.00	1.00	1.00	xxxx	xxxxx
RT Adj:	0.89	xxxx	0.89			xxxx	xxxx	xxxxx	xxxx	0.99		0.99	xxxx	xxxx	xxxx	xxxxx
LT Adj:	0.99	xxxx	0.99			xxxx	xxxx	xxxxx	xxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxx	xxxxx
PedBike 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	1.00
HCM Sat Adj:	0.86	1.00	0.86			1.00	1.00	1.00	1.00	0.97		0.97	0.93	0.98	1.00	1.00
Usr Sat 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	1.00
MLF Sat 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	1.00
Fnl Sat Adj:	0.86	1.00	0.86			1.00	1.00	1.00	1.00	0.97		0.97	0.93	0.98	1.00	1.00
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > >															
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00				

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Stuhr Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.32	0.00	0.32	0.00	0.00	0.00	0.00	0.33	0.33	0.26	0.59	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	3.0	0.0	3.0	0.0	0.0	0.0	0.0	3.4	3.4	2.8	0.7	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.1	0.0
HCM2KQueue:	3.4	0.0	3.4	0.0	0.0	0.0	0.0	3.7	3.7	3.2	0.8	0.0
70th%Factor:	1.19	1.20	1.19	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.20	1.20
HCM2k70thQ:	4.0	0.0	4.0	0.0	0.0	0.0	0.0	4.5	4.5	3.8	1.0	0.0
85th%Factor:	1.57	1.60	1.57	1.60	1.60	1.60	1.60	1.56	1.56	1.57	1.59	1.60
HCM2k85thQ:	5.3	0.0	5.3	0.0	0.0	0.0	0.0	5.9	5.9	5.0	1.3	0.0
90th%Factor:	1.74	1.80	1.74	1.80	1.80	1.80	1.80	1.73	1.73	1.74	1.78	1.80
HCM2k90thQ:	5.8	0.0	5.8	0.0	0.0	0.0	0.0	6.5	6.5	5.5	1.4	0.0
95th%Factor:	2.00	2.10	2.00	2.10	2.10	2.10	2.10	1.99	1.99	2.00	2.07	2.10
HCM2k95thQ:	6.7	0.0	6.7	0.0	0.0	0.0	0.0	7.4	7.4	6.3	1.7	0.0
98th%Factor:	2.47	2.70	2.47	2.70	2.70	2.70	2.70	2.45	2.45	2.48	2.64	2.70
HCM2k98thQ:	8.3	0.0	8.3	0.0	0.0	0.0	0.0	9.2	9.2	7.9	2.1	0.0

Existing Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 Stuhr Road & Collector Rd B

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A[9.1]

Street Name:	Collector Rd B						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0 0 1	0	0	0 0 0	0	0	1 0 1	0	0	1 0 0
Volume Module:	PM Peak Hour											
Base Vol:	0	0	0	0	0	0	0	85	0	0	36	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	85	0	0	36	0
Added Vol:	0	0	47	0	0	0	0	20	26	0	46	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	47	0	0	0	0	105	26	0	82	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	51	0	0	0	0	114	28	0	89	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	51	0	0	0	0	114	28	0	89	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	114	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	938	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	938	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	4.3	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	9.1			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	A			*			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

****

Intersection #13 Stuhr Road & Collector Rd B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Existing Plus Project PM Peak Hour

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

****

Intersection #14 Jensen Road & Collector Rd B

****

Average Delay (sec/veh): 2.8 Level Of Service: A

****

Street Name:	Collector Rd B						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			2		
Volume Module:	PM Peak Hour											
Base Vol:	0	0	0	0	0	0	0	12	0	0	12	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	12	0	0	12	0
Added Vol:	9	82	29	72	47	3	4	76	7	50	150	149
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	82	29	72	47	3	4	88	7	50	162	149
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	10	89	32	78	51	3	4	96	8	54	176	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	89	32	78	51	3	4	96	8	54	176	162
PCE 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
MLF 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
FinalVolume:	10	89	32	78	51	3	4	96	8	54	176	162
PCE Module:												
AutoPCE:	10	89	32	78	51	3	4	96	8	54	176	162
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	10	89	32	78	51	3	4	96	8	54	176	162
Delay Module:	>> Time Period: 0.25 hours <<											
CircVolume:	178			240			184			103		
MaxVolume:	1104			1070			1101			2350		
PedVolume:	0			0			0			0		
AdjMaxVol:	1104			1070			1101			2350		
ApproachVol:	130			133			108			392		
ApproachV/C:	0.12			0.12			0.10			0.17		
ApproachDel:	3.7			3.8			3.6			1.8		
ApproachLOS:	A			A			A			A		
Queue:	0.4			0.4			0.3			0.6		

Existing Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[11.5]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	4	23	2	1	20	2	12	111	10	1	34	4
Growth 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
Initial Bse:	4	23	2	1	20	2	12	111	10	1	34	4
Added Vol:	0	0	0	0	0	0	0	82	0	0	57	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	23	2	1	20	2	12	193	10	1	91	4
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	4	25	2	1	22	2	13	210	11	1	99	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	25	2	1	22	2	13	210	11	1	99	4
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	357	347	215	358	350	101	103	xxxx	xxxxx	221	xxxx	xxxxx
Potent Cap.:	599	577	825	597	574	954	1489	xxxx	xxxxx	1349	xxxx	xxxxx
Move Cap.:	576	571	825	572	569	954	1489	xxxx	xxxxx	1349	xxxx	xxxxx
Volume/Cap:	0.01	0.04	0.00	0.00	0.04	0.00	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.7	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	584	xxxxx	xxxx	590	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.5	xxxxx	xxxxx	11.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.5			11.4			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Existing Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: B[10.2]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module: PM Peak Hour												
Base Vol:	0	0	0	2	0	140	73	45	0	0	43	3
Growth 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
Initial Bse:	0	0	0	2	0	140	73	45	0	0	43	3
Added Vol:	0	0	0	0	0	0	0	142	0	0	123	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	140	73	187	0	0	166	3
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	2	0	152	79	203	0	0	180	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	2	0	152	79	203	0	0	180	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	544	544	182	184	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	500	446	860	1391	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	477	420	860	1391	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.18	0.06	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	4.5	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	851	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.7	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.2	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.2			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the distance per lane in feet.

Existing Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #16 Stuhr & Villa Manucha

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:							#91					
Dist(miles):							0.250					
Speed (mph):							1.00					
SignalIndex:							#1					
Cycle Time:							100 secs					
InitVolume:							1	113				
Saturation:							1612	714				
ArrivalType:							3	3				
G/C:							0.00	0.31				
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:							0.001	0.309				
gq1:							0.06	10.93				
gq2:							0.00	2.06				
gq:							0.06	12.99				
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:							0.550					
beta:							0.645					
ta (secs):							900.000					
F:							0.003					
f:							1.000	1.000				
vcmax:							0	28				
vcg:							0	33				
vcmin:							1000	1000				
tp:							0.0	0.0				
p:							0.000					
*** Computation 3: Platoon Event Periods												
pdom/psubo:							0.000/0.000/Unconstrained					
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	620	546	203	544	544	182	184	xxxxx	xxxxx	0	xxxxx	xxxxx
AdjCnflVol:	620	546	203	544	544	182	184	xxxxx	xxxxx	0	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	620	546	203	544	544	182	184	xxxxx	xxxxx	0	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	400	445	837	500	446	860	1391	xxxxx	xxxxx	1623	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	400	445	837	500	446	860	1391	xxxxx	xxxxx	1623	xxxxx	xxxxx

Existing Plus Project PM Peak Hour

Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#4	[2Way95thQ]:	4.1	4.1	4.1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1.2	1.2	xxxx
#5	[HCM2k95thQ]:	182	325	325	486	222	222	42	152	159	296	157	194
#6	[AllWayAvgQ]	4.7	4.7	4.7	6.0	6.0	6.0	4.0	4.0	4.0	12.7	12.7	12.7
#7	[2Way95thQ]:	109	109	109	256	256	256	1.3	xxxx	xxxx	0.7	xxxx	xxxx
#8	[HCM2k95thQ]:	77	0	77	0	0	0	0	125	125	48	33	0
#9	[HCM2k95thQ]:	168	0	168	0	0	0	0	186	186	158	42	0
#13	[2Way95thQ]:	xxxx	xxxx	4.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#14	[DesignQueue]:	0	10	0	0	11	0	0	8	0	0	15	0
#15	[2Way95thQ]:	4.3	4.3	4.3	3.3	3.3	3.3	0.7	xxxx	xxxx	0.1	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	16.5	16.5	16.5	4.5	4.5	xxxx	xxxx	xxxx	xxxx

LEVEL OF SERVICE CALCULATION WORKSHEETS

EXISTING PLUS PROJECT WITH MITIGATION

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	22	28	988	539	18
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	200	-	-	200
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	24	30	1074	586	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1184	293	586	0	-	0
Stage 1	586	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	182	703	985	-	-	-
Stage 1	519	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	176	703	985	-	-	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	519	-	-	-	-	-
Stage 2	496	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	985	-	703	-	-
HCM Lane V/C Ratio	0.031	-	0.034	-	-
HCM Control Delay (s)	8.8	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	29	100	217	69	287	99	557	379	62	40	272	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	171.8	190.0	186.3	172.1	190.0
Adj Flow Rate, veh/h	35	122	265	84	350	121	679	462	76	49	332	62
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	44	174	793	375	370	128	723	1461	239	63	409	76
Arrive On Green	0.02	0.09	0.09	0.21	0.28	0.28	0.41	0.52	0.52	0.04	0.15	0.15
Sat Flow, veh/h	1774	1863	1583	1774	1324	458	1774	2810	460	1774	2756	509
Grp Volume(v), veh/h	35	122	265	84	0	471	679	267	271	49	195	199
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1782	1774	1632	1637	1774	1635	1631
Q Serve(g_s), s	2.2	7.3	0.0	4.5	0.0	29.6	42.1	10.8	10.9	3.1	13.2	13.5
Cycle Q Clear(g_c), s	2.2	7.3	0.0	4.5	0.0	29.6	42.1	10.8	10.9	3.1	13.2	13.5
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.28	1.00		0.31
Lane Grp Cap(c), veh/h	44	174	793	375	0	499	723	849	851	63	243	242
V/C Ratio(X)	0.79	0.70	0.33	0.22	0.00	0.94	0.94	0.31	0.32	0.78	0.81	0.82
Avail Cap(c_a), veh/h	62	406	990	375	0	513	774	849	851	124	243	242
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	1.00	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	55.6	50.4	17.2	37.4	0.0	40.4	32.6	15.8	15.8	54.8	47.2	47.3
Incr Delay (d2), s/veh	35.7	5.1	0.2	0.3	0.0	26.2	18.6	1.0	1.0	18.2	24.1	25.8
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(50%),veh/ln	1.5	4.0	5.1	2.2	0.0	18.1	24.3	5.1	5.1	1.9	7.6	7.8
LnGrp Delay(d),s/veh	91.3	55.5	17.4	37.7	0.0	66.6	51.2	16.7	16.8	73.0	71.3	73.1
LnGrp LOS	F	F	B	D		F	D	B	B	F	F	F
Approach Vol, veh/h		422			555			1217			443	
Approach Delay, s/veh		34.5			62.2			36.0			72.3	
Approach LOS		C			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	69.0	28.2	14.7	56.1	21.0	6.9	36.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	59.0	12.0	25.0	50.0	17.0	4.0	33.0
Max Q Clear Time (g_c+I1), s	5.1	12.9	6.5	9.3	44.1	15.5	4.2	31.6
Green Ext Time (p_c), s	0.0	6.9	1.6	1.4	2.6	0.4	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	47.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	105	4	155	3	1	1	278	956	1	1	480	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	169.7	190.0	186.3	171.9	190.0
Adj Flow Rate, veh/h	128	5	189	4	1	1	339	1166	1	1	585	101
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	233	28	226	290	73	48	406	1510	1	85	768	132
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.23	0.46	0.46	0.05	0.28	0.28
Sat Flow, veh/h	521	113	901	668	289	191	1774	3305	3	1774	2787	480
Grp Volume(v), veh/h	322	0	0	6	0	0	339	569	598	1	342	344
Grp Sat Flow(s),veh/h/ln	1536	0	0	1148	0	0	1774	1612	1696	1774	1633	1634
Q Serve(g_s), s	8.1	0.0	0.0	0.0	0.0	0.0	9.0	14.6	14.6	0.0	9.4	9.5
Cycle Q Clear(g_c), s	9.7	0.0	0.0	0.1	0.0	0.0	9.0	14.6	14.6	0.0	9.4	9.5
Prop In Lane	0.40		0.59	0.67		0.17	1.00		0.00	1.00		0.29
Lane Grp Cap(c), veh/h	488	0	0	410	0	0	406	736	775	85	450	450
V/C Ratio(X)	0.66	0.00	0.00	0.01	0.00	0.00	0.83	0.77	0.77	0.01	0.76	0.76
Avail Cap(c_a), veh/h	601	0	0	508	0	0	541	918	966	144	565	565
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	0.0	0.0	13.8	0.0	0.0	18.1	11.2	11.2	22.3	16.3	16.3
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.0	0.0	0.0	8.3	7.7	7.3	0.1	11.5	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(50%),veh/ln	4.4	0.0	0.0	0.1	0.0	0.0	5.3	7.9	8.2	0.0	5.6	5.7
LnGrp Delay(d),s/veh	19.3	0.0	0.0	13.8	0.0	0.0	26.3	18.9	18.5	22.3	27.8	28.0
LnGrp LOS	B			B			C	B	B	C	C	C
Approach Vol, veh/h		322			6			1506			687	
Approach Delay, s/veh		19.3			13.8			20.4			27.9	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.2	26.5		16.3	15.3	28.4		16.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	28.0		16.0	15.0	17.0		16.0
Max Q Clear Time (g_c+I1), s	2.0	16.6		11.7	11.0	11.5		2.1
Green Ext Time (p_c), s	0.9	5.9		0.8	0.4	2.1		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	27	22	36	999	542	19
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	29	24	39	1086	589	21
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	76	68	270	2772	1925	861
Arrive On Green	0.04	0.04	0.15	0.78	0.54	0.54
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	29	24	39	1086	589	21
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	0.7	0.7	0.9	4.4	4.2	0.3
Cycle Q Clear(g_c), s	0.7	0.7	0.9	4.4	4.2	0.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	76	68	270	2772	1925	861
V/C Ratio(X)	0.38	0.35	0.14	0.39	0.31	0.02
Avail Cap(c_a), veh/h	618	551	270	2772	1925	861
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	16.9	1.6	5.7	4.8
Incr Delay (d2), s/veh	3.1	3.1	0.2	0.4	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.7	0.4	2.1	2.1	0.1
LnGrp Delay(d),s/veh	24.5	24.5	17.1	2.0	6.1	4.9
LnGrp LOS	C	C	B	A	A	A
Approach Vol, veh/h	53			1125	610	
Approach Delay, s/veh	24.5			2.5	6.1	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		54.0		6.0	25.0	29.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		36.0		16.0	7.0	25.0		
Max Q Clear Time (g_c+I1), s		6.4		2.7	2.9	6.2		
Green Ext Time (p_c), s		9.6		0.1	2.6	3.9		

Intersection Summary	
HCM 2010 Ctrl Delay	4.4
HCM 2010 LOS	A

Existing Plus Project AM Peak Hour
With Mitigation Measures

Scenario Report

Scenario:	Exist Plus Proj AM
Command:	Exist Plus Proj AM
Volume:	Existing AM
Geometry:	Exist Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	AM Pk Hr
Trip Distribution:	AM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Existing Plus Project AM Peak Hour
With Mitigation Measures

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 7 Fig Lane & Yolo Street	A	5.2	0.195	B	10.7	0.440	+ 5.479 D/V

Existing Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Cycle (sec):	60	Critical Vol./Cap.(X):	0.440
Loss Time (sec):	6	Average Delay (sec/veh):	10.7
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1	0
Volume Module:	AM Peak Hour											
Base Vol:	6	11	5	22	21	3	8	160	1	2	183	55
Growth 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
Initial Bse:	6	11	5	22	21	3	8	160	1	2	183	55
Added Vol:	18	93	3	36	157	7	32	61	48	-2	21	121
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	104	8	58	178	10	40	221	49	0	204	176
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	26	113	9	63	193	11	43	240	53	0	222	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	113	9	63	193	11	43	240	53	0	222	191
PCE 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
MLF 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
FinalVolume:	26	113	9	63	193	11	43	240	53	0	222	191
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.88	0.88	0.88	0.88	0.88	0.88	1.00	0.92	0.92
Lanes:	0.18	0.76	0.06	0.24	0.72	0.04	0.13	0.71	0.16	0.00	0.54	0.46
Final Sat.:	302	1311	101	395	1212	68	217	1198	266	0	937	808
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.09	0.16	0.16	0.16	0.20	0.20	0.20	0.00	0.24	0.24
Crit Moves:					****						****	
Green/Cycle:	0.36	0.36	0.36	0.36	0.36	0.36	0.54	0.54	0.54	0.00	0.54	0.54
Volume/Cap:	0.24	0.24	0.24	0.44	0.44	0.44	0.37	0.37	0.37	0.00	0.44	0.44
Delay/Veh:	13.5	13.5	13.5	15.0	15.0	15.0	8.3	8.3	8.3	0.0	8.7	8.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.5	13.5	13.5	15.0	15.0	15.0	8.3	8.3	8.3	0.0	8.7	8.7
LOS by Move:	B	B	B	B	B	B	A	A	A	A	A	A
HCM2k95thQ:	103	103	103	205	205	205	190	190	190	0	242	242

Note: Queue reported is the distance per lane in feet.

Existing Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1	0
Lane Group:	LTR			LTR			LTR			xxxx	RT	
#LnsInGrps:	1			1			1			0	1	
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	5	5	5	5	5	5	5	5	5	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxx	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	xxxx	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxx	1.00	1.00
Parking Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxx	1.00	1.00
RT Adj:	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98	xxxx	0.94	0.94
LT Adj:	0.93	0.93	0.93	0.91	0.91	0.91	0.92	0.92	0.92	xxxx	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.90	0.90	0.90	0.88	0.88	0.88	0.88	0.88	0.88	1.00	0.92	0.92
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.90	0.90	0.90	0.88	0.88	0.88	0.88	0.88	0.88	1.00	0.92	0.92
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00

Existing Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North	South	East	West
Cycle Length, C:	60	60	60	xxxxxx
Actual Green Time Per Lane Group, G:	20.75	20.75	31.25	xxxxxx
Effective Green Time Per Lane Group, g:	21.75	21.75	32.25	xxxxxx
Opposing Effective Green Time, go:	21.75	21.75	32.25	xxxxxx
Number Of Opposing Lanes, No:	1	1	1	xxxxxx
Number Of Lanes In Lane Group, N:	1	1	1	xxxxxx
Adjusted Left-Turn Flow Rate, Vlt:	26	63	43	xxxxxx
Proportion of Left Turns in Lane Group, Plt:	0.18	0.24	0.13	xxxxxx
Proportion of Left Turns in Opp Flow, Plto:	0.24	0.18	0.00	xxxxxx
Left Turns Per Cycle, LTC:	0.43	1.05	0.72	xxxxxx
Adjusted Opposing Flow Rate, Vo:	267	148	413	xxxxxx
Opposing Flow Per Lane Per Cycle, Volc:	4.45	2.47	6.88	xxxxxx
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	xxxxxx
Lost Time Per Phase, tl:	3.00	3.00	3.00	xxxxxx
Eff grn until arrival of left-turn car, gf:	9.47	5.55	12.48	xxxxxx
Opposing Queue Ratio, qro:	0.64	0.64	0.46	xxxxxx
Eff grn blocked by opposing queue, gq:	6.56	3.10	6.49	xxxxxx
Eff grn while left turns filter thru, gu:	12.28	16.20	19.77	xxxxxx
Max opposing cars arriving during gq-gf, n:	0.00	0.00	0.00	xxxxxx
Proportion of Opposing Thru & RT cars, ptho:	0.76	0.82	1.00	xxxxxx
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	1.83	1.62	2.13	xxxxxx
Single Lane Through-car Equivalents, el2:	1.00	1.00	1.00	xxxxxx
Minimum Left Turn Adjustment Factor, fmin:	0.11	0.11	0.07	xxxxxx
Single Lane Left Turn Adjustment Factor, fm:	0.93	0.90	0.92	xxxxxx
Left Turn Adjustment Factor, flt:	0.93	0.90	0.92	xxxxxx

Existing Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.36	0.36	0.36	0.36	0.36	0.36	0.54	0.54	0.54	0.00	0.54	0.54
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.7	1.7	1.7	3.4	3.4	3.4	3.2	3.2	3.2	0.0	4.2	4.2
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Q2:	0.3	0.3	0.3	0.8	0.8	0.8	0.6	0.6	0.6	0.0	0.8	0.8
HCM2KQueue:	2.0	2.0	2.0	4.2	4.2	4.2	3.8	3.8	3.8	0.0	4.9	4.9
70th%Factor:	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19	1.20	1.19	1.19
HCM2k70thQ:	2.4	2.4	2.4	4.9	4.9	4.9	4.6	4.6	4.6	0.0	5.9	5.9
85th%Factor:	1.58	1.58	1.58	1.56	1.56	1.56	1.56	1.56	1.56	1.60	1.55	1.55
HCM2k85thQ:	3.2	3.2	3.2	6.5	6.5	6.5	6.0	6.0	6.0	0.0	7.7	7.7
90th%Factor:	1.76	1.76	1.76	1.72	1.72	1.72	1.73	1.73	1.73	1.80	1.71	1.71
HCM2k90thQ:	3.6	3.6	3.6	7.2	7.2	7.2	6.6	6.6	6.6	0.0	8.5	8.5
95th%Factor:	2.04	2.04	2.04	1.98	1.98	1.98	1.98	1.98	1.98	2.10	1.96	1.96
HCM2k95thQ:	4.1	4.1	4.1	8.2	8.2	8.2	7.6	7.6	7.6	0.0	9.7	9.7
98th%Factor:	2.56	2.56	2.56	2.43	2.43	2.43	2.44	2.44	2.44	2.70	2.38	2.38
HCM2k98thQ:	5.2	5.2	5.2	10.1	10.1	10.1	9.4	9.4	9.4	0.0	11.8	11.8

Existing Plus Project AM Peak Hour
With Mitigation Measures

Future Queue Length Report (feet)

Node	Intersection	Northbound L -- T -- R			Southbound L -- T -- R			Eastbound L -- T -- R			Westbound L -- T -- R		
#7	[HCM2k95thQ]:	103	103	103	205	205	205	190	190	190	0	242	242

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	147	84	720	978	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	-	0	200	-	-	200
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	160	91	783	1063	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1637	532	1063	0	-	0
Stage 1	1063	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	91	492	651	-	-	-
Stage 1	293	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	78	492	651	-	-	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	293	-	-	-	-	-
Stage 2	453	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.8	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	651	-	492	-	-
HCM Lane V/C Ratio	0.14	-	0.325	-	-
HCM Control Delay (s)	11.4	-	15.8	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	1.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	194	495	55	151	52	366	320	92	149	538	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	173.1	190.0	186.3	170.6	190.0
Adj Flow Rate, veh/h	63	237	604	67	184	63	446	390	112	182	656	45
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	80	387	766	86	280	96	489	954	271	282	800	55
Arrive On Green	0.05	0.21	0.21	0.05	0.21	0.21	0.28	0.38	0.38	0.16	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	1774	1328	455	1774	2530	718	1774	3079	211
Grp Volume(v), veh/h	63	237	604	67	0	247	446	252	250	182	345	356
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1783	1774	1644	1604	1774	1621	1669
Q Serve(g_s), s	2.7	8.9	14.8	2.9	0.0	9.8	18.7	8.7	8.9	7.4	15.4	15.4
Cycle Q Clear(g_c), s	2.7	8.9	14.8	2.9	0.0	9.8	18.7	8.7	8.9	7.4	15.4	15.4
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.45	1.00		0.13
Lane Grp Cap(c), veh/h	80	387	766	86	0	376	489	620	605	282	421	434
V/C Ratio(X)	0.78	0.61	0.79	0.78	0.00	0.66	0.91	0.41	0.41	0.65	0.82	0.82
Avail Cap(c_a), veh/h	92	387	766	92	0	376	553	620	605	346	421	434
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	1.00	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	36.4	27.7	6.7	36.2	0.0	27.8	26.9	17.6	17.7	30.3	26.8	26.8
Incr Delay (d2), s/veh	31.2	2.8	5.5	32.6	0.0	4.1	18.1	2.0	2.1	2.9	16.1	15.8
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(50%),veh/ln	2.0	4.8	7.6	2.2	0.0	5.2	11.6	4.3	4.2	3.9	8.8	9.0
LnGrp Delay(d),s/veh	67.5	30.5	12.2	68.8	0.0	31.9	45.0	19.6	19.8	33.3	42.9	42.6
LnGrp LOS	E	C	B	E		C	D	B	B	C	D	D
Approach Vol, veh/h		904			314			948			883	
Approach Delay, s/veh		20.8			39.8			31.6			40.8	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	33.0	7.7	20.0	25.2	27.1	7.5	20.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	29.0	4.0	16.0	24.0	20.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	9.4	10.9	4.9	16.8	20.7	17.4	4.7	11.8
Green Ext Time (p_c), s	2.4	2.9	0.0	0.0	0.5	1.3	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	31.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	1	203	6	2	4	160	734	0	5	1053	77
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	169.6	190.0	186.3	170.7	190.0
Adj Flow Rate, veh/h	79	1	248	7	2	5	195	895	0	6	1284	94
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	120	15	240	142	50	68	234	1975	0	53	1565	114
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.13	0.61	0.00	0.03	0.51	0.51
Sat Flow, veh/h	306	73	1176	358	243	334	1774	3308	0	1774	3065	224
Grp Volume(v), veh/h	328	0	0	14	0	0	195	895	0	6	678	700
Grp Sat Flow(s),veh/h/ln	1555	0	0	935	0	0	1774	1612	0	1774	1621	1667
Q Serve(g_s), s	13.2	0.0	0.0	0.0	0.0	0.0	8.4	11.7	0.0	0.3	27.5	27.7
Cycle Q Clear(g_c), s	16.0	0.0	0.0	0.5	0.0	0.0	8.4	11.7	0.0	0.3	27.5	27.7
Prop In Lane	0.24		0.76	0.50		0.36	1.00		0.00	1.00		0.13
Lane Grp Cap(c), veh/h	375	0	0	260	0	0	234	1975	0	53	828	851
V/C Ratio(X)	0.88	0.00	0.00	0.05	0.00	0.00	0.83	0.45	0.00	0.11	0.82	0.82
Avail Cap(c_a), veh/h	375	0	0	260	0	0	272	1975	0	91	828	851
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	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	0.0	0.0	25.0	0.0	0.0	33.2	8.1	0.0	37.0	16.1	16.2
Incr Delay (d2), s/veh	20.0	0.0	0.0	0.1	0.0	0.0	17.4	0.8	0.0	0.9	8.9	8.8
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(50%),veh/ln	9.1	0.0	0.0	0.2	0.0	0.0	5.2	5.3	0.0	0.1	14.3	14.7
LnGrp Delay(d),s/veh	51.4	0.0	0.0	25.1	0.0	0.0	50.6	8.9	0.0	37.9	25.0	25.0
LnGrp LOS	D			C			D	A		D	C	C
Approach Vol, veh/h		328			14			1090			1384	
Approach Delay, s/veh		51.4			25.1			16.3			25.0	
Approach LOS		D			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	52.0		20.0	14.3	45.7		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	48.0		16.0	12.0	40.0		16.0
Max Q Clear Time (g_c+I1), s	2.3	13.7		18.0	10.4	29.7		2.5
Green Ext Time (p_c), s	1.4	7.7		0.0	0.1	6.5		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	153	149	124	709	1015	111
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	166	162	135	771	1103	121
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	239	213	292	2673	1896	848
Arrive On Green	0.13	0.13	0.16	0.76	0.54	0.54
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	166	162	135	771	1103	121
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	6.5	7.2	5.0	5.0	15.3	2.8
Cycle Q Clear(g_c), s	6.5	7.2	5.0	5.0	15.3	2.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	239	213	292	2673	1896	848
V/C Ratio(X)	0.69	0.76	0.46	0.29	0.58	0.14
Avail Cap(c_a), veh/h	414	370	292	2673	1896	848
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	30.1	30.4	27.5	2.8	11.4	8.5
Incr Delay (d2), s/veh	3.6	5.5	1.1	0.3	1.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	6.4	2.5	2.5	7.7	1.3
LnGrp Delay(d),s/veh	33.7	35.8	28.6	3.1	12.7	8.9
LnGrp LOS	C	D	C	A	B	A
Approach Vol, veh/h	328			906	1224	
Approach Delay, s/veh	34.7			6.9	12.3	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		66.2		13.8	23.2	43.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		55.0		17.0	12.0	39.0		
Max Q Clear Time (g_c+I1), s		7.0		9.2	7.0	17.3		
Green Ext Time (p_c), s		7.0		0.6	2.4	9.0		

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Existing Plus Project PM Peak Hour
With Mitigation Measures

Scenario Report

Scenario:	Exist Plus Proj PM
Command:	Exist Plus Proj PM
Volume:	Existing PM
Geometry:	Exist Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	PM Pk Hr
Trip Distribution:	PM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Existing Plus Project PM Peak Hour
With Mitigation Measures

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 7 Fig Lane & Yolo Street	A	7.7	0.109	B	11.0	0.466	+ 3.254 D/V

Existing Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Cycle (sec):	60	Critical Vol./Cap.(X):	0.466
Loss Time (sec):	6	Average Delay (sec/veh):	11.0
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Volume Module:	PM Peak Hour											
Base Vol:	3	3	3	28	16	7	9	69	3	6	71	27
Growth 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
Initial Bse:	3	3	3	28	16	7	9	69	3	6	71	27
Added Vol:	62	178	5	124	141	32	11	51	32	6	75	52
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	65	181	8	152	157	39	20	120	35	12	146	79
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	71	197	9	165	171	42	22	130	38	13	159	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	197	9	165	171	42	22	130	38	13	159	86
PCE 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
MLF 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
FinalVolume:	71	197	9	165	171	42	22	130	38	13	159	86
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.83	0.83	0.73	0.73	0.73	0.91	0.91	0.91	0.92	0.92	0.92
Lanes:	0.26	0.71	0.03	0.44	0.45	0.11	0.11	0.69	0.20	0.05	0.62	0.33
Final Sat.:	403	1122	50	606	626	156	197	1184	345	89	1078	583
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.27	0.27	0.27	0.11	0.11	0.11	0.15	0.15	0.15
Crit Moves:					****						****	
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Volume/Cap:	0.30	0.30	0.30	0.47	0.47	0.47	0.35	0.35	0.35	0.47	0.47	0.47
Delay/Veh:	6.5	6.5	6.5	7.6	7.6	7.6	16.2	16.2	16.2	17.1	17.1	17.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.5	6.5	6.5	7.6	7.6	7.6	16.2	16.2	16.2	17.1	17.1	17.1
LOS by Move:	A	A	A	A	A	A	B	B	B	B	B	B
HCM2k95thQ:	138	138	138	220	220	220	149	149	149	212	212	212

Note: Queue reported is the distance per lane in feet.

Existing Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Lane Group:	LTR			LTR			LTR			LTR		
#LnsInGrps:	1			1			1			1		
HCM Ops Input Saturation Adj Module:												
Lane Width:	12			12			12			12		
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	5	5	5	5	5	5	5	5	5	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking 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
Bus Stp 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
Area 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
RT Adj:	1.00	1.00	1.00	0.99	0.99	0.99	0.97	0.97	0.97	0.96	0.96	0.96
LT Adj:	0.85	0.85	0.85	0.76	0.76	0.76	0.95	0.95	0.95	0.98	0.98	0.98
PedBike 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
HCM Sat Adj:	0.83	0.83	0.83	0.73	0.73	0.73	0.91	0.91	0.91	0.92	0.92	0.92
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.83	0.83	0.83	0.73	0.73	0.73	0.91	0.91	0.91	0.92	0.92	0.92
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Existing Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North	South	East	West
Cycle Length, C:	60	60	60	60
Actual Green Time Per Lane Group, G:	34.05	34.05	17.95	17.95
Effective Green Time Per Lane Group, g:	35.05	35.05	18.95	18.95
Opposing Effective Green Time, go:	35.05	35.05	18.95	18.95
Number Of Opposing Lanes, No:	1	1	1	1
Number Of Lanes In Lane Group, N:	1	1	1	1
Adjusted Left-Turn Flow Rate, Vlt:	71	165	22	13
Proportion of Left Turns in Lane Group, Plt:	0.26	0.44	0.11	0.05
Proportion of Left Turns in Opp Flow, Plto:	0.44	0.26	0.05	0.11
Left Turns Per Cycle, LTC:	1.18	2.75	0.36	0.22
Adjusted Opposing Flow Rate, Vo:	378	276	258	190
Opposing Flow Per Lane Per Cycle, Volc:	6.30	4.60	4.30	3.17
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00
Lost Time Per Phase, tl:	3.00	3.00	3.00	3.00
Eff grn until arrival of left-turn car, gf:	10.13	3.70	8.40	9.91
Opposing Queue Ratio, qro:	0.42	0.42	0.68	0.68
Eff grn blocked by opposing queue, gq:	4.92	3.23	7.04	4.95
Eff grn while left turns filter thru, gu:	24.92	31.35	10.55	9.04
Max opposing cars arriving during gq-gf, n:	0.00	0.00	0.00	0.00
Proportion of Opposing Thru & RT cars, ptho:	0.56	0.74	0.95	0.89
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	2.06	1.85	1.82	1.69
Single Lane Through-car Equivalents, el2:	1.00	1.00	1.00	1.00
Minimum Left Turn Adjustment Factor, fmin:	0.07	0.08	0.12	0.11
Single Lane Left Turn Adjustment Factor, fm:	0.85	0.76	0.95	0.98
Left Turn Adjustment Factor, flt:	0.85	0.76	0.95	0.98

Existing Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	2.3	2.3	2.3	3.6	3.6	3.6	2.4	2.4	2.4	3.4	3.4	3.4
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.4	0.4	0.4	0.9	0.9	0.9	0.5	0.5	0.5	0.9	0.9	0.9
HCM2KQueue:	2.7	2.7	2.7	4.5	4.5	4.5	3.0	3.0	3.0	4.3	4.3	4.3
70th%Factor:	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
HCM2k70thQ:	3.3	3.3	3.3	5.3	5.3	5.3	3.5	3.5	3.5	5.1	5.1	5.1
85th%Factor:	1.57	1.57	1.57	1.56	1.56	1.56	1.57	1.57	1.57	1.56	1.56	1.56
HCM2k85thQ:	4.3	4.3	4.3	7.0	7.0	7.0	4.7	4.7	4.7	6.7	6.7	6.7
90th%Factor:	1.75	1.75	1.75	1.72	1.72	1.72	1.74	1.74	1.74	1.72	1.72	1.72
HCM2k90thQ:	4.8	4.8	4.8	7.7	7.7	7.7	5.2	5.2	5.2	7.4	7.4	7.4
95th%Factor:	2.02	2.02	2.02	1.97	1.97	1.97	2.01	2.01	2.01	1.97	1.97	1.97
HCM2k95thQ:	5.5	5.5	5.5	8.8	8.8	8.8	6.0	6.0	6.0	8.5	8.5	8.5
98th%Factor:	2.51	2.51	2.51	2.41	2.41	2.41	2.50	2.50	2.50	2.42	2.42	2.42
HCM2k98thQ:	6.9	6.9	6.9	10.8	10.8	10.8	7.4	7.4	7.4	10.4	10.4	10.4

Existing Plus Project PM Peak Hour
With Mitigation Measures

Future Queue Length Report (feet)

Node	Intersection	Northbound L	T	R	Southbound L	T	R	Eastbound L	T	R	Westbound L	T	R
#7	[HCM2k95thQ]:	138	138	138	220	220	220	149	149	149	212	212	212

LEVEL OF SERVICE CALCULATION WORKSHEETS

EPAP NO PROJECT

Two Way Analysis cannot be performed on an All Way Stop Intersection.

Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	19	18	8	55	76	77	3	269	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	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	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	23	22	10	67	93	94	4	328	65

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	768	674	288	690	697	328	311	0	0
Stage 1	339	339	-	335	335	-	-	-	-
Stage 2	429	335	-	355	362	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	319	376	751	359	365	713	1249	-	-
Stage 1	676	640	-	679	643	-	-	-	-
Stage 2	604	643	-	662	625	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	217	367	751	332	356	713	1249	-	-
Mov Cap-2 Maneuver	217	367	-	332	356	-	-	-	-
Stage 1	673	626	-	676	640	-	-	-	-
Stage 2	447	640	-	617	612	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	19.3	25	0.1
HCM LOS	C	D	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1249	-	-	306	427	1232	-	-
HCM Lane V/C Ratio	0.003	-	-	0.179	0.594	0.021	-	-
HCM Control Delay (s)	7.9	0	-	19.3	25	8	-	-
HCM Lane LOS	A	A	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	3.7	0.1	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	21	217	38
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	415	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	26	265	46

Major/Minor	Major2		
Conflicting Flow All	328	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1232	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1232	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.6
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	87	4	72	3	1	1	141	264	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	106	5	88	4	1	1	172	322	1

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	962	961	291	1006	1009	323	340	0	0
Stage 1	294	294	-	666	666	-	-	-	-
Stage 2	668	667	-	340	343	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	235	256	748	220	240	718	1219	-	-
Stage 1	714	670	-	449	457	-	-	-	-
Stage 2	448	457	-	675	637	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	208	220	748	171	206	718	1219	-	-
Mov Cap-2 Maneuver	344	356	-	171	206	-	-	-	-
Stage 1	613	669	-	386	393	-	-	-	-
Stage 2	383	393	-	591	636	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	19.1	22.7	2.9
HCM LOS	C	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1219	-	-	452	210	1237	-	-
HCM Lane V/C Ratio	0.141	-	-	0.44	0.029	0.001	-	-
HCM Control Delay (s)	8.4	-	-	19.1	22.7	7.9	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	2.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	1	199	80
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	1	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	1	243	98

Major/Minor	Major2		
Conflicting Flow All	323	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1237	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1237	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	8	22	33	0	83	24	1	0	37	204	139
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	12	2
Mvmt Flow	0	10	27	40	0	100	29	1	0	45	246	167
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9	10.1	13.4
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	13%	77%	2%
Vol Thru, %	54%	35%	22%	98%
Vol Right, %	37%	52%	1%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	380	63	108	128
LT Vol	204	22	24	125
Through Vol	139	33	1	0
RT Vol	37	8	83	3
Lane Flow Rate	458	76	130	154
Geometry Grp	1	1	1	1
Degree of Util (X)	0.57	0.113	0.205	0.215
Departure Headway (Hd)	4.48	5.356	5.682	5.014
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	797	673	635	706
Service Time	2.554	3.36	3.685	3.113
HCM Lane V/C Ratio	0.575	0.113	0.205	0.218
HCM Control Delay	13.4	9	10.1	9.5
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	3.7	0.4	0.8	0.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	3	125	0
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	12	2
Mvmt Flow	0	4	151	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.5
HCM LOS	A

Lane

EPAP No Project AM Peak Hour

Scenario Report

Scenario:	EPAP No Proj AM
Command:	EPAP No Proj AM
Volume:	Existing AM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	AM Pk Hr
Trip Distribution:	AM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

EPAP No Project AM Peak Hour

Trip Generation Report

Forecast for AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
31	Dollar Gener	21.00	Small Box KSF	1.14	0.76	24	16	40	7.2
	Zone 31 Subtotal					24	16	40	7.2
32	AutoZone	6.70	Auto Parts Sal	1.15	0.73	8	5	13	2.3
	Zone 32 Subtotal					8	5	13	2.3
33	Riddle Mine	1.00	Mining Trips	63.00	63.00	63	63	126	22.6
	Zone 33 Subtotal					63	63	126	22.6
34	Souza Indust	49.90	Industr Pk Acr	6.32	1.29	315	64	379	67.9
	Zone 34 Subtotal					315	64	379	67.9
TOTAL						410	148	558	100.0

EPAP No Project AM Peak Hour

Trip Distribution Report

Percent Of Trips AM Pk Hr

Zone	To Gates 1	2	3	4	5	6	7	8	9	10	11
31	0.0	47.0	0.0	12.0	0.0	0.0	0.0	29.0	12.0	0.0	0.0
32	0.0	47.0	0.0	12.0	0.0	0.0	0.0	29.0	12.0	0.0	0.0
33	44.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	10.0	25.0	1.0
34	0.0	45.0	0.0	21.0	0.0	0.0	0.0	13.0	21.0	0.0	0.0

Zone	To Gates 15	16	18	19
31	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0
33	0.0	0.0	0.0	0.0
34	0.0	0.0	0.0	0.0

EPAP No Project AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 4 Stuhr Road & Draper Road	A	9.2	0.030	A	9.4	0.031	+ 0.195 D/V
# 5 Jensen Road & Fig Lane	A	9.4	0.137	A	9.4	0.137	+ 0.000 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	9.5	0.350	A	9.5	0.350	+ 0.000 V/C
# 7 Fig Lane & Yolo Street	B	12.5	0.046	B	12.5	0.046	+ 0.000 D/V
# 15 Stuhr & Eastin	B	10.2	0.054	B	10.9	0.060	+ 0.709 D/V
# 16 Stuhr & Villa Manucha	A	8.9	0.107	A	8.9	0.108	+ 0.054 D/V

EPAP No Project AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	??? / ???	No / No
# 5 Jensen Road & Fig Lane	??? / ???	No / No
# 6 Orestimba/Yolo St & Hardin Rd	???	No
# 7 Fig Lane & Yolo Street	??? / ???	No / No
# 15 Stuhr & Eastin	??? / ???	No / No
# 16 Stuhr & Villa Manucha	??? / ???	No / No

EPAP No Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

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Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1 0	0 1	0	0 0
Initial Vol:	23	0	18	0	0	0	0	61	13	22	59	0
ApproachDel:	9.4			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=41]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=196]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Stuhr Road & Draper Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1	0	0	1	0	0	0	0
Initial Vol:	23	0	18	0	0	0	0	61	13	22	59	0

Major Street Volume: 155
Minor Approach Volume: 41
Minor Approach Volume Threshold: 717

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #5 Jensen Road & Fig Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	1	0	0	0	0	0	1! 0	0	1	0	0	0	0
Initial Vol:	3	6	42	1	6	0	1	3	5	119	0	0
ApproachDel:	xxxxxx			xxxxxx			8.8			9.4		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=186]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=119]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=186]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #5 Jensen Road & Fig Lane

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 1	0	0 0	0 0 1!	0	0	1 0	0	0 0
Initial Vol:	3	6	42	1	6	0	1	3	5	119	0	0

Major Street Volume: 58
Minor Approach Volume: 119
Minor Approach Volume Threshold: 979

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	14	144	30	49	174	16	19	11	9	37	18	100

Major Street Volume: 427
Minor Approach Volume: 155
Minor Approach Volume Threshold: 446

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Fig Lane & Yolo Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Initial Vol:	6	11	5	22	21	3	8	160	1	2	183	55
ApproachDel:	11.8			12.5			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=22]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=477]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=46]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=477]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Fig Lane & Yolo Street

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Initial Vol:	6	11	5	22	21	3	8	160	1	2	183	55

Major Street Volume: 409
Minor Approach Volume: 46
Minor Approach Volume Threshold: 458

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0	0 0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	5	8	0	1	35	24	19	43	7	11	121	4
ApproachDel:	10.9			10.5			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=13]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=278]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=60]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=278]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0	0 0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	5	8	0	1	35	24	19	43	7	11	121	4

Major Street Volume: 205
Minor Approach Volume: 60
Minor Approach Volume Threshold: 642

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

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Intersection #16 Stuhr & Villa Manucha

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1	0	1	0	0	0
Initial Vol:	0	0	0	0	0	86	154	53	0	0	53	1
ApproachDel:	xxxxxx			8.9			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=86]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=347]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #16 Stuhr & Villa Manucha

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1	0	1	0	0	0
Initial Vol:	0	0	0	0	0	86	154	53	0	0	53	1

Major Street Volume: 261

Minor Approach Volume: 86

Minor Approach Volume Threshold: 578

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: A[9.4]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 0	0	0	0 0 0	1	0	0 1	0	0 0
Volume Module: AM Peak Hour												
Base Vol:	23	0	18	0	0	0	0	42	13	22	40	0
Growth 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
Initial Bse:	23	0	18	0	0	0	0	42	13	22	40	0
Added Vol:	0	0	0	0	0	0	0	19	0	0	19	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	0	18	0	0	0	0	61	13	22	59	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	25	0	20	0	0	0	0	66	14	24	64	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	0	20	0	0	0	0	66	14	24	64	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	185	185	73	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	80	xxxx	xxxxx
Potent Cap.:	804	709	988	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1517	xxxx	xxxxx
Move Cap.:	794	698	988	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1517	xxxx	xxxxx
Volume/Cap:	0.03	0.00	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	869	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	9.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:		9.4		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		A		*			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100 secs		
InitVolume:										0	81	
Saturation:										1900	1862	
ArrivalType:										0	3	
G/C:										0.00	0.91	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.000	0.910	
gq1:										0.00	0.39	
gq2:										0.00	0.02	
gq:										0.00	0.41	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										0	2	
vcg:										0	22	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:										0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	185	185	73	195	192	64	0	xxxxx	xxxxx	80	xxxxx	xxxxx
AdjCnflVol:	185	185	73	195	192	64	0	xxxxx	xxxxx	80	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	185	185	73	195	192	64	0	xxxxx	xxxxx	80	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	804	709	988	769	706	1006	1623	xxxxx	xxxxx	1517	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	804	709	988	769	706	1006	1623	xxxxx	xxxxx	1517	xxxxx	xxxxx

EPAP No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Average Delay (sec/veh): 6.6 Worst Case Level Of Service: A[9.4]

Street Name:	Fig Lane						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 0			0 0 1! 0 0			1 0 0 0 0		
Volume Module: AM Peak Hour												
Base Vol:	3	6	42	1	6	0	1	3	5	119	0	0
Growth 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
Initial Bse:	3	6	42	1	6	0	1	3	5	119	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	6	42	1	6	0	1	3	5	119	0	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	3	7	46	1	7	0	1	3	5	129	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	7	46	1	7	0	1	3	5	129	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	7	xxxx	xxxxx	52	xxxx	xxxxx	45	67	7	49	xxxx	xxxxx
Potent Cap.:	1614	xxxx	xxxxx	1554	xxxx	xxxxx	958	823	1076	951	xxxx	xxxxx
Move Cap.:	1614	xxxx	xxxxx	1554	xxxx	xxxxx	956	821	1076	942	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.01	0.14	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	11.9	xxxx	xxxxx
Control Del:	7.2	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	963	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	8.8	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.8			9.4		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the distance per lane in feet.

EPAP No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.350
Loss Time (sec): 0 Average Delay (sec/veh): 9.5
Optimal Cycle: 0 Level Of Service: A

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: AM Peak Hour												
Base Vol:	14	144	30	49	174	16	19	11	9	37	18	100
Growth 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
Initial Bse:	14	144	30	49	174	16	19	11	9	37	18	100
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	144	30	49	174	16	19	11	9	37	18	100
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	15	157	33	53	189	17	21	12	10	40	20	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	157	33	53	189	17	21	12	10	40	20	109
PCE 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
MLF 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
FinalVolume:	15	157	33	53	189	17	21	12	10	40	20	109
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.07	0.77	0.16	0.20	0.73	0.07	0.49	0.28	0.23	0.24	0.12	0.64
Final Sat.:	55	567	118	152	540	50	307	178	146	170	82	458
Capacity Analysis Module:												
Vol/Sat:	0.28	0.28	0.28	0.35	0.35	0.35	0.07	0.07	0.07	0.24	0.24	0.24
Crit Moves:			****			****		****			****	
Delay/Veh:	9.3	9.3	9.3	10.0	10.0	10.0	8.5	8.5	8.5	9.0	9.0	9.0
Delay 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
AdjDel/Veh:	9.3	9.3	9.3	10.0	10.0	10.0	8.5	8.5	8.5	9.0	9.0	9.0
LOS by Move:	A	A	A	B	B	B	A	A	A	A	A	A
ApproachDel:	9.3			10.0			8.5			9.0		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.3			10.0			8.5			9.0		
LOS by Appr:	A			B			A			A		
AllWayAvgQ:	8.6	8.6	8.6	12.2	12.2	12.2	1.5	1.5	1.5	6.5	6.5	6.5

Note: Queue reported is the distance per lane in feet.

EPAP No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[12.5]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: AM Peak Hour												
Base Vol:	6	11	5	22	21	3	8	160	1	2	183	55
Growth 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
Initial Bse:	6	11	5	22	21	3	8	160	1	2	183	55
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	11	5	22	21	3	8	160	1	2	183	55
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	7	12	5	24	23	3	9	174	1	2	199	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	7	12	5	24	23	3	9	174	1	2	199	60
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	438	455	174	434	426	229	259	xxxx	xxxxx	175	xxxx	xxxxx
Potent Cap.:	529	501	869	532	521	810	1306	xxxx	xxxxx	1401	xxxx	xxxxx
Move Cap.:	506	497	869	516	516	810	1306	xxxx	xxxxx	1401	xxxx	xxxxx
Volume/Cap:	0.01	0.02	0.01	0.05	0.04	0.00	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.5	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	554	xxxxx	xxxx	529	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.8	xxxxx	xxxxx	12.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.8			12.5			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 3.6 Worst Case Level Of Service: B[10.9]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: AM Peak Hour												
Base Vol:	4	8	0	1	35	8	3	24	6	11	102	4
Growth 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
Initial Bse:	4	8	0	1	35	8	3	24	6	11	102	4
Added Vol:	1	0	0	0	0	16	16	19	1	0	19	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	8	0	1	35	24	19	43	7	11	121	4
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	5	9	0	1	38	26	21	47	8	12	132	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	5	9	0	1	38	26	21	47	8	12	132	4
Critical Gap Module:												
Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	282	252	xxxxx	254	253	134	136	xxxx	xxxxx	54	xxxx	xxxxx
Potent Cap.:	671	652	xxxxx	699	650	915	1448	xxxx	xxxxx	1551	xxxx	xxxxx
Move Cap.:	611	637	xxxxx	681	636	915	1448	xxxx	xxxxx	1551	xxxx	xxxxx
Volume/Cap:	0.01	0.01	xxxx	0.00	0.06	0.03	0.01	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.1	xxxx	xxxxx	0.6	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	7.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	627	xxxx	xxxxx	xxxx	725	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	10.9	xxxx	xxxxx	xxxxx	10.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	10.9			10.5			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

EPAP No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: A[8.9]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 1 0 0 0			0 0 0 1 0		
Volume Module:AM Peak Hour												
Base Vol:	0	0	0	0	0	86	154	44	0	0	44	1
Growth 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
Initial Bse:	0	0	0	0	0	86	154	44	0	0	44	1
Added Vol:	0	0	0	0	0	0	0	9	0	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	86	154	53	0	0	53	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	0	0	93	167	58	0	0	58	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	93	167	58	0	0	58	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	58	59	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	1008	1545	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	1008	1545	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	0.11	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	7.6	9.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.9	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.9			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

****

Intersection #16 Stuhr & Villa Manucha

****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	2%	2%	2%	2%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

EPAP No Project AM Peak Hour

Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[2Way95thQ]:	4.0	4.0	4.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1.2	1.2	xxxx
#5	[2Way95thQ]:	0.2	xxxx	xxxx	0.1	0.1	xxxx	0.8	0.8	0.8	11.9	xxxx	xxxx
#6	[AllWayAvgQ]	8.6	8.6	8.6	12.2	12.2	12.2	1.5	1.5	1.5	6.5	6.5	6.5
#7	[2Way95thQ]:	3.4	3.4	3.4	7.8	7.8	7.8	0.5	xxxx	xxxx	0.1	xxxx	xxxx
#15	[2Way95thQ]:	1.7	1.7	xxxx	7.4	7.4	7.4	1.1	xxxx	xxxx	0.6	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	7.6	9.1	9.1	xxxx	xxxx	xxxx	xxxx

Two Way Analysis cannot be performed on an All Way Stop Intersection.

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	21	11	3	24	14	44	4	263	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	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	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	26	13	4	29	17	54	5	321	71

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1076	1040	466	1048	1050	321	476	0	0
Stage 1	710	710	-	330	330	-	-	-	-
Stage 2	366	330	-	718	720	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	197	230	597	206	227	720	1086	-	-
Stage 1	424	437	-	683	646	-	-	-	-
Stage 2	653	646	-	420	432	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	157	206	597	179	203	720	1086	-	-
Mov Cap-2 Maneuver	157	206	-	179	203	-	-	-	-
Stage 1	421	394	-	679	642	-	-	-	-
Stage 2	585	642	-	364	389	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	30.7	22	0.1
HCM LOS	D	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1086	-	-	182	310	1239	-	-
HCM Lane V/C Ratio	0.004	-	-	0.235	0.323	0.098	-	-
HCM Control Delay (s)	8.3	0	-	30.7	22	8.2	-	-
HCM Lane LOS	A	A	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.9	1.4	0.3	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	100	374	16
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	415	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	122	456	20

Major/Minor	Major2		
Conflicting Flow All	321	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1239	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1239	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	1.7
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	39	1	48	6	2	4	56	252	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	48	1	59	7	2	5	68	307	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	878	874	418	904	904	307	448	0	0
Stage 1	430	430	-	444	444	-	-	-	-
Stage 2	448	444	-	460	460	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	268	288	635	258	277	733	1112	-	-
Stage 1	603	583	-	593	575	-	-	-	-
Stage 2	590	575	-	581	566	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	251	269	635	222	259	733	1112	-	-
Mov Cap-2 Maneuver	430	436	-	222	259	-	-	-	-
Stage 1	566	580	-	557	540	-	-	-	-
Stage 2	548	540	-	524	563	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	13.7	17.7	1.5
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1112	-	-	522	298	1254	-	-
HCM Lane V/C Ratio	0.061	-	-	0.206	0.049	0.005	-	-
HCM Control Delay (s)	8.4	-	-	13.7	17.7	7.9	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.8	0.2	0	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	5	319	48
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	1	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	6	389	59

Major/Minor	Major2		
Conflicting Flow All	307	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1254	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1254	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.1
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	2	20	63	0	126	16	1	0	18	155	86
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	12	2
Mvmt Flow	0	2	24	76	0	152	19	1	0	22	187	104
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.2	10.9	11.5
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	2%	88%	0%
Vol Thru, %	60%	24%	11%	99%
Vol Right, %	33%	74%	1%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	259	85	143	221
LT Vol	155	20	16	218
Through Vol	86	63	1	2
RT Vol	18	2	126	1
Lane Flow Rate	312	102	172	266
Geometry Grp	1	1	1	1
Degree of Util (X)	0.418	0.15	0.275	0.381
Departure Headway (Hd)	4.954	5.287	5.746	5.156
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	730	680	627	700
Service Time	2.954	3.31	3.765	3.176
HCM Lane V/C Ratio	0.427	0.15	0.274	0.38
HCM Control Delay	11.5	9.2	10.9	11.3
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	2.1	0.5	1.1	1.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	1	218	2
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	12	2
Mvmt Flow	0	1	263	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	11.3
HCM LOS	B

Lane

EPAP No Project PM Peak Hour

Scenario Report

Scenario:	EPAP No Proj PM
Command:	EPAP No Proj PM
Volume:	Existing PM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	PM Pk Hr
Trip Distribution:	PM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

EPAP No Project PM Peak Hour

Trip Generation Report

Forecast for PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
31	Dollar Gener	21.00	Small Box KSF	2.24	2.24	47	47	94	18.0
	Zone 31 Subtotal					47	47	94	18.0
32	AutoZone	6.70	Auto Parts Sal	2.49	2.59	17	17	34	6.5
	Zone 32 Subtotal					17	17	34	6.5
33	Riddle Mine	1.00	Mining Trips	1.00	8.00	1	8	9	1.7
	Zone 33 Subtotal					1	8	9	1.7
34	Souza Indust	49.90	Industr Pk Acr	1.62	6.11	81	305	386	73.8
	Zone 34 Subtotal					81	305	386	73.8
TOTAL						146	377	523	100.0

EPAP No Project PM Peak Hour

Trip Distribution Report

Percent Of Trips PM Pk Hr

Zone	To Gates 1	2	3	4	5	6	7	8	9	10	11
31	0.0	47.0	0.0	12.0	0.0	0.0	0.0	29.0	12.0	0.0	0.0
32	0.0	47.0	0.0	12.0	0.0	0.0	0.0	29.0	12.0	0.0	0.0
33	44.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	10.0	25.0	1.0
34	0.0	45.0	0.0	21.0	0.0	0.0	0.0	13.0	21.0	0.0	0.0

Zone	To Gates 18	19
31	0.0	0.0
32	0.0	0.0
33	0.0	0.0
34	0.0	0.0

EPAP No Project PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 4 Stuhr Road & Draper Road	A	9.3	0.022	A	9.3	0.022	+ 0.013 D/V
# 5 Jensen Road & Fig Lane	A	9.1	0.027	A	9.1	0.027	+ 0.000 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	7.7	0.116	A	7.7	0.116	+ 0.000 V/C
# 7 Fig Lane & Yolo Street	B	10.2	0.041	B	10.2	0.041	+ 0.000 D/V
# 15 Stuhr & Eastin	B	10.3	0.036	B	10.4	0.036	+ 0.053 D/V
# 16 Stuhr & Villa Manucha	A	9.2	0.149	A	9.2	0.149	+ 0.000 D/V

EPAP No Project PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	??? / ???	No / No
# 5 Jensen Road & Fig Lane	??? / ???	No / No
# 6 Orestimba/Yolo St & Hardin Rd	???	No
# 7 Fig Lane & Yolo Street	??? / ???	No / No
# 15 Stuhr & Eastin	??? / ???	No / No
# 16 Stuhr & Villa Manucha	??? / ???	No / No

EPAP No Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1	0	1	0
Initial Vol:	14	0	19	0	0	0	0	85	37	16	32	0
ApproachDel:	9.3			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=33]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=203]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Stuhr Road & Draper Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1	0	0	1	0	0	0	0
Initial Vol:	14	0	19	0	0	0	0	85	37	16	32	0

Major Street Volume: 170
Minor Approach Volume: 33
Minor Approach Volume Threshold: 692

SIGNAL WARRANT DISCLAIMER
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EPAP No Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #5 Jensen Road & Fig Lane

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	1	0	0	0	0	0	0	1	0	0	0	1! 0	0
Initial Vol:	3	4	28	1	6	0	0	8	4	24	9	1
ApproachDel:	xxxxxx			xxxxxx			9.0			9.1		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=12]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=88]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=34]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=88]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #5 Jensen Road & Fig Lane

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	1	0	0	0	0	0	1 0
Initial Vol:	3	4	28	1	6	0	0	8	4	24	9	1

Major Street Volume: 42
Minor Approach Volume: 34
Minor Approach Volume Threshold: 1065

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Initial Vol:	9	48	19	24	43	2	7	31	9	26	20	45

Major Street Volume: 145
Minor Approach Volume: 91
Minor Approach Volume Threshold: 734

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP No Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Fig Lane & Yolo Street

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	3	3	3	28	16	7	9	69	3	6	71	27
ApproachDel:	9.7			10.2			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=245]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=51]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=245]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #7 Fig Lane & Yolo Street

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	3	3	3	28	16	7	9	69	3	6	71	27

Major Street Volume: 185
Minor Approach Volume: 51
Minor Approach Volume Threshold: 669

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP No Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Initial Vol:	4	23	2	1	20	2	14	113	10	1	34	4
ApproachDel:	10.4			10.3			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=29]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=228]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=23]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=228]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Initial Vol:	4	23	2	1	20	2	14	113	10	1	34	4

Major Street Volume: 176
Minor Approach Volume: 29
Minor Approach Volume Threshold: 683

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP No Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #16 Stuhr & Villa Manucha

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	0	1	0	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	46	0	0	43	3
ApproachDel:	xxxxxx			9.2			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.4]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=142]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=307]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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EPAP No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #16 Stuhr & Villa Manucha

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	0	1	0	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	46	0	0	43	3

Major Street Volume: 165

Minor Approach Volume: 142

Minor Approach Volume Threshold: 700

SIGNAL WARRANT DISCLAIMER

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EPAP No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: A[9.3]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	1	0	0 1	0	0
Volume Module: PM Peak Hour												
Base Vol:	14	0	19	0	0	0	0	83	37	16	32	0
Growth 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
Initial Bse:	14	0	19	0	0	0	0	83	37	16	32	0
Added Vol:	0	0	0	0	0	0	0	2	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	0	19	0	0	0	0	85	37	16	32	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	15	0	21	0	0	0	0	92	40	17	35	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	15	0	21	0	0	0	0	92	40	17	35	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	182	182	112	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	133	xxxx	xxxxx
Potent Cap.:	807	712	940	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1452	xxxx	xxxxx
Move Cap.:	800	703	940	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1452	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.9	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	875	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	9.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:		9.3		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		A		*			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100 secs		
InitVolume:										0	48	
Saturation:										1900	1862	
ArrivalType:										0	3	
G/C:										0.00	0.91	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.000	0.910	
gq1:										0.00	0.23	
gq2:										0.00	0.01	
gq:										0.00	0.24	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										0	1	
vcg:										0	13	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:										0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	182	182	112	192	202	35	0	xxxxx	xxxxx	133	xxxxx	xxxxx
AdjCnflVol:	182	182	112	192	202	35	0	xxxxx	xxxxx	133	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	182	182	112	192	202	35	0	xxxxx	xxxxx	133	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	807	712	940	772	698	1044	1623	xxxxx	xxxxx	1452	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	807	712	940	772	698	1044	1623	xxxxx	xxxxx	1452	xxxxx	xxxxx

EPAP No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: A[9.1]

Street Name:	Fig Lane						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	3	4	28	1	6	0	0	8	4	24	9	1
Growth 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
Initial Bse:	3	4	28	1	6	0	0	8	4	24	9	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	4	28	1	6	0	0	8	4	24	9	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	3	4	30	1	7	0	0	9	4	26	10	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	4	30	1	7	0	0	9	4	26	10	1
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	7	xxxx	xxxxx	35	xxxx	xxxxx	xxxx	50	7	41	35	20
Potent Cap.:	1614	xxxx	xxxxx	1577	xxxx	xxxxx	xxxx	841	1076	962	858	1058
Move Cap.:	1614	xxxx	xxxxx	1577	xxxx	xxxxx	xxxx	839	1076	949	855	1058
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	0.01	0.00	0.03	0.01	0.00
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.2	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	906	xxxx	925	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	0.0	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	9.0	xxxxx	9.1	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	A	*	A	*
ApproachDel:	xxxxxx			xxxxxx			9.0			9.1		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the distance per lane in feet.

EPAP No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.116
Loss Time (sec): 0 Average Delay (sec/veh): 7.7
Optimal Cycle: 0 Level Of Service: A

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	9	48	19	24	43	2	7	31	9	26	20	45
Growth 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
Initial Bse:	9	48	19	24	43	2	7	31	9	26	20	45
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	48	19	24	43	2	7	31	9	26	20	45
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	10	52	21	26	47	2	8	34	10	28	22	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	52	21	26	47	2	8	34	10	28	22	49
PCE 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
MLF 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
FinalVolume:	10	52	21	26	47	2	8	34	10	28	22	49
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.12	0.63	0.25	0.35	0.62	0.03	0.15	0.66	0.19	0.29	0.22	0.49
Final Sat.:	98	523	207	277	496	23	121	534	155	243	187	421
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.10	0.09	0.09	0.09	0.06	0.06	0.06	0.12	0.12	0.12
Crit Moves:		****				****		****			****	
Delay/Veh:	7.6	7.6	7.6	7.8	7.8	7.8	7.6	7.6	7.6	7.6	7.6	7.6
Delay 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
AdjDel/Veh:	7.6	7.6	7.6	7.8	7.8	7.8	7.6	7.6	7.6	7.6	7.6	7.6
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	7.6			7.8			7.6			7.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.6			7.8			7.6			7.6		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	2.6	2.6	2.6	2.4	2.4	2.4	1.6	1.6	1.6	3.0	3.0	3.0

Note: Queue reported is the distance per lane in feet.

EPAP No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: B[10.2]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:	PM Peak Hour											
Base Vol:	3	3	3	28	16	7	9	69	3	6	71	27
Growth 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
Initial Bse:	3	3	3	28	16	7	9	69	3	6	71	27
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	3	3	28	16	7	9	69	3	6	71	27
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	3	3	3	30	17	8	10	75	3	7	77	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	3	3	30	17	8	10	75	3	7	77	29
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	214	216	77	204	203	92	107	xxxx	xxxxx	78	xxxx	xxxxx
Potent Cap.:	743	682	984	754	694	966	1484	xxxx	xxxxx	1520	xxxx	xxxxx
Move Cap.:	717	675	984	742	686	966	1484	xxxx	xxxxx	1520	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.04	0.03	0.01	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.5	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	771	xxxxx	xxxx	747	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	9.7	xxxxx	xxxxx	10.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	A	*	*	B	*	*	*	*	*	*	*
ApproachDel:		9.7			10.2			xxxxxx			xxxxxx	
ApproachLOS:		A			B			*			*	

Note: Queue reported is the distance per lane in feet.

EPAP No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: B[10.4]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:	PM Peak Hour											
Base Vol:	4	23	2	1	20	2	12	111	10	1	34	4
Growth 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
Initial Bse:	4	23	2	1	20	2	12	111	10	1	34	4
Added Vol:	0	0	0	0	0	0	2	2	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	23	2	1	20	2	14	113	10	1	34	4
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	4	25	2	1	22	2	15	123	11	1	37	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	25	2	1	22	2	15	123	11	1	37	4
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	212	202	128	214	205	39	41	xxxx	xxxxx	134	xxxx	xxxxx
Potent Cap.:	745	694	922	743	691	1032	1568	xxxx	xxxxx	1451	xxxx	xxxxx
Move Cap.:	720	687	922	715	684	1032	1568	xxxx	xxxxx	1451	xxxx	xxxxx
Volume/Cap:	0.01	0.04	0.00	0.00	0.03	0.00	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.7	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	703	xxxxx	xxxx	706	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.4	xxxxx	xxxxx	10.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:		10.4			10.3			xxxxxx			xxxxxx	
ApproachLOS:		B			B			*			*	

Note: Queue reported is the distance per lane in feet.

EPAP No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

EPAP No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 6.0 Worst Case Level Of Service: A[9.2]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	0	0	1	0
Volume Module: PM Peak Hour												
Base Vol:	0	0	0	2	0	140	73	45	0	0	43	3
Growth 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
Initial Bse:	0	0	0	2	0	140	73	45	0	0	43	3
Added Vol:	0	0	0	0	0	0	0	1	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	140	73	46	0	0	43	3
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	2	0	152	79	50	0	0	47	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	2	0	152	79	50	0	0	47	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	257	257	48	50	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	732	647	1020	1557	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	702	613	1020	1557	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.15	0.05	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	4.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1014	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.2			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

****

Intersection #16 Stuhr & Villa Manucha

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

EPAP No Project PM Peak Hour

Future Queue Length Report (feet)

Node	Intersection	Northbound L	T	R	Southbound L	T	R	Eastbound L	T	R	Westbound L	T	R
#4	[2Way95thQ]:	3.2	3.2	3.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.9	0.9	xxxx
#5	[2Way95thQ]:	0.2	xxxx	xxxx	0.1	0.1	xxxx	xxxx	1.1	1.1	3.1	3.1	3.1
#6	[AllWayAvgQ]	2.6	2.6	2.6	2.4	2.4	2.4	1.6	1.6	1.6	3.0	3.0	3.0
#7	[2Way95thQ]:	1.0	1.0	1.0	6.0	6.0	6.0	0.5	xxxx	xxxx	0.3	xxxx	xxxx
#15	[2Way95thQ]:	3.5	3.5	3.5	2.8	2.8	2.8	0.7	xxxx	xxxx	0.1	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	13.4	13.4	13.4	4.0	4.0	xxxx	xxxx	xxxx	xxxx

LEVEL OF SERVICE CALCULATION WORKSHEETS

EPAP PLUS PROJECT

Two Way Analysis cannot be performed on Signalized Intersection.

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	884.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	105	4	155	3	1	1	278	1001	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	128	5	189	4	1	1	339	1221	1

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2738	2737	835	2833	2787	1221	885	0	0
Stage 1	837	837	-	1899	1899	-	-	-	-
Stage 2	1901	1900	-	934	888	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	~ 13	20	368	11	19	219	765	-	-
Stage 1	361	382	-	89	117	-	-	-	-
Stage 2	~ 89	117	-	319	362	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	~ 8	11	368	~ 2	11	219	765	-	-
Mov Cap-2 Maneuver	~ 8	11	-	~ 2	11	-	-	-	-
Stage 1	201	381	-	50	65	-	-	-	-
Stage 2	~ 48	65	-	153	361	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	$ 7565.6	$ 2510.4	2.9
HCM LOS	F	F	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	765	-	-	19	3	570	-	-
HCM Lane V/C Ratio	0.443	-	-	16.945	2.033	0.002	-	-
HCM Control Delay (s)	13.4	-	-	$ 7565.6	$ 2510.4	11.3	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	2.3	-	-	40.8	1.7	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	1	643	83
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	1	784	101

Major/Minor	Major2		
Conflicting Flow All	1222	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	570	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	570	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0
HCM LOS	

Minor Lane/Major Mvmt

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	10	22	28	1033	702	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	200	-	-	200
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	11	24	30	1123	763	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1947	763	763	0	-	0
Stage 1	763	-	-	-	-	-
Stage 2	1184	-	-	-	-	-
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	71	404	850	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	290	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	68	404	850	-	-	-
Mov Cap-2 Maneuver	68	-	-	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	280	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.2	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	850	-	68	404	-	-
HCM Lane V/C Ratio	0.036	-	0.16	0.059	-	-
HCM Control Delay (s)	9.4	-	67.8	14.5	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.2	-	-

Two Way Analysis cannot be performed on Signalized Intersection.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	100	95	115	120	1	54	250	153	3	302	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	175.6	190.0	186.3	171.7	190.0
Adj Flow Rate, veh/h	43	120	114	139	145	1	65	301	0	4	364	55
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	63	160	152	171	448	3	82	718	0	8	534	81
Arrive On Green	0.04	0.18	0.18	0.10	0.24	0.24	0.05	0.41	0.00	0.00	0.37	0.37
Sat Flow, veh/h	1774	880	836	1774	1848	13	1774	1756	0	1774	1457	220
Grp Volume(v), veh/h	43	0	234	139	0	146	65	301	0	4	0	419
Grp Sat Flow(s),veh/h/ln	1774	0	1715	1774	0	1860	1774	1756	0	1774	0	1678
Q Serve(g_s), s	1.2	0.0	6.7	4.0	0.0	3.3	1.9	6.3	0.0	0.1	0.0	10.9
Cycle Q Clear(g_c), s	1.2	0.0	6.7	4.0	0.0	3.3	1.9	6.3	0.0	0.1	0.0	10.9
Prop In Lane	1.00		0.49	1.00		0.01	1.00		0.00	1.00		0.13
Lane Grp Cap(c), veh/h	63	0	312	171	0	451	82	718	0	8	0	615
V/C Ratio(X)	0.68	0.00	0.75	0.81	0.00	0.32	0.79	0.42	0.00	0.52	0.00	0.68
Avail Cap(c_a), veh/h	171	0	530	171	0	574	137	718	0	137	0	615
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	0.97	0.97	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	20.1	23.0	0.0	16.1	24.5	10.9	0.0	25.7	0.0	13.9
Incr Delay (d2), s/veh	12.1	0.0	3.6	24.8	0.0	0.4	14.8	1.7	0.0	45.7	0.0	6.0
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(50%),veh/ln	0.8	0.0	3.5	3.1	0.0	1.8	1.2	3.4	0.0	0.2	0.0	6.0
LnGrp Delay(d),s/veh	36.8	0.0	23.7	47.8	0.0	16.5	39.2	12.7	0.0	71.5	0.0	19.9
LnGrp LOS	D		C	D		B	D	B		F		B
Approach Vol, veh/h		277			285			366			423	
Approach Delay, s/veh		25.8			31.8			17.4			20.4	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.2	33.4	9.0	13.4	14.6	23.0	5.8	16.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	4.0	19.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.1	8.3	6.0	8.7	3.9	12.9	3.2	5.3
Green Ext Time (p_c), s	0.0	1.4	0.0	0.7	0.0	1.3	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	29	100	217	69	287	99	557	424	62	40	435	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	171.6	190.0	186.3	171.2	190.0
Adj Flow Rate, veh/h	35	122	265	84	350	121	679	517	76	49	530	62
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	44	100	218	89	287	99	562	863	127	63	464	54
Arrive On Green	0.02	0.19	0.19	0.05	0.22	0.22	0.32	0.59	0.59	0.07	0.62	0.62
Sat Flow, veh/h	1774	524	1138	1774	1324	458	1774	1463	215	1774	1505	176
Grp Volume(v), veh/h	35	0	387	84	0	471	679	0	593	49	0	592
Grp Sat Flow(s),veh/h/ln	1774	0	1662	1774	0	1782	1774	0	1678	1774	0	1681
Q Serve(g_s), s	2.4	0.0	23.0	5.7	0.0	26.0	38.0	0.0	26.9	3.3	0.0	37.0
Cycle Q Clear(g_c), s	2.4	0.0	23.0	5.7	0.0	26.0	38.0	0.0	26.9	3.3	0.0	37.0
Prop In Lane	1.00		0.68	1.00		0.26	1.00		0.13	1.00		0.10
Lane Grp Cap(c), veh/h	44	0	319	89	0	386	562	0	989	63	0	518
V/C Ratio(X)	0.79	0.00	1.21	0.95	0.00	1.22	1.21	0.00	0.60	0.78	0.00	1.14
Avail Cap(c_a), veh/h	59	0	319	89	0	386	562	0	989	118	0	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.00	0.93
Uniform Delay (d), s/veh	58.2	0.0	48.5	56.8	0.0	47.0	41.0	0.0	15.6	55.3	0.0	23.0
Incr Delay (d2), s/veh	38.9	0.0	122.0	77.9	0.0	120.2	109.8	0.0	2.7	17.4	0.0	83.6
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(50%),veh/ln	1.6	0.0	21.3	4.7	0.0	25.7	35.7	0.0	13.1	1.9	0.0	28.7
LnGrp Delay(d),s/veh	97.1	0.0	170.5	134.8	0.0	167.2	150.8	0.0	18.3	72.7	0.0	106.6
LnGrp LOS	F		F	F		F	F		B	F		F
Approach Vol, veh/h		422			555			1272			641	
Approach Delay, s/veh		164.4			162.3			89.0			104.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	74.8	10.0	27.0	42.0	41.0	7.0	30.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	67.0	6.0	23.0	38.0	37.0	4.0	25.0
Max Q Clear Time (g_c+I1), s	5.3	28.9	7.7	25.0	40.0	39.0	4.4	28.0
Green Ext Time (p_c), s	0.0	10.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay	117.4	
HCM 2010 LOS	F	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	3	109	456	489	23
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	1	3	118	496	532	25
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	8	7	150	1517	1192	1013
Arrive On Green	0.00	0.00	0.17	1.00	1.00	1.00
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	1	3	118	496	532	25
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	0.0	0.1	2.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.1	2.8	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	8	7	150	1517	1192	1013
V/C Ratio(X)	0.13	0.44	0.79	0.33	0.45	0.02
Avail Cap(c_a), veh/h	642	573	281	1517	1192	1013
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.76	0.76	0.76	0.76
Uniform Delay (d), s/veh	21.9	21.9	18.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	7.4	38.2	6.9	0.4	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	1.7	0.2	0.3	0.0
LnGrp Delay(d),s/veh	29.3	60.1	24.9	0.4	0.9	0.0
LnGrp LOS	C	E	C	A	A	A
Approach Vol, veh/h	4			614	557	
Approach Delay, s/veh	52.4			5.1	0.9	
Approach LOS	D			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		55.8		4.2	7.7	48.1		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		36.0		16.0	7.0	25.0		
Max Q Clear Time (g_c+I1), s		2.0		2.1	4.8	2.0		
Green Ext Time (p_c), s		8.2		0.0	0.1	7.4		

Intersection Summary	
HCM 2010 Ctrl Delay	3.3
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	22	36	1044	705	19
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	18	24	39	1135	766	21
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	47	42	100	1674	1499	1274
Arrive On Green	0.03	0.03	0.06	0.90	0.80	0.80
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	18	24	39	1135	766	21
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	1.1	1.6	2.3	16.9	14.6	0.3
Cycle Q Clear(g_c), s	1.1	1.6	2.3	16.9	14.6	0.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	47	42	100	1674	1499	1274
V/C Ratio(X)	0.38	0.57	0.39	0.68	0.51	0.02
Avail Cap(c_a), veh/h	266	237	100	1674	1499	1274
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	51.1	51.4	48.7	1.4	3.5	2.1
Incr Delay (d2), s/veh	5.0	11.4	2.5	2.2	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.5	1.2	9.2	7.8	0.1
LnGrp Delay(d),s/veh	56.1	62.8	51.2	3.6	4.7	2.1
LnGrp LOS	E	E	D	A	A	A
Approach Vol, veh/h	42			1174	787	
Approach Delay, s/veh	59.9			5.2	4.6	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		113.1		6.9	23.1	90.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		96.0		16.0	6.0	86.0		
Max Q Clear Time (g_c+I1), s		18.9		3.6	4.3	16.6		
Green Ext Time (p_c), s		16.6		0.0	1.3	7.1		

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

EPAP Plus Project AM Peak Hour

Scenario Report

Scenario:	EPAP Plus Proj AM
Command:	EPAP Plus Proj AM
Volume:	Existing AM
Geometry:	Exist Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	AM Pk Hr
Trip Distribution:	AM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

EPAP Plus Project AM Peak Hour

Trip Generation Report

Forecast for AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	VLDR	55.00	SFDUs	0.19	0.56	10	31	41	1.3
	Zone 1 Subtotal					10	31	41	1.3
2	PMR 1	144.00	SFDUs	0.19	0.56	27	81	108	3.4
2	PMR 1	16.00	MFDUs	0.10	0.41	2	7	9	0.3
	Zone 2 Subtotal					29	88	117	3.7
3	PMR 2	108.00	SFDUs	0.19	0.56	21	60	81	2.5
3	PMR 2	13.00	MFDUs	0.10	0.41	1	5	6	0.2
	Zone 3 Subtotal					22	65	87	2.7
4	PMR 3	93.00	SFDUs	0.19	0.56	18	52	70	2.2
4	PMR 3	11.00	MFDUs	0.10	0.41	1	5	6	0.2
	Zone 4 Subtotal					19	57	76	2.4
5	PMR 4	117.00	SFDUs	0.19	0.56	22	66	88	2.8
5	PMR 4	14.00	MFDUs	0.10	0.41	1	6	7	0.2
	Zone 5 Subtotal					23	72	95	3.0
6	PMR 5	47.00	SFDUs	0.19	0.56	9	26	35	1.1
6	PMR 5	6.00	MFDUs	0.10	0.41	1	2	3	0.1
	Zone 6 Subtotal					10	28	38	1.2
7	PMR 6	66.00	SFDUs	0.19	0.56	13	37	50	1.6
7	PMR 6	8.00	MFDUs	0.10	0.41	1	3	4	0.1
	Zone 7 Subtotal					14	40	54	1.7
8	PMR 7	95.00	SFDUs	0.19	0.56	18	53	71	2.2
8	PMR 7	11.00	MFDUs	0.10	0.41	1	5	6	0.2
	Zone 8 Subtotal					19	58	77	2.4
9	PMR 8	86.00	SFDUs	0.19	0.56	16	48	64	2.0
9	PMR 8	10.00	MFDUs	0.10	0.41	1	4	5	0.2
	Zone 9 Subtotal					17	52	69	2.2
10	PMR 9	74.00	SFDUs	0.19	0.56	14	41	55	1.7
10	PMR 9	9.00	MFDUs	0.10	0.41	1	4	5	0.2
	Zone 10 Subtotal					15	45	60	1.9
11	PMR 10	33.00	SFDUs	0.19	0.56	6	18	24	0.8
11	PMR 10	4.00	MFDUs	0.10	0.41	0	2	2	0.1
	Zone 11 Subtotal					6	20	26	0.8
12	PMR 12	137.00	SFDUs	0.19	0.56	26	77	103	3.2
12	PMR 12	16.00	MFDUs	0.10	0.41	2	7	9	0.3

EPAP Plus Project AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
	Zone 12 Subtotal					28	84	112	3.5
14	Prof Office	8.30	Off Pk Acres	23.60	2.05	196	17	213	6.7
	Zone 14 Subtotal					196	17	213	6.7
15	BP-1	288.15	Busi Pk KSF	1.19	0.21	343	61	404	12.7
	Zone 15 Subtotal					343	61	404	12.7
16	BP-2	195.15	Busi Pk KSF	1.19	0.21	232	41	273	8.6
	Zone 16 Subtotal					232	41	273	8.6
17	BP-3	419.27	Busi Pk KSF	1.19	0.21	499	88	587	18.5
	Zone 17 Subtotal					499	88	587	18.5
18	CC 1	51.18	Shop Ctr KSF	0.51	0.33	26	17	43	1.4
	Zone 18 Subtotal					26	17	43	1.4
19	CC 2	246.11	Shop Ctr KSF	0.51	0.33	126	81	207	6.5
	Zone 19 Subtotal					126	81	207	6.5
20	HDR	180.00	MFDUs	0.10	0.41	18	74	92	2.9
	Zone 20 Subtotal					18	74	92	2.9
21	Exist LU for	36.00	Exist SFDUs	-0.19	-0.56	-7	-20	-27	-0.8
21	Exist LU for	11.00	Exist MFDUs	-0.10	-0.41	-1	-5	-6	-0.2
21	Exist LU for	54.50	Exist Wrhs KSF	-0.24	-0.06	-13	-3	-16	-0.5
	Zone 21 Subtotal					-21	-28	-49	-1.5
31	Dollar Gener	21.00	Small Box KSF	1.14	0.76	24	16	40	1.3
	Zone 31 Subtotal					24	16	40	1.3
32	AutoZone	6.70	Auto Parts Sal	1.15	0.73	8	5	13	0.4
	Zone 32 Subtotal					8	5	13	0.4
33	Riddle Mine	1.00	Mining Trips	63.00	63.00	63	63	126	4.0
	Zone 33 Subtotal					63	63	126	4.0
34	Souza Indust	49.90	Industr Pk Acr	6.32	1.29	315	64	379	11.9
	Zone 34 Subtotal					315	64	379	11.9
TOTAL						2041	1139	3180	100.0

EPAP Plus Project AM Peak Hour

Trip Distribution Report

Percent Of Trips AM Pk Hr

Zone	To Gates 1	2	3	4	5	6	7	8	9	10	11
1	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
2	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
3	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
4	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
5	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
6	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
7	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
8	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
9	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
10	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
11	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
12	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
13	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
14	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
15	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
16	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
17	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
18	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
19	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
20	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	0.0	0.0
21	10.0	3.0	9.0	9.0	1.0	0.0	5.0	33.0	29.0	0.0	0.0
31	0.0	47.0	0.0	12.0	0.0	0.0	0.0	29.0	12.0	0.0	0.0
32	0.0	47.0	0.0	12.0	0.0	0.0	0.0	29.0	12.0	0.0	0.0
33	44.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	10.0	25.0	1.0
34	0.0	45.0	0.0	21.0	0.0	0.0	0.0	13.0	21.0	0.0	0.0

Zone	To Gates 15	16	17	18	19
1	2.0	1.0	0.0	1.0	2.0
2	2.0	1.0	0.0	1.0	2.0
3	2.0	1.0	0.0	1.0	2.0
4	2.0	1.0	0.0	1.0	2.0
5	2.0	1.0	0.0	1.0	2.0
6	2.0	1.0	0.0	1.0	2.0
7	2.0	1.0	0.0	1.0	2.0
8	2.0	1.0	0.0	1.0	2.0
9	2.0	1.0	0.0	1.0	2.0
10	2.0	1.0	0.0	1.0	2.0
11	2.0	1.0	0.0	1.0	2.0
12	2.0	1.0	0.0	1.0	2.0
13	2.0	1.0	0.0	1.0	2.0
14	0.0	0.0	2.0	1.0	2.0
15	0.0	0.0	2.0	1.0	2.0
16	0.0	0.0	2.0	1.0	2.0

EPAP Plus Project AM Peak Hour

Zone	To Gates 15	16	17	18	19
17	0.0	0.0	2.0	1.0	2.0
18	0.0	0.0	2.0	1.0	2.0
19	0.0	0.0	2.0	1.0	2.0
20	2.0	1.0	0.0	1.0	2.0
21	0.0	1.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	0.0
33	0.0	0.0	0.0	0.0	0.0
34	0.0	0.0	0.0	0.0	0.0

EPAP Plus Project AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 4 Stuhr Road & Draper Road	A	9.2	0.030	A	9.9	0.037	+ 0.700 D/V
# 5 Jensen Road & Fig Lane	B	17.7	0.121	C	30.7	0.498	+13.031 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	9.5	0.350	B	12.0	0.552	+ 0.202 V/C
# 7 Fig Lane & Yolo Street	B	12.5	0.046	F	54.1	0.552	+41.632 D/V
# 8 Stuhr & Harvey	A	0.4	0.078	B	12.9	0.174	+12.482 D/V
# 9 Stuhr Road & Fig Lane	A	0.4	0.039	C	21.7	0.272	+21.299 D/V
# 13 Stuhr Road & Collector Rd B	A	0.0	0.000	A	9.2	0.082	+ 9.231 D/V
# 14 Jensen Road & Collector Rd B	A	2.6	0.008	A	3.3	0.167	+ 0.159 V/C
# 15 Stuhr & Eastin	B	10.2	0.054	B	12.0	0.070	+ 1.796 D/V
# 16 Stuhr & Villa Manucha	A	8.9	0.107	A	9.7	0.121	+ 0.846 D/V

EPAP Plus Project AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	??? / ???	No / No
# 6 Orestimba/Yolo St & Hardin Rd	???	No
# 7 Fig Lane & Yolo Street	??? / ???	No / No
# 13 Stuhr Road & Collector Rd B	??? / ???	No / No
# 15 Stuhr & Eastin	??? / ???	No / No
# 16 Stuhr & Villa Manucha	??? / ???	No / No

EPAP Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1	0	1	0
Initial Vol:	23	0	23	0	0	0	0	96	13	23	131	0
ApproachDel:	9.9			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=46]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=309]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	0	1	0 0 0
Initial Vol:	23	0	23	0	0	0	0	96	13	23	131	0

Major Street Volume: 263
Minor Approach Volume: 46
Minor Approach Volume Threshold: 576

SIGNAL WARRANT DISCLAIMER

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EPAP Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	0	0	1!	0 0	0	0	1! 0 0
Initial Vol:	16	153	30	117	202	17	23	85	14	38	38	125

Major Street Volume: 535
Minor Approach Volume: 201
Minor Approach Volume Threshold: 386

SIGNAL WARRANT DISCLAIMER

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EPAP Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Fig Lane & Yolo Street

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	0 1	0
Initial Vol:	24	104	8	58	178	10	40	221	49	0	204	176
ApproachDel:	30.4			54.1			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=136]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1072]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=3.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=246]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1072]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

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EPAP Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #7 Fig Lane & Yolo Street

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	0 1	0
Initial Vol:	24	104	8	58	178	10	40	221	49	0	204	176

Major Street Volume: 690
Minor Approach Volume: 246
Minor Approach Volume Threshold: 318

SIGNAL WARRANT DISCLAIMER

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EPAP Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1	0	0	1	0
Initial Vol:	0	0	70	0	0	0	0	114	8	0	100	0
ApproachDel:	9.2			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=70]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=292]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	1	0	0	0	0	0	1	0
Initial Vol:	0	0	70	0	0	0	0	114	8	0	100	0

Major Street Volume: 222
Minor Approach Volume: 70
Minor Approach Volume Threshold: 803

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0	0 0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	5	8	0	1	35	24	19	78	7	11	193	4
ApproachDel:	12.0			11.3			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=13]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=385]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=60]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=385]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0	0 0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	5	8	0	1	35	24	19	78	7	11	193	4

Major Street Volume: 312
Minor Approach Volume: 60
Minor Approach Volume Threshold: 530

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #16 Stuhr & Villa Manucha

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 0	0	0	0	0 1	0	1	0	0 0	0	0	0	1 0
Initial Vol:	0	0	0	0	0	0	86		154	137	0		0	172	1	
ApproachDel:	xxxxxx				9.7				xxxxxx				xxxxxx			

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=86]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=550]

FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #16 Stuhr & Villa Manucha

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 0	0	0	0	0 1	0	1	0	0 0	0	0	0	1 0
Initial Vol:	0	0	0	0	0	0	86		154	137	0		0	172	1	

Major Street Volume: 464

Minor Approach Volume: 86

Minor Approach Volume Threshold: 424

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: A[9.9]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 0	0	0	0 0 0	1	0	0 1	0	0 0
Volume Module:AM Peak Hour												
Base Vol:	23	0	18	0	0	0	0	42	13	22	40	0
Growth 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
Initial Bse:	23	0	18	0	0	0	0	42	13	22	40	0
Added Vol:	0	0	5	0	0	0	0	54	0	1	91	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	0	23	0	0	0	0	96	13	23	131	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	25	0	25	0	0	0	0	104	14	25	142	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	0	25	0	0	0	0	104	14	25	142	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	304	304	111	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	118	xxxx	xxxxx
Potent Cap.:	688	609	942	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1470	xxxx	xxxxx
Move Cap.:	679	599	942	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1470	xxxx	xxxxx
Volume/Cap:	0.04	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	789	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:		9.9		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		A		*			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100 secs		
InitVolume:										60	94	
Saturation:										1394	1862	
ArrivalType:										3	3	
G/C:										0.27	0.64	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.270	0.640	
gq1:										3.14	1.82	
gq2:										0.14	0.10	
gq:										3.28	1.91	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										14	11	
vcg:										18	26	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:									0.000/0.000/Unconstrained			
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	304	304	111	316	311	142	0	xxxxx	xxxxx	118	xxxxx	xxxxx
AdjCnflVol:	304	304	111	316	311	142	0	xxxxx	xxxxx	118	xxxxx	xxxxx
UpstreamAdj:	1.00	1.00	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	304	304	111	316	311	142	0	xxxxx	xxxxx	118	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	688	609	942	640	607	911	1623	xxxxx	xxxxx	1470	xxxxx	xxxxx
UpstreamAdj:	1.00	1.00	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	688	609	942	640	607	911	1623	xxxxx	xxxxx	1470	xxxxx	xxxxx

EPAP Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Cycle (sec):	100			Critical Vol./Cap.(X):			0.498						
Loss Time (sec):	12			Average Delay (sec/veh):			30.7						
Optimal Cycle:	41			Level Of Service:			C						

Street Name:	Fig Lane						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 0	1	0	1 0	0 1	0	1 0	2 0 1		1 0	2 0 1
Volume Module:AM Peak Hour												
Base Vol:	3	6	42	1	6	0	1	3	5	119	0	0
Growth 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
Initial Bse:	3	6	42	1	6	0	1	3	5	119	0	0
Added Vol:	36	168	1	130	127	7	26	156	87	139	59	306
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	39	174	43	131	133	7	27	159	92	258	59	306
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	42	189	47	142	145	8	29	173	100	280	64	333
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	189	47	142	145	8	29	173	100	280	64	333
PCE 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
MLF 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
FinalVolume:	42	189	47	142	145	8	29	173	100	280	64	333
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.95	0.93	0.97	0.97	0.93	0.93	0.83	0.93	0.93	0.83
Lanes:	1.00	0.80	0.20	1.00	0.95	0.05	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1769	1448	358	1769	1757	92	1769	3538	1583	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.02	0.13	0.13	0.08	0.08	0.08	0.02	0.05	0.06	0.16	0.02	0.21
Crit Moves:		****		****			****					****
Green/Cycle:	0.10	0.26	0.26	0.16	0.33	0.33	0.03	0.13	0.13	0.33	0.42	0.42
Volume/Cap:	0.25	0.50	0.50	0.50	0.25	0.25	0.50	0.38	0.49	0.49	0.04	0.50
Delay/Veh:	42.7	32.1	32.1	39.6	24.8	24.8	54.0	40.3	42.2	27.7	17.0	21.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	32.1	32.1	39.6	24.8	24.8	54.0	40.3	42.2	27.7	17.0	21.7
LOS by Move:	D	C	C	D	C	C	D	D	D	C	B	C
HCM2k95thQ:	73	312	312	223	171	171	83	146	173	341	31	365

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0 0	1	0	1 0	0 1	0	1 0	2 0 1		1 0	2 0 1
Lane Group:	L	RT		RT	L	RT	RT	L	T	R	L	T	R
#LnsInGrps:	1	1		1	1	1	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8		
% Hev Veh:		2			2			2			2		
Grade:		0%			0%			0%			0%		
Parking/Hr:		No			No			No			No		
Bus Stp/Hr:		0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >												
Cnft Ped/Hr:		0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include			
% RT Prtct:		0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	
HCM Ops Saturation Adj Module:												
Ln Wid 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	
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Grade 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	
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	
Area 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	
RT Adj:	xxxx	0.97	0.97	xxxx	0.99	0.99	xxxx	xxxx	0.85	xxxx	xxxx	0.85	
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	
PedBike 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	
HCM Sat Adj:	0.93	0.95	0.95	0.93	0.97	0.97	0.93	0.98	0.83	0.93	0.98	0.83	
Usr Sat 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	
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Fnl Sat Adj:	0.93	0.95	0.95	0.93	0.97	0.97	0.93	0.93	0.83	0.93	0.93	0.83	
Delay Adjustment Factor Module:													
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >												
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >												
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

****

Intersection #5 Jensen Road & Fig Lane

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.10	0.26	0.26	0.16	0.33	0.33	0.03	0.13	0.13	0.33	0.42	0.42
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.1	5.6	5.6	3.6	3.1	3.1	0.8	2.3	2.6	6.2	0.6	6.8
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.3	1.0	1.0	0.9	0.3	0.3	0.8	0.6	0.9	0.9	0.0	1.0
HCM2KQueue:	1.4	6.5	6.5	4.5	3.4	3.4	1.6	2.9	3.5	7.2	0.6	7.7
70th%Factor:	1.20	1.18	1.18	1.19	1.19	1.19	1.20	1.19	1.19	1.18	1.20	1.18
HCM2k70thQ:	1.7	7.7	7.7	5.4	4.1	4.1	1.9	3.5	4.1	8.5	0.7	9.1
85th%Factor:	1.59	1.54	1.54	1.56	1.57	1.57	1.58	1.57	1.57	1.54	1.59	1.53
HCM2k85thQ:	2.2	10.0	10.0	7.1	5.4	5.4	2.6	4.6	5.4	11.0	1.0	11.8
90th%Factor:	1.77	1.69	1.69	1.72	1.74	1.74	1.77	1.75	1.74	1.68	1.79	1.67
HCM2k90thQ:	2.5	11.0	11.0	7.8	5.9	5.9	2.9	5.1	6.0	12.0	1.1	12.9
95th%Factor:	2.05	1.92	1.92	1.97	2.00	2.00	2.05	2.01	1.99	1.90	2.08	1.89
HCM2k95thQ:	2.9	12.5	12.5	8.9	6.8	6.8	3.3	5.8	6.9	13.6	1.2	14.6
98th%Factor:	2.60	2.31	2.31	2.40	2.47	2.47	2.58	2.50	2.47	2.28	2.66	2.25
HCM2k98thQ:	3.7	15.0	15.0	10.9	8.5	8.5	4.2	7.2	8.6	16.3	1.6	17.4

EPAP Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.552
Loss Time (sec):	0	Average Delay (sec/veh):	12.0
Optimal Cycle:	0	Level Of Service:	B

****

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:	AM Peak Hour											
Base Vol:	14	144	30	49	174	16	19	11	9	37	18	100
Growth 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
Initial Bse:	14	144	30	49	174	16	19	11	9	37	18	100
Added Vol:	2	9	0	68	28	1	4	74	5	1	20	25
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	153	30	117	202	17	23	85	14	38	38	125
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	17	166	33	127	220	18	25	92	15	41	41	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	166	33	127	220	18	25	92	15	41	41	136
PCE 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
MLF 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
FinalVolume:	17	166	33	127	220	18	25	92	15	41	41	136
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.08	0.77	0.15	0.35	0.60	0.05	0.19	0.70	0.11	0.19	0.19	0.62
Final Sat.:	51	486	95	230	398	33	106	393	65	118	118	388
Capacity Analysis Module:												
Vol/Sat:	0.34	0.34	0.34	0.55	0.55	0.55	0.24	0.24	0.24	0.35	0.35	0.35
Crit Moves:			****		****			****				****
Delay/Veh:	10.8	10.8	10.8	14.0	14.0	14.0	10.3	10.3	10.3	10.8	10.8	10.8
Delay 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
AdjDel/Veh:	10.8	10.8	10.8	14.0	14.0	14.0	10.3	10.3	10.3	10.8	10.8	10.8
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
ApproachDel:	10.8			14.0			10.3			10.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.8			14.0			10.3			10.8		
LOS by Appr:	B			B			B			B		
AllWayAvgQ:	10.9	10.9	10.9	26.5	26.5	26.5	6.0	6.0	6.0	10.8	10.8	10.8

****

Note: Queue reported is the distance per lane in feet.

****

EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM 4-Way Stop Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	1			1			1			1		
P[C1]:	0.25			0.36			0.22			0.25		
P[C2]:	0.28			0.17			0.10			0.07		
P[C3]:	0.19			0.27			0.35			0.40		
P[C4]:	0.24			0.17			0.28			0.24		
P[C5]:	0.04			0.02			0.05			0.04		
Padj[C1]:	0.015			0.013			0.019			0.017		
Padj[C2]:	0.005			0.005			0.010			0.009		
Padj[C3]:	-0.002			-0.006			-0.007			-0.009		
Padj[C4]:	-0.014			-0.010			-0.016			-0.014		
Padj[C5]:	-0.004			-0.002			-0.005			-0.004		
Lane:	L1			L1			L1			L1		
LaneType:	LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE		
HeadwayAdj:	-0.040			0.073			0.003			-0.301		
Volume:	216			365			133			218		
Capacity:	632			662			564			624		
DegOfUtil:	0.32			0.53			0.21			0.32		
DepHeadway:	5.33			5.23			5.74			5.30		
ServiceTime:	3.3			3.2			3.7			3.3		
Delay:	10.8			14.0			10.3			10.8		
Queue:	0.4			1.1			0.2			0.4		

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	10.8	14.0	10.3	10.8
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	10.8	14.0	10.3	10.8
LOS by Appr:	B	B	B	B

OverallDel: 12.0
OverallLOS: B

EPAP Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): 16.6 Worst Case Level Of Service: F[54.1]

Street Name:	Fig Lane									Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0 1! 0	0	0	0 1! 0	0	0	0 1! 0	0	0	0 0 1	0
Volume Module:AM Peak Hour												
Base Vol:	6	11	5	22	21	3	8	160	1	2	183	55
Growth 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
Initial Bse:	6	11	5	22	21	3	8	160	1	2	183	55
Added Vol:	18	93	3	36	157	7	32	61	48	-2	21	121
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	104	8	58	178	10	40	221	49	0	204	176
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	26	113	9	63	193	11	43	240	53	0	222	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	26	113	9	63	193	11	43	240	53	0	222	191
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	773	767	267	732	698	317	413	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	316	333	772	372	337	364	723	1146	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	170	320	772	235	350	723	1146	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.15	0.35	0.01	0.27	0.55	0.02	0.04	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	285	xxxxx	xxxx	320	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	2.8	xxxxx	xxxxx	7.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	30.4	xxxxx	xxxxx	54.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	D	*	*	F	*	*	*	*	*	*	*
ApproachDel:		30.4			54.1			xxxxxx			xxxxxx	
ApproachLOS:		D			F			*			*	

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

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Intersection #7 Fig Lane & Yolo Street

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HevVeh:		2%			2%			2%			2%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

EPAP Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #8 Stuhr & Harvey

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Cycle (sec):	100	Critical Vol./Cap.(X):		0.174
Loss Time (sec):	9	Average Delay (sec/veh):		12.9
Optimal Cycle:	22	Level Of Service:		B

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Street Name:	Harvey Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 1! 0	0	0	0 0	0 0	0	0 0	1 0	1	0 1	0 0
Volume Module:AM Peak Hour												
Base Vol:	0	0	0	0	0	0	0	122	0	0	62	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	122	0	0	62	0
Added Vol:	60	0	15	0	0	0	0	44	15	7	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	60	0	15	0	0	0	0	166	15	7	94	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	65	0	16	0	0	0	0	180	16	8	102	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	0	16	0	0	0	0	180	16	8	102	0
PCE 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
MLF 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
FinalVolume:	65	0	16	0	0	0	0	180	16	8	102	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00
Lanes:	0.80	0.00	0.20	0.00	0.00	0.00	0.00	0.92	0.08	1.00	1.00	0.00
Final Sat.:	1394	0	349	0	0	0	0	1689	153	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.11	0.11	0.00	0.05	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.62	0.62	0.02	0.64	0.00
Volume/Cap:	0.17	0.00	0.17	0.00	0.00	0.00	0.00	0.17	0.17	0.17	0.09	0.00
Delay/Veh:	28.2	0.0	28.2	0.0	0.0	0.0	0.0	8.3	8.3	49.6	6.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.2	0.0	28.2	0.0	0.0	0.0	0.0	8.3	8.3	49.6	6.9	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	D	A	A
HCM2k95thQ:	99	0	99	0	0	0	0	129	129	21	60	0

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Note: Queue reported is the distance per lane in feet.

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EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1! 0	0	0	0 0	0	0 0 1	0		1 0	1 0	0
Lane Group:	LTR			LTR			RT			L	T	
#LnsInGrps:	1			1			1			1	1	
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	xxxx	4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	0.97	xxxx	0.97	xxxx	xxxx	xxxxx	xxxx	0.99	0.99	xxxx	xxxx	xxxxx
LT Adj:	0.96	xxxx	0.96	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.62	0.62	0.02	0.64	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.7	0.0	1.7	0.0	0.0	0.0	0.0	2.4	2.4	0.2	1.1	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.0
HCM2KQueue:	1.9	0.0	1.9	0.0	0.0	0.0	0.0	2.6	2.6	0.4	1.2	0.0
70th%Factor:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.20	1.20	1.20
HCM2k70thQ:	2.3	0.0	2.3	0.0	0.0	0.0	0.0	3.1	3.1	0.5	1.4	0.0
85th%Factor:	1.58	1.60	1.58	1.60	1.60	1.60	1.60	1.58	1.58	1.60	1.59	1.60
HCM2k85thQ:	3.1	0.0	3.1	0.0	0.0	0.0	0.0	4.0	4.0	0.7	1.9	0.0
90th%Factor:	1.76	1.80	1.76	1.80	1.80	1.80	1.80	1.75	1.75	1.79	1.78	1.80
HCM2k90thQ:	3.4	0.0	3.4	0.0	0.0	0.0	0.0	4.5	4.5	0.7	2.1	0.0
95th%Factor:	2.04	2.10	2.04	2.10	2.10	2.10	2.10	2.02	2.02	2.09	2.06	2.10
HCM2k95thQ:	4.0	0.0	4.0	0.0	0.0	0.0	0.0	5.2	5.2	0.9	2.4	0.0
98th%Factor:	2.56	2.70	2.56	2.70	2.70	2.70	2.70	2.52	2.52	2.67	2.61	2.70
HCM2k98thQ:	5.0	0.0	5.0	0.0	0.0	0.0	0.0	6.5	6.5	1.1	3.1	0.0

EPAP Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Stuhr Road & Fig Lane

Cycle (sec):	100					Critical Vol./Cap.(X):				0.272						
Loss Time (sec):	9					Average Delay (sec/veh):				21.7						
Optimal Cycle:	25					Level Of Service:				C						

Street Name:	Fig Lane						Stuhr Road									
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase			Split Phase			Protected			Protected						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Volume Module:AM Peak Hour																
Base Vol:	0	0	0	0	0	0	0	63	0	0	61	0				
Growth 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				
Initial Bse:	0	0	0	0	0	0	0	63	0	0	61	0				
Added Vol:	16	0	68	0	0	0	0	104	17	136	23	0				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	16	0	68	0	0	0	0	167	17	136	84	0				
User 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				
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92				
PHF Volume:	17	0	74	0	0	0	0	182	18	148	91	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	17	0	74	0	0	0	0	182	18	148	91	0				
PCE 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				
MLF 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				
FinalVolume:	17	0	74	0	0	0	0	182	18	148	91	0				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.87	1.00	0.87	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00				
Lanes:	0.19	0.00	0.81	0.00	0.00	0.00	0.00	0.91	0.09	1.00	1.00	0.00				
Final Sat.:	313	0	1331	0	0	0	0	1670	170	1769	1862	0				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.00	0.06	0.00	0.00	0.00	0.00	0.11	0.11	0.08	0.05	0.00				
Crit Moves:			****					****		****						
Green/Cycle:	0.20	0.00	0.20	0.00	0.00	0.00	0.00	0.40	0.40	0.31	0.71	0.00				
Volume/Cap:	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.27	0.27	0.27	0.07	0.00				
Delay/Veh:	34.0	0.0	34.0	0.0	0.0	0.0	0.0	20.5	20.5	26.5	4.6	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	34.0	0.0	34.0	0.0	0.0	0.0	0.0	20.5	20.5	26.5	4.6	0.0				
LOS by Move:	C	A	C	A	A	A	A	C	C	C	A	A				
HCM2k95thQ:	127	0	127	0	0	0	0	204	204	173	44	0				

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Stuhr Road & Fig Lane

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
HCM Ops Adjusted Lane Utilization Module:																								
Lanes:	0	0	1!	0	0		0	0	0	0	0		0	0	0	1	0		1	0	1	0	0	
Lane Group:	LTR		LTR		LTR	xxxx	xxxx		xxxx		xxxx		RT		RT		L		T		xxxx	
#LnsInGrps:	1		1		1		0		0		0		1		1		1		1		0	
HCM Ops Input Saturation Adj Module:																								
Lane Width:	12		12		12		12		12		12		12		12		12		12		12			
CrsswalkWid:	8						8						8						8					
% Hev Veh:	2						2						2						2					
Grade:	0%						0%						0%						0%					
Parking/Hr:	No						No						No						No					
Bus Stp/Hr:	0						0						0						0					
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >																							
Cnft Ped/Hr:	0						0						0						0					
ExclusiveRT:	Include						Include						Include						Include					
% RT Prtct:	0						0						0						0					
HCM Ops f(lt) Adj Case Module:																								
f(lt) Case:	4	xxxx		4		xxxx	xxxx		xxxx		xxxx		xxxx				1	xxxx		xxxx				
HCM Ops Saturation Adj Module:																								
Ln Wid Adj:	1.00	xxxx	1.00			xxxx	xxxx		xxxxx		xxxx	1.00		1.00			1.00	1.00	xxxxx					
Hev Veh Adj:	0.98	xxxx	0.98			xxxx	xxxx		xxxxx		xxxx	0.98		0.98			0.98	0.98	xxxxx					
Grade Adj:	1.00	xxxx	1.00			xxxx	xxxx		xxxxx		xxxx	1.00		1.00			1.00	1.00	xxxxx					
Parking Adj:	1.00	xxxx	1.00			xxxx	xxxx		xxxxx		xxxx	1.00		1.00			xxxx	1.00	xxxxx					
Bus Stp Adj:	1.00	xxxx	1.00			xxxx	xxxx		xxxxx		xxxx	1.00		1.00			xxxx	1.00	xxxxx					
Area Adj:	1.00	xxxx	1.00			xxxx	xxxx		xxxxx		xxxx	1.00		1.00			1.00	1.00	xxxxx					
RT Adj:	0.89	xxxx	0.89			xxxx	xxxx		xxxxx		xxxx	0.99		0.99			xxxx	xxxx	xxxxx					
LT Adj:	0.99	xxxx	0.99			xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx			0.95	xxxx	xxxxx					
PedBike 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					
HCM Sat Adj:	0.87	1.00	0.87			1.00	1.00		1.00		1.00	0.97		0.97			0.93	0.98	1.00					
Usr Sat 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					
MLF Sat 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					
Fnl Sat Adj:	0.87	1.00	0.87			1.00	1.00		1.00		1.00	0.97		0.97			0.93	0.98	1.00					
Delay Adjustment Factor Module:																								
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >																							
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > >																							
DelAdjFctr:	1.00	0.00	1.00			0.00	0.00		0.00		0.00	1.00		1.00			1.00	1.00	0.00					

EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

****

Intersection #9 Stuhr Road & Fig Lane

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.20	0.00	0.20	0.00	0.00	0.00	0.00	0.40	0.40	0.31	0.71	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	2.1	0.0	2.1	0.0	0.0	0.0	0.0	3.7	3.7	3.1	0.8	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.1	0.0
HCM2KQueue:	2.5	0.0	2.5	0.0	0.0	0.0	0.0	4.1	4.1	3.5	0.9	0.0
70th%Factor:	1.19	1.20	1.19	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.20	1.20
HCM2k70thQ:	3.0	0.0	3.0	0.0	0.0	0.0	0.0	4.9	4.9	4.1	1.0	0.0
85th%Factor:	1.58	1.60	1.58	1.60	1.60	1.60	1.60	1.56	1.56	1.57	1.59	1.60
HCM2k85thQ:	4.0	0.0	4.0	0.0	0.0	0.0	0.0	6.4	6.4	5.4	1.4	0.0
90th%Factor:	1.75	1.80	1.75	1.80	1.80	1.80	1.80	1.73	1.73	1.74	1.78	1.80
HCM2k90thQ:	4.4	0.0	4.4	0.0	0.0	0.0	0.0	7.1	7.1	6.0	1.5	0.0
95th%Factor:	2.02	2.10	2.02	2.10	2.10	2.10	2.10	1.98	1.98	1.99	2.07	2.10
HCM2k95thQ:	5.1	0.0	5.1	0.0	0.0	0.0	0.0	8.1	8.1	6.9	1.8	0.0
98th%Factor:	2.52	2.70	2.52	2.70	2.70	2.70	2.70	2.43	2.43	2.47	2.64	2.70
HCM2k98thQ:	6.3	0.0	6.3	0.0	0.0	0.0	0.0	10.0	10.0	8.6	2.3	0.0

EPAP Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #13 Stuhr Road & Collector Rd B

****

Average Delay (sec/veh): 2.2 Worst Case Level Of Service: A[9.2]

****

Street Name:	Collector Rd B						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0 0 1	0	0	0 0 0	0	0	1 0 1	0	0	1 0 0
Volume Module:	AM Peak Hour											
Base Vol:	0	0	0	0	0	0	0	63	0	0	61	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	63	0	0	61	0
Added Vol:	0	0	70	0	0	0	0	51	8	0	39	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	70	0	0	0	0	114	8	0	100	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	76	0	0	0	0	124	9	0	109	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	76	0	0	0	0	124	9	0	109	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	124	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	927	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	927	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	6.7	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	9.2			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	A			*			*			*		

****

Note: Queue reported is the distance per lane in feet.

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EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

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Intersection #13 Stuhr Road & Collector Rd B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:		2%			2%			2%			2%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

EPAP Plus Project AM Peak Hour

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

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Intersection #14 Jensen Road & Collector Rd B

****

Average Delay (sec/veh): 3.3 Level Of Service: A

****

Street Name:	Collector Rd B						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			2		
Volume Module:AM Peak Hour												
Base Vol:	0	0	0	0	0	0	0	9	0	0	3	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	9	0	0	3	0
Added Vol:	8	37	39	107	67	4	2	119	7	18	41	43
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	37	39	107	67	4	2	128	7	18	44	43
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	9	40	42	116	73	4	2	139	8	20	48	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	40	42	116	73	4	2	139	8	20	48	47
PCE 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
MLF 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
FinalVolume:	9	40	42	116	73	4	2	139	8	20	48	47
PCE Module:												
AutoPCE:	9	40	42	116	73	4	2	139	8	20	48	47
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	9	40	42	116	73	4	2	139	8	20	48	47
Delay Module: >> Time Period: 0.25 hours <<												
CircVolume:	258			76			209			51		
MaxVolume:	1061			1159			1087			2387		
PedVolume:	0			0			0			0		
AdjMaxVol:	1061			1159			1087			2387		
ApproachVol:	91			193			149			114		
ApproachV/C:	0.09			0.17			0.14			0.05		
ApproachDel:	3.7			3.7			3.8			1.6		
ApproachLOS:	A			A			A			A		
Queue:	0.3			0.6			0.5			0.2		

EPAP Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: B[12.0]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module: AM Peak Hour												
Base Vol:	4	8	0	1	35	8	3	24	6	11	102	4
Growth 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
Initial Bse:	4	8	0	1	35	8	3	24	6	11	102	4
Added Vol:	1	0	0	0	0	16	16	54	1	0	91	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	8	0	1	35	24	19	78	7	11	193	4
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	5	9	0	1	38	26	21	85	8	12	210	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	5	9	0	1	38	26	21	85	8	12	210	4
Critical Gap Module:												
Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	398	368	xxxxx	370	370	212	214	xxxx	xxxxx	92	xxxx	xxxxx
Potent Cap.:	562	561	xxxxx	587	560	828	1356	xxxx	xxxxx	1502	xxxx	xxxxx
Move Cap.:	507	548	xxxxx	569	547	828	1356	xxxx	xxxxx	1502	xxxx	xxxxx
Volume/Cap:	0.01	0.02	xxxx	0.00	0.07	0.03	0.02	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.2	xxxx	xxxxx	0.6	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	531	xxxx	xxxxx	xxxx	633	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	12.0	xxxx	xxxxx	xxxxx	11.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	12.0			11.3			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

EPAP Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: A[9.7]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 1 0 0 0			0 0 0 1 0		
Volume Module: AM Peak Hour												
Base Vol:	0	0	0	0	0	86	154	44	0	0	44	1
Growth 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
Initial Bse:	0	0	0	0	0	86	154	44	0	0	44	1
Added Vol:	0	0	0	0	0	0	0	93	0	0	128	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	86	154	137	0	0	172	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	0	0	93	167	149	0	0	187	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	93	167	149	0	0	187	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	188	188	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	855	1386	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	855	1386	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.11	0.12	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	9.2	10.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.7	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.7			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #16 Stuhr & Villa Manucha

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:							#91					
Dist(miles):							0.250					
Speed (mph):							1.00					
SignalIndex:							#1					
Cycle Time:							100 secs					
InitVolume:							3	100				
Saturation:							1612	885				
ArrivalType:							3	3				
G/C:							0.00	0.24				
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:							0.004	0.236				
gq1:							0.19	8.63				
gq2:							0.00	1.10				
gq:							0.19	9.73				
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:							0.550					
beta:							0.645					
ta (secs):							900.000					
F:							0.003					
f:							1.000	1.000				
vcmax:							1	27				
vcg:							1	30				
vcmin:							1000	1000				
tp:							0.0	0.0				
p:							0.000					
*** Computation 3: Platoon Event Periods												
pdom/psubo:							0.000/0.000/Unconstrained					
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	718	672	149	671	671	188	188	xxxxx	xxxxx	0	xxxxx	xxxxx
AdjCnflVol:	718	672	149	671	671	188	188	xxxxx	xxxxx	0	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	718	672	149	671	671	188	188	xxxxx	xxxxx	0	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	344	377	898	422	378	855	1386	xxxxx	xxxxx	1623	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	344	377	898	422	378	855	1386	xxxxx	xxxxx	1623	xxxxx	xxxxx

EPAP Plus Project AM Peak Hour

Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[2Way95thQ]:	5.1	5.1	5.1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1.3	1.3	xxxx
#5	[HCM2k95thQ]:	73	312	312	223	171	171	83	146	173	341	31	365
#6	[AllWayAvgQ]	10.9	10.9	10.9	26.5	26.5	26.5	6.0	6.0	6.0	10.8	10.8	10.8
#7	[2Way95thQ]:	69.4	69.4	69.4	181	181	181	3.0	xxxx	xxxx	xxxx	xxxx	xxxx
#8	[HCM2k95thQ]:	99	0	99	0	0	0	0	129	129	21	60	0
#9	[HCM2k95thQ]:	127	0	127	0	0	0	0	204	204	173	44	0
#13	[2Way95thQ]:	xxxx	xxxx	6.7	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#14	[DesignQueue]:	0	7	0	0	15	0	0	12	0	0	4	0
#15	[2Way95thQ]:	2.0	2.0	xxxx	8.6	8.6	8.6	1.2	xxxx	xxxx	0.6	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	9.2	10.3	10.3	xxxx	xxxx	xxxx	xxxx

Two Way Analysis cannot be performed on Signalized Intersection.

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	816.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	65	1	203	6	2	4	160	901	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	79	1	248	7	2	5	195	1099	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2918	2914	1413	3038	2961	1099	1460	0	0
Stage 1	1425	1425	-	1489	1489	-	-	-	-
Stage 2	1493	1489	-	1549	1472	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-	-
Pot Cap-1 Maneuver	~ 10	15	~ 169	8	14	258	463	-	-
Stage 1	168	201	-	155	187	-	-	-	-
Stage 2	154	187	-	143	191	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	~ 5	9	~ 169	-	8	258	463	-	-
Mov Cap-2 Maneuver	~ 5	9	-	-	8	-	-	-	-
Stage 1	97	199	-	90	108	-	-	-	-
Stage 2	85	108	-	-	189	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	$ 7709.9		2.8
HCM LOS	F	-	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	463	-	-	19	-	635	-	-
HCM Lane V/C Ratio	0.421	-	-	17.266	-	0.01	-	-
HCM Control Delay (s)	18.3	-	-	-$ 7709.9	-	10.7	-	-
HCM Lane LOS	C	-	-	F	-	B	-	-
HCM 95th %tile Q(veh)	2.1	-	-	41.6	-	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	5	1120	77
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	6	1366	94

Major/Minor	Major2		
Conflicting Flow All	1099	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	635	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	635	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0
HCM LOS	

Minor Lane/Major Mvmt

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	17.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	58	147	84	888	1046	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	200	0	200	-	-	200
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	63	160	91	965	1137	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2285	1137	1137	0	-	0
Stage 1	1137	-	-	-	-	-
Stage 2	1148	-	-	-	-	-
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	~ 43	246	614	-	-	-
Stage 1	306	-	-	-	-	-
Stage 2	302	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 37	246	614	-	-	-
Mov Cap-2 Maneuver	~ 37	-	-	-	-	-
Stage 1	306	-	-	-	-	-
Stage 2	257	-	-	-	-	-

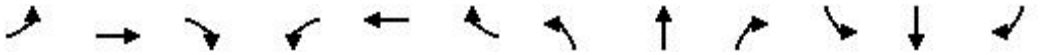
Approach	EB	NB	SB
HCM Control Delay, s	194.1	1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	614	-	37	246	-	-
HCM Lane V/C Ratio	0.149	-	1.704	0.65	-	-
HCM Control Delay (s)	11.9	-	$ 576.4	43.2	-	-
HCM Lane LOS	B	-	F	E	-	-
HCM 95th %tile Q(veh)	0.5	-	6.8	4	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Two Way Analysis cannot be performed on Signalized Intersection.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	44	115	157	164	101	1	40	350	134	1	303	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	173.9	190.0	186.3	171.2	190.0
Adj Flow Rate, veh/h	53	139	189	198	122	1	48	422	0	1	365	40
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	67	156	212	221	562	5	61	723	0	36	609	67
Arrive On Green	0.04	0.22	0.22	0.12	0.30	0.30	0.07	0.83	0.00	0.02	0.40	0.40
Sat Flow, veh/h	1774	717	974	1774	1845	15	1774	1739	0	1774	1516	166
Grp Volume(v), veh/h	53	0	328	198	0	123	48	422	0	1	0	405
Grp Sat Flow(s),veh/h/ln	1774	0	1691	1774	0	1860	1774	1739	0	1774	0	1682
Q Serve(g_s), s	2.1	0.0	13.6	7.9	0.0	3.6	1.9	5.7	0.0	0.0	0.0	13.7
Cycle Q Clear(g_c), s	2.1	0.0	13.6	7.9	0.0	3.6	1.9	5.7	0.0	0.0	0.0	13.7
Prop In Lane	1.00		0.58	1.00		0.01	1.00		0.00	1.00		0.10
Lane Grp Cap(c), veh/h	67	0	367	221	0	566	61	723	0	36	0	676
V/C Ratio(X)	0.79	0.00	0.89	0.89	0.00	0.22	0.79	0.58	0.00	0.03	0.00	0.60
Avail Cap(c_a), veh/h	148	0	375	221	0	566	123	723	0	98	0	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.95	0.95	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	27.4	31.1	0.0	18.7	33.3	4.0	0.0	34.6	0.0	17.0
Incr Delay (d2), s/veh	18.7	0.0	22.4	33.7	0.0	0.2	19.0	3.2	0.0	0.3	0.0	3.9
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(50%),veh/ln	1.4	0.0	8.6	6.0	0.0	1.8	1.3	3.0	0.0	0.0	0.0	7.0
LnGrp Delay(d),s/veh	53.1	0.0	49.8	64.8	0.0	18.9	52.3	7.3	0.0	34.9	0.0	20.9
LnGrp LOS	D		D	F		B	D	A		C		C
Approach Vol, veh/h		381			321			470			406	
Approach Delay, s/veh		50.3			47.2			11.9			20.9	
Approach LOS		D			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	34.0	13.0	19.7	9.3	33.0	6.7	26.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	30.0	9.0	16.0	5.0	29.0	6.0	19.0
Max Q Clear Time (g_c+I1), s	2.0	7.7	9.9	15.6	3.9	15.7	4.1	5.6
Green Ext Time (p_c), s	0.0	2.7	0.0	0.1	0.0	2.1	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	194	495	55	151	52	366	488	92	149	605	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	172.1	190.0	186.3	170.5	190.0
Adj Flow Rate, veh/h	63	237	604	67	184	63	446	595	112	182	738	45
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	80	152	388	47	409	140	319	620	117	177	573	35
Arrive On Green	0.05	0.33	0.33	0.03	0.31	0.31	0.18	0.44	0.44	0.20	0.72	0.72
Sat Flow, veh/h	1774	466	1187	1774	1328	455	1774	1409	265	1774	1591	97
Grp Volume(v), veh/h	63	0	841	67	0	247	446	0	707	182	0	783
Grp Sat Flow(s),veh/h/ln	1774	0	1653	1774	0	1783	1774	0	1674	1774	0	1688
Q Serve(g_s), s	5.3	0.0	49.0	4.0	0.0	16.7	27.0	0.0	61.4	15.0	0.0	54.0
Cycle Q Clear(g_c), s	5.3	0.0	49.0	4.0	0.0	16.7	27.0	0.0	61.4	15.0	0.0	54.0
Prop In Lane	1.00		0.72	1.00		0.26	1.00		0.16	1.00		0.06
Lane Grp Cap(c), veh/h	80	0	540	47	0	549	319	0	737	177	0	608
V/C Ratio(X)	0.79	0.00	1.56	1.42	0.00	0.45	1.40	0.00	0.96	1.03	0.00	1.29
Avail Cap(c_a), veh/h	130	0	540	47	0	549	319	0	737	177	0	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.90	0.00	0.90
Uniform Delay (d), s/veh	70.9	0.0	50.5	73.0	0.0	41.7	61.5	0.0	40.7	60.0	0.0	21.0
Incr Delay (d2), s/veh	15.4	0.0	259.8	275.4	0.0	0.6	196.5	0.0	24.7	70.9	0.0	140.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	61.3	5.6	0.0	8.3	30.6	0.0	33.3	10.8	0.0	48.1
LnGrp Delay(d),s/veh	86.3	0.0	310.3	348.4	0.0	42.2	258.0	0.0	65.4	131.1	0.0	161.7
LnGrp LOS	F		F	F		D	F		F	F		F
Approach Vol, veh/h		904			314			1153			965	
Approach Delay, s/veh		294.6			107.6			139.9			156.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	70.0	8.0	53.0	31.0	58.0	10.8	50.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	66.0	4.0	49.0	27.0	54.0	11.0	42.0
Max Q Clear Time (g_c+I1), s	17.0	63.4	6.0	51.0	29.0	56.0	7.3	18.7
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	0.0	0.0	9.2

Intersection Summary	
HCM 2010 Ctrl Delay	183.4
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	16	88	11	508	621	3
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	17	96	12	552	675	3
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	144	128	21	1480	1341	1140
Arrive On Green	0.08	0.08	0.02	1.00	1.00	1.00
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	17	96	12	552	675	3
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	0.6	3.8	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	3.8	0.4	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	144	128	21	1480	1341	1140
V/C Ratio(X)	0.12	0.75	0.56	0.37	0.50	0.00
Avail Cap(c_a), veh/h	442	395	111	1480	1341	1140
HCM Platoon Ratio	1.00	1.00	1.33	1.33	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.27	0.27	0.74	0.74
Uniform Delay (d), s/veh	27.4	28.9	31.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	8.4	6.3	0.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.6	0.2	0.1	0.4	0.0
LnGrp Delay(d),s/veh	27.7	37.3	37.7	0.2	1.0	0.0
LnGrp LOS	C	D	D	A	A	A
Approach Vol, veh/h	113			564	678	
Approach Delay, s/veh	35.8			1.0	1.0	
Approach LOS	D			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		65.8		9.2	4.8	61.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		51.0		16.0	4.0	43.0		
Max Q Clear Time (g_c+I1), s		2.0		5.8	2.4	2.0		
Green Ext Time (p_c), s		11.5		0.2	0.0	11.1		

Intersection Summary	
HCM 2010 Ctrl Delay	3.9
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	95	149	124	876	1082	111
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	103	162	135	952	1176	121
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	189	169	177	1565	1329	1129
Arrive On Green	0.11	0.11	0.10	0.84	0.71	0.71
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	103	162	135	952	1176	121
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	8.3	15.3	11.1	25.1	73.6	3.6
Cycle Q Clear(g_c), s	8.3	15.3	11.1	25.1	73.6	3.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	189	169	177	1565	1329	1129
V/C Ratio(X)	0.54	0.96	0.76	0.61	0.89	0.11
Avail Cap(c_a), veh/h	189	169	177	1565	1329	1129
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	63.5	66.7	65.8	3.9	16.7	6.7
Incr Delay (d2), s/veh	3.2	57.1	17.4	1.8	8.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	15.4	6.3	13.5	40.5	1.6
LnGrp Delay(d),s/veh	66.7	123.8	83.1	5.7	25.6	6.9
LnGrp LOS	F	F	F	A	C	A
Approach Vol, veh/h	265			1087	1297	
Approach Delay, s/veh	101.6			15.3	23.9	
Approach LOS	F			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		130.0		20.0	19.0	111.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		126.0		16.0	15.0	107.0		
Max Q Clear Time (g_c+I1), s		27.1		17.3	13.1	75.6		
Green Ext Time (p_c), s		11.3		0.0	1.3	14.5		

Intersection Summary	
HCM 2010 Ctrl Delay	28.1
HCM 2010 LOS	C

EPAP Plus Project PM Peak Hour

Scenario Report

Scenario:	EPAP Plus Proj PM
Command:	EPAP Plus Proj PM
Volume:	Existing PM
Geometry:	Exist Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	PM Pk Hr
Trip Distribution:	PM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

EPAP Plus Project PM Peak Hour

Trip Generation Report

Forecast for PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	VLDR	55.00	SFDUs	0.63	0.37	35	20	55	1.4
	Zone 1 Subtotal					35	20	55	1.4
2	PMR 1	144.00	SFDUs	0.63	0.37	91	53	144	3.8
2	PMR 1	16.00	MFDUs	0.40	0.22	6	4	10	0.3
	Zone 2 Subtotal					97	57	154	4.1
3	PMR 2	108.00	SFDUs	0.63	0.37	68	40	108	2.8
3	PMR 2	13.00	MFDUs	0.40	0.22	5	3	8	0.2
	Zone 3 Subtotal					73	43	116	3.1
4	PMR 3	93.00	SFDUs	0.63	0.37	59	34	93	2.4
4	PMR 3	11.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 4 Subtotal					63	36	99	2.6
5	PMR 4	117.00	SFDUs	0.63	0.37	74	43	117	3.1
5	PMR 4	14.00	MFDUs	0.40	0.22	6	3	9	0.2
	Zone 5 Subtotal					80	46	126	3.3
6	PMR 5	47.00	SFDUs	0.63	0.37	30	17	47	1.2
6	PMR 5	6.00	MFDUs	0.40	0.22	2	1	3	0.1
	Zone 6 Subtotal					32	18	50	1.3
7	PMR 6	66.00	SFDUs	0.63	0.37	42	24	66	1.7
7	PMR 6	8.00	MFDUs	0.40	0.22	3	2	5	0.1
	Zone 7 Subtotal					45	26	71	1.9
8	PMR 7	95.00	SFDUs	0.63	0.37	60	35	95	2.5
8	PMR 7	11.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 8 Subtotal					64	37	101	2.7
9	PMR 8	86.00	SFDUs	0.63	0.37	54	32	86	2.3
9	PMR 8	10.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 9 Subtotal					58	34	92	2.4
10	PMR 9	74.00	SFDUs	0.63	0.37	47	27	74	1.9
10	PMR 9	9.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 10 Subtotal					51	29	80	2.1
11	PMR 10	33.00	SFDUs	0.63	0.37	21	12	33	0.9
11	PMR 10	4.00	MFDUs	0.40	0.22	2	1	3	0.1
	Zone 11 Subtotal					23	13	36	0.9
12	PMR 12	137.00	SFDUs	0.63	0.37	86	51	137	3.6
12	PMR 12	16.00	MFDUs	0.40	0.22	6	4	10	0.3

EPAP Plus Project PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
	Zone 12 Subtotal					92	55	147	3.9
14	Prof Office	8.30	Off Pk Acres	4.24	24.04	35	200	235	6.2
	Zone 14 Subtotal					35	200	235	6.2
15	BP-1	288.15	Busi Pk KSF	0.33	0.93	95	268	363	9.6
	Zone 15 Subtotal					95	268	363	9.6
16	BP-2	195.15	Busi Pk KSF	0.33	0.93	64	181	245	6.4
	Zone 16 Subtotal					64	181	245	6.4
17	BP-3	419.27	Busi Pk KSF	0.33	0.93	138	390	528	13.9
	Zone 17 Subtotal					138	390	528	13.9
18	CC 1	51.18	Shop Ctr KSF	1.17	1.27	60	65	125	3.3
	Zone 18 Subtotal					60	65	125	3.3
19	CC 2	246.11	Shop Ctr KSF	1.17	1.27	288	313	601	15.8
	Zone 19 Subtotal					288	313	601	15.8
20	HDR	180.00	MFDUs	0.40	0.22	72	40	112	2.9
	Zone 20 Subtotal					72	40	112	2.9
21	Exist LU for	36.00	Exist SFDUs	-0.63	-0.37	-23	-13	-36	-0.9
21	Exist LU for	11.00	Exist MFDUs	-0.40	-0.22	-4	-2	-6	-0.2
21	Exist LU for	54.50	Exist Wrhs KSF	-0.08	-0.24	-4	-13	-17	-0.4
	Zone 21 Subtotal					-31	-28	-59	-1.6
31	Dollar Gener	21.00	Small Box KSF	2.24	2.24	47	47	94	2.5
	Zone 31 Subtotal					47	47	94	2.5
32	AutoZone	6.70	Auto Parts Sal	2.49	2.59	17	17	34	0.9
	Zone 32 Subtotal					17	17	34	0.9
33	Riddle Mine	1.00	Mining Trips	1.00	8.00	1	8	9	0.2
	Zone 33 Subtotal					1	8	9	0.2
34	Souza Indust	49.90	Industr Pk Acr	1.62	6.11	81	305	386	10.2
	Zone 34 Subtotal					81	305	386	10.2
TOTAL						1580	2220	3800	100.0

EPAP Plus Project PM Peak Hour

Trip Distribution Report

Percent Of Trips PM Pk Hr

Zone	To Gates 1	2	3	4	5	6	7	8	9	10	11
1	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
2	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
3	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
4	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
5	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
6	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
7	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
8	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
9	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
10	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
11	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
12	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
13	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
14	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
15	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
16	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
17	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
18	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
19	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
20	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	0.0
21	10.0	3.0	10.0	9.0	1.0	1.0	5.0	32.0	29.0	0.0	0.0
31	0.0	47.0	0.0	12.0	0.0	0.0	0.0	29.0	12.0	0.0	0.0
32	0.0	47.0	0.0	12.0	0.0	0.0	0.0	29.0	12.0	0.0	0.0
33	44.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	10.0	25.0	1.0
34	0.0	45.0	0.0	21.0	0.0	0.0	0.0	13.0	21.0	0.0	0.0

Zone	To Gates 17	18	19
1	0.0	1.0	2.0
2	0.0	1.0	2.0
3	0.0	1.0	2.0
4	0.0	1.0	2.0
5	0.0	1.0	2.0
6	0.0	1.0	2.0
7	0.0	1.0	2.0
8	0.0	1.0	2.0
9	0.0	1.0	2.0
10	0.0	1.0	2.0
11	0.0	1.0	2.0
12	0.0	1.0	2.0
13	0.0	1.0	2.0
14	2.0	1.0	2.0
15	2.0	1.0	2.0
16	2.0	1.0	2.0

EPAP Plus Project PM Peak Hour

Zone	To Gates 17	18	19
17	2.0	1.0	2.0
18	2.0	1.0	2.0
19	2.0	1.0	2.0
20	0.0	1.0	2.0
21	0.0	0.0	0.0
31	0.0	0.0	0.0
32	0.0	0.0	0.0
33	0.0	0.0	0.0
34	0.0	0.0	0.0

EPAP Plus Project PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 4 Stuhr Road & Draper Road	A	9.3	0.022	B	10.1	0.029	+ 0.782 D/V
# 5 Jensen Road & Fig Lane	C	22.8	0.045	C	32.7	0.583	+ 9.937 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	7.7	0.116	A	9.4	0.363	+ 0.247 V/C
# 7 Fig Lane & Yolo Street	B	10.2	0.041	F	60.9	0.537	+50.677 D/V
# 8 Stuhr & Harvey	A	0.4	0.065	B	13.5	0.177	+13.043 D/V
# 9 Stuhr Road & Fig Lane	A	0.4	0.055	C	24.3	0.275	+23.890 D/V
# 13 Stuhr Road & Collector Rd B	A	0.0	0.000	A	9.1	0.055	+ 9.069 D/V
# 14 Jensen Road & Collector Rd B	A	2.3	0.011	A	2.8	0.167	+ 0.156 V/C
# 15 Stuhr & Eastin	B	10.3	0.036	B	11.6	0.044	+ 1.288 D/V
# 16 Stuhr & Villa Manucha	A	9.2	0.149	B	10.2	0.177	+ 0.980 D/V

EPAP Plus Project PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	??? / ???	No / No
# 6 Orestimba/Yolo St & Hardin Rd	???	No
# 7 Fig Lane & Yolo Street	??? / ???	Yes / No
# 13 Stuhr Road & Collector Rd B	??? / ???	No / No
# 15 Stuhr & Eastin	??? / ???	No / No
# 16 Stuhr & Villa Manucha	??? / ???	No / No

EPAP Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 0	1	0
Initial Vol:	14	0	22	0	0	0	0	168	37	20	89	0
ApproachDel:	10.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=36]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=350]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	1!	0 0	0	0	0	0 0	0	0	0	1 0	0	1	0	0 0
Initial Vol:	14		0	22	0		0	0	0		168	37	20		89	0

Major Street Volume: 314
Minor Approach Volume: 36
Minor Approach Volume Threshold: 528

SIGNAL WARRANT DISCLAIMER

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EPAP Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	0	0	1!	0 0	0	0	1!	0 0	0	0	1!	0 0	0	0	1!	0 0
Initial Vol:	15		79	20	69		61	3	9		78	12	26		104	129

Major Street Volume: 358
Minor Approach Volume: 133
Minor Approach Volume Threshold: 493

SIGNAL WARRANT DISCLAIMER

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EPAP Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Fig Lane & Yolo Street

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	65	181	8	152	157	39	20	120	35	12	146	79
ApproachDel:	27.1			60.9			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=254]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1014]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=5.9]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=348]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1014]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #7 Fig Lane & Yolo Street

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	65	181	8	152	157	39	20	120	35	12	146	79

Major Street Volume: 412
Minor Approach Volume: 348
Minor Approach Volume Threshold: 456

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1	0	0	1	0
Initial Vol:	0	0	47	0	0	0	0	107	26	0	82	0
ApproachDel:	9.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=47]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=262]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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EPAP Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	1	0	0	1	0	0	1	0
Initial Vol:	0	0	47	0	0	0	0	107	26	0	82	0

Major Street Volume: 215
Minor Approach Volume: 47
Minor Approach Volume Threshold: 814

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1! 0	0	0	0 1! 0	0	0	0 1! 0	0	0	0 1! 0	0
Initial Vol:	4	23	2	1	20	2	14	196	10	1	91	4
ApproachDel:	11.6			11.4			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=29]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=368]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=23]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=368]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1! 0	0	0	0 1! 0	0	0	0 1! 0	0	0	0 1! 0	0
Initial Vol:	4	23	2	1	20	2	14	196	10	1	91	4

Major Street Volume: 316
Minor Approach Volume: 29
Minor Approach Volume Threshold: 527

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #16 Stuhr & Villa Manucha

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	188	0	0	166	3
ApproachDel:	xxxxxx			10.2			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=142]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=572]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Stuhr & Villa Manucha

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	188	0	0	166	3

Major Street Volume: 430
Minor Approach Volume: 142
Minor Approach Volume Threshold: 444

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[10.1]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Volume Module:	PM Peak Hour											
Base Vol:	14	0	19	0	0	0	0	83	37	16	32	0
Growth 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
Initial Bse:	14	0	19	0	0	0	0	83	37	16	32	0
Added Vol:	0	0	3	0	0	0	0	85	0	4	57	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	0	22	0	0	0	0	168	37	20	89	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	15	0	24	0	0	0	0	183	40	22	97	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	15	0	24	0	0	0	0	183	40	22	97	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	343	343	203	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	223	xxxx	xxxxx
Potent Cap.:	653	579	838	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1346	xxxx	xxxxx
Move Cap.:	645	570	838	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1346	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	751	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	A	*	*
ApproachDel:	10.1			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100 secs		
InitVolume:										41	68	
Saturation:										1432	1862	
ArrivalType:										3	3	
G/C:										0.18	0.73	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.176	0.734	
gq1:										2.36	0.97	
gq2:										0.07	0.04	
gq:										2.43	1.01	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										11	6	
vcg:										12	18	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:									0.000/0.000/Unconstrained			
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	343	343	203	355	363	97	0	xxxxx	xxxxx	223	xxxxx	xxxxx
AdjCnflVol:	343	343	203	355	363	97	0	xxxxx	xxxxx	223	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	343	343	203	355	363	97	0	xxxxx	xxxxx	223	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	653	579	838	604	568	965	1623	xxxxx	xxxxx	1346	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	653	579	838	604	568	965	1623	xxxxx	xxxxx	1346	xxxxx	xxxxx

EPAP Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Cycle (sec):	100	Critical Vol./Cap.(X):	0.583
Loss Time (sec):	12	Average Delay (sec/veh):	32.7
Optimal Cycle:	47	Level Of Service:	C

Street Name:	Fig Lane						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 0 1 0			1 0 0 1 0			1 0 2 0 1			1 0 2 0 1		
Volume Module: PM Peak Hour												
Base Vol:	3	4	28	1	6	0	0	8	4	24	9	1
Growth 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
Initial Bse:	3	4	28	1	6	0	0	8	4	24	9	1
Added Vol:	131	146	24	398	161	21	10	112	56	152	202	129
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	134	150	52	399	167	21	10	120	60	176	211	130
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	146	163	57	434	182	23	11	130	65	191	229	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	163	57	434	182	23	11	130	65	191	229	141
PCE 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
MLF 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
FinalVolume:	146	163	57	434	182	23	11	130	65	191	229	141
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.93	0.83	0.93	0.93	0.83
Lanes:	1.00	0.74	0.26	1.00	0.89	0.11	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1769	1329	461	1769	1626	204	1769	3538	1583	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.08	0.12	0.12	0.25	0.11	0.11	0.01	0.04	0.04	0.11	0.06	0.09
Crit Moves:		****		****				****		****		
Green/Cycle:	0.27	0.21	0.21	0.42	0.36	0.36	0.02	0.06	0.06	0.19	0.23	0.23
Volume/Cap:	0.31	0.58	0.58	0.58	0.31	0.31	0.38	0.58	0.65	0.58	0.28	0.38
Delay/Veh:	29.6	37.8	37.8	23.4	23.1	23.1	57.1	49.4	60.0	39.9	31.7	33.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.6	37.8	37.8	23.4	23.1	23.1	57.1	49.4	60.0	39.9	31.7	33.0
LOS by Move:	C	D	D	C	C	C	E	D	E	D	C	C
HCM2k95thQ:	182	325	325	486	222	222	42	152	159	296	157	194

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0 0 1 0			1 0 0 1 0			1 0 2 0 1			1 0 2 0 1		
Lane Group:	L	RT	RT	L	RT	RT	L	T	R	L	T	R
#LnsInGrps:	1	1	1	1	1	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area 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
RT Adj:	xxxx	0.96	0.96	xxxx	0.98	0.98	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat 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
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.93	0.83	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

****

Intersection #5 Jensen Road & Fig Lane

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.27	0.21	0.21	0.42	0.36	0.36	0.02	0.06	0.06	0.19	0.23	0.23
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	3.2	5.5	5.5	9.2	4.1	4.1	0.3	1.9	1.8	4.9	2.8	3.3
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.4	1.3	1.3	1.4	0.4	0.4	0.5	1.2	1.4	1.3	0.4	0.6
HCM2KQueue:	3.7	6.8	6.8	10.6	4.5	4.5	0.8	3.0	3.2	6.2	3.1	3.9
70th%Factor:	1.19	1.18	1.18	1.18	1.19	1.19	1.20	1.19	1.19	1.19	1.19	1.19
HCM2k70thQ:	4.4	8.1	8.1	12.5	5.4	5.4	1.0	3.6	3.8	7.3	3.7	4.7
85th%Factor:	1.57	1.54	1.54	1.51	1.56	1.56	1.59	1.57	1.57	1.54	1.57	1.56
HCM2k85thQ:	5.7	10.5	10.5	16.0	7.0	7.0	1.3	4.8	5.0	9.5	4.9	6.1
90th%Factor:	1.73	1.68	1.68	1.64	1.72	1.72	1.78	1.74	1.74	1.69	1.74	1.73
HCM2k90thQ:	6.4	11.5	11.5	17.3	7.8	7.8	1.4	5.3	5.5	10.4	5.5	6.8
95th%Factor:	1.99	1.91	1.91	1.83	1.97	1.97	2.07	2.01	2.00	1.93	2.00	1.98
HCM2k95thQ:	7.3	13.0	13.0	19.4	8.9	8.9	1.7	6.1	6.4	11.8	6.3	7.8
98th%Factor:	2.45	2.29	2.29	2.14	2.41	2.41	2.64	2.49	2.48	2.32	2.49	2.44
HCM2k98thQ:	9.0	15.6	15.6	22.7	10.9	10.9	2.1	7.5	7.9	14.3	7.8	9.6

EPAP Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Cycle (sec): 100 Critical Vol./Cap.(X): 0.363
Loss Time (sec): 0 Average Delay (sec/veh): 9.4
Optimal Cycle: 0 Level Of Service: A

****

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:	PM Peak Hour											
Base Vol:	9	48	19	24	43	2	7	31	9	26	20	45
Growth 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
Initial Bse:	9	48	19	24	43	2	7	31	9	26	20	45
Added Vol:	6	31	1	45	18	1	2	47	3	0	84	84
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	79	20	69	61	3	9	78	12	26	104	129
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	16	86	22	75	66	3	10	85	13	28	113	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	86	22	75	66	3	10	85	13	28	113	140
PCE 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
MLF 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
FinalVolume:	16	86	22	75	66	3	10	85	13	28	113	140
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.13	0.69	0.18	0.52	0.46	0.02	0.09	0.79	0.12	0.10	0.40	0.50
Final Sat.:	89	471	119	345	305	15	63	547	84	78	311	386
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.22	0.22	0.22	0.15	0.15	0.15	0.36	0.36	0.36
Crit Moves:			****	****			****			****		
Delay/Veh:	8.9	8.9	8.9	9.4	9.4	9.4	8.7	8.7	8.7	9.8	9.8	9.8
Delay 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
AdjDel/Veh:	8.9	8.9	8.9	9.4	9.4	9.4	8.7	8.7	8.7	9.8	9.8	9.8
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	8.9			9.4			8.7			9.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.9			9.4			8.7			9.8		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	4.7	4.7	4.7	6.0	6.0	6.0	4.0	4.0	4.0	12.7	12.7	12.7

****

Note: Queue reported is the distance per lane in feet.

****

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM 4-Way Stop Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	2%	2%	2%	2%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.44	0.46	0.43	0.57
P[C2]:	0.11	0.09	0.23	0.10
P[C3]:	0.31	0.33	0.20	0.26
P[C4]:	0.12	0.11	0.13	0.07
P[C5]:	0.01	0.01	0.01	0.01
Padj[C1]:	0.011	0.011	0.011	0.009
Padj[C2]:	0.005	0.005	0.003	0.003
Padj[C3]:	-0.008	-0.009	-0.004	-0.007
Padj[C4]:	-0.007	-0.006	-0.008	-0.004
Padj[C5]:	-0.001	-0.001	-0.001	-0.001
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.045	0.124	-0.021	-0.245
Volume:	124	145	108	282
Capacity:	679	665	695	775
DegOfUtil:	0.17	0.20	0.15	0.35
DepHeadway:	4.93	5.07	4.87	4.46
ServiceTime:	2.9	3.1	2.9	2.5
Delay:	8.9	9.4	8.7	9.8
Queue:	0.2	0.2	0.2	0.5

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	8.9	9.4	8.7	9.8
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	8.9	9.4	8.7	9.8
LOS by Appr:	A	A	A	A

OverallDel: 9.4
OverallLOS: A

EPAP Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): 27.9 Worst Case Level Of Service: F[60.9]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	3	3	3	28	16	7	9	69	3	6	71	27
Growth 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
Initial Bse:	3	3	3	28	16	7	9	69	3	6	71	27
Added Vol:	62	178	5	124	141	32	11	51	32	6	75	52
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	65	181	8	152	157	39	20	120	35	12	146	79
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	71	197	9	165	171	42	22	130	38	13	159	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	71	197	9	165	171	42	22	130	38	13	159	86
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	527	464	149	523	440	202	245	xxxx	xxxxx	168	xxxx	xxxxx
Potent Cap.:	462	496	897	464	511	839	1322	xxxx	xxxxx	1409	xxxx	xxxxx
Move Cap.:	316	483	897	308	498	839	1322	xxxx	xxxxx	1409	xxxx	xxxxx
Volume/Cap:	0.22	0.41	0.01	0.54	0.34	0.05	0.02	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.3	xxxx	xxxxx	0.7	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	431	xxxxx	xxxx	407	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	4.4	xxxxx	xxxxx	10.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	27.1	xxxxx	xxxxx	60.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	D	*	*	F	*	*	*	*	*	*	*
ApproachDel:		27.1			60.9			xxxxxx			xxxxxx	
ApproachLOS:		D			F			*			*	

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

EPAP Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Stuhr & Harvey

Cycle (sec):	100		Critical Vol./Cap.(X):	0.177		
Loss Time (sec):	9		Average Delay (sec/veh):	13.5		
Optimal Cycle:	22		Level Of Service:	B		

Street Name:	Harvey Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	0	1	0	1	0	0
Volume Module:	PM Peak Hour											
Base Vol:	0	0	0	0	0	0	0	102	0	0	48	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	102	0	0	48	0
Added Vol:	41	0	9	0	0	0	0	40	47	26	20	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	41	0	9	0	0	0	0	142	47	26	68	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	45	0	10	0	0	0	0	154	51	28	74	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	0	10	0	0	0	0	154	51	28	74	0
PCE 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
MLF 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
FinalVolume:	45	0	10	0	0	0	0	154	51	28	74	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.95	0.95	0.93	0.98	1.00
Lanes:	0.82	0.00	0.18	0.00	0.00	0.00	0.00	0.75	0.25	1.00	1.00	0.00
Final Sat.:	1432	0	314	0	0	0	0	1351	447	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.11	0.11	0.02	0.04	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.18	0.00	0.18	0.00	0.00	0.00	0.00	0.64	0.64	0.09	0.73	0.00
Volume/Cap:	0.18	0.00	0.18	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.05	0.00
Delay/Veh:	35.4	0.0	35.4	0.0	0.0	0.0	0.0	7.2	7.2	42.6	3.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.4	0.0	35.4	0.0	0.0	0.0	0.0	7.2	7.2	42.6	3.7	0.0
LOS by Move:	D	A	D	A	A	A	A	A	A	D	A	A
HCM2k95thQ:	77	0	77	0	0	0	0	127	127	49	32	0

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0 0	1!	0 0	0 0	0	0 0	0 0	0	1 0	1 0	1	0 0
Lane Group:	LTR	LTR	LTR	xxxx	xxxx	xxxx	xxxx	RT	RT	L	T	xxxx
#LnsInGrps:	1	1	1	0	0	0	0	1	1	1	1	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	xxxx	4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.97	0.97	xxxx	xxxx	xxxxx
LT Adj:	0.96	xxxx	0.96	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.95	0.95	0.93	0.98	1.00
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.95	0.95	0.93	0.98	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.18	0.00	0.18	0.00	0.00	0.00	0.00	0.64	0.64	0.09	0.73	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.3	0.0	1.3	0.0	0.0	0.0	0.0	2.3	2.3	0.7	0.6	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.0
HCM2KQueue:	1.5	0.0	1.5	0.0	0.0	0.0	0.0	2.5	2.5	0.9	0.6	0.0
70th%Factor:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.20	1.20	1.20
HCM2k70thQ:	1.8	0.0	1.8	0.0	0.0	0.0	0.0	3.0	3.0	1.1	0.7	0.0
85th%Factor:	1.59	1.60	1.59	1.60	1.60	1.60	1.60	1.58	1.58	1.59	1.59	1.60
HCM2k85thQ:	2.4	0.0	2.4	0.0	0.0	0.0	0.0	4.0	4.0	1.5	1.0	0.0
90th%Factor:	1.77	1.80	1.77	1.80	1.80	1.80	1.80	1.75	1.75	1.78	1.79	1.80
HCM2k90thQ:	2.7	0.0	2.7	0.0	0.0	0.0	0.0	4.4	4.4	1.7	1.1	0.0
95th%Factor:	2.05	2.10	2.05	2.10	2.10	2.10	2.10	2.02	2.02	2.07	2.08	2.10
HCM2k95thQ:	3.1	0.0	3.1	0.0	0.0	0.0	0.0	5.1	5.1	1.9	1.3	0.0
98th%Factor:	2.59	2.70	2.59	2.70	2.70	2.70	2.70	2.52	2.52	2.63	2.65	2.70
HCM2k98thQ:	3.9	0.0	3.9	0.0	0.0	0.0	0.0	6.3	6.3	2.5	1.7	0.0

EPAP Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Stuhr Road & Fig Lane

Cycle (sec):	100					Critical Vol./Cap.(X):				0.275						
Loss Time (sec):	9					Average Delay (sec/veh):				24.3						
Optimal Cycle:	25					Level Of Service:				C						
Street Name:	Fig Lane							Stuhr Road								
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R				
Control:	Split Phase			Split Phase			Protected			Protected						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Lanes:	0	0 1! 0	0	0	0 0	0 0	0	0 0	1 0	1	0 1	0 0				
Volume Module:	PM Peak Hour															
Base Vol:	0	0	0	0	0	0	0	85	0	0	36	0				
Growth 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				
Initial Bse:	0	0	0	0	0	0	0	85	0	0	36	0				
Added Vol:	24	0	109	0	0	0	0	54	15	116	22	0				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	24	0	109	0	0	0	0	139	15	116	58	0				
User 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				
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92				
PHF Volume:	26	0	118	0	0	0	0	151	16	126	63	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	26	0	118	0	0	0	0	151	16	126	63	0				
PCE 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				
MLF 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				
FinalVolume:	26	0	118	0	0	0	0	151	16	126	63	0				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.86	1.00	0.86	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00				
Lanes:	0.18	0.00	0.82	0.00	0.00	0.00	0.00	0.90	0.10	1.00	1.00	0.00				
Final Sat.:	296	0	1344	0	0	0	0	1659	179	1769	1862	0				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.00	0.09	0.00	0.00	0.00	0.00	0.09	0.09	0.07	0.03	0.00				
Crit Moves:			****					****		****						
Green/Cycle:	0.32	0.00	0.32	0.00	0.00	0.00	0.00	0.33	0.33	0.26	0.59	0.00				
Volume/Cap:	0.28	0.00	0.28	0.00	0.00	0.00	0.00	0.28	0.28	0.28	0.06	0.00				
Delay/Veh:	25.6	0.0	25.6	0.0	0.0	0.0	0.0	24.9	24.9	29.9	8.7	0.0				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	25.6	0.0	25.6	0.0	0.0	0.0	0.0	24.9	24.9	29.9	8.7	0.0				
LOS by Move:	C	A	C	A	A	A	A	C	C	C	A	A				
HCM2k95thQ:	168	0	168	0	0	0	0	189	189	159	42	0				

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Stuhr Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R				
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	0	0 1! 0	0	0	0 0	0 0	0	0 0	1 0	1	0 1	0 0				
Lane Group:	LTR			LTR			xxxx	xxxx	xxxx	xxxx	RT		RT	L	T	xxxx
#LnsInGrps:	1			1			0	0	0	0	1		1	1	1	0
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12				
CrsswalkWid:	8			8			8			8						
% Hev Veh:	2			2			2			2						
Grade:	0%			0%			0%			0%						
Parking/Hr:	No			No			No			No						
Bus Stp/Hr:	0			0			0			0						
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:	0			0			0			0						
ExclusiveRT:	Include			Include			Include			Include						
% RT Prtct:	0			0			0			0						
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	4	xxxx		4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx			1	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx				
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	0.98	0.98	xxxxx				
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx				
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx				
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx				
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx				
RT Adj:	0.89	xxxx	0.89	xxxx	xxxx	xxxxx	xxxx	0.99	0.99	xxxx	xxxx	xxxxx				
LT Adj:	0.99	xxxx	0.99	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx				
PedBike 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				
HCM Sat Adj:	0.86	1.00	0.86	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00				
Usr Sat 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				
MLF Sat 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				
Fnl Sat Adj:	0.86	1.00	0.86	1.00	1.00	1.00	1.00	0.97	0.97	0.93	0.98	1.00				
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > >															
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00				

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Stuhr Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.32	0.00	0.32	0.00	0.00	0.00	0.00	0.33	0.33	0.26	0.59	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	3.0	0.0	3.0	0.0	0.0	0.0	0.0	3.4	3.4	2.8	0.7	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.1	0.0
HCM2KQueue:	3.4	0.0	3.4	0.0	0.0	0.0	0.0	3.8	3.8	3.2	0.8	0.0
70th%Factor:	1.19	1.20	1.19	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.20	1.20
HCM2k70thQ:	4.0	0.0	4.0	0.0	0.0	0.0	0.0	4.5	4.5	3.8	1.0	0.0
85th%Factor:	1.57	1.60	1.57	1.60	1.60	1.60	1.60	1.56	1.56	1.57	1.59	1.60
HCM2k85thQ:	5.3	0.0	5.3	0.0	0.0	0.0	0.0	5.9	5.9	5.0	1.3	0.0
90th%Factor:	1.74	1.80	1.74	1.80	1.80	1.80	1.80	1.73	1.73	1.74	1.78	1.80
HCM2k90thQ:	5.9	0.0	5.9	0.0	0.0	0.0	0.0	6.6	6.6	5.5	1.4	0.0
95th%Factor:	2.00	2.10	2.00	2.10	2.10	2.10	2.10	1.99	1.99	2.00	2.07	2.10
HCM2k95thQ:	6.7	0.0	6.7	0.0	0.0	0.0	0.0	7.5	7.5	6.4	1.7	0.0
98th%Factor:	2.47	2.70	2.47	2.70	2.70	2.70	2.70	2.45	2.45	2.48	2.64	2.70
HCM2k98thQ:	8.3	0.0	8.3	0.0	0.0	0.0	0.0	9.3	9.3	7.9	2.1	0.0

EPAP Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 Stuhr Road & Collector Rd B

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A[9.1]

Street Name:	Collector Rd B						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0 0 1	0	0	0 0 0	0	0	1 0 1	0	0	1 0 0
Volume Module:	PM Peak Hour											
Base Vol:	0	0	0	0	0	0	0	85	0	0	36	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	85	0	0	36	0
Added Vol:	0	0	47	0	0	0	0	22	26	0	46	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	47	0	0	0	0	107	26	0	82	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	51	0	0	0	0	116	28	0	89	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	51	0	0	0	0	116	28	0	89	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	116	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	936	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	936	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	4.3	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	9.1			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	A			*			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

****

Intersection #13 Stuhr Road & Collector Rd B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HevVeh:		2%			2%			2%			2%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

EPAP Plus Project PM Peak Hour

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

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Intersection #14 Jensen Road & Collector Rd B

****

Average Delay (sec/veh): 2.8 Level Of Service: A

****

Street Name:	Collector Rd B						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			2		
Volume Module:PM Peak Hour												
Base Vol:	0	0	0	0	0	0	0	12	0	0	12	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	12	0	0	12	0
Added Vol:	9	82	29	72	47	3	4	76	7	50	150	149
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	82	29	72	47	3	4	88	7	50	162	149
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	10	89	32	78	51	3	4	96	8	54	176	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	89	32	78	51	3	4	96	8	54	176	162
PCE 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
MLF 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
FinalVolume:	10	89	32	78	51	3	4	96	8	54	176	162
PCE Module:												
AutoPCE:	10	89	32	78	51	3	4	96	8	54	176	162
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	10	89	32	78	51	3	4	96	8	54	176	162
Delay Module: >> Time Period: 0.25 hours <<												
CircVolume:	178			240			184			103		
MaxVolume:	1104			1070			1101			2350		
PedVolume:	0			0			0			0		
AdjMaxVol:	1104			1070			1101			2350		
ApproachVol:	130			133			108			392		
ApproachV/C:	0.12			0.12			0.10			0.17		
ApproachDel:	3.7			3.8			3.6			1.8		
ApproachLOS:	A			A			A			A		
Queue:	0.4			0.4			0.3			0.6		

EPAP Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[11.6]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	4	23	2	1	20	2	12	111	10	1	34	4
Growth 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
Initial Bse:	4	23	2	1	20	2	12	111	10	1	34	4
Added Vol:	0	0	0	0	0	0	2	85	0	0	57	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	23	2	1	20	2	14	196	10	1	91	4
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	4	25	2	1	22	2	15	213	11	1	99	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	25	2	1	22	2	15	213	11	1	99	4
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	364	354	218	366	358	101	103	xxxx	xxxxx	224	xxxx	xxxxx
Potent Cap.:	592	571	821	590	569	954	1489	xxxx	xxxxx	1345	xxxx	xxxxx
Move Cap.:	568	565	821	564	562	954	1489	xxxx	xxxxx	1345	xxxx	xxxxx
Volume/Cap:	0.01	0.04	0.00	0.00	0.04	0.00	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.8	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	7.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	578	xxxxx	xxxx	583	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.6	xxxxx	xxxxx	11.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:	11.6			11.4			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

EPAP Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: B[10.2]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module: PM Peak Hour												
Base Vol:	0	0	0	2	0	140	73	45	0	0	43	3
Growth 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
Initial Bse:	0	0	0	2	0	140	73	45	0	0	43	3
Added Vol:	0	0	0	0	0	0	0	143	0	0	123	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	140	73	188	0	0	166	3
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	2	0	152	79	204	0	0	180	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	2	0	152	79	204	0	0	180	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	545	545	182	184	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	499	446	860	1391	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	477	419	860	1391	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.18	0.06	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	4.5	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	851	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.7	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.2	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.2			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #16 Stuhr & Villa Manucha

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:							#91					
Dist(miles):							0.250					
Speed (mph):							1.00					
SignalIndex:							#1					
Cycle Time:							100 secs					
InitVolume:							1	115				
Saturation:							1612	719				
ArrivalType:							3	3				
G/C:							0.00	0.26				
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:							0.001	0.255				
gq1:							0.06	11.91				
gq2:							0.00	2.27				
gq:							0.06	14.18				
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:							0.550					
beta:							0.645					
ta (secs):							900.000					
F:							0.003					
f:							1.000	1.000				
vcmax:							0	31				
vcg:							0	34				
vcmin:							1000	1000				
tp:							0.0	0.0				
p:							0.000					
*** Computation 3: Platoon Event Periods												
pdom/psubo:							0.000/0.000/Unconstrained					
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	621	547	204	545	545	182	184	xxxxx	xxxxx	0	xxxxx	xxxxx
AdjCnflVol:	621	547	204	545	545	182	184	xxxxx	xxxxx	0	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	621	547	204	545	545	182	184	xxxxx	xxxxx	0	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	400	445	836	499	446	860	1391	xxxxx	xxxxx	1623	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	400	445	836	499	446	860	1391	xxxxx	xxxxx	1623	xxxxx	xxxxx

EPAP Plus Project PM Peak Hour

Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#4	[2Way95thQ]:	4.1	4.1	4.1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1.2	1.2	xxxx
#5	[HCM2k95thQ]:	182	325	325	486	222	222	42	152	159	296	157	194
#6	[AllWayAvgQ]	4.7	4.7	4.7	6.0	6.0	6.0	4.0	4.0	4.0	12.7	12.7	12.7
#7	[2Way95thQ]:	109	109	109	256	256	256	1.3	xxxx	xxxx	0.7	xxxx	xxxx
#8	[HCM2k95thQ]:	77	0	77	0	0	0	0	127	127	49	32	0
#9	[HCM2k95thQ]:	168	0	168	0	0	0	0	189	189	159	42	0
#13	[2Way95thQ]:	xxxx	xxxx	4.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#14	[DesignQueue]:	0	10	0	0	11	0	0	8	0	0	15	0
#15	[2Way95thQ]:	4.3	4.3	4.3	3.4	3.4	3.4	0.8	xxxx	xxxx	0.1	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	16.5	16.5	16.5	4.5	4.5	xxxx	xxxx	xxxx	xxxx

LEVEL OF SERVICE CALCULATION WORKSHEETS

EPAP PLUS PROJECT WITH MITIGATION

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	22	28	1033	702	18
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	200	-	-	200
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	24	30	1123	763	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1385	382	763	0	-	0
Stage 1	763	-	-	-	-	-
Stage 2	622	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	134	616	845	-	-	-
Stage 1	421	-	-	-	-	-
Stage 2	498	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	129	616	845	-	-	-
Mov Cap-2 Maneuver	129	-	-	-	-	-
Stage 1	421	-	-	-	-	-
Stage 2	480	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	845	-	616	-	-
HCM Lane V/C Ratio	0.036	-	0.039	-	-
HCM Control Delay (s)	9.4	-	11.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	29	100	217	69	287	99	557	424	62	40	435	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	171.6	190.0	186.3	171.2	190.0
Adj Flow Rate, veh/h	35	122	265	84	350	121	679	517	76	49	530	62
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	47	315	888	84	354	301	695	1491	218	126	593	69
Arrive On Green	0.03	0.17	0.17	0.05	0.19	0.19	0.39	0.52	0.52	0.07	0.20	0.20
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	2855	418	1774	2936	342
Grp Volume(v), veh/h	35	122	265	84	350	121	679	294	299	49	293	299
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1630	1642	1774	1627	1652
Q Serve(g_s), s	1.7	4.9	7.4	4.0	15.8	5.6	31.8	8.9	8.9	2.2	14.8	14.9
Cycle Q Clear(g_c), s	1.7	4.9	7.4	4.0	15.8	5.6	31.8	8.9	8.9	2.2	14.8	14.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		0.21
Lane Grp Cap(c), veh/h	47	315	888	84	354	301	695	852	858	126	328	333
V/C Ratio(X)	0.74	0.39	0.30	1.00	0.99	0.40	0.98	0.35	0.35	0.39	0.89	0.90
Avail Cap(c_a), veh/h	84	354	921	84	354	301	695	852	858	126	328	333
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	31.1	9.8	40.1	34.0	29.9	25.2	11.7	11.7	37.4	32.7	32.8
Incr Delay (d2), s/veh	20.3	0.8	0.2	97.1	44.8	0.9	28.4	1.1	1.1	1.9	28.6	29.0
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(50%),veh/ln	1.1	2.6	3.3	4.2	12.5	2.5	20.9	4.2	4.3	1.2	9.2	9.4
LnGrp Delay(d),s/veh	61.0	31.9	9.9	137.2	78.9	30.8	53.6	12.8	12.9	39.3	61.3	61.7
LnGrp LOS	E	C	A	F	E	C	D	B	B	D	E	E
Approach Vol, veh/h		422			555			1272			641	
Approach Delay, s/veh		20.5			77.2			34.6			59.8	
Approach LOS		C			E			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	48.0	8.0	18.2	37.0	22.8	6.2	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	44.0	4.0	16.0	33.0	17.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.2	10.9	6.0	9.4	33.8	16.9	3.7	17.8
Green Ext Time (p_c), s	0.7	4.1	0.0	1.0	0.0	0.1	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	105	4	155	3	1	1	278	1001	1	1	643	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	169.7	190.0	186.3	171.4	190.0
Adj Flow Rate, veh/h	128	5	189	4	1	1	339	1221	1	1	784	101
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	192	19	211	222	56	41	409	2032	2	2	1118	144
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.61	0.61	0.00	0.39	0.39
Sat Flow, veh/h	551	80	896	628	237	173	1774	3305	3	1774	2902	374
Grp Volume(v), veh/h	322	0	0	6	0	0	339	595	627	1	440	445
Grp Sat Flow(s),veh/h/ln	1527	0	0	1038	0	0	1774	1612	1696	1774	1628	1648
Q Serve(g_s), s	14.8	0.0	0.0	0.0	0.0	0.0	14.6	18.2	18.2	0.0	18.3	18.3
Cycle Q Clear(g_c), s	16.4	0.0	0.0	0.2	0.0	0.0	14.6	18.2	18.2	0.0	18.3	18.3
Prop In Lane	0.40		0.59	0.67		0.17	1.00		0.00	1.00		0.23
Lane Grp Cap(c), veh/h	421	0	0	318	0	0	409	991	1043	2	627	635
V/C Ratio(X)	0.76	0.00	0.00	0.02	0.00	0.00	0.83	0.60	0.60	0.45	0.70	0.70
Avail Cap(c_a), veh/h	461	0	0	353	0	0	485	991	1043	88	627	635
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	0.0	23.6	0.0	0.0	29.4	9.5	9.5	40.2	20.8	20.8
Incr Delay (d2), s/veh	6.9	0.0	0.0	0.0	0.0	0.0	9.9	2.7	2.6	103.2	6.4	6.4
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(50%),veh/ln	7.7	0.0	0.0	0.1	0.0	0.0	8.3	8.7	9.1	0.1	9.3	9.4
LnGrp Delay(d),s/veh	36.6	0.0	0.0	23.7	0.0	0.0	39.4	12.2	12.0	143.3	27.3	27.2
LnGrp LOS	D			C			D	B	B	F	C	C
Approach Vol, veh/h		322			6			1561			886	
Approach Delay, s/veh		36.6			23.7			18.0			27.4	
Approach LOS		D			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	59.0		22.9	28.1	35.0		22.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	49.0		21.0	22.0	31.0		21.0
Max Q Clear Time (g_c+I1), s	2.0	20.2		18.4	16.6	20.3		2.2
Green Ext Time (p_c), s	0.0	11.7		0.5	2.0	4.3		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	27	22	36	1044	705	19
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	29	24	39	1135	766	21
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	65	58	54	3008	2701	1208
Arrive On Green	0.04	0.04	0.03	0.85	0.76	0.76
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	29	24	39	1135	766	21
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	1.1	1.0	1.5	5.0	4.6	0.2
Cycle Q Clear(g_c), s	1.1	1.0	1.5	5.0	4.6	0.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	65	58	54	3008	2701	1208
V/C Ratio(X)	0.45	0.41	0.73	0.38	0.28	0.02
Avail Cap(c_a), veh/h	452	404	251	3008	2701	1208
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	33.3	33.3	33.9	1.2	2.5	2.0
Incr Delay (d2), s/veh	4.7	4.7	16.9	0.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.0	1.0	2.5	2.3	0.1
LnGrp Delay(d),s/veh	38.0	37.9	50.8	1.5	2.8	2.0
LnGrp LOS	D	D	D	A	A	A
Approach Vol, veh/h	53			1174	787	
Approach Delay, s/veh	38.0			3.2	2.8	
Approach LOS	D			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		79.4		6.6	6.1	73.3		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		60.0		18.0	10.0	46.0		
Max Q Clear Time (g_c+I1), s		7.0		3.1	3.5	6.6		
Green Ext Time (p_c), s		23.6		0.1	0.0	20.7		

Intersection Summary	
HCM 2010 Ctrl Delay	3.9
HCM 2010 LOS	A

EPAP Plus Project AM Peak Hour
With Mitigation Measures

Scenario Report

Scenario:	EPAP Plus Proj AM
Command:	EPAP Plus Proj AM
Volume:	Existing AM
Geometry:	Exist Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	AM Pk Hr
Trip Distribution:	AM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

EPAP Plus Project AM Peak Hour
With Mitigation Measures

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 7 Fig Lane & Yolo Street	A	5.2	0.195	B	10.7	0.440	+ 5.479 D/V

EPAP Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Cycle (sec):	60	Critical Vol./Cap.(X):	0.440
Loss Time (sec):	6	Average Delay (sec/veh):	10.7
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1	0
Volume Module:	AM Peak Hour											
Base Vol:	6	11	5	22	21	3	8	160	1	2	183	55
Growth 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
Initial Bse:	6	11	5	22	21	3	8	160	1	2	183	55
Added Vol:	18	93	3	36	157	7	32	61	48	-2	21	121
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	104	8	58	178	10	40	221	49	0	204	176
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	26	113	9	63	193	11	43	240	53	0	222	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	113	9	63	193	11	43	240	53	0	222	191
PCE 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
MLF 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
FinalVolume:	26	113	9	63	193	11	43	240	53	0	222	191
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.88	0.88	0.88	0.88	0.88	0.88	1.00	0.92	0.92
Lanes:	0.18	0.76	0.06	0.24	0.72	0.04	0.13	0.71	0.16	0.00	0.54	0.46
Final Sat.:	302	1311	101	395	1212	68	217	1198	266	0	937	808
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.09	0.16	0.16	0.16	0.20	0.20	0.20	0.00	0.24	0.24
Crit Moves:					****						****	
Green/Cycle:	0.36	0.36	0.36	0.36	0.36	0.36	0.54	0.54	0.54	0.00	0.54	0.54
Volume/Cap:	0.24	0.24	0.24	0.44	0.44	0.44	0.37	0.37	0.37	0.00	0.44	0.44
Delay/Veh:	13.5	13.5	13.5	15.0	15.0	15.0	8.3	8.3	8.3	0.0	8.7	8.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.5	13.5	13.5	15.0	15.0	15.0	8.3	8.3	8.3	0.0	8.7	8.7
LOS by Move:	B	B	B	B	B	B	A	A	A	A	A	A
HCM2k95thQ:	103	103	103	205	205	205	190	190	190	0	242	242

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1	0
Lane Group:	LTR			LTR			LTR			xxxx	RT	
#LnsInGrps:	1			1			1			0	1	
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	5	5	5	5	5	5	5	5	5	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxx	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	xxxx	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxx	1.00	1.00
Parking Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxx	1.00	1.00
RT Adj:	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98	xxxx	0.94	0.94
LT Adj:	0.93	0.93	0.93	0.91	0.91	0.91	0.92	0.92	0.92	xxxx	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.90	0.90	0.90	0.88	0.88	0.88	0.88	0.88	0.88	1.00	0.92	0.92
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.90	0.90	0.90	0.88	0.88	0.88	0.88	0.88	0.88	1.00	0.92	0.92
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00

EPAP Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North	South	East	West
Cycle Length, C:	60	60	60	xxxxxx
Actual Green Time Per Lane Group, G:	20.75	20.75	31.25	xxxxxx
Effective Green Time Per Lane Group, g:	21.75	21.75	32.25	xxxxxx
Opposing Effective Green Time, go:	21.75	21.75	32.25	xxxxxx
Number Of Opposing Lanes, No:	1	1	1	xxxxxx
Number Of Lanes In Lane Group, N:	1	1	1	xxxxxx
Adjusted Left-Turn Flow Rate, Vlt:	26	63	43	xxxxxx
Proportion of Left Turns in Lane Group, Plt:	0.18	0.24	0.13	xxxxxx
Proportion of Left Turns in Opp Flow, Plto:	0.24	0.18	0.00	xxxxxx
Left Turns Per Cycle, LTC:	0.43	1.05	0.72	xxxxxx
Adjusted Opposing Flow Rate, Vo:	267	148	413	xxxxxx
Opposing Flow Per Lane Per Cycle, Volc:	4.45	2.47	6.88	xxxxxx
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	xxxxxx
Lost Time Per Phase, tl:	3.00	3.00	3.00	xxxxxx
Eff grn until arrival of left-turn car, gf:	9.47	5.55	12.48	xxxxxx
Opposing Queue Ratio, qro:	0.64	0.64	0.46	xxxxxx
Eff grn blocked by opposing queue, gq:	6.56	3.10	6.49	xxxxxx
Eff grn while left turns filter thru, gu:	12.28	16.20	19.77	xxxxxx
Max opposing cars arriving during gq-gf, n:	0.00	0.00	0.00	xxxxxx
Proportion of Opposing Thru & RT cars, ptho:	0.76	0.82	1.00	xxxxxx
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	1.83	1.62	2.13	xxxxxx
Single Lane Through-car Equivalents, el2:	1.00	1.00	1.00	xxxxxx
Minimum Left Turn Adjustment Factor, fmin:	0.11	0.11	0.07	xxxxxx
Single Lane Left Turn Adjustment Factor, fm:	0.93	0.90	0.92	xxxxxx
Left Turn Adjustment Factor, flt:	0.93	0.90	0.92	xxxxxx

EPAP Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.36	0.36	0.36	0.36	0.36	0.36	0.54	0.54	0.54	0.00	0.54	0.54
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.7	1.7	1.7	3.4	3.4	3.4	3.2	3.2	3.2	0.0	4.2	4.2
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Q2:	0.3	0.3	0.3	0.8	0.8	0.8	0.6	0.6	0.6	0.0	0.8	0.8
HCM2KQueue:	2.0	2.0	2.0	4.2	4.2	4.2	3.8	3.8	3.8	0.0	4.9	4.9
70th%Factor:	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19	1.20	1.19	1.19
HCM2k70thQ:	2.4	2.4	2.4	4.9	4.9	4.9	4.6	4.6	4.6	0.0	5.9	5.9
85th%Factor:	1.58	1.58	1.58	1.56	1.56	1.56	1.56	1.56	1.56	1.60	1.55	1.55
HCM2k85thQ:	3.2	3.2	3.2	6.5	6.5	6.5	6.0	6.0	6.0	0.0	7.7	7.7
90th%Factor:	1.76	1.76	1.76	1.72	1.72	1.72	1.73	1.73	1.73	1.80	1.71	1.71
HCM2k90thQ:	3.6	3.6	3.6	7.2	7.2	7.2	6.6	6.6	6.6	0.0	8.5	8.5
95th%Factor:	2.04	2.04	2.04	1.98	1.98	1.98	1.98	1.98	1.98	2.10	1.96	1.96
HCM2k95thQ:	4.1	4.1	4.1	8.2	8.2	8.2	7.6	7.6	7.6	0.0	9.7	9.7
98th%Factor:	2.56	2.56	2.56	2.43	2.43	2.43	2.44	2.44	2.44	2.70	2.38	2.38
HCM2k98thQ:	5.2	5.2	5.2	10.1	10.1	10.1	9.4	9.4	9.4	0.0	11.8	11.8

EPAP Plus Project AM Peak Hour
With Mitigation Measures

Future Queue Length Report (feet)

Node	Intersection	Northbound L -- T -- R	Southbound L -- T -- R	Eastbound L -- T -- R	Westbound L -- T -- R
#7	[HCM2k95thQ]:	103 103 103	205 205 205	190 190 190	0 242 242

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	147	84	888	1046	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	-	0	200	-	-	200
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	160	91	965	1137	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1802	568	1137	0	-	0
Stage 1	1137	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	71	466	610	-	-	-
Stage 1	268	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	60	466	610	-	-	-
Mov Cap-2 Maneuver	60	-	-	-	-	-
Stage 1	268	-	-	-	-	-
Stage 2	402	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.7	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	610	-	466	-	-
HCM Lane V/C Ratio	0.15	-	0.343	-	-
HCM Control Delay (s)	11.9	-	16.7	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	1.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	194	495	55	151	52	366	488	92	149	605	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	172.1	190.0	186.3	170.5	190.0
Adj Flow Rate, veh/h	63	237	604	67	184	63	446	595	112	182	738	45
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	81	317	712	86	323	274	496	1177	221	279	949	58
Arrive On Green	0.05	0.17	0.17	0.05	0.17	0.17	0.28	0.43	0.43	0.16	0.31	0.31
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	2748	516	1774	3103	189
Grp Volume(v), veh/h	63	237	604	67	184	63	446	353	354	182	385	398
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1635	1630	1774	1620	1672
Q Serve(g_s), s	2.9	9.9	4.9	3.1	7.4	1.9	19.8	12.9	13.0	7.9	17.7	17.7
Cycle Q Clear(g_c), s	2.9	9.9	4.9	3.1	7.4	1.9	19.8	12.9	13.0	7.9	17.7	17.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		0.11
Lane Grp Cap(c), veh/h	81	317	712	86	323	274	496	700	698	279	496	511
V/C Ratio(X)	0.78	0.75	0.85	0.78	0.57	0.23	0.90	0.50	0.51	0.65	0.78	0.78
Avail Cap(c_a), veh/h	130	365	753	130	365	310	586	700	698	369	496	511
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	32.2	8.9	38.5	31.0	13.9	28.3	17.0	17.1	32.3	25.8	25.8
Incr Delay (d2), s/veh	15.0	7.1	8.6	15.4	1.6	0.4	15.2	2.6	2.6	2.6	11.4	11.1
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(50%),veh/ln	1.7	5.7	9.4	1.9	3.9	1.2	11.8	6.3	6.3	4.0	9.5	9.8
LnGrp Delay(d),s/veh	53.6	39.3	17.6	53.8	32.6	14.3	43.5	19.6	19.7	34.9	37.2	36.9
LnGrp LOS	D	D	B	D	C	B	D	B	B	C	D	D
Approach Vol, veh/h		904			314			1153			965	
Approach Delay, s/veh		25.8			33.5			28.9			36.7	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.1	39.0	8.0	17.9	35.1	29.0	7.7	18.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	35.0	6.0	16.0	27.0	25.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	9.9	15.0	5.1	11.9	21.8	19.7	4.9	9.4
Green Ext Time (p_c), s	1.3	4.5	0.0	2.0	1.1	2.3	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	30.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	1	203	6	2	4	160	901	0	5	1120	77
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	190.0	186.3	190.0	190.0	186.3	190.0	186.3	169.6	190.0	186.3	170.6	190.0
Adj Flow Rate, veh/h	79	1	248	7	2	5	195	1099	0	6	1366	94
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	114	14	239	133	46	65	230	2040	0	50	1635	112
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.13	0.63	0.00	0.03	0.53	0.53
Sat Flow, veh/h	311	68	1175	353	226	321	1774	3308	0	1774	3079	211
Grp Volume(v), veh/h	328	0	0	14	0	0	195	1099	0	6	717	743
Grp Sat Flow(s),veh/h/ln	1554	0	0	900	0	0	1774	1612	0	1774	1621	1669
Q Serve(g_s), s	15.1	0.0	0.0	0.0	0.0	0.0	9.5	16.8	0.0	0.3	32.9	33.3
Cycle Q Clear(g_c), s	18.0	0.0	0.0	0.6	0.0	0.0	9.5	16.8	0.0	0.3	32.9	33.3
Prop In Lane	0.24		0.76	0.50		0.36	1.00		0.00	1.00		0.13
Lane Grp Cap(c), veh/h	366	0	0	244	0	0	230	2040	0	50	861	886
V/C Ratio(X)	0.90	0.00	0.00	0.06	0.00	0.00	0.85	0.54	0.00	0.12	0.83	0.84
Avail Cap(c_a), veh/h	366	0	0	244	0	0	261	2040	0	80	861	886
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	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	0.0	28.3	0.0	0.0	37.6	9.1	0.0	41.9	17.5	17.5
Incr Delay (d2), s/veh	23.4	0.0	0.0	0.1	0.0	0.0	20.2	1.0	0.0	1.1	9.3	9.3
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(50%),veh/ln	10.3	0.0	0.0	0.3	0.0	0.0	5.9	7.6	0.0	0.2	16.8	17.4
LnGrp Delay(d),s/veh	58.9	0.0	0.0	28.4	0.0	0.0	57.8	10.1	0.0	43.0	26.7	26.8
LnGrp LOS	E			C			E	B		D	C	C
Approach Vol, veh/h		328			14			1294			1466	
Approach Delay, s/veh		58.9			28.4			17.3			26.9	
Approach LOS		E			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	60.0		22.0	15.5	52.5		22.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	56.0		18.0	13.0	47.0		18.0
Max Q Clear Time (g_c+I1), s	2.3	18.8		20.0	11.5	35.3		2.6
Green Ext Time (p_c), s	1.4	10.4		0.0	0.1	7.6		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	153	149	124	876	1082	111
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	166	162	135	952	1176	121
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	232	207	321	2734	1922	860
Arrive On Green	0.13	0.13	0.18	0.77	0.54	0.54
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	166	162	135	952	1176	121
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	7.4	8.2	5.6	6.9	18.8	3.1
Cycle Q Clear(g_c), s	7.4	8.2	5.6	6.9	18.8	3.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	232	207	321	2734	1922	860
V/C Ratio(X)	0.71	0.78	0.42	0.35	0.61	0.14
Avail Cap(c_a), veh/h	385	344	321	2734	1922	860
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	34.5	34.9	30.1	2.9	12.9	9.4
Incr Delay (d2), s/veh	4.1	6.3	0.9	0.4	1.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	7.3	2.8	3.4	9.5	1.4
LnGrp Delay(d),s/veh	38.6	41.2	30.9	3.3	14.4	9.7
LnGrp LOS	D	D	C	A	B	A
Approach Vol, veh/h	328			1087	1297	
Approach Delay, s/veh	39.9			6.7	14.0	
Approach LOS	D			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		75.2		14.8	26.2	49.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		64.0		18.0	15.0	45.0		
Max Q Clear Time (g_c+I1), s		8.9		10.2	7.6	20.8		
Green Ext Time (p_c), s		9.4		0.6	4.0	10.2		

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

EPAP Plus Project PM Peak Hour
With Mitigation Measures

Scenario Report

Scenario:	EPAP Plus Proj PM
Command:	EPAP Plus Proj PM
Volume:	Existing PM
Geometry:	Exist Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	PM Pk Hr
Trip Distribution:	PM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

EPAP Plus Project PM Peak Hour
With Mitigation Measures

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 7 Fig Lane & Yolo Street	A	7.7	0.109	B	11.0	0.466	+ 3.254 D/V

EPAP Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Cycle (sec):	60	Critical Vol./Cap.(X):	0.466
Loss Time (sec):	6	Average Delay (sec/veh):	11.0
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Volume Module:	PM Peak Hour											
Base Vol:	3	3	3	28	16	7	9	69	3	6	71	27
Growth 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
Initial Bse:	3	3	3	28	16	7	9	69	3	6	71	27
Added Vol:	62	178	5	124	141	32	11	51	32	6	75	52
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	65	181	8	152	157	39	20	120	35	12	146	79
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	71	197	9	165	171	42	22	130	38	13	159	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	197	9	165	171	42	22	130	38	13	159	86
PCE 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
MLF 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
FinalVolume:	71	197	9	165	171	42	22	130	38	13	159	86
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	0.83	0.83	0.73	0.73	0.73	0.91	0.91	0.91	0.92	0.92	0.92
Lanes:	0.26	0.71	0.03	0.44	0.45	0.11	0.11	0.69	0.20	0.05	0.62	0.33
Final Sat.:	403	1122	50	606	626	156	197	1184	345	89	1078	583
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.18	0.27	0.27	0.27	0.11	0.11	0.11	0.15	0.15	0.15
Crit Moves:					****						****	
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Volume/Cap:	0.30	0.30	0.30	0.47	0.47	0.47	0.35	0.35	0.35	0.47	0.47	0.47
Delay/Veh:	6.5	6.5	6.5	7.6	7.6	7.6	16.2	16.2	16.2	17.1	17.1	17.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.5	6.5	6.5	7.6	7.6	7.6	16.2	16.2	16.2	17.1	17.1	17.1
LOS by Move:	A	A	A	A	A	A	B	B	B	B	B	B
HCM2k95thQ:	138	138	138	220	220	220	149	149	149	212	212	212

Note: Queue reported is the distance per lane in feet.

EPAP Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Lane Group:	LTR			LTR			LTR			LTR		
#LnsInGrps:	1			1			1			1		
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	5	5	5	5	5	5	5	5	5	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking 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
Bus Stp 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
Area 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
RT Adj:	1.00	1.00	1.00	0.99	0.99	0.99	0.97	0.97	0.97	0.96	0.96	0.96
LT Adj:	0.85	0.85	0.85	0.76	0.76	0.76	0.95	0.95	0.95	0.98	0.98	0.98
PedBike 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
HCM Sat Adj:	0.83	0.83	0.83	0.73	0.73	0.73	0.91	0.91	0.91	0.92	0.92	0.92
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.83	0.83	0.83	0.73	0.73	0.73	0.91	0.91	0.91	0.92	0.92	0.92
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

EPAP Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North	South	East	West
Cycle Length, C:	60	60	60	60
Actual Green Time Per Lane Group, G:	34.05	34.05	17.95	17.95
Effective Green Time Per Lane Group, g:	35.05	35.05	18.95	18.95
Opposing Effective Green Time, go:	35.05	35.05	18.95	18.95
Number Of Opposing Lanes, No:	1	1	1	1
Number Of Lanes In Lane Group, N:	1	1	1	1
Adjusted Left-Turn Flow Rate, Vlt:	71	165	22	13
Proportion of Left Turns in Lane Group, Plt:	0.26	0.44	0.11	0.05
Proportion of Left Turns in Opp Flow, Plto:	0.44	0.26	0.05	0.11
Left Turns Per Cycle, LTC:	1.18	2.75	0.36	0.22
Adjusted Opposing Flow Rate, Vo:	378	276	258	190
Opposing Flow Per Lane Per Cycle, Volc:	6.30	4.60	4.30	3.17
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00
Lost Time Per Phase, tl:	3.00	3.00	3.00	3.00
Eff grn until arrival of left-turn car, gf:	10.13	3.70	8.40	9.91
Opposing Queue Ratio, qro:	0.42	0.42	0.68	0.68
Eff grn blocked by opposing queue, gq:	4.92	3.23	7.04	4.95
Eff grn while left turns filter thru, gu:	24.92	31.35	10.55	9.04
Max opposing cars arriving during gq-gf, n:	0.00	0.00	0.00	0.00
Proportion of Opposing Thru & RT cars, ptho:	0.56	0.74	0.95	0.89
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	2.06	1.85	1.82	1.69
Single Lane Through-car Equivalents, el2:	1.00	1.00	1.00	1.00
Minimum Left Turn Adjustment Factor, fmin:	0.07	0.08	0.12	0.11
Single Lane Left Turn Adjustment Factor, fm:	0.85	0.76	0.95	0.98
Left Turn Adjustment Factor, flt:	0.85	0.76	0.95	0.98

EPAP Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	2.3	2.3	2.3	3.6	3.6	3.6	2.4	2.4	2.4	3.4	3.4	3.4
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.4	0.4	0.4	0.9	0.9	0.9	0.5	0.5	0.5	0.9	0.9	0.9
HCM2KQueue:	2.7	2.7	2.7	4.5	4.5	4.5	3.0	3.0	3.0	4.3	4.3	4.3
70th%Factor:	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
HCM2k70thQ:	3.3	3.3	3.3	5.3	5.3	5.3	3.5	3.5	3.5	5.1	5.1	5.1
85th%Factor:	1.57	1.57	1.57	1.56	1.56	1.56	1.57	1.57	1.57	1.56	1.56	1.56
HCM2k85thQ:	4.3	4.3	4.3	7.0	7.0	7.0	4.7	4.7	4.7	6.7	6.7	6.7
90th%Factor:	1.75	1.75	1.75	1.72	1.72	1.72	1.74	1.74	1.74	1.72	1.72	1.72
HCM2k90thQ:	4.8	4.8	4.8	7.7	7.7	7.7	5.2	5.2	5.2	7.4	7.4	7.4
95th%Factor:	2.02	2.02	2.02	1.97	1.97	1.97	2.01	2.01	2.01	1.97	1.97	1.97
HCM2k95thQ:	5.5	5.5	5.5	8.8	8.8	8.8	6.0	6.0	6.0	8.5	8.5	8.5
98th%Factor:	2.51	2.51	2.51	2.41	2.41	2.41	2.50	2.50	2.50	2.42	2.42	2.42
HCM2k98thQ:	6.9	6.9	6.9	10.8	10.8	10.8	7.4	7.4	7.4	10.4	10.4	10.4

EPAP Plus Project PM Peak Hour
With Mitigation Measures

Future Queue Length Report (feet)

Node	Intersection	Northbound L -- T -- R			Southbound L -- T -- R			Eastbound L -- T -- R			Westbound L -- T -- R		
#7	[HCM2k95thQ]:	138	138	138	220	220	220	149	149	149	212	212	212

LEVEL OF SERVICE CALCULATION WORKSHEETS

CUMULATIVE NO PROJECT

Two Way Analysis cannot be performed on an All Way Stop Intersection.

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	4	47	13	912	71	356	16	878	912
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	500	-	-	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	5	57	16	1112	87	434	20	1071	1112

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	1914	3518	393	2597	2965	1091	787	0	0
Stage 1	1296	1296	-	1666	1666	-	-	-	-
Stage 2	618	2222	-	931	1299	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	41	~ 6	606	~ 12	~ 14	~ 210	828	-	-
Stage 1	171	231	-	~ 100	152	-	-	-	-
Stage 2	443	79	-	~ 287	230	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	-	~ 6	606	-	~ 14	~ 210	828	-	-
Mov Cap-2 Maneuver	-	~ 6	-	-	~ 14	-	-	-	-
Stage 1	167	231	-	~ 98	148	-	-	-	-
Stage 2	-	77	-	~ 210	230	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s			0.1
HCM LOS	-	-	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT
Capacity (veh/h)	828	-	-	-	6	9	-	14	93	~ 240	-
HCM Lane V/C Ratio	0.024	-	-	-	4.776	4.946	-	3.092	5.134	1.067	-
HCM Control Delay (s)	9.5	-	-	-	$ 2873	$ 2588.4	-	$ 1494.1	$ 1950.8	121.3	-
HCM Lane LOS	A	-	-	-	F	F	-	F	F	F	-
HCM 95th %tile Q(veh)	0.1	-	-	-	5	6.9	-	6.3	51.5	10.9	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	210	640	5
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	415	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	256	780	6

Major/Minor	Major2		
Conflicting Flow All	2183	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	~ 240	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	~ 240	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	29.8
HCM LOS	

Minor Lane/Major Mvmt	SBR

Intersection	
Int Delay, s/veh	51117.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	469	4	140	3	1	1	184	1604	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	572	5	171	4	1	1	224	1956	1

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	3176	4155	1041	3115	4489	979	2082	0	0
Stage 1	1749	1749	-	2405	2405	-	-	-	-
Stage 2	1427	2406	-	710	2084	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	~ 4	~ 2	227	5	~ 1	249	263	-	-
Stage 1	~ 89	138	-	34	64	-	-	-	-
Stage 2	~ 142	64	-	391	93	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	~ 1	0	227	0	0	249	263	-	-
Mov Cap-2 Maneuver	~ 1	0	-	0	0	-	-	-	-
Stage 1	~ 13	138	-	5	9	-	-	-	-
Stage 2	~ 18	9	-	93	93	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	$ 343124.4	19.8	6.7
HCM LOS	F	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	263	-	-	1	249	294	-	-
HCM Lane V/C Ratio	0.853	-	-	747.561	0.024	0.004	-	-
HCM Control Delay (s)	65.3	-	-	$ 343124.4	19.8	17.3	-	-
HCM Lane LOS	F	-	-	F	C	C	-	-
HCM 95th %tile Q(veh)	7.1	-	-	96.2	0.1	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	1	1157	550
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	1	1411	671

Major/Minor	Major2		
Conflicting Flow All	1957	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	294	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	294	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Intersection Delay, s/veh	77.5
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	95	112	204	0	88	165	51	0	253	834	92
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	12	2
Mvmt Flow	0	114	135	246	0	106	199	61	0	305	1005	111
Number of Lanes	0	0	1	0	0	0	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	1
HCM Control Delay	84.5	85.6	73.4
HCM LOS	F	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	23%	29%	100%	0%	0%
Vol Thru, %	0%	100%	75%	27%	54%	0%	100%	66%
Vol Right, %	0%	0%	25%	50%	17%	0%	0%	34%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	253	556	370	411	304	32	413	314
LT Vol	0	556	278	112	165	0	413	206
Through Vol	0	0	92	204	51	0	0	108
RT Vol	253	0	0	95	88	32	0	0
Lane Flow Rate	305	670	446	495	366	39	497	379
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.868	1	1	1	1	0.112	1	1
Departure Headway (Hd)	10.254	9.924	9.581	11.039	11.298	10.479	10.149	9.739
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	357	375	383	332	322	344	363	375
Service Time	7.962	7.632	7.288	8.814	9.072	8.188	7.859	7.448
HCM Lane V/C Ratio	0.854	1.787	1.164	1.491	1.137	0.113	1.369	1.011
HCM Control Delay	53.2	79.5	78	84.5	85.6	14.5	80.5	78.7
HCM Lane LOS	F	F	F	F	F	B	F	F
HCM 95th-tile Q	8.2	11.7	11.9	11	10.9	0.4	11.5	11.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	32	619	108
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	12	2
Mvmt Flow	0	39	746	130
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	77
HCM LOS	F

Lane

Cumulative No Project AM Peak Hour

Scenario Report

Scenario:	Cumul No Proj AM
Command:	Cumul No Proj AM
Volume:	Cumul No Prj AM
Geometry:	Cumul No Proj
Impact Fee:	Default Impact Fee
Trip Generation:	AM Pk Hr
Trip Distribution:	AM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Cumulative No Project AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 4 Stuhr Road & Draper Road	F	OVRFL	3.310	F	OVRFL	3.310	+ 0.000 D/V
# 5 Jensen Road & Fig Lane	A	9.3	0.084	A	9.3	0.084	+ 0.000 D/V
# 6 Orestimba/Yolo St & Hardin Rd	E	46.9	1.008	E	46.9	1.008	+ 0.000 V/C
# 7 Fig Lane & Yolo Street	F	OVRFL	6.011	F	OVRFL	6.011	+ 0.000 D/V
# 15 Stuhr & Eastin	F	451.0	0.866	F	451.0	0.866	+ 0.000 D/V
# 16 Stuhr & Villa Manucha	B	11.5	0.136	B	11.5	0.136	+ 0.000 D/V

Cumulative No Project AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	Yes / Yes	??? / ???
# 5 Jensen Road & Fig Lane	No / No	??? / ???
# 6 Orestimba/Yolo St & Hardin Rd	No	???
# 7 Fig Lane & Yolo Street	Yes / Yes	??? / ???
# 15 Stuhr & Eastin	No / No	??? / ???
# 16 Stuhr & Villa Manucha	No / No	??? / ???

Cumulative No Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Stuhr Road & Draper Road

****

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1 0	0 1	0	0 0
Initial Vol:	557	0	71	0	0	0	0	338	435	61	455	0
ApproachDel:	1157.8			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=202.0]

SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=628]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1917]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Cumulative No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Stuhr Road & Draper Road

****

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1	0	0	1	0	0	0	0
Initial Vol:	557	0	71	0	0	0	0	338	435	61	455	0

Major Street Volume: 1289
Minor Approach Volume: 628
Minor Approach Volume Threshold: 152

SIGNAL WARRANT DISCLAIMER

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Cumulative No Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #5 Jensen Road & Fig Lane

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	1	0	0	0	0	0	1! 0	0	1	0	0	0	0
Initial Vol:	3	6	72	1	6	0	1	3	5	71	0	0
ApproachDel:	xxxxxx			xxxxxx			8.9			9.3		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=168]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=71]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=168]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Cumulative No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #5 Jensen Road & Fig Lane

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 1	0 0	0	0 0	1! 0	0	1 0	0 0	0
Initial Vol:	3	6	72	1	6	0	1	3	5	71	0	0

Major Street Volume: 88
Minor Approach Volume: 71
Minor Approach Volume Threshold: 868

SIGNAL WARRANT DISCLAIMER

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Cumulative No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	116	2	8	1	1	11	13	481	90	6	623	1

Major Street Volume: 1214
Minor Approach Volume: 126
Minor Approach Volume Threshold: 168

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative No Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Fig Lane & Yolo Street

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Initial Vol:	164	162	95	26	113	55	52	321	132	84	436	40
ApproachDel:	2978.0			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=348.3]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=421]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1680]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=194]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1680]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Cumulative No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Fig Lane & Yolo Street

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Initial Vol:	164	162	95	26	113	55	52	321	132	84	436	40

Major Street Volume: 1065
Minor Approach Volume: 421
Minor Approach Volume Threshold: 203

SIGNAL WARRANT DISCLAIMER
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Cumulative No Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	10 25 6	2 47 6	2 789 8	4 1012 6
ApproachDel:	451.0	204.0	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=5.1]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=41]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1917]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=3.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=55]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1917]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	10 25 6	2 47 6	2 789 8	4 1012 6

Major Street Volume: 1821
Minor Approach Volume: 55
Minor Approach Volume Threshold: 60 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

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Cumulative No Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #16 Stuhr & Villa Manucha

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1	0	0	0	0
Initial Vol:	0	0	0	5	0	86	154	236	0	0	303	1
ApproachDel:	xxxxxx			11.5			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.3]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=91]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=785]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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Cumulative No Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #16 Stuhr & Villa Manucha

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1	0	0	0	0
Initial Vol:	0	0	0	5	0	86	154	236	0	0	303	1

Major Street Volume: 694

Minor Approach Volume: 91

Minor Approach Volume Threshold: 317

SIGNAL WARRANT DISCLAIMER

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Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 379.6 Worst Case Level Of Service: F[1157.8]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 0	0	0	0 0 0	1	0	0 1	0	0 0
Volume Module: AM Peak Hour												
Base Vol:	557	0	71	0	0	0	0	338	435	61	455	0
Growth 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
Initial Bse:	557	0	71	0	0	0	0	338	435	61	455	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	605	0	77	0	0	0	0	367	473	66	495	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	605	0	77	0	0	0	0	367	473	66	495	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1231	1231	604	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	840	xxxx	xxxxx
Potent Cap.:	196	177	498	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	795	xxxx	xxxxx
Move Cap.:	183	162	498	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	795	xxxx	xxxxx
Volume/Cap:	3.31	0.00	0.15	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.08	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	6.8	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.9	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	197	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	64.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Shrd ConDel:	xxxxx	1158	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.9	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	A	*	*
ApproachDel:	1157.8			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			*			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100		secs
InitVolume:										0	516	
Saturation:										1900	1862	
ArrivalType:										0	3	
G/C:										0.00	0.91	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.000	0.910	
gq1:										0.00	2.49	
gq2:										0.00	0.96	
gq:										0.00	3.45	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										0	20	
vcg:										0	139	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:										0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	1231	1231	604	1270	1467	495	0	xxxxx	xxxxx	840	xxxxx	xxxxx
AdjCnflVol:	1231	1231	604	1270	1467	495	0	xxxxx	xxxxx	840	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	1231	1231	604	1270	1467	495	0	xxxxx	xxxxx	840	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	196	177	498	146	129	579	1623	xxxxx	xxxxx	795	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	196	177	498	146	129	579	1623	xxxxx	xxxxx	795	xxxxx	xxxxx

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: A[9.3]

Street Name:	Fig Lane						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 0			0 0 1! 0 0			1 0 0 0 0		
Volume Module: AM Peak Hour												
Base Vol:	3	6	72	1	6	0	1	3	5	71	0	0
Growth 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
Initial Bse:	3	6	72	1	6	0	1	3	5	71	0	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	3	7	78	1	7	0	1	3	5	77	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	7	78	1	7	0	1	3	5	77	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	7	xxxx	xxxxx	85	xxxx	xxxxx	61	100	7	65	xxxx	xxxxx
Potent Cap.:	1614	xxxx	xxxxx	1512	xxxx	xxxxx	934	790	1076	928	xxxx	xxxxx
Move Cap.:	1614	xxxx	xxxxx	1512	xxxx	xxxxx	933	788	1076	919	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.01	0.08	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	6.9	xxxx	xxxxx
Control Del:	7.2	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	945	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	8.9	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.9			9.3		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.008
Loss Time (sec):	12	Average Delay (sec/veh):	46.9
Optimal Cycle:	0	Level Of Service:	E

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module: AM Peak Hour												
Base Vol:	116	2	8	1	1	11	13	481	90	6	623	1
Growth 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
Initial Bse:	116	2	8	1	1	11	13	481	90	6	623	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	126	2	9	1	1	12	14	523	98	7	677	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	126	2	9	1	1	12	14	523	98	7	677	1
PCE 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
MLF 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
FinalVolume:	126	2	9	1	1	12	14	523	98	7	677	1
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.92	0.02	0.06	0.08	0.08	0.84	0.02	0.83	0.15	0.01	0.98	0.01
Final Sat.:	466	8	32	38	38	423	15	561	105	6	672	1
Capacity Analysis Module:												
Vol/Sat:	0.27	0.27	0.27	0.03	0.03	0.03	0.93	0.93	0.93	1.01	1.01	1.01
Crit Moves:			****			****	****			****		
Delay/Veh:	12.5	12.5	12.5	10.1	10.1	10.1	42.0	42.0	42.0	59.1	59.1	59.1
Delay 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
AdjDel/Veh:	12.5	12.5	12.5	10.1	10.1	10.1	42.0	42.0	42.0	59.1	59.1	59.1
LOS by Move:	B	B	B	B	B	B	E	E	E	F	F	F
ApproachDel:	12.5			10.1			42.0			59.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	12.5			10.1			42.0			59.1		
LOS by Appr:	B			B			E			F		
AllWayAvgQ:	8.9	8.9	8.9	0.7	0.7	0.7	160	160	159.6	240	240	239.8

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM 4-Way Stop Method
Base Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	1			1			1			1		
P[C1]:	0.0000			0.0000			0.0000			0.0503		
P[C2]:	0.0000			0.0000			0.7135			0.6632		
P[C3]:	0.0686			0.0517			0.0000			0.0197		
P[C4]:	0.9062			0.7004			0.2793			0.2601		
P[C5]:	0.0252			0.2478			0.0072			0.0067		
Padj[C1]:	0.02957			0.03196			0.01580			0.01510		
Padj[C2]:	0.01957			0.02196			-0.00133			-0.00103		
Padj[C3]:	0.00751			0.01041			0.00294			0.00214		
Padj[C4]:	-0.05412			-0.03955			-0.01668			-0.01554		
Padj[C5]:	-0.00252			-0.02478			-0.00072			-0.00067		
Lane:	L1			L1			L1			L1		
LaneType:	LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE		
HeadwayAdj:	0.180			-0.458			-0.054			0.035		
Volume:	137			14			635			685		
Capacity:	506			500			681			679		
DegOfUtil:	0.27			0.03			0.93			1.01		
DepHeadway:	7.01			6.90			5.27			5.30		
ServiceTime:	5.0			4.9			3.3			3.3		
Delay:	12.5			10.1			42.0			59.1		
Queue:	0.4			0.0			6.4			9.6		
Approach:	North Bound			South Bound			East Bound			West Bound		
ApproachDel:	12.5			10.1			42.0			59.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	12.5			10.1			42.0			59.1		
LOS by Appr:	B			B			E			F		
OverallDel:						46.9						
OverallLOS:						E						

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:	AM Peak Hour											
Base Vol:	164	162	95	26	113	55	52	321	132	84	436	40
Growth 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
Initial Bse:	164	162	95	26	113	55	52	321	132	84	436	40
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	178	176	103	28	123	60	57	349	143	91	474	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	178	176	103	28	123	60	57	349	143	91	474	43
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1303	1234	421	1352	1284	496	517	xxxx	xxxxx	492	xxxx	xxxxx
Potent Cap.:	137	177	633	127	165	574	1048	xxxx	xxxxx	1071	xxxx	xxxxx
Move Cap.:	30	152	633	0	142	574	1048	xxxx	xxxxx	1071	xxxx	xxxxx
Volume/Cap:	6.01	1.16	0.16	xxxx	0.87	0.10	0.05	xxxx	xxxx	0.09	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	4.3	xxxx	xxxxx	7.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	8.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	62	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	52.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	2978	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*
ApproachDel:	2978.0			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 15.5 Worst Case Level Of Service: F[451.0]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: AM Peak Hour												
Base Vol:	10	25	6	2	47	6	2	789	8	4	1012	6
Growth 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
Initial Bse:	10	25	6	2	47	6	2	789	8	4	1012	6
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	11	27	7	2	51	7	2	858	9	4	1100	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	27	7	2	51	7	2	858	9	4	1100	7
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2007	1982	862	1995	1983	1103	1107	xxxx	xxxxx	866	xxxx	xxxxx
Potent Cap.:	44	61	355	45	61	257	631	xxxx	xxxxx	777	xxxx	xxxxx
Move Cap.:	13	61	355	29	61	257	631	xxxx	xxxxx	777	xxxx	xxxxx
Volume/Cap:	0.87	0.45	0.02	0.08	0.84	0.03	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	0.4	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.7	xxxx	xxxxx	9.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	34	xxxxx	xxxx	64	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	4.8	xxxxx	xxxxx	4.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	451	xxxxx	xxxxx	204	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*
ApproachDel:	451.0			204.0			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative No Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: B[11.5]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module: AM Peak Hour												
Base Vol:	0	0	0	5	0	86	154	236	0	0	303	1
Growth 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
Initial Bse:	0	0	0	5	0	86	154	236	0	0	303	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	5	0	93	167	257	0	0	329	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	5	0	93	167	257	0	0	329	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	921	921	330	330	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	300	270	712	1229	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	266	230	712	1229	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.02	0.00	0.13	0.14	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	11.8	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	652	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	0.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	11.5	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			11.5			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #16 Stuhr & Villa Manucha

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative No Project AM Peak Hour

Base Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#4	[2Way95thQ]:	1617	1617	1617	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	6.8	6.8	xxxx
#5	[2Way95thQ]:	0.2	xxxx	xxxx	0.1	0.1	xxxx	0.8	0.8	0.8	6.9	xxxx	xxxx
#6	[AllWayAvgQ]	8.9	8.9	8.9	0.7	0.7	0.7	160	160	160	240	240	240
#7	[2Way95thQ]:	1316	1316	1316	xxxx	xxxx	xxxx	4.3	xxxx	xxxx	7.0	xxxx	xxxx
#15	[2Way95thQ]:	121	121	121	113	113	113	0.3	xxxx	xxxx	0.4	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	13.3	13.3	13.3	11.8	11.8	xxxx	xxxx	xxxx	xxxx

Two Way Analysis cannot be performed on an All Way Stop Intersection.

Intersection	
Int Delay, s/veh	11.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	4	65	18	920	53	257	12	607	923
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	500	-	-	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	5	79	22	1122	65	313	15	740	1126

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2311	3774	559	2691	3214	933	1118	0	0
Stage 1	1879	1879	-	1332	1332	-	-	-	-
Stage 2	432	1895	-	1359	1882	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	20	~ 4	472	~ 10	~ 10	~ 268	620	-	-
Stage 1	74	119	-	~ 163	222	-	-	-	-
Stage 2	572	117	-	~ 157	118	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	-	~ 4	472	-	~ 10	~ 268	620	-	-
Mov Cap-2 Maneuver	-	~ 4	-	-	~ 10	-	-	-	-
Stage 1	72	119	-	~ 159	217	-	-	-	-
Stage 2	-	114	-	~ 50	118	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s			0.1
HCM LOS	-	-	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT
Capacity (veh/h)	620	-	-	-	4	6	-	10	79	~ 319	-
HCM Lane V/C Ratio	0.024	-	-	-	9.909	10.264	-	3.232	4.376	1.197	-
HCM Control Delay (s)	10.9	-	-	-$	5743.3	$ 5357.1	-	$ 1747.9	$ 1626.9	150.1	-
HCM Lane LOS	B	-	-	-	F	F	-	F	F	F	-
HCM 95th %tile Q(veh)	0.1	-	-	-	6.7	9.4	-	5.1	36.9	16.5	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	313	912	5
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	415	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	382	1112	6

Major/Minor	Major2		
Conflicting Flow All	1866	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	~ 319	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	~ 319	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	38.2
HCM LOS	

Minor Lane/Major Mvmt	SBR

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	460	1	181	6	2	4	112	1074	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	561	1	221	7	2	5	137	1310	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	2984	3638	1165	2473	3926	655	2330	0	0
Stage 1	2055	2055	-	1583	1583	-	-	-	-
Stage 2	929	1583	-	890	2343	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	~ 6	5	~ 187	15	3	409	210	-	-
Stage 1	~ 57	97	-	113	167	-	-	-	-
Stage 2	~ 288	167	-	304	69	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	-	2	~ 187	-	~ 1	409	210	-	-
Mov Cap-2 Maneuver	-	2	-	-	~ 1	-	-	-	-
Stage 1	~ 20	96	-	39	58	-	-	-	-
Stage 2	~ 95	58	-	-	68	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s			4.7
HCM LOS	-	-	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	210	-	-	-	-	524	-	-
HCM Lane V/C Ratio	0.65	-	-	-	-	0.012	-	-
HCM Control Delay (s)	49.3	-	-	-	-	12	-	-
HCM Lane LOS	E	-	-	-	-	B	-	-
HCM 95th %tile Q(veh)	3.9	-	-	-	-	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	5	1439	472
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	6	1755	576

Major/Minor	Major2		
Conflicting Flow All	1310	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	524	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	524	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Intersection Delay, s/veh	67.5
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	84	136	239	0	80	116	35	0	178	568	86
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	12	2
Mvmt Flow	0	101	164	288	0	96	140	42	0	214	684	104
Number of Lanes	0	0	1	0	0	0	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	1
HCM Control Delay	80.9	50.7	56.3
HCM LOS	F	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	18%	35%	100%	0%	0%
Vol Thru, %	0%	100%	69%	30%	50%	0%	100%	71%
Vol Right, %	0%	0%	31%	52%	15%	0%	0%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	178	379	275	459	231	40	505	356
LT Vol	0	379	189	136	116	0	505	253
Through Vol	0	0	86	239	35	0	0	103
RT Vol	178	0	0	84	80	40	0	0
Lane Flow Rate	214	456	332	553	278	48	609	429
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.589	1	0.845	1	0.837	0.134	1	1
Departure Headway (Hd)	9.892	9.562	9.174	10.251	10.831	10.046	9.716	9.344
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	365	379	395	359	334	356	377	390
Service Time	7.679	7.349	6.961	7.951	8.594	7.834	7.504	7.132
HCM Lane V/C Ratio	0.586	1.203	0.841	1.54	0.832	0.135	1.615	1.1
HCM Control Delay	26	78.2	45.9	80.9	50.7	14.4	78.9	77.3
HCM Lane LOS	D	F	E	F	F	B	F	F
HCM 95th-tile Q	3.6	11.8	8	11.5	7.4	0.5	11.7	12

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	40	758	103
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	12	2
Mvmt Flow	0	48	913	124
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	75.4
HCM LOS	F

Lane

Cumulative No Project PM Peak Hour

Scenario Report

Scenario:	Cumul No Proj PM
Command:	Cumul No Proj PM
Volume:	Cumul No Prj PM
Geometry:	Cumul No Proj
Impact Fee:	Default Impact Fee
Trip Generation:	PM Pk Hr
Trip Distribution:	PM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Cumulative No Project PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 4 Stuhr Road & Draper Road	F	769.3	2.436	F	769.3	2.436	+ 0.000 D/V
# 5 Jensen Road & Fig Lane	A	9.5	0.100	A	9.5	0.100	+ 0.000 D/V
# 6 Orestimba/Yolo St & Hardin Rd	D	33.2	0.961	D	33.2	0.961	+ 0.000 V/C
# 7 Fig Lane & Yolo Street	F	OVRFL	1.041	F	OVRFL	1.041	+ 0.000 D/V
# 15 Stuhr & Eastin	F	333.1	0.688	F	333.1	0.688	+ 0.000 D/V
# 16 Stuhr & Villa Manucha	B	10.8	0.193	B	10.8	0.193	+ 0.000 D/V

Cumulative No Project PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	Yes / Yes	??? / ???
# 5 Jensen Road & Fig Lane	No / No	??? / ???
# 6 Orestimba/Yolo St & Hardin Rd	No	???
# 7 Fig Lane & Yolo Street	Yes / Yes	??? / ???
# 15 Stuhr & Eastin	No / No	??? / ???
# 16 Stuhr & Villa Manucha	No / No	??? / ???

Cumulative No Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Stuhr Road & Draper Road

****

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	0	1	0 0
Initial Vol:	407	0	63	0	0	0	0	393	526	60	355	0
ApproachDel:	769.3			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=100.4]

SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=470]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1804]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Stuhr Road & Draper Road

****

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	1	0	0	1	0
Initial Vol:	407	0	63	0	0	0	0	393	526	60	355	0

Major Street Volume: 1334
Minor Approach Volume: 470
Minor Approach Volume Threshold: 143

SIGNAL WARRANT DISCLAIMER
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Cumulative No Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #5 Jensen Road & Fig Lane

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	1	0	0	0	1	0	0	1! 0
Initial Vol:	3	4	80	1	6	0	0	8	4	84	9	1
ApproachDel:	xxxxxx			xxxxxx			9.3			9.5		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=12]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=200]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=94]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=200]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Cumulative No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #5 Jensen Road & Fig Lane

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	1	0	0	0	0	0	1! 0	0	0
Initial Vol:	3	4	80	1	6	0	0	8	4	84	9	1

Major Street Volume: 94
Minor Approach Volume: 94
Minor Approach Volume Threshold: 850

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	0	0	1! 0	0	0	0	1! 0	0	0
Initial Vol:	81	1	7	1	2	12	9	537	107	6	472	1

Major Street Volume: 1132
Minor Approach Volume: 89
Minor Approach Volume Threshold: 186

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative No Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #7 Fig Lane & Yolo Street

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Initial Vol:	114	106	84	33	149	55	44	375	159	82	325	28
ApproachDel:	xxxxxx			439.2			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=304]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1554]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=28.9]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=237]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1554]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #7 Fig Lane & Yolo Street

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 1!	0	0	0 1!	0	0	0 1!	0
Initial Vol:	114	106	84	33	149	55	44	375	159	82	325	28

Major Street Volume: 1013
Minor Approach Volume: 304
Minor Approach Volume Threshold: 216

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative No Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0
Initial Vol:	12	43	16	10	41	4	30	877	18	7	762	3
ApproachDel:	333.1			320.1			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=6.6]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=71]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1823]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=4.9]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=55]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1823]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0
Initial Vol:	12	43	16	10	41	4	30	877	18	7	762	3

Major Street Volume: 1697
Minor Approach Volume: 71
Minor Approach Volume Threshold: 78 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative No Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #16 Stuhr & Villa Manucha

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	0	1	0	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	263	0	0	229	3
ApproachDel:	xxxxxx			10.8			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.4]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=142]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=710]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative No Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #16 Stuhr & Villa Manucha

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	0	1	0	0	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	263	0	0	229	3

Major Street Volume: 568

Minor Approach Volume: 142

Minor Approach Volume Threshold: 370

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 200.8 Worst Case Level Of Service: F[769.3]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 0	0	0	0 0 0	1	0	0 1	0	0 0
Volume Module: PM Peak Hour												
Base Vol:	407	0	63	0	0	0	0	393	526	60	355	0
Growth 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
Initial Bse:	407	0	63	0	0	0	0	393	526	60	355	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	442	0	68	0	0	0	0	427	572	65	386	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	442	0	68	0	0	0	0	427	572	65	386	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1229	1229	713	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	999	xxxx	xxxxx
Potent Cap.:	196	178	432	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	693	xxxx	xxxxx
Move Cap.:	182	160	432	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	693	xxxx	xxxxx
Volume/Cap:	2.44	0.00	0.16	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	7.8	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	197	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	43.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Shrd ConDel:	xxxxx	769	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.7	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	B	*	*
ApproachDel:	769.3			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			*			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100 secs		
InitVolume:										0	415	
Saturation:										1900	1862	
ArrivalType:										0	3	
G/C:										0.00	0.91	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.000	0.910	
gq1:										0.00	2.01	
gq2:										0.00	0.58	
gq:										0.00	2.58	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										0	15	
vcg:										0	112	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:										0.000/0.000/Unconstrained		
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	1229	1229	713	1264	1515	386	0	xxxxx	xxxxx	999	xxxxx	xxxxx
AdjCnflVol:	1229	1229	713	1264	1515	386	0	xxxxx	xxxxx	999	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	1229	1229	713	1264	1515	386	0	xxxxx	xxxxx	999	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	196	178	432	148	121	666	1623	xxxxx	xxxxx	693	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	196	178	432	148	121	666	1623	xxxxx	xxxxx	693	xxxxx	xxxxx

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Average Delay (sec/veh): 5.2 Worst Case Level Of Service: A[9.5]

Street Name:	Fig Lane						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	3	4	80	1	6	0	0	8	4	84	9	1
Growth 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
Initial Bse:	3	4	80	1	6	0	0	8	4	84	9	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	3	4	87	1	7	0	0	9	4	91	10	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	4	87	1	7	0	0	9	4	91	10	1
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	7	xxxx	xxxxx	91	xxxx	xxxxx	xxxx	107	7	70	63	48
Potent Cap.:	1614	xxxx	xxxxx	1504	xxxx	xxxxx	xxxx	784	1076	922	828	1021
Move Cap.:	1614	xxxx	xxxxx	1504	xxxx	xxxxx	xxxx	781	1076	909	825	1021
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	0.01	0.00	0.10	0.01	0.00
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.2	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	860	xxxx	901	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	0.0	xxxxx	0.4	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	9.3	xxxxx	9.5	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	A	*	A	*
ApproachDel:	xxxxxx			xxxxxx			9.3			9.5		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.961
Loss Time (sec):	12	Average Delay (sec/veh):	33.2
Optimal Cycle:	0	Level Of Service:	D

Street Name: Hardin Road / Orestimba Road / Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module: PM Peak Hour												
Base Vol:	81	1	7	1	2	12	9	537	107	6	472	1
Growth 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
Initial Bse:	81	1	7	1	2	12	9	537	107	6	472	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	88	1	8	1	2	13	10	584	116	7	513	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	1	8	1	2	13	10	584	116	7	513	1
PCE 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
MLF 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
FinalVolume:	88	1	8	1	2	13	10	584	116	7	513	1
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.91	0.01	0.08	0.07	0.13	0.80	0.01	0.83	0.16	0.01	0.98	0.01
Final Sat.:	461	6	40	34	69	412	10	607	121	9	681	1
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.19	0.03	0.03	0.03	0.96	0.96	0.96	0.75	0.75	0.75
Crit Moves:	****			****			****			****		
Delay/Veh:	11.2	11.2	11.2	9.6	9.6	9.6	45.4	45.4	45.4	21.6	21.6	21.6
Delay 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
AdjDel/Veh:	11.2	11.2	11.2	9.6	9.6	9.6	45.4	45.4	45.4	21.6	21.6	21.6
LOS by Move:	B	B	B	A	A	A	E	E	E	C	C	C
ApproachDel:	11.2			9.6			45.4			21.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.2			9.6			45.4			21.6		
LOS by Appr:	B			A			E			C		
AllWayAvgQ:	5.2	5.2	5.2	0.7	0.7	0.7	192	192	192.3	64.4	64.4	64.4

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM 4-Way Stop Method
Base Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	1			1			1			1		
P[C1]:	0.01			0.01			0.20			0.03		
P[C2]:	0.00			0.00			0.59			0.76		
P[C3]:	0.27			0.23			0.05			0.01		
P[C4]:	0.70			0.63			0.15			0.19		
P[C5]:	0.02			0.13			0.00			0.01		
Padj[C1]:	0.027			0.029			0.012			0.014		
Padj[C2]:	0.017			0.019			-0.002			-0.004		
Padj[C3]:	-0.001			0.002			0.000			0.002		
Padj[C4]:	-0.042			-0.037			-0.009			-0.011		
Padj[C5]:	-0.002			-0.013			-0.000			-0.001		
Lane:	L1			L1			L1			L1		
LaneType:	LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE		
HeadwayAdj:	0.169			-0.433			-0.062			0.035		
Volume:	97			16			710			521		
Capacity:	507			515			738			691		
DegOfUtil:	0.18			0.03			0.96			0.74		
DepHeadway:	6.74			6.43			4.86			5.15		
ServiceTime:	4.7			4.4			2.9			3.1		
Delay:	11.2			9.6			45.4			21.6		
Queue:	0.2			0.0			7.7			2.6		
Approach:	North Bound			South Bound			East Bound			West Bound		
ApproachDel:	11.2			9.6			45.4			21.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.2			9.6			45.4			21.6		
LOS by Appr:	B			A			E			C		
OverallDel:	33.2											
OverallLOS:	D											

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	114	106	84	33	149	55	44	375	159	82	325	28
Growth 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
Initial Bse:	114	106	84	33	149	55	44	375	159	82	325	28
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	124	115	91	36	162	60	48	408	173	89	353	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	124	115	91	36	162	60	48	408	173	89	353	30
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1247	1152	494	1240	1223	368	384	xxxx	xxxxx	580	xxxx	xxxxx
Potent Cap.:	150	198	575	152	179	677	1175	xxxx	xxxxx	994	xxxx	xxxxx
Move Cap.:	0	172	575	54	156	677	1175	xxxx	xxxxx	994	xxxx	xxxxx
Volume/Cap:	xxxx	0.67	0.16	0.67	1.04	0.09	0.04	xxxx	xxxx	0.09	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.2	xxxx	xxxxx	7.4	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	9.0	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	143	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	19.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	439	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	F	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			439.2			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 22.8 Worst Case Level Of Service: F[333.1]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	12	43	16	10	41	4	30	877	18	7	762	3
Growth 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
Initial Bse:	12	43	16	10	41	4	30	877	18	7	762	3
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	13	47	17	11	45	4	33	953	20	8	828	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	13	47	17	11	45	4	33	953	20	8	828	3
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1898	1875	963	1905	1883	830	832	xxxx	xxxxx	973	xxxx	xxxxx
Potent Cap.:	53	72	310	52	71	370	801	xxxx	xxxxx	709	xxxx	xxxxx
Move Cap.:	23	68	310	21	67	370	801	xxxx	xxxxx	709	xxxx	xxxxx
Volume/Cap:	0.56	0.69	0.06	0.52	0.66	0.01	0.04	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.2	xxxx	xxxxx	0.8	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.7	xxxx	xxxxx	10.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	59	xxxxx	xxxx	50	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	6.6	xxxxx	xxxxx	5.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	333	xxxxx	xxxxx	320	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*
ApproachDel:	333.1			320.1			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative No Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: B[10.8]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module: PM Peak Hour												
Base Vol:	0	0	0	2	0	140	73	263	0	0	229	3
Growth 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
Initial Bse:	0	0	0	2	0	140	73	263	0	0	229	3
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	2	0	152	79	286	0	0	249	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	2	0	152	79	286	0	0	249	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	695	695	251	252	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	408	366	788	1313	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	388	343	788	1313	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	0.00	0.19	0.06	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	4.8	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	777	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.7	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.8	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.8			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #16 Stuhr & Villa Manucha

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative No Project PM Peak Hour

Base Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#4	[2Way95thQ]:	1091	1091	1091	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	7.8	7.8	xxxx
#5	[2Way95thQ]:	0.2	xxxx	xxxx	0.1	0.1	xxxx	xxxx	1.2	1.2	9.6	9.6	9.6
#6	[AllWayAvgQ]	5.2	5.2	5.2	0.7	0.7	0.7	192	192	192	64.4	64.4	64.4
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	483	483	483	3.2	xxxx	xxxx	7.4	xxxx	xxxx
#15	[2Way95thQ]:	165	165	165	134	134	134	3.2	xxxx	xxxx	0.8	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	18.4	18.4	18.4	4.8	4.8	xxxx	xxxx	xxxx	xxxx

LEVEL OF SERVICE CALCULATION WORKSHEETS

CUMULATIVE PLUS PROJECT

Two Way Analysis cannot be performed on Signalized Intersection.

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	30603.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	478	4	38	3	1	1	50	2202	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	583	5	46	4	1	1	61	2685	1

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	3780	5124	1332	3794	5474	1343	2663	0	0
Stage 1	2315	2315	-	2808	2808	-	-	-	-
Stage 2	1465	2809	-	986	2666	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	~ 1	0	144	~ 1	0	142	154	-	-
Stage 1	~ 39	71	-	18	39	-	-	-	-
Stage 2	~ 134	39	-	266	46	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	~ 1	0	144	0	0	142	154	-	-
Mov Cap-2 Maneuver	~ 1	0	-	0	0	-	-	-	-
Stage 1	~ 24	71	-	11	24	-	-	-	-
Stage 2	~ 76	24	-	167	46	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	$ 292082	31.5	1
HCM LOS	F	D	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	154	-	-	1	142	151	-	-
HCM Lane V/C Ratio	0.396	-	-	634.146	0.043	0.008	-	-
HCM Control Delay (s)	42.9	-	-	$ 292082	31.5	29	-	-
HCM Lane LOS	E	-	-	F	D	D	-	-
HCM 95th %tile Q(veh)	1.7	-	-	82	0.1	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	1	1609	575
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	1	1962	701

Major/Minor	Major2		
Conflicting Flow All	2687	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	151	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	151	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0
HCM LOS	

Minor Lane/Major Mvmt

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	10	22	28	2474	1659	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	200	-	-	200
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	11	24	30	2689	1803	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3208	902	1803	0	-	0
Stage 1	1803	-	-	-	-	-
Stage 2	1405	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 8	281	338	-	-	-
Stage 1	117	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 7	281	338	-	-	-
Mov Cap-2 Maneuver	~ 7	-	-	-	-	-
Stage 1	117	-	-	-	-	-
Stage 2	176	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 405.5	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	338	-	7	281	-	-
HCM Lane V/C Ratio	0.09	-	1.553	0.085	-	-
HCM Control Delay (s)	16.7	-	$ 1255.9	19	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.3	-	2.3	0.3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Two Way Analysis cannot be performed on Signalized Intersection.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	131	231	185	119	325	104	228	780	128	67	573	147
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	171.8	190.0	186.3	172.8	190.0
Adj Flow Rate, veh/h	158	278	223	143	392	125	275	940	154	81	690	177
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	180	301	241	166	414	132	294	1179	193	102	806	207
Arrive On Green	0.10	0.31	0.31	0.09	0.31	0.31	0.33	0.84	0.84	0.06	0.31	0.31
Sat Flow, veh/h	1774	958	769	1774	1355	432	1774	2809	460	1774	2589	664
Grp Volume(v), veh/h	158	0	501	143	0	517	275	546	548	81	437	430
Grp Sat Flow(s),veh/h/ln	1774	0	1727	1774	0	1787	1774	1632	1637	1774	1642	1611
Q Serve(g_s), s	12.1	0.0	38.8	11.0	0.0	39.1	20.8	22.4	22.5	6.2	34.6	34.6
Cycle Q Clear(g_c), s	12.1	0.0	38.8	11.0	0.0	39.1	20.8	22.4	22.5	6.2	34.6	34.6
Prop In Lane	1.00		0.45	1.00		0.24	1.00		0.28	1.00		0.41
Lane Grp Cap(c), veh/h	180	0	542	166	0	547	294	685	687	102	511	502
V/C Ratio(X)	0.88	0.00	0.92	0.86	0.00	0.95	0.94	0.80	0.80	0.80	0.86	0.86
Avail Cap(c_a), veh/h	180	0	550	167	0	556	308	685	687	116	511	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	0.0	45.8	61.7	0.0	46.8	45.5	8.2	8.2	64.3	44.7	44.7
Incr Delay (d2), s/veh	35.7	0.0	21.5	33.9	0.0	25.2	32.7	8.8	8.8	28.3	16.6	17.0
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(50%),veh/ln	7.7	0.0	21.7	7.0	0.0	23.1	12.7	11.0	11.1	3.9	18.0	17.8
LnGrp Delay(d),s/veh	96.9	0.0	67.3	95.6	0.0	72.0	78.2	17.0	17.1	92.6	61.3	61.6
LnGrp LOS	F		F	F		F	F	B	B	F	F	F
Approach Vol, veh/h		659			660			1369			948	
Approach Delay, s/veh		74.4			77.1			29.3			64.1	
Approach LOS		E			E			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	62.0	16.9	47.4	26.9	48.8	18.0	46.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	58.0	13.0	44.0	24.0	43.0	14.0	43.0
Max Q Clear Time (g_c+I1), s	8.2	24.5	13.0	40.8	22.8	36.6	14.1	41.1
Green Ext Time (p_c), s	0.1	9.2	0.0	1.9	0.1	3.1	0.0	1.2

Intersection Summary		
HCM 2010 Ctrl Delay		55.3
HCM 2010 LOS		E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	586	453	521	848	156	561	1102	550	97	801	122
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	174.8	190.0	186.3	171.7	190.0
Adj Flow Rate, veh/h	134	715	552	635	1034	190	684	1344	671	118	977	149
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	139	424	323	355	1024	188	380	932	429	76	710	108
Arrive On Green	0.08	0.22	0.22	0.20	0.34	0.34	0.21	0.42	0.42	0.04	0.25	0.25
Sat Flow, veh/h	1774	1914	1460	1774	2988	548	1774	2211	1019	1774	2839	433
Grp Volume(v), veh/h	134	660	607	635	612	612	684	982	1033	118	561	565
Grp Sat Flow(s),veh/h/ln	1774	1770	1605	1774	1770	1766	1774	1661	1569	1774	1631	1640
Q Serve(g_s), s	10.5	31.0	31.0	28.0	48.0	48.0	30.0	59.0	59.0	6.0	35.0	35.0
Cycle Q Clear(g_c), s	10.5	31.0	31.0	28.0	48.0	48.0	30.0	59.0	59.0	6.0	35.0	35.0
Prop In Lane	1.00		0.91	1.00		0.31	1.00		0.65	1.00		0.26
Lane Grp Cap(c), veh/h	139	392	355	355	607	606	380	700	661	76	408	410
V/C Ratio(X)	0.96	1.69	1.71	1.79	1.01	1.01	1.80	1.40	1.56	1.55	1.38	1.38
Avail Cap(c_a), veh/h	139	392	355	355	607	606	380	700	661	76	408	410
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	64.3	54.5	54.5	56.0	46.0	46.0	55.0	40.5	40.5	67.0	52.5	52.5
Incr Delay (d2), s/veh	64.3	319.3	329.9	366.5	38.5	39.5	370.0	189.6	260.7	299.7	183.1	183.7
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(50%),veh/ln	7.7	49.9	46.3	49.8	29.9	30.0	53.8	63.9	73.4	9.3	36.5	36.8
LnGrp Delay(d),s/veh	128.6	373.8	384.4	422.5	84.5	85.5	425.0	230.1	301.2	366.7	235.6	236.2
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	F
Approach Vol, veh/h		1401			1859			2699			1244	
Approach Delay, s/veh		354.9			200.3			306.8			248.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	63.0	32.0	35.0	34.0	39.0	15.0	52.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	59.0	28.0	31.0	30.0	35.0	11.0	48.0
Max Q Clear Time (g_c+I1), s	8.0	61.0	30.0	33.0	32.0	37.0	12.5	50.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	278.6
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	3	109	1166	962	23
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	1	3	118	1267	1046	25
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	8	7	327	3002	2088	934
Arrive On Green	0.00	0.00	0.37	1.00	1.00	1.00
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	1	3	118	1267	1046	25
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	0.0	0.1	2.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.1	2.6	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	8	7	327	3002	2088	934
V/C Ratio(X)	0.13	0.44	0.36	0.42	0.50	0.03
Avail Cap(c_a), veh/h	523	467	327	3002	2088	934
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.42	0.42
Uniform Delay (d), s/veh	26.9	26.9	14.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	7.5	38.7	0.1	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	1.2	0.0	0.1	0.0
LnGrp Delay(d),s/veh	34.4	65.6	14.9	0.0	0.4	0.0
LnGrp LOS	C	E	B	A	A	A
Approach Vol, veh/h	4			1385	1071	
Approach Delay, s/veh	57.8			1.3	0.4	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		65.8		4.2	29.8	36.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		46.0		16.0	10.0	32.0		
Max Q Clear Time (g_c+I1), s		2.0		2.1	4.6	2.0		
Green Ext Time (p_c), s		13.8		0.0	3.8	9.1		

Intersection Summary	
HCM 2010 Ctrl Delay	1.0
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	22	36	2554	1715	19
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	18	24	39	2776	1864	21
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	43	39	50	3230	3019	1351
Arrive On Green	0.02	0.02	0.03	0.91	0.85	0.85
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	18	24	39	2776	1864	21
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	1.3	1.9	2.8	40.3	20.8	0.3
Cycle Q Clear(g_c), s	1.3	1.9	2.8	40.3	20.8	0.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	43	39	50	3230	3019	1351
V/C Ratio(X)	0.42	0.62	0.78	0.86	0.62	0.02
Avail Cap(c_a), veh/h	223	199	112	3230	3019	1351
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	61.1	61.4	61.4	2.2	2.9	1.4
Incr Delay (d2), s/veh	6.3	15.3	22.5	3.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.8	1.7	19.6	10.2	0.1
LnGrp Delay(d),s/veh	67.4	76.7	83.9	5.5	3.9	1.4
LnGrp LOS	E	E	E	A	A	A
Approach Vol, veh/h	42			2815	1885	
Approach Delay, s/veh	72.7			6.6	3.8	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		132.9		7.1	7.6	125.3		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		116.0		16.0	8.0	104.0		
Max Q Clear Time (g_c+I1), s		42.3		3.9	4.8	22.8		
Green Ext Time (p_c), s		72.6		0.0	0.0	80.0		

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Cumulative Plus Project AM Peak Hour

Scenario Report

Scenario:	Cumul Plus Proj AM
Command:	Cumul Plus Proj AM
Volume:	Cumul Prj Bckgr AM
Geometry:	Cumul Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	AM Pk Hr
Trip Distribution:	AM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Cumulative Plus Project AM Peak Hour

Trip Generation Report

Forecast for AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	VLDR	55.00	SFDUs	0.19	0.56	10	31	41	1.6
	Zone 1 Subtotal					10	31	41	1.6
2	PMR 1	144.00	SFDUs	0.19	0.56	27	81	108	4.1
2	PMR 1	16.00	MFDUs	0.10	0.41	2	7	9	0.3
	Zone 2 Subtotal					29	88	117	4.5
3	PMR 2	108.00	SFDUs	0.19	0.56	21	60	81	3.1
3	PMR 2	13.00	MFDUs	0.10	0.41	1	5	6	0.2
	Zone 3 Subtotal					22	65	87	3.3
4	PMR 3	93.00	SFDUs	0.19	0.56	18	52	70	2.7
4	PMR 3	11.00	MFDUs	0.10	0.41	1	5	6	0.2
	Zone 4 Subtotal					19	57	76	2.9
5	PMR 4	117.00	SFDUs	0.19	0.56	22	66	88	3.4
5	PMR 4	14.00	MFDUs	0.10	0.41	1	6	7	0.3
	Zone 5 Subtotal					23	72	95	3.6
6	PMR 5	47.00	SFDUs	0.19	0.56	9	26	35	1.3
6	PMR 5	6.00	MFDUs	0.10	0.41	1	2	3	0.1
	Zone 6 Subtotal					10	28	38	1.4
7	PMR 6	66.00	SFDUs	0.19	0.56	13	37	50	1.9
7	PMR 6	8.00	MFDUs	0.10	0.41	1	3	4	0.2
	Zone 7 Subtotal					14	40	54	2.1
8	PMR 7	95.00	SFDUs	0.19	0.56	18	53	71	2.7
8	PMR 7	11.00	MFDUs	0.10	0.41	1	5	6	0.2
	Zone 8 Subtotal					19	58	77	2.9
9	PMR 8	86.00	SFDUs	0.19	0.56	16	48	64	2.4
9	PMR 8	10.00	MFDUs	0.10	0.41	1	4	5	0.2
	Zone 9 Subtotal					17	52	69	2.6
10	PMR 9	74.00	SFDUs	0.19	0.56	14	41	55	2.1
10	PMR 9	9.00	MFDUs	0.10	0.41	1	4	5	0.2
	Zone 10 Subtotal					15	45	60	2.3
11	PMR 10	33.00	SFDUs	0.19	0.56	6	18	24	0.9
11	PMR 10	4.00	MFDUs	0.10	0.41	0	2	2	0.1
	Zone 11 Subtotal					6	20	26	1.0
12	PMR 12	137.00	SFDUs	0.19	0.56	26	77	103	3.9
12	PMR 12	16.00	MFDUs	0.10	0.41	2	7	9	0.3

Cumulative Plus Project AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
	Zone 12 Subtotal					28	84	112	4.3
14	Prof Office	8.30	Off Pk Acres	23.60	2.05	196	17	213	8.1
	Zone 14 Subtotal					196	17	213	8.1
15	BP-1	288.15	Busi Pk KSF	1.19	0.21	343	61	404	15.4
	Zone 15 Subtotal					343	61	404	15.4
16	BP-2	195.15	Busi Pk KSF	1.19	0.21	232	41	273	10.4
	Zone 16 Subtotal					232	41	273	10.4
17	BP-3	419.27	Busi Pk KSF	1.19	0.21	499	88	587	22.4
	Zone 17 Subtotal					499	88	587	22.4
18	CC 1	51.18	Shop Ctr KSF	0.51	0.33	26	17	43	1.6
	Zone 18 Subtotal					26	17	43	1.6
19	CC 2	246.11	Shop Ctr KSF	0.51	0.33	126	81	207	7.9
	Zone 19 Subtotal					126	81	207	7.9
20	HDR	180.00	MFDUs	0.10	0.41	18	74	92	3.5
	Zone 20 Subtotal					18	74	92	3.5
21	Exist LU for	36.00	Exist SFDUs	-0.19	-0.56	-7	-20	-27	-1.0
21	Exist LU for	11.00	Exist MFDUs	-0.10	-0.41	-1	-5	-6	-0.2
21	Exist LU for	54.50	Exist Wrhs KSF	-0.24	-0.06	-13	-3	-16	-0.6
	Zone 21 Subtotal					-21	-28	-49	-1.9
TOTAL						1631	991	2622	100.0

Cumulative Plus Project AM Peak Hour

Trip Distribution Report

Percent Of Trips AM Pk Hr

Zone	To Gates 1	2	3	4	5	6	7	8	9	15	16
1	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
2	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
3	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
4	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
5	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
6	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
7	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
8	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
9	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
10	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
11	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
12	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
13	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
14	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
15	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
16	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
17	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
18	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
19	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	0.0	0.0
20	10.0	3.0	9.0	9.0	1.0	0.0	5.0	28.0	29.0	2.0	1.0
21	10.0	3.0	9.0	9.0	1.0	0.0	5.0	33.0	29.0	0.0	1.0

Zone	To Gates 17	18	19
1	0.0	1.0	2.0
2	0.0	1.0	2.0
3	0.0	1.0	2.0
4	0.0	1.0	2.0
5	0.0	1.0	2.0
6	0.0	1.0	2.0
7	0.0	1.0	2.0
8	0.0	1.0	2.0
9	0.0	1.0	2.0
10	0.0	1.0	2.0
11	0.0	1.0	2.0
12	0.0	1.0	2.0
13	0.0	1.0	2.0
14	2.0	1.0	2.0
15	2.0	1.0	2.0
16	2.0	1.0	2.0
17	2.0	1.0	2.0
18	2.0	1.0	2.0
19	2.0	1.0	2.0
20	0.0	1.0	2.0

Cumulative Plus Project AM Peak Hour

Zone	To Gates 17	18	19
21	0.0	0.0	0.0

Cumulative Plus Project AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 4 Stuhr Road & Draper Road	F	506.5	1.888	F	677.7	2.238	+171.225 D/V
# 5 Jensen Road & Fig Lane	B	12.7	0.164	C	28.7	0.491	+15.999 D/V
# 6 Orestimba/Yolo St & Hardin Rd	B	14.8	0.666	D	25.1	0.838	+ 0.172 V/C
# 7 Fig Lane & Yolo Street	F	592.3	1.362	F	OVRFL	1.907	+ 1.8E+0308
# 8 Stuhr & Harvey	C	24.9	0.761	C	30.3	0.845	+ 5.377 D/V
# 9 Stuhr Road & Fig Lane	A	0.6	0.271	B	13.8	0.431	+13.204 D/V
# 13 Stuhr Road & Collector Rd B	A	0.0	0.000	B	11.2	0.116	+11.212 D/V
# 14 Jensen Road & Collector Rd B	A	2.9	0.289	A	4.0	0.447	+ 0.158 V/C
# 15 Stuhr & Eastin	F	453.7	0.831	F	OVRFL	3.675	+1793.549 D/
# 16 Stuhr & Villa Manucha	B	11.8	0.139	B	13.5	0.160	+ 1.731 D/V

Cumulative Plus Project AM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	??? / ???	Yes / Yes
# 6 Orestimba/Yolo St & Hardin Rd	???	No
# 7 Fig Lane & Yolo Street	??? / ???	Yes / Yes
# 13 Stuhr Road & Collector Rd B	??? / ???	No / No
# 15 Stuhr & Eastin	??? / ???	No / No
# 16 Stuhr & Villa Manucha	??? / ???	No / No

Cumulative Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

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Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1	0	1	0
Initial Vol:	181	0	10	0	0	0	0	673	139	5	899	0
ApproachDel:	677.7			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=36.0]

SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=191]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1907]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	0	1	0 0 0
Initial Vol:	181	0	10	0	0	0	0	673	139	5	899	0

Major Street Volume: 1716
Minor Approach Volume: 191
Minor Approach Volume Threshold: 75 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0	0	1! 0	0	0	0	0	1! 0	0	0	0	1! 0 0
Initial Vol:	64	15	12	70	31	16	20	415	54	11	463	29

Major Street Volume: 992
Minor Approach Volume: 117
Minor Approach Volume Threshold: 222

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Fig Lane & Yolo Street

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Initial Vol:	169	256	93	54	272	45	67	269	170	79	309	150
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=518]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1933]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=371]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1933]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #7 Fig Lane & Yolo Street

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Initial Vol:	169	256	93	54	272	45	67	269	170	79	309	150

Major Street Volume: 1044
Minor Approach Volume: 518
Minor Approach Volume Threshold: 208

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1	0	0	1	0
Initial Vol:	0	0	70	0	0	0	0	362	8	0	443	0
ApproachDel:	11.2			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.2]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=70]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=883]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	1	0	0	0	0	0	1	0
Initial Vol:	0	0	70	0	0	0	0	362	8	0	443	0

Major Street Volume: 813

Minor Approach Volume: 70

Minor Approach Volume Threshold: 356

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0	0 0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	10	25	0	2	47	6	2	821	8	4	1080	6
ApproachDel:	2247.3			280.8			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=21.8]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=35]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2011]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=4.3]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=55]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2011]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0	0 0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	10	25	0	2	47	6	2	821	8	4	1080	6

Major Street Volume: 1921
Minor Approach Volume: 55
Minor Approach Volume Threshold: 45 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project AM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #16 Stuhr & Villa Manucha

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0
Initial Vol:	0	0	0	5	0	86	154	336	0	0	442	1
ApproachDel:	xxxxxx			13.5			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=91]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1024]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project AM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Stuhr & Villa Manucha

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0
Initial Vol:	0	0	0	5	0	86	154	336	0	0	442	1

Major Street Volume: 933
Minor Approach Volume: 91
Minor Approach Volume Threshold: 238

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 67.9 Worst Case Level Of Service: F[677.7]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	1	0	0	1	0
Volume Module: AM Peak Hour												
Base Vol:	181	0	5	0	0	0	0	638	139	4	827	0
Growth 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
Initial Bse:	181	0	5	0	0	0	0	638	139	4	827	0
Added Vol:	0	0	5	0	0	0	0	35	0	1	72	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	181	0	10	0	0	0	0	673	139	5	899	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	197	0	11	0	0	0	0	732	151	5	977	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	197	0	11	0	0	0	0	732	151	5	977	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1795	1795	807	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	883	xxxx	xxxxx
Potent Cap.:	88	80	381	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	766	xxxx	xxxxx
Move Cap.:	88	80	381	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	766	xxxx	xxxxx
Volume/Cap:	2.24	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.5	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	92	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	18.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	678	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.7	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	A	*	*
ApproachDel:	677.7			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			*			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100 secs		
InitVolume:										488	409	
Saturation:										1621	1862	
ArrivalType:										3	3	
G/C:										0.39	0.52	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.387	0.523	
gq1:										18.44	10.49	
gq2:										7.94	2.95	
gq:										26.39	13.44	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										128	77	
vcg:										142	115	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:									0.000/0.000/Unconstrained			
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	1795	1795	807	1801	1871	977	0	xxxxx	xxxxx	883	xxxxx	xxxxx
AdjCnflVol:	1795	1795	807	1801	1871	977	0	xxxxx	xxxxx	883	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	1795	1795	807	1801	1871	977	0	xxxxx	xxxxx	883	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	88	80	381	63	73	307	1623	xxxxx	xxxxx	766	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	88	80	381	63	73	307	1623	xxxxx	xxxxx	766	xxxxx	xxxxx

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Cycle (sec):	100	Critical Vol./Cap.(X):	0.491		
Loss Time (sec):	12	Average Delay (sec/veh):	28.7		
Optimal Cycle:	40	Level Of Service:	C		

Street Name:	Fig Lane						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	2 0	1	1 0	2 0	1
Volume Module:AM Peak Hour												
Base Vol:	61	0	33	0	0	0	0	265	47	27	347	0
Growth 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
Initial Bse:	61	0	33	0	0	0	0	265	47	27	347	0
Added Vol:	36	168	1	130	127	7	26	156	87	139	59	306
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	97	168	34	130	127	7	26	421	134	166	406	306
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	105	183	37	141	138	8	28	458	146	180	441	333
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	183	37	141	138	8	28	458	146	180	441	333
PCE 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
MLF 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
FinalVolume:	105	183	37	141	138	8	28	458	146	180	441	333
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.96	0.96	0.93	0.97	0.97	0.93	0.93	0.83	0.93	0.93	0.83
Lanes:	1.00	0.83	0.17	1.00	0.95	0.05	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1769	1510	306	1769	1751	96	1769	3538	1583	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.06	0.12	0.12	0.08	0.08	0.08	0.02	0.13	0.09	0.10	0.12	0.21
Crit Moves:		****		****				****		****		
Green/Cycle:	0.18	0.25	0.25	0.16	0.23	0.23	0.03	0.26	0.26	0.21	0.44	0.44
Volume/Cap:	0.34	0.49	0.49	0.49	0.34	0.34	0.48	0.49	0.35	0.49	0.28	0.48
Delay/Veh:	36.7	33.2	33.2	39.4	32.4	32.4	53.5	31.6	30.4	36.0	18.2	20.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.7	33.2	33.2	39.4	32.4	32.4	53.5	31.6	30.4	36.0	18.2	20.5
LOS by Move:	D	C	C	D	C	C	D	C	C	D	B	C
HCM2k95thQ:	154	297	297	221	192	192	79	316	189	260	223	355

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	2 0	1	1 0	2 0	1
Lane Group:	L	RT		RT	L	RT	RT	L	T	R	L	T	R
#LnsInGrps:	1	1		1	1	1	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8		
% Hev Veh:		2			2			2			2		
Grade:		0%			0%			0%			0%		
Parking/Hr:		No			No			No			No		
Bus Stp/Hr:		0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >												
Cnft Ped/Hr:		0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include			
% RT Prtct:		0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	
HCM Ops Saturation Adj Module:												
Ln Wid 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	
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Grade 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	
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	
Area 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	
RT Adj:	xxxx	0.98	0.98	xxxx	0.99	0.99	xxxx	xxxx	0.85	xxxx	xxxx	0.85	
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	
PedBike 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	
HCM Sat Adj:	0.93	0.96	0.96	0.93	0.97	0.97	0.93	0.98	0.83	0.93	0.98	0.83	
Usr Sat 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	
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Fnl Sat Adj:	0.93	0.96	0.96	0.93	0.97	0.97	0.93	0.93	0.83	0.93	0.93	0.83	
Delay Adjustment Factor Module:													
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >												
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > >												
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

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Intersection #5 Jensen Road & Fig Lane

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.18	0.25	0.25	0.16	0.23	0.23	0.03	0.26	0.26	0.21	0.44	0.44
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	2.6	5.2	5.2	3.6	3.4	3.4	0.8	5.7	3.3	4.4	4.1	6.6
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.5	0.9	0.9	0.9	0.5	0.5	0.8	0.9	0.5	0.9	0.4	0.9
HCM2KQueue:	3.1	6.2	6.2	4.5	3.9	3.9	1.5	6.6	3.8	5.4	4.5	7.5
70th%Factor:	1.19	1.19	1.19	1.19	1.19	1.19	1.20	1.18	1.19	1.19	1.19	1.18
HCM2k70thQ:	3.7	7.3	7.3	5.3	4.6	4.6	1.8	7.8	4.5	6.4	5.4	8.8
85th%Factor:	1.57	1.54	1.54	1.56	1.56	1.56	1.58	1.54	1.56	1.55	1.56	1.53
HCM2k85thQ:	4.8	9.5	9.5	7.0	6.1	6.1	2.4	10.2	6.0	8.3	7.1	11.5
90th%Factor:	1.74	1.69	1.69	1.72	1.73	1.73	1.77	1.69	1.73	1.71	1.72	1.68
HCM2k90thQ:	5.3	10.4	10.4	7.7	6.7	6.7	2.7	11.1	6.6	9.1	7.8	12.5
95th%Factor:	2.01	1.93	1.93	1.97	1.98	1.98	2.05	1.92	1.99	1.95	1.97	1.90
HCM2k95thQ:	6.2	11.9	11.9	8.8	7.7	7.7	3.2	12.6	7.6	10.4	8.9	14.2
98th%Factor:	2.49	2.32	2.32	2.41	2.44	2.44	2.59	2.30	2.45	2.36	2.41	2.26
HCM2k98thQ:	7.6	14.3	14.3	10.8	9.5	9.5	4.0	15.2	9.3	12.6	10.9	16.9

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #6 Orestimba/Yolo St & Hardin Rd

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Cycle (sec):	100	Critical Vol./Cap.(X):	0.838	
Loss Time (sec):	12	Average Delay (sec/veh):	25.1	
Optimal Cycle:	0	Level Of Service:	D	

****

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:	AM Peak Hour											
Base Vol:	62	6	12	2	3	15	16	341	49	10	443	4
Growth 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
Initial Bse:	62	6	12	2	3	15	16	341	49	10	443	4
Added Vol:	2	9	0	68	28	1	4	74	5	1	20	25
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	15	12	70	31	16	20	415	54	11	463	29
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	70	16	13	76	34	17	22	451	59	12	503	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	16	13	76	34	17	22	451	59	12	503	32
PCE 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
MLF 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
FinalVolume:	70	16	13	76	34	17	22	451	59	12	503	32
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.71	0.16	0.13	0.60	0.26	0.14	0.04	0.85	0.11	0.02	0.92	0.06
Final Sat.:	330	77	62	287	127	66	27	553	72	14	600	38
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.26	0.26	0.26	0.82	0.82	0.82	0.84	0.84	0.84
Crit Moves:			****			****			****			****
Delay/Veh:	11.6	11.6	11.6	12.0	12.0	12.0	26.8	26.8	26.8	29.0	29.0	29.0
Delay 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
AdjDel/Veh:	11.6	11.6	11.6	12.0	12.0	12.0	26.8	26.8	26.8	29.0	29.0	29.0
LOS by Move:	B	B	B	B	B	B	D	D	D	D	D	D
ApproachDel:	11.6			12.0			26.8			29.0		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.6			12.0			26.8			29.0		
LOS by Appr:	B			B			D			D		
AllWayAvgQ:	5.3	5.3	5.3	7.2	7.2	7.2	83.2	83.2	83.2	93.2	93.2	93.2

****

Note: Queue reported is the distance per lane in feet.

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Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM 4-Way Stop Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	1			1			1			1		
P[C1]:	0.03			0.03			0.11			0.12		
P[C2]:	0.01			0.01			0.51			0.49		
P[C3]:	0.23			0.24			0.06			0.07		
P[C4]:	0.58			0.59			0.29			0.28		
P[C5]:	0.16			0.13			0.04			0.04		
Padj[C1]:	0.028			0.028			0.016			0.016		
Padj[C2]:	0.019			0.018			0.002			0.003		
Padj[C3]:	0.002			0.001			0.002			0.002		
Padj[C4]:	-0.033			-0.034			-0.017			-0.017		
Padj[C5]:	-0.016			-0.013			-0.004			-0.004		
Lane:	L1			L1			L1			L1		
LaneType:	LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE		
HeadwayAdj:	0.096			0.072			-0.024			0.004		
Volume:	99			127			532			547		
Capacity:	469			480			652			652		
DegOfUtil:	0.19			0.24			0.80			0.83		
DepHeadway:	6.96			6.84			5.44			5.44		
ServiceTime:	5.0			4.8			3.4			3.4		
Delay:	11.6			12.0			26.8			29.0		
Queue:	0.2			0.3			3.3			3.7		

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	11.6	12.0	26.8	29.0
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	11.6	12.0	26.8	29.0
LOS by Appr:	B	B	D	D

OverallDel: 25.1
OverallLOS: D

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0 1! 0	0	0	0 1! 0	0	0	0 1! 0	0	0	0 1! 0	0
Volume Module:AM Peak Hour												
Base Vol:	151	163	90	18	115	38	35	208	122	81	288	29
Growth 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
Initial Bse:	151	163	90	18	115	38	35	208	122	81	288	29
Added Vol:	18	93	3	36	157	7	32	61	48	-2	21	121
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	169	256	93	54	272	45	67	269	170	79	309	150
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	184	278	101	59	296	49	73	292	185	86	336	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	184	278	101	59	296	49	73	292	185	86	336	163
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1292	1201	385	1309	1212	417	499	xxxx	xxxxx	477	xxxx	xxxxx
Potent Cap.:	140	185	663	136	182	635	1065	xxxx	xxxxx	1085	xxxx	xxxxx
Move Cap.:	0	157	663	0	155	635	1065	xxxx	xxxxx	1085	xxxx	xxxxx
Volume/Cap:	xxxx	1.77	0.15	xxxx	1.91	0.08	0.07	xxxx	xxxx	0.08	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	5.5	xxxx	xxxxx	6.4	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Stuhr & Harvey

Cycle (sec):	100			Critical Vol./Cap.(X):			0.845					
Loss Time (sec):	9			Average Delay (sec/veh):			30.3					
Optimal Cycle:	80			Level Of Service:			C					

Street Name:	Harvey Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 1! 0	0	0	0 0	0 0	0	0 0	1 0	1	0 1	0 0
Volume Module: AM Peak Hour												
Base Vol:	428	0	27	0	0	0	0	302	333	22	396	0
Growth 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
Initial Bse:	428	0	27	0	0	0	0	302	333	22	396	0
Added Vol:	60	0	15	0	0	0	0	25	15	7	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	488	0	42	0	0	0	0	327	348	29	409	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	530	0	46	0	0	0	0	355	378	32	445	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	530	0	46	0	0	0	0	355	378	32	445	0
PCE 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
MLF 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
FinalVolume:	530	0	46	0	0	0	0	355	378	32	445	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.91	0.91	0.93	0.98	1.00
Lanes:	0.92	0.00	0.08	0.00	0.00	0.00	0.00	0.48	0.52	1.00	1.00	0.00
Final Sat.:	1621	0	140	0	0	0	0	839	893	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.33	0.00	0.33	0.00	0.00	0.00	0.00	0.42	0.42	0.02	0.24	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.39	0.00	0.39	0.00	0.00	0.00	0.00	0.50	0.50	0.02	0.52	0.00
Volume/Cap:	0.84	0.00	0.84	0.00	0.00	0.00	0.00	0.84	0.84	0.84	0.46	0.00
Delay/Veh:	37.4	0.0	37.4	0.0	0.0	0.0	0.0	29.2	29.2	136.3	15.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.4	0.0	37.4	0.0	0.0	0.0	0.0	29.2	29.2	136.3	15.3	0.0
LOS by Move:	D	A	D	A	A	A	A	C	C	F	B	A
HCM2k95thQ:	801	0	801	0	0	0	0	921	921	128	401	0

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1! 0	0	0	0 0	0	0 0 1	0	1	0 1	0	0
Lane Group:	LTR		LTR	xxxx		xxxx	xxxx	RT	RT	L	T	xxxx
#LnsInGrps:	1		1	0		0	0	1	1	1	1	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12		12	12		12	12		12	12		12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	xxxx	4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	0.99	xxxx	0.99	xxxx	xxxx	xxxxx	xxxx	0.93	0.93	xxxx	xxxx	xxxxx
LT Adj:	0.96	xxxx	0.96	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.91	0.91	0.93	0.98	1.00
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.91	0.91	0.93	0.98	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.39	0.00	0.39	0.00	0.00	0.00	0.00	0.50	0.50	0.02	0.52	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	14.6	0.0	14.6	0.0	0.0	0.0	0.0	17.6	17.6	0.9	7.7	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	4.1	0.0	4.1	0.0	0.0	0.0	0.0	4.3	4.3	1.7	0.8	0.0
HCM2KQueue:	18.7	0.0	18.7	0.0	0.0	0.0	0.0	22.0	22.0	2.5	8.6	0.0
70th%Factor:	1.16	1.20	1.16	1.20	1.20	1.20	1.20	1.16	1.16	1.19	1.18	1.20
HCM2k70thQ:	21.8	0.0	21.8	0.0	0.0	0.0	0.0	25.4	25.4	3.0	10.1	0.0
85th%Factor:	1.46	1.60	1.46	1.60	1.60	1.60	1.60	1.44	1.44	1.58	1.53	1.60
HCM2k85thQ:	27.3	0.0	27.3	0.0	0.0	0.0	0.0	31.7	31.7	4.0	13.1	0.0
90th%Factor:	1.56	1.80	1.56	1.80	1.80	1.80	1.80	1.53	1.53	1.75	1.66	1.80
HCM2k90thQ:	29.1	0.0	29.1	0.0	0.0	0.0	0.0	33.7	33.7	4.4	14.2	0.0
95th%Factor:	1.71	2.10	1.71	2.10	2.10	2.10	2.10	1.68	1.68	2.02	1.87	2.10
HCM2k95thQ:	32.0	0.0	32.0	0.0	0.0	0.0	0.0	36.8	36.8	5.1	16.1	0.0
98th%Factor:	1.94	2.70	1.94	2.70	2.70	2.70	2.70	1.88	1.88	2.52	2.22	2.70
HCM2k98thQ:	36.3	0.0	36.3	0.0	0.0	0.0	0.0	41.4	41.4	6.4	19.0	0.0

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Stuhr Road & Fig Lane

Cycle (sec):	100					Critical Vol./Cap.(X):				0.431						
Loss Time (sec):	9					Average Delay (sec/veh):				13.8						
Optimal Cycle:	31					Level Of Service:				B						
Street Name:	Fig Lane								Stuhr Road							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Volume Module: AM Peak Hour																
Base Vol:	0	0	0		0	0	0		0	330	0		0	423	0	
Growth 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	
Initial Bse:	0	0	0		0	0	0		0	330	0		0	423	0	
Added Vol:	16	0	68		0	0	0		0	85	17		136	4	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	16	0	68		0	0	0		0	415	17		136	427	0	
User 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	
PHF Adj:	0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92	
PHF Volume:	17	0	74		0	0	0		0	451	18		148	464	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	17	0	74		0	0	0		0	451	18		148	464	0	
PCE 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	
MLF 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	
FinalVolume:	17	0	74		0	0	0		0	451	18		148	464	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.87	1.00	0.87		1.00	1.00	1.00		1.00	0.98	0.98		0.93	0.98	1.00	
Lanes:	0.19	0.00	0.81		0.00	0.00	0.00		0.00	0.96	0.04		1.00	1.00	0.00	
Final Sat.:	313	0	1331		0	0	0		0	1780	73		1769	1862	0	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.00	0.06		0.00	0.00	0.00		0.00	0.25	0.25		0.08	0.25	0.00	
Crit Moves:			****							****			****			
Green/Cycle:	0.13	0.00	0.13		0.00	0.00	0.00		0.00	0.59	0.59		0.19	0.78	0.00	
Volume/Cap:	0.43	0.00	0.43		0.00	0.00	0.00		0.00	0.43	0.43		0.43	0.32	0.00	
Delay/Veh:	41.6	0.0	41.6		0.0	0.0	0.0		0.0	11.7	11.7		36.3	3.3	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	41.6	0.0	41.6		0.0	0.0	0.0		0.0	11.7	11.7		36.3	3.3	0.0	
LOS by Move:	D		A		D		A		A		A		B		B	
HCM2k95thQ:	154		0		154		0		0		375		375		214	

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Stuhr Road & Fig Lane

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Lane Group:	LTR		LTR		LTR	xxxx		xxxx		xxxx	xxxx		RT		RT	L		T		xxxx
#LnsInGrps:	1		1		1	0		0		0	0		1		1	1		1		0
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12		12		12	12		12		12	12		12		12
CrsswalkWid:	8					8					8					8				
% Hev Veh:	2					2					2					2				
Grade:	0%					0%					0%					0%				
Parking/Hr:	No					No					No					No				
Bus Stp/Hr:	0					0					0					0				
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:	0					0					0					0				
ExclusiveRT:	Include					Include					Include					Include				
% RT Prtct:	0					0					0					0				
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	4	xxxx		4		xxxx	xxxx		xxxx		xxxx	xxxx		xxxx		1	xxxx		xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	1.00	xxxx		1.00		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		1.00	1.00		xxxxx	
Hev Veh Adj:	0.98	xxxx		0.98		xxxx	xxxx		xxxxx		xxxx	0.98		0.98		0.98	0.98		xxxxx	
Grade Adj:	1.00	xxxx		1.00		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		1.00	1.00		xxxxx	
Parking Adj:	1.00	xxxx		1.00		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		xxxx	1.00		xxxxx	
Bus Stp Adj:	1.00	xxxx		1.00		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		xxxx	1.00		xxxxx	
Area Adj:	1.00	xxxx		1.00		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		1.00	1.00		xxxxx	
RT Adj:	0.89	xxxx		0.89		xxxx	xxxx		xxxxx		xxxx	1.00		1.00		xxxx	xxxx		xxxxx	
LT Adj:	0.99	xxxx		0.99		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		0.95	xxxx		xxxxx	
PedBike 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	
HCM Sat Adj:	0.87	1.00		0.87		1.00	1.00		1.00		1.00	0.98		0.98		0.93	0.98		1.00	
Usr Sat 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	
MLF Sat 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	
Fnl Sat Adj:	0.87	1.00		0.87		1.00	1.00		1.00		1.00	0.98		0.98		0.93	0.98		1.00	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >															
DelAdjFctr:	1.00	0.00		1.00		0.00	0.00		0.00		0.00	1.00		1.00		1.00	1.00		0.00	

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

****

Intersection #9 Stuhr Road & Fig Lane

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.13	0.00	0.13	0.00	0.00	0.00	0.00	0.59	0.59	0.19	0.78	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	2.3	0.0	2.3	0.0	0.0	0.0	0.0	7.2	7.2	3.6	3.8	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.7	0.0	0.7	0.0	0.0	0.0	0.0	0.8	0.8	0.7	0.5	0.0
HCM2KQueue:	3.1	0.0	3.1	0.0	0.0	0.0	0.0	8.0	8.0	4.3	4.2	0.0
70th%Factor:	1.19	1.20	1.19	1.20	1.20	1.20	1.20	1.18	1.18	1.19	1.19	1.20
HCM2k70thQ:	3.7	0.0	3.7	0.0	0.0	0.0	0.0	9.4	9.4	5.2	5.0	0.0
85th%Factor:	1.57	1.60	1.57	1.60	1.60	1.60	1.60	1.53	1.53	1.56	1.56	1.60
HCM2k85thQ:	4.8	0.0	4.8	0.0	0.0	0.0	0.0	12.2	12.2	6.8	6.6	0.0
90th%Factor:	1.74	1.80	1.74	1.80	1.80	1.80	1.80	1.67	1.67	1.72	1.72	1.80
HCM2k90thQ:	5.3	0.0	5.3	0.0	0.0	0.0	0.0	13.3	13.3	7.5	7.3	0.0
95th%Factor:	2.01	2.10	2.01	2.10	2.10	2.10	2.10	1.89	1.89	1.97	1.97	2.10
HCM2k95thQ:	6.1	0.0	6.1	0.0	0.0	0.0	0.0	15.0	15.0	8.6	8.3	0.0
98th%Factor:	2.49	2.70	2.49	2.70	2.70	2.70	2.70	2.24	2.24	2.42	2.42	2.70
HCM2k98thQ:	7.6	0.0	7.6	0.0	0.0	0.0	0.0	17.8	17.8	10.5	10.2	0.0

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #13 Stuhr Road & Collector Rd B

****

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[11.2]

****

Street Name:	Collector Rd B						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0 0 1	0	0	0 0 0	0	0	1 0 1	0	0	1 0 0
Volume Module:	AM Peak Hour											
Base Vol:	0	0	0	0	0	0	0	330	0	0	423	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	330	0	0	423	0
Added Vol:	0	0	70	0	0	0	0	32	8	0	20	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	70	0	0	0	0	362	8	0	443	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	76	0	0	0	0	393	9	0	482	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	76	0	0	0	0	393	9	0	482	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	393	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	655	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	655	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.12	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	9.8	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	11.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.2			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

****

Note: Queue reported is the distance per lane in feet.

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Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

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Intersection #13 Stuhr Road & Collector Rd B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:		2%			2%			2%			2%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

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Intersection #14 Jensen Road & Collector Rd B

****

Average Delay (sec/veh): 4.0 Level Of Service: A

****

Street Name:	Collector Rd B						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			2		
Volume Module:AM Peak Hour												
Base Vol:	0	0	0	0	0	0	0	319	0	0	410	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	319	0	0	410	0
Added Vol:	8	37	39	107	67	4	2	119	7	18	41	43
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	37	39	107	67	4	2	438	7	18	451	43
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	9	40	42	116	73	4	2	476	8	20	490	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	40	42	116	73	4	2	476	8	20	490	47
PCE 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
MLF 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
FinalVolume:	9	40	42	116	73	4	2	476	8	20	490	47
PCE Module:												
AutoPCE:	9	40	42	116	73	4	2	476	8	20	490	47
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	9	40	42	116	73	4	2	476	8	20	490	47
Delay Module: >> Time Period: 0.25 hours <<												
CircVolume:	595			518			209			51		
MaxVolume:	879			920			1087			2387		
PedVolume:	0			0			0			0		
AdjMaxVol:	879			920			1087			2387		
ApproachVol:	91			193			486			557		
ApproachV/C:	0.10			0.21			0.45			0.23		
ApproachDel:	4.6			5.0			6.0			2.0		
ApproachLOS:	A			A			A			A		
Queue:	0.3			0.8			2.4			0.9		

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 46.8 Worst Case Level Of Service: F[2247.3]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module: AM Peak Hour												
Base Vol:	10	25	0	2	47	6	2	786	8	4	1008	6
Growth 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
Initial Bse:	10	25	0	2	47	6	2	786	8	4	1008	6
Added Vol:	0	0	0	0	0	0	0	35	0	0	72	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	25	0	2	47	6	2	821	8	4	1080	6
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	11	27	0	2	51	7	2	892	9	4	1174	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	27	0	2	51	7	2	892	9	4	1174	7
Critical Gap Module:												
Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2116	2090	xxxxx	2101	2091	1177	1180	xxxx	xxxxx	901	xxxx	xxxxx
Potent Cap.:	37	53	xxxxx	38	52	233	592	xxxx	xxxxx	754	xxxx	xxxxx
Move Cap.:	3	52	xxxxx	22	52	233	592	xxxx	xxxxx	754	xxxx	xxxxx
Volume/Cap:	3.67	0.52	xxxx	0.10	0.98	0.03	0.00	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	0.4	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.1	xxxx	xxxxx	9.8	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	9	xxxx	xxxxx	xxxx	54	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	6.0	xxxx	xxxxx	xxxxx	5.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	2247	xxxx	xxxxx	xxxxx	281	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	F	*	*	*	F	*	*	*	*	*	*	*
ApproachDel:	2247.3			280.8			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative Plus Project AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: B[13.5]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module: AM Peak Hour												
Base Vol:	0	0	0	5	0	86	154	253	0	0	324	1
Growth 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
Initial Bse:	0	0	0	5	0	86	154	253	0	0	324	1
Added Vol:	0	0	0	0	0	0	0	83	0	0	118	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	5	0	86	154	336	0	0	442	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	5	0	93	167	365	0	0	480	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	5	0	93	167	365	0	0	480	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1181	1181	481	482	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	210	190	585	1081	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	182	158	585	1081	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.03	0.00	0.16	0.15	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	13.7	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	522	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.7	xxxxx	0.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.5	xxxxx	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			13.5			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #16 Stuhr & Villa Manucha

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:							#91					
Dist(miles):							0.250					
Speed (mph):							1.00					
SignalIndex:							#1					
Cycle Time:							100 secs					
InitVolume:							67	231				
Saturation:							1612	965				
ArrivalType:							3	3				
G/C:							0.06	0.32				
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:							0.062	0.319				
gq1:							3.90	16.30				
gq2:							0.17	5.13				
gq:							4.07	21.43				
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:							0.550					
beta:							0.645					
ta (secs):							900.000					
F:							0.003					
f:							1.000	1.000				
vcmax:							20	63				
vcg:							21	68				
vcmin:							1000	1000				
tp:							0.0	0.0				
p:							0.000					
*** Computation 3: Platoon Event Periods												
pdom/psubo:							0.000/0.000/Unconstrained					
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	1228	1182	365	1181	1181	481	482	xxxxx	xxxxx	0	xxxxx	xxxxx
AdjCnflVol:	1228	1182	365	1181	1181	481	482	xxxxx	xxxxx	0	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	1228	1182	365	1181	1181	481	482	xxxxx	xxxxx	0	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	155	190	680	210	190	585	1081	xxxxx	xxxxx	1623	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	155	190	680	210	190	585	1081	xxxxx	xxxxx	1623	xxxxx	xxxxx

Cumulative Plus Project AM Peak Hour

Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[2Way95thQ]:	467	467	467	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.5	0.5	xxxx
#5	[HCM2k95thQ]:	154	297	297	221	192	192	79	316	189	260	223	355
#6	[AllWayAvgQ]	5.3	5.3	5.3	7.2	7.2	7.2	83.2	83.2	83.2	93.2	93.2	93.2
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	5.5	xxxx	xxxx	6.4	xxxx	xxxx
#8	[HCM2k95thQ]:	801	0	801	0	0	0	0	921	921	128	401	0
#9	[HCM2k95thQ]:	154	0	154	0	0	0	0	375	375	214	208	0
#13	[2Way95thQ]:	xxxx	xxxx	9.8	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#14	[DesignQueue]:	0	9	0	0	20	0	0	59	0	0	23	0
#15	[2Way95thQ]:	150	150	xxxx	128	128	128	0.3	xxxx	xxxx	0.4	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	17.3	17.3	17.3	13.7	13.7	xxxx	xxxx	xxxx	xxxx

Two Way Analysis cannot be performed on Signalized Intersection.

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	512	1	37	6	2	4	34	1936	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	12	2
Mvmt Flow	624	1	45	7	2	5	41	2361	6

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	3320	4505	1155	3348	4769	1184	2310	0	0
Stage 1	2055	2055	-	2447	2447	-	-	-	-
Stage 2	1265	2450	-	901	2322	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	~ 3	~ 1	190	~ 3	~ 1	182	214	-	-
Stage 1	~ 57	97	-	32	61	-	-	-	-
Stage 2	~ 179	60	-	299	70	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	-	~ 1	190	-	~ 1	182	214	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-
Stage 1	~ 46	94	-	26	49	-	-	-	-
Stage 2	~ 134	49	-	218	68	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s			0.4
HCM LOS	-	-	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	214	-	-	-	-	203	-	-
HCM Lane V/C Ratio	0.194	-	-	-	-	0.03	-	-
HCM Control Delay (s)	25.8	-	-	-	-	23.3	-	-
HCM Lane LOS	D	-	-	-	-	C	-	-
HCM 95th %tile Q(veh)	0.7	-	-	-	-	0.1	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection			
Int Delay, s/veh			

Movement	SBL	SBT	SBR
Vol, veh/h	5	1456	438
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	200	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	82	82	82
Heavy Vehicles, %	2	12	2
Mvmt Flow	6	1776	534

Major/Minor	Major2		
Conflicting Flow All	2367	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	203	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	203	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0.1
HCM LOS	

Minor Lane/Major Mvmt

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	157.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	58	147	84	1664	2233	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	200	0	200	-	-	200
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	63	160	91	1809	2427	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3514	1214	2427	0	-	0
Stage 1	2427	-	-	-	-	-
Stage 2	1087	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 5	174	192	-	-	-
Stage 1	~ 52	-	-	-	-	-
Stage 2	285	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 3	174	192	-	-	-
Mov Cap-2 Maneuver	~ 3	-	-	-	-	-
Stage 1	~ 52	-	-	-	-	-
Stage 2	150	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 3279	1.9	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	192	-	3	174	-	-
HCM Lane V/C Ratio	0.476	-	21.014	0.918	-	-
HCM Control Delay (s)	39.7	-	$ 11332.1	101.6	-	-
HCM Lane LOS	E	-	F	F	-	-
HCM 95th %tile Q(veh)	2.3	-	9.9	6.9	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Two Way Analysis cannot be performed on Signalized Intersection.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	116	274	218	110	231	72	157	523	116	83	708	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	172.4	190.0	186.3	172.2	190.0
Adj Flow Rate, veh/h	140	330	263	133	278	87	189	630	140	100	853	167
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	166	325	259	136	438	137	205	923	205	205	945	185
Arrive On Green	0.09	0.34	0.34	0.08	0.32	0.32	0.23	0.69	0.69	0.12	0.35	0.35
Sat Flow, veh/h	1774	961	766	1774	1361	426	1774	2667	592	1774	2729	534
Grp Volume(v), veh/h	140	0	593	133	0	365	189	387	383	100	511	509
Grp Sat Flow(s),veh/h/ln	1774	0	1728	1774	0	1788	1774	1638	1620	1774	1636	1627
Q Serve(g_s), s	10.1	0.0	44.0	9.7	0.0	22.6	13.5	17.9	18.0	6.9	38.7	38.7
Cycle Q Clear(g_c), s	10.1	0.0	44.0	9.7	0.0	22.6	13.5	17.9	18.0	6.9	38.7	38.7
Prop In Lane	1.00		0.44	1.00		0.24	1.00		0.37	1.00		0.33
Lane Grp Cap(c), veh/h	166	0	585	136	0	576	205	567	561	205	566	563
V/C Ratio(X)	0.85	0.00	1.01	0.97	0.00	0.63	0.92	0.68	0.68	0.49	0.90	0.90
Avail Cap(c_a), veh/h	218	0	585	136	0	576	205	567	561	205	566	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	0.0	43.0	59.9	0.0	37.5	49.4	15.8	15.8	53.9	40.4	40.4
Incr Delay (d2), s/veh	20.2	0.0	40.8	69.0	0.0	2.3	40.8	6.2	6.3	1.8	20.2	20.3
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(50%),veh/ln	5.9	0.0	27.6	7.4	0.0	11.5	8.9	8.7	8.9	3.5	20.6	20.6
LnGrp Delay(d),s/veh	78.2	0.0	83.8	128.9	0.0	39.8	90.2	22.1	22.2	55.7	60.7	60.8
LnGrp LOS	F		F	F		D	F	C	C	F	F	F
Approach Vol, veh/h		733			498			959			1120	
Approach Delay, s/veh		82.7			63.6			35.5			60.3	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	49.0	14.0	48.0	19.0	49.0	16.1	45.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	45.0	10.0	44.0	15.0	45.0	16.0	38.0
Max Q Clear Time (g_c+I1), s	8.9	20.0	11.7	46.0	15.5	40.7	12.1	24.6
Green Ext Time (p_c), s	3.5	5.4	0.0	0.0	0.0	2.6	0.1	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	58.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	99	726	553	499	628	110	402	751	517	129	1046	123
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	176.0	190.0	186.3	171.3	190.0
Adj Flow Rate, veh/h	121	885	674	609	766	134	490	916	630	157	1276	150
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	145	497	362	314	1051	184	259	757	501	96	881	103
Arrive On Green	0.08	0.25	0.25	0.18	0.35	0.35	0.15	0.39	0.39	0.11	0.60	0.60
Sat Flow, veh/h	1774	1957	1424	1774	3012	527	1774	1931	1277	1774	2935	344
Grp Volume(v), veh/h	121	796	763	609	450	450	490	789	757	157	705	721
Grp Sat Flow(s),veh/h/ln	1774	1770	1611	1774	1770	1770	1774	1672	1535	1774	1627	1652
Q Serve(g_s), s	8.7	33.0	33.0	23.0	28.9	28.9	19.0	51.0	51.0	7.0	39.0	39.0
Cycle Q Clear(g_c), s	8.7	33.0	33.0	23.0	28.9	28.9	19.0	51.0	51.0	7.0	39.0	39.0
Prop In Lane	1.00		0.88	1.00		0.30	1.00		0.83	1.00		0.21
Lane Grp Cap(c), veh/h	145	449	409	314	618	618	259	656	602	96	488	496
V/C Ratio(X)	0.83	1.77	1.86	1.94	0.73	0.73	1.89	1.20	1.26	1.64	1.44	1.46
Avail Cap(c_a), veh/h	164	449	409	314	618	618	259	656	602	96	488	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	58.8	48.5	48.5	53.5	36.9	36.9	55.5	39.5	39.5	58.0	26.0	26.0
Incr Delay (d2), s/veh	27.0	356.8	398.2	434.7	4.3	4.3	414.7	105.0	129.1	327.5	210.0	214.7
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(50%),veh/ln	5.4	60.6	59.9	49.1	14.9	14.9	39.2	42.6	43.2	12.1	45.6	46.9
LnGrp Delay(d),s/veh	85.8	405.3	446.7	488.2	41.3	41.3	470.2	144.5	168.6	385.5	236.0	240.7
LnGrp LOS	F	F	F	F	D	D	F	F	F	F	F	F
Approach Vol, veh/h		1680			1509			2036			1583	
Approach Delay, s/veh		401.1			221.6			231.8			253.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	55.0	27.0	37.0	23.0	43.0	14.6	49.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	51.0	23.0	33.0	19.0	39.0	12.0	44.0
Max Q Clear Time (g_c+I1), s	9.0	53.0	25.0	35.0	21.0	41.0	10.7	30.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3

Intersection Summary	
HCM 2010 Ctrl Delay	276.2
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	16	88	11	876	1184	3
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	17	96	12	952	1287	3
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	145	129	133	2719	2189	979
Arrive On Green	0.08	0.08	0.10	1.00	1.00	1.00
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	17	96	12	952	1287	3
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	0.5	3.2	0.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	3.2	0.3	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	145	129	133	2719	2189	979
V/C Ratio(X)	0.12	0.74	0.09	0.35	0.59	0.00
Avail Cap(c_a), veh/h	532	475	133	2719	2189	979
HCM Platoon Ratio	1.00	1.00	1.33	1.33	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.28	0.28
Uniform Delay (d), s/veh	22.7	24.0	22.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	8.1	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.0	0.2	0.0	0.1	0.0
LnGrp Delay(d),s/veh	23.1	32.0	22.4	0.0	0.3	0.0
LnGrp LOS	C	C	C	A	A	A
Approach Vol, veh/h	113			964	1290	
Approach Delay, s/veh	30.7			0.3	0.3	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		56.6		8.4	19.6	37.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		41.0		16.0	4.0	33.0		
Max Q Clear Time (g_c+I1), s		2.0		5.2	2.3	2.0		
Green Ext Time (p_c), s		8.5		0.2	1.0	12.1		

Intersection Summary	
HCM 2010 Ctrl Delay	1.8
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	95	149	124	1701	2332	111
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	103	162	135	1849	2535	121
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	207	185	137	2906	2522	1128
Arrive On Green	0.12	0.12	0.08	0.82	0.71	0.71
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	103	162	135	1849	2535	121
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	7.0	13.0	9.8	25.3	92.0	3.1
Cycle Q Clear(g_c), s	7.0	13.0	9.8	25.3	92.0	3.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	207	185	137	2906	2522	1128
V/C Ratio(X)	0.50	0.88	0.98	0.64	1.00	0.11
Avail Cap(c_a), veh/h	220	196	137	2906	2522	1128
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	53.4	56.1	59.5	4.3	18.5	5.8
Incr Delay (d2), s/veh	1.8	31.7	71.1	1.1	19.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	12.6	7.5	12.5	50.8	1.4
LnGrp Delay(d),s/veh	55.3	87.8	130.6	5.4	37.7	6.0
LnGrp LOS	F	F	F	A	F	A
Approach Vol, veh/h	265			1984	2656	
Approach Delay, s/veh	75.2			13.9	36.2	
Approach LOS	E			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		110.9		19.1	14.0	96.9		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		106.0		16.0	10.0	92.0		
Max Q Clear Time (g_c+I1), s		27.3		15.0	11.8	94.0		
Green Ext Time (p_c), s		76.8		0.1	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Cumulative Plus Project PM Peak Hour

Scenario Report

Scenario:	Cumul Plus Proj PM
Command:	Cumul Plus Proj PM
Volume:	Cumul Prj Bckgr PM
Geometry:	Cumul Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	PM Pk Hr
Trip Distribution:	PM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Cumulative Plus Project PM Peak Hour

Trip Generation Report

Forecast for PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	VLDR	55.00	SFDUs	0.63	0.37	35	20	55	1.7
	Zone 1 Subtotal					35	20	55	1.7
2	PMR 1	144.00	SFDUs	0.63	0.37	91	53	144	4.4
2	PMR 1	16.00	MFDUs	0.40	0.22	6	4	10	0.3
	Zone 2 Subtotal					97	57	154	4.7
3	PMR 2	108.00	SFDUs	0.63	0.37	68	40	108	3.3
3	PMR 2	13.00	MFDUs	0.40	0.22	5	3	8	0.2
	Zone 3 Subtotal					73	43	116	3.5
4	PMR 3	93.00	SFDUs	0.63	0.37	59	34	93	2.8
4	PMR 3	11.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 4 Subtotal					63	36	99	3.0
5	PMR 4	117.00	SFDUs	0.63	0.37	74	43	117	3.6
5	PMR 4	14.00	MFDUs	0.40	0.22	6	3	9	0.3
	Zone 5 Subtotal					80	46	126	3.8
6	PMR 5	47.00	SFDUs	0.63	0.37	30	17	47	1.4
6	PMR 5	6.00	MFDUs	0.40	0.22	2	1	3	0.1
	Zone 6 Subtotal					32	18	50	1.5
7	PMR 6	66.00	SFDUs	0.63	0.37	42	24	66	2.0
7	PMR 6	8.00	MFDUs	0.40	0.22	3	2	5	0.2
	Zone 7 Subtotal					45	26	71	2.2
8	PMR 7	95.00	SFDUs	0.63	0.37	60	35	95	2.9
8	PMR 7	11.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 8 Subtotal					64	37	101	3.1
9	PMR 8	86.00	SFDUs	0.63	0.37	54	32	86	2.6
9	PMR 8	10.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 9 Subtotal					58	34	92	2.8
10	PMR 9	74.00	SFDUs	0.63	0.37	47	27	74	2.3
10	PMR 9	9.00	MFDUs	0.40	0.22	4	2	6	0.2
	Zone 10 Subtotal					51	29	80	2.4
11	PMR 10	33.00	SFDUs	0.63	0.37	21	12	33	1.0
11	PMR 10	4.00	MFDUs	0.40	0.22	2	1	3	0.1
	Zone 11 Subtotal					23	13	36	1.1
12	PMR 12	137.00	SFDUs	0.63	0.37	86	51	137	4.2
12	PMR 12	16.00	MFDUs	0.40	0.22	6	4	10	0.3

Cumulative Plus Project PM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
	Zone 12 Subtotal					92	55	147	4.5
14	Prof Office	8.30	Off Pk Acres	4.24	24.04	35	200	235	7.2
	Zone 14 Subtotal					35	200	235	7.2
15	BP-1	288.15	Busi Pk KSF	0.33	0.93	95	268	363	11.1
	Zone 15 Subtotal					95	268	363	11.1
16	BP-2	195.15	Busi Pk KSF	0.33	0.93	64	181	245	7.5
	Zone 16 Subtotal					64	181	245	7.5
17	BP-3	419.27	Busi Pk KSF	0.33	0.93	138	390	528	16.1
	Zone 17 Subtotal					138	390	528	16.1
18	CC 1	51.18	Shop Ctr KSF	1.17	1.27	60	65	125	3.8
	Zone 18 Subtotal					60	65	125	3.8
19	CC 2	246.11	Shop Ctr KSF	1.17	1.27	288	313	601	18.3
	Zone 19 Subtotal					288	313	601	18.3
20	HDR	180.00	MFDUs	0.40	0.22	72	40	112	3.4
	Zone 20 Subtotal					72	40	112	3.4
21	Exist LU for	36.00	Exist SFDUs	-0.63	-0.37	-23	-13	-36	-1.1
21	Exist LU for	11.00	Exist MFDUs	-0.40	-0.22	-4	-2	-6	-0.2
21	Exist LU for	54.50	Exist Wrhs KSF	-0.08	-0.24	-4	-13	-17	-0.5
	Zone 21 Subtotal					-31	-28	-59	-1.8
TOTAL						1434	1843	3277	100.0

Cumulative Plus Project PM Peak Hour

Trip Distribution Report

Percent Of Trips PM Pk Hr

Zone	To Gates 1	2	3	4	5	6	7	8	9	17	18	19
1	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
2	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
3	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
4	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
5	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
6	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
7	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
8	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
9	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
10	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
11	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
12	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
13	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
14	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
15	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
16	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
17	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
18	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
19	1.0	4.0	7.0	16.0	4.0	5.0	0.0	4.0	54.0	2.0	1.0	2.0
20	10.0	3.0	10.0	9.0	1.0	1.0	5.0	29.0	29.0	0.0	1.0	2.0
21	10.0	3.0	10.0	9.0	1.0	1.0	5.0	32.0	29.0	0.0	0.0	2.0

Cumulative Plus Project PM Peak Hour

Zone	To Gates 19
21	0.0

Cumulative Plus Project PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 4 Stuhr Road & Draper Road	F	190.8	1.129	F	324.1	1.424	+133.229 D/V
# 5 Jensen Road & Fig Lane	B	11.0	0.155	C	34.2	0.686	+23.240 D/V
# 6 Orestimba/Yolo St & Hardin Rd	B	13.1	0.626	C	24.5	0.826	+ 0.200 V/C
# 7 Fig Lane & Yolo Street	F	386.7	1.154	F	OVRFL	1.829	+ 1.8E+0308
# 8 Stuhr & Harvey	C	22.0	0.755	C	30.0	0.865	+ 8.003 D/V
# 9 Stuhr Road & Fig Lane	A	0.6	0.235	B	16.6	0.454	+16.030 D/V
# 13 Stuhr Road & Collector Rd B	A	0.0	0.000	B	11.2	0.081	+11.188 D/V
# 14 Jensen Road & Collector Rd B	A	3.2	0.322	A	3.8	0.436	+ 0.115 V/C
# 15 Stuhr & Eastin	F	325.3	0.682	F	680.0	1.048	+354.696 D/V
# 16 Stuhr & Villa Manucha	B	10.9	0.197	B	12.5	0.234	+ 1.541 D/V

Cumulative Plus Project PM Peak Hour

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 4 Stuhr Road & Draper Road	??? / ???	Yes / Yes
# 6 Orestimba/Yolo St & Hardin Rd	???	No
# 7 Fig Lane & Yolo Street	??? / ???	Yes / Yes
# 13 Stuhr Road & Collector Rd B	??? / ???	No / No
# 15 Stuhr & Eastin	??? / ???	No / No
# 16 Stuhr & Villa Manucha	??? / ???	No / No

Cumulative Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

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Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1 0	0 1	0	0 0
Initial Vol:	128	0	7	0	0	0	0	793	165	8	689	0
ApproachDel:	324.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=12.2]

SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=135]

SUCCEED - Approach volume greater than or equal to 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=1790]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Stuhr Road & Draper Road

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	1!	0 0	0	0	0	0 0	0	0	0	1 0	0	1	0	0 0
Initial Vol:	128		0	7	0		0	0	0	793		165	8	689		0

Major Street Volume: 1655
Minor Approach Volume: 135
Minor Approach Volume Threshold: 85 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #6 Orestimba/Yolo St & Hardin Rd

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	0	0	1!	0 0	0	0	1!	0 0	0	0	1!	0 0	0	0	1!	0 0
Initial Vol:	49		34	11	48		23	17	14	429		61	10	417		87

Major Street Volume: 1018
Minor Approach Volume: 94
Minor Approach Volume Threshold: 215

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Fig Lane & Yolo Street

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	1! 0	0	0	0	1! 0
Initial Vol:	169	286	86	148	292	71	42	298	179	84	290	72
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=541]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2017]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=511]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2017]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #7 Fig Lane & Yolo Street

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	1! 0	0	0	0	1! 0
Initial Vol:	169	286	86	148	292	71	42	298	179	84	290	72

Major Street Volume: 965
Minor Approach Volume: 541
Minor Approach Volume Threshold: 229

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	0	1	0	0	1	0
Initial Vol:	0	0	47	0	0	0	0	387	26	0	365	0
ApproachDel:	11.2			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]

Signal Warrant Rule #1: [vehicle-hours=0.1]

FAIL - Vehicle-hours less than 4 for one lane approach.

Signal Warrant Rule #2: [approach volume=47]

FAIL - Approach volume less than 100 for one lane approach.

Signal Warrant Rule #3: [approach count=3][total volume=825]

SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #13 Stuhr Road & Collector Rd B

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	1	0	0	0	0	0	1	0
Initial Vol:	0	0	47	0	0	0	0	387	26	0	365	0

Major Street Volume: 778

Minor Approach Volume: 47

Minor Approach Volume Threshold: 371

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	12 43 16	10 41 4	30 956 18	7 817 3
ApproachDel:	670.3	680.0	xxxxxx	xxxxxx

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=13.2]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=71]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1957]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=10.4]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=55]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1957]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #15 Stuhr & Eastin

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	12 43 16	10 41 4	30 956 18	7 817 3

Major Street Volume: 1831
Minor Approach Volume: 71
Minor Approach Volume Threshold: 58 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Delay Signal Warrant Report

Intersection #16 Stuhr & Villa Manucha

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	423	0	0	367	3
ApproachDel:	xxxxxx			12.5			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=142]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1008]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #16 Stuhr & Villa Manucha

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	0	1!	0	0	0	1	0
Initial Vol:	0	0	0	2	0	140	73	423	0	0	367	3

Major Street Volume: 866
Minor Approach Volume: 142
Minor Approach Volume Threshold: 258

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Average Delay (sec/veh): 24.5 Worst Case Level Of Service: F[324.1]

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 0	0	0	0 0 0 1	0	0	0 1 0	0	0
Volume Module: PM Peak Hour												
Base Vol:	128	0	4	0	0	0	0	711	165	4	632	0
Growth 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
Initial Bse:	128	0	4	0	0	0	0	711	165	4	632	0
Added Vol:	0	0	3	0	0	0	0	82	0	4	57	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	128	0	7	0	0	0	0	793	165	8	689	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	139	0	8	0	0	0	0	862	179	9	749	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	139	0	8	0	0	0	0	862	179	9	749	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1718	1718	952	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1041	xxxx	xxxxx
Potent Cap.:	99	90	315	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	668	xxxx	xxxxx
Move Cap.:	98	89	315	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	668	xxxx	xxxxx
Volume/Cap:	1.42	0.00	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	101	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	10.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	324	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.5	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	B	*	*
ApproachDel:	324.1			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			*			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			0%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:										#78		
Dist(miles):										0.250		
Speed (mph):										1.00		
SignalIndex:										#8		
Cycle Time:										100 secs		
InitVolume:										353	329	
Saturation:										1614	1862	
ArrivalType:										3	3	
G/C:										0.27	0.64	
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:										0.275	0.635	
gq1:										15.86	6.44	
gq2:										4.44	1.38	
gq:										20.30	7.83	
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:										0.550		
beta:										0.645		
ta (secs):										900.000		
F:										0.003		
f:										1.000	1.000	
vcmax:										99	45	
vcg:										105	90	
vcmin:										1000	1000	
tp:										0.0	0.0	
p:										0.000		
*** Computation 3: Platoon Event Periods												
pdom/psubo:									0.000/0.000/Unconstrained			
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	1718	1718	952	1722	1808	749	0	xxxxx	xxxxx	1041	xxxxx	xxxxx
AdjCnflVol:	1718	1718	952	1722	1808	749	0	xxxxx	xxxxx	1041	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	1718	1718	952	1722	1808	749	0	xxxxx	xxxxx	1041	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	99	90	315	71	80	415	1623	xxxxx	xxxxx	668	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	99	90	315	71	80	415	1623	xxxxx	xxxxx	668	xxxxx	xxxxx

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Jensen Road & Fig Lane

Cycle (sec):	100					Critical Vol./Cap.(X):						0.686				
Loss Time (sec):	12					Average Delay (sec/veh):						34.2				
Optimal Cycle:	58					Level Of Service:						C				
Street Name:	Fig Lane							Jensen Road								
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R				
Control:	Protected			Protected			Protected			Protected						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Lanes:	1	0 0	1 0	1	0 0	1 0	1	0 2	0 1	1	0 2	0 1				
Volume Module:	PM Peak Hour															
Base Vol:	41	0	28	0	0	0	0	303	60	29	266	0				
Growth 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				
Initial Bse:	41	0	28	0	0	0	0	303	60	29	266	0				
Added Vol:	131	146	24	398	161	21	10	112	56	152	202	129				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	172	146	52	398	161	21	10	415	116	181	468	129				
User 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				
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92				
PHF Volume:	187	159	57	433	175	23	11	451	126	197	509	140				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	187	159	57	433	175	23	11	451	126	197	509	140				
PCE 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				
MLF 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				
FinalVolume:	187	159	57	433	175	23	11	451	126	197	509	140				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.93	0.83	0.93	0.93	0.83				
Lanes:	1.00	0.74	0.26	1.00	0.88	0.12	1.00	2.00	1.00	1.00	2.00	1.00				
Final Sat.:	1769	1319	470	1769	1619	211	1769	3538	1583	1769	3538	1583				
Capacity Analysis Module:																
Vol/Sat:	0.11	0.12	0.12	0.24	0.11	0.11	0.01	0.13	0.08	0.11	0.14	0.09				
Crit Moves:		****		****				****		****						
Green/Cycle:	0.26	0.18	0.18	0.36	0.27	0.27	0.01	0.19	0.19	0.16	0.33	0.33				
Volume/Cap:	0.40	0.69	0.69	0.69	0.40	0.40	0.43	0.69	0.43	0.69	0.43	0.27				
Delay/Veh:	30.9	44.9	44.9	30.6	30.5	30.5	60.3	41.0	37.0	46.3	26.2	24.6				
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
AdjDel/Veh:	30.9	44.9	44.9	30.6	30.5	30.5	60.3	41.0	37.0	46.3	26.2	24.6				
LOS by Move:	C	D	D	C	C	C	E	D	D	D	C	C				
HCM2k95thQ:	242	355	355	553	252	252	45	380	190	335	313	160				

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #5 Jensen Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0 0	1 0	1	0 0	1 0	1	0 2	0 1	1	0 2	0 1
Lane Group:	L	RT	RT	L	RT	RT	L	T	R	L	T	R
#LnsInGrps:	1	1	1	1	1	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area 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
RT Adj:	xxxx	0.96	0.96	xxxx	0.98	0.98	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat 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
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.93	0.83	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

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Intersection #5 Jensen Road & Fig Lane

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.26	0.18	0.18	0.36	0.27	0.27	0.01	0.19	0.19	0.16	0.33	0.33
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	4.3	5.6	5.6	10.2	4.5	4.5	0.3	6.2	3.1	5.2	5.8	2.8
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.7	1.9	1.9	2.0	0.7	0.7	0.6	1.9	0.7	1.9	0.7	0.4
HCM2KQueue:	4.9	7.5	7.5	12.3	5.2	5.2	0.9	8.1	3.8	7.0	6.5	3.2
70th%Factor:	1.19	1.18	1.18	1.17	1.19	1.19	1.20	1.18	1.19	1.18	1.18	1.19
HCM2k70thQ:	5.9	8.9	8.9	14.4	6.1	6.1	1.0	9.5	4.6	8.3	7.7	3.8
85th%Factor:	1.55	1.53	1.53	1.50	1.55	1.55	1.59	1.53	1.56	1.54	1.54	1.57
HCM2k85thQ:	7.7	11.5	11.5	18.4	8.0	8.0	1.4	12.3	6.0	10.8	10.1	5.0
90th%Factor:	1.71	1.67	1.67	1.62	1.71	1.71	1.78	1.67	1.73	1.68	1.69	1.74
HCM2k90thQ:	8.5	12.6	12.6	19.8	8.8	8.8	1.6	13.5	6.6	11.8	11.0	5.6
95th%Factor:	1.96	1.90	1.90	1.80	1.95	1.95	2.07	1.88	1.99	1.91	1.92	2.00
HCM2k95thQ:	9.7	14.2	14.2	22.1	10.1	10.1	1.8	15.2	7.6	13.4	12.5	6.4
98th%Factor:	2.38	2.26	2.26	2.09	2.37	2.37	2.64	2.24	2.45	2.28	2.31	2.48
HCM2k98thQ:	11.8	17.0	17.0	25.6	12.3	12.3	2.3	18.1	9.3	16.0	15.1	8.0

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #6 Orestimba/Yolo St & Hardin Rd

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Cycle (sec):	100	Critical Vol./Cap.(X):	0.826
Loss Time (sec):	12	Average Delay (sec/veh):	24.5
Optimal Cycle:	0	Level Of Service:	C

****

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:	PM Peak Hour											
Base Vol:	43	3	10	3	5	16	12	382	58	10	333	3
Growth 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
Initial Bse:	43	3	10	3	5	16	12	382	58	10	333	3
Added Vol:	6	31	1	45	18	1	2	47	3	0	84	84
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	49	34	11	48	23	17	14	429	61	10	417	87
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	53	37	12	52	25	18	15	466	66	11	453	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	37	12	52	25	18	15	466	66	11	453	95
PCE 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
MLF 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
FinalVolume:	53	37	12	52	25	18	15	466	66	11	453	95
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.52	0.36	0.12	0.55	0.26	0.19	0.03	0.85	0.12	0.02	0.81	0.17
Final Sat.:	251	174	56	263	126	93	19	571	81	13	549	114
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.21	0.20	0.20	0.20	0.82	0.82	0.82	0.83	0.83	0.83
Crit Moves:		****			****			****			****	
Delay/Veh:	11.4	11.4	11.4	11.3	11.3	11.3	26.5	26.5	26.5	27.2	27.2	27.2
Delay 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
AdjDel/Veh:	11.4	11.4	11.4	11.3	11.3	11.3	26.5	26.5	26.5	27.2	27.2	27.2
LOS by Move:	B	B	B	B	B	B	D	D	D	D	D	D
ApproachDel:	11.4			11.3			26.5			27.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.4			11.3			26.5			27.2		
LOS by Appr:	B			B			D			D		
AllWayAvgQ:	5.4	5.4	5.4	5.0	5.0	5.0	84.6	84.6	84.6	88.8	88.8	88.8

****

Note: Queue reported is the distance per lane in feet.

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Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM 4-Way Stop Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	1			1			1			1		
P[C1]:	0.03			0.03			0.12			0.13		
P[C2]:	0.01			0.01			0.54			0.53		
P[C3]:	0.25			0.25			0.06			0.06		
P[C4]:	0.59			0.59			0.25			0.25		
P[C5]:	0.12			0.13			0.03			0.03		
Padj[C1]:	0.028			0.028			0.015			0.015		
Padj[C2]:	0.018			0.018			0.001			0.001		
Padj[C3]:	0.001			0.001			0.001			0.001		
Padj[C4]:	-0.034			-0.034			-0.015			-0.015		
Padj[C5]:	-0.012			-0.013			-0.003			-0.003		
Lane:	L1			L1			L1			L1		
LaneType:	LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE			LEFTTHRURITE		
HeadwayAdj:	0.068			0.027			-0.033			-0.064		
Volume:	102			96			548			559		
Capacity:	482			482			671			676		
DegOfUtil:	0.19			0.18			0.81			0.82		
DepHeadway:	6.81			6.79			5.29			5.25		
ServiceTime:	4.8			4.8			3.3			3.3		
Delay:	11.4			11.3			26.5			27.2		
Queue:	0.2			0.2			3.4			3.6		

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	11.4	11.3	26.5	27.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	11.4	11.3	26.5	27.2
LOS by Appr:	B	B	D	D

OverallDel: 24.5
OverallLOS: C

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0 1! 0	0	0	0 1! 0	0	0	0 1! 0	0	0	0 1! 0	0
Volume Module:	PM Peak Hour											
Base Vol:	107	108	81	24	151	39	31	247	147	78	215	20
Growth 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
Initial Bse:	107	108	81	24	151	39	31	247	147	78	215	20
Added Vol:	62	178	5	124	141	32	11	51	32	6	75	52
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	169	286	86	148	292	71	42	298	179	84	290	72
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	184	311	93	161	317	77	46	324	195	91	315	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	184	311	93	161	317	77	46	324	195	91	315	78
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1247	1089	421	1252	1147	354	393	xxxx	xxxxx	518	xxxx	xxxxx
Potent Cap.:	150	216	632	149	199	689	1165	xxxx	xxxxx	1048	xxxx	xxxxx
Move Cap.:	0	188	632	0	174	689	1165	xxxx	xxxxx	1048	xxxx	xxxxx
Volume/Cap:	xxxx	1.65	0.15	xxxx	1.83	0.11	0.04	xxxx	xxxx	0.09	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.1	xxxx	xxxxx	7.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	8.8	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

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Intersection #7 Fig Lane & Yolo Street

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #8 Stuhr & Harvey

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Cycle (sec): 100 Critical Vol./Cap.(X): 0.865
Loss Time (sec): 9 Average Delay (sec/veh): 30.0
Optimal Cycle: 87 Level Of Service: C

****

Street Name:	Harvey Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0	0	0	0	1	0	1	0	0
Volume Module:	PM Peak Hour											
Base Vol:	312	0	23	0	0	0	0	343	399	22	309	0
Growth 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
Initial Bse:	312	0	23	0	0	0	0	343	399	22	309	0
Added Vol:	41	0	9	0	0	0	0	37	47	26	20	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	353	0	32	0	0	0	0	380	446	48	329	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	384	0	35	0	0	0	0	413	485	52	358	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	384	0	35	0	0	0	0	413	485	52	358	0
PCE 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
MLF 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
FinalVolume:	384	0	35	0	0	0	0	413	485	52	358	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.91	0.91	0.93	0.98	1.00
Lanes:	0.92	0.00	0.08	0.00	0.00	0.00	0.00	0.46	0.54	1.00	1.00	0.00
Final Sat.:	1614	0	146	0	0	0	0	794	932	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.24	0.00	0.24	0.00	0.00	0.00	0.00	0.52	0.52	0.03	0.19	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.60	0.60	0.03	0.64	0.00
Volume/Cap:	0.87	0.00	0.87	0.00	0.00	0.00	0.00	0.87	0.87	0.87	0.30	0.00
Delay/Veh:	49.5	0.0	49.5	0.0	0.0	0.0	0.0	24.3	24.3	117.9	8.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.5	0.0	49.5	0.0	0.0	0.0	0.0	24.3	24.3	117.9	8.4	0.0
LOS by Move:	D	A	D	A	A	A	A	C	C	F	A	A
HCM2k95thQ:	671	0	671	0	0	0	0	1057	1057	176	240	0

****

Note: Queue reported is the distance per lane in feet.

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Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1!	0	0	0	0	0	0 1	0	1	0 1	0 0
Lane Group:	LTR			LTR			RT			L	T	
#LnsInGrps:	1			1			1			1	1	
HCM Ops Input Saturation Adj Module:												
Lane Width:	12			12			12			12		
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	xxxx		4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	0.99	xxxx	0.99	xxxx	xxxx	xxxxx	xxxx	0.93	0.93	xxxx	xxxx	xxxxx
LT Adj:	0.96	xxxx	0.96	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.91	0.91	0.93	0.98	1.00
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.91	0.91	0.93	0.98	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #8 Stuhr & Harvey

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.60	0.60	0.03	0.64	0.00
ArrivalType:	3			3			3			3		
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	11.1	0.0	11.1	0.0	0.0	0.0	0.0	20.7	20.7	1.4	4.5	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	4.2	0.0	4.2	0.0	0.0	0.0	0.0	5.0	5.0	2.1	0.4	0.0
HCM2KQueue:	15.3	0.0	15.3	0.0	0.0	0.0	0.0	25.7	25.7	3.5	4.9	0.0
70th%Factor:	1.17	1.20	1.17	1.20	1.20	1.20	1.20	1.15	1.15	1.19	1.19	1.20
HCM2k70thQ:	17.9	0.0	17.9	0.0	0.0	0.0	0.0	29.6	29.6	4.2	5.8	0.0
85th%Factor:	1.48	1.60	1.48	1.60	1.60	1.60	1.60	1.43	1.43	1.57	1.55	1.60
HCM2k85thQ:	22.6	0.0	22.6	0.0	0.0	0.0	0.0	36.7	36.7	5.5	7.6	0.0
90th%Factor:	1.59	1.80	1.59	1.80	1.80	1.80	1.80	1.51	1.51	1.74	1.71	1.80
HCM2k90thQ:	24.2	0.0	24.2	0.0	0.0	0.0	0.0	38.9	38.9	6.1	8.4	0.0
95th%Factor:	1.76	2.10	1.76	2.10	2.10	2.10	2.10	1.64	1.64	1.99	1.96	2.10
HCM2k95thQ:	26.9	0.0	26.9	0.0	0.0	0.0	0.0	42.3	42.3	7.1	9.6	0.0
98th%Factor:	2.01	2.70	2.01	2.70	2.70	2.70	2.70	1.84	1.84	2.46	2.39	2.70
HCM2k98thQ:	30.7	0.0	30.7	0.0	0.0	0.0	0.0	47.3	47.3	8.7	11.7	0.0

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Stuhr Road & Fig Lane

Cycle (sec):	100	Critical Vol./Cap.(X):	0.454
Loss Time (sec):	9	Average Delay (sec/veh):	16.6
Optimal Cycle:	32	Level Of Service:	B

Street Name:	Fig Lane						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 0 1 0			1 0 1 0 0		
Volume Module: PM Peak Hour												
Base Vol:	0	0	0	0	0	0	0	367	0	0	319	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	367	0	0	319	0
Added Vol:	24	0	109	0	0	0	0	51	15	116	22	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	0	109	0	0	0	0	418	15	116	341	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	26	0	118	0	0	0	0	454	16	126	371	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	0	118	0	0	0	0	454	16	126	371	0
PCE 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
MLF 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
FinalVolume:	26	0	118	0	0	0	0	454	16	126	371	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	1.00	0.86	1.00	1.00	1.00	1.00	0.98	0.98	0.93	0.98	1.00
Lanes:	0.18	0.00	0.82	0.00	0.00	0.00	0.00	0.97	0.03	1.00	1.00	0.00
Final Sat.:	296	0	1344	0	0	0	0	1789	64	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.09	0.00	0.09	0.00	0.00	0.00	0.00	0.25	0.25	0.07	0.20	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.19	0.00	0.19	0.00	0.00	0.00	0.00	0.56	0.56	0.16	0.72	0.00
Volume/Cap:	0.45	0.00	0.45	0.00	0.00	0.00	0.00	0.45	0.45	0.45	0.28	0.00
Delay/Veh:	36.7	0.0	36.7	0.0	0.0	0.0	0.0	13.3	13.3	39.5	5.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.7	0.0	36.7	0.0	0.0	0.0	0.0	13.3	13.3	39.5	5.1	0.0
LOS by Move:	D	A	D	A	A	A	A	B	B	D	A	A
HCM2k95thQ:	214	0	214	0	0	0	0	400	400	197	200	0

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #9 Stuhr Road & Fig Lane

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 0 1 0			1 0 1 0 0		
Lane Group:	LTR	LTR	LTR	xxxx	xxxx	xxxx	xxxx	RT	RT	L	T	xxxx
#LnsInGrps:	1	1	1	0	0	0	0	1	1	1	1	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	xxxx	4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	0.89	xxxx	0.89	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
LT Adj:	0.99	xxxx	0.99	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.86	1.00	0.86	1.00	1.00	1.00	1.00	0.98	0.98	0.93	0.98	1.00
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.86	1.00	0.86	1.00	1.00	1.00	1.00	0.98	0.98	0.93	0.98	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

****

Intersection #9 Stuhr Road & Fig Lane

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.19	0.00	0.19	0.00	0.00	0.00	0.00	0.56	0.56	0.16	0.72	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	3.5	0.0	3.5	0.0	0.0	0.0	0.0	7.7	7.7	3.2	3.7	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.4	0.0
HCM2KQueue:	4.4	0.0	4.4	0.0	0.0	0.0	0.0	8.5	8.5	4.0	4.0	0.0
70th%Factor:	1.19	1.20	1.19	1.20	1.20	1.20	1.20	1.18	1.18	1.19	1.19	1.20
HCM2k70thQ:	5.2	0.0	5.2	0.0	0.0	0.0	0.0	10.1	10.1	4.7	4.8	0.0
85th%Factor:	1.56	1.60	1.56	1.60	1.60	1.60	1.60	1.53	1.53	1.56	1.56	1.60
HCM2k85thQ:	6.8	0.0	6.8	0.0	0.0	0.0	0.0	13.0	13.0	6.2	6.3	0.0
90th%Factor:	1.72	1.80	1.72	1.80	1.80	1.80	1.80	1.66	1.66	1.73	1.73	1.80
HCM2k90thQ:	7.5	0.0	7.5	0.0	0.0	0.0	0.0	14.2	14.2	6.9	7.0	0.0
95th%Factor:	1.97	2.10	1.97	2.10	2.10	2.10	2.10	1.87	1.87	1.98	1.98	2.10
HCM2k95thQ:	8.6	0.0	8.6	0.0	0.0	0.0	0.0	16.0	16.0	7.9	8.0	0.0
98th%Factor:	2.42	2.70	2.42	2.70	2.70	2.70	2.70	2.22	2.22	2.44	2.43	2.70
HCM2k98thQ:	10.5	0.0	10.5	0.0	0.0	0.0	0.0	19.0	19.0	9.7	9.8	0.0

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #13 Stuhr Road & Collector Rd B

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Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[11.2]

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Street Name:	Collector Rd B						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0 0 1	0	0	0 0 0	0	0	1 0 1	0	0	1 0 0
Volume Module:	PM Peak Hour											
Base Vol:	0	0	0	0	0	0	0	367	0	0	319	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	367	0	0	319	0
Added Vol:	0	0	47	0	0	0	0	20	26	0	46	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	47	0	0	0	0	387	26	0	365	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	51	0	0	0	0	421	28	0	397	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	51	0	0	0	0	421	28	0	397	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	421	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	633	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	633	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	6.6	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	11.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.2			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

****

Note: Queue reported is the distance per lane in feet.

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Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

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Intersection #13 Stuhr Road & Collector Rd B

****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	2%	2%	2%	2%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

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Intersection #14 Jensen Road & Collector Rd B

****

Average Delay (sec/veh): 3.8 Level Of Service: A

****

Street Name:	Collector Rd B						Jensen Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			2		
Volume Module:PM Peak Hour												
Base Vol:	0	0	0	0	0	0	0	355	0	0	309	0
Growth 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
Initial Bse:	0	0	0	0	0	0	0	355	0	0	309	0
Added Vol:	9	82	29	72	47	3	4	76	7	50	150	149
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	82	29	72	47	3	4	431	7	50	459	149
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	10	89	32	78	51	3	4	468	8	54	499	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	89	32	78	51	3	4	468	8	54	499	162
PCE 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
MLF 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
FinalVolume:	10	89	32	78	51	3	4	468	8	54	499	162
PCE Module:												
AutoPCE:	10	89	32	78	51	3	4	468	8	54	499	162
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	10	89	32	78	51	3	4	468	8	54	499	162
Delay Module: >> Time Period: 0.25 hours <<												
CircVolume:	551			563			184			103		
MaxVolume:	902			896			1101			2350		
PedVolume:	0			0			0			0		
AdjMaxVol:	902			896			1101			2350		
ApproachVol:	130			133			480			715		
ApproachV/C:	0.14			0.15			0.44			0.30		
ApproachDel:	4.7			4.7			5.8			2.2		
ApproachLOS:	A			A			A			A		
Queue:	0.5			0.5			2.3			1.3		

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Stuhr & Eastin

Average Delay (sec/veh): 43.6 Worst Case Level Of Service: F[680.0]

Street Name:	Eastin Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module: PM Peak Hour												
Base Vol:	12	43	16	10	41	4	30	874	18	7	760	3
Growth 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
Initial Bse:	12	43	16	10	41	4	30	874	18	7	760	3
Added Vol:	0	0	0	0	0	0	0	82	0	0	57	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	43	16	10	41	4	30	956	18	7	817	3
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	13	47	17	11	45	4	33	1039	20	8	888	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	13	47	17	11	45	4	33	1039	20	8	888	3
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	2043	2021	1049	2051	2029	890	891	xxxx	xxxxx	1059	xxxx	xxxxx
Potent Cap.:	42	58	276	41	57	342	761	xxxx	xxxxx	658	xxxx	xxxxx
Move Cap.:	12	55	276	10	54	342	761	xxxx	xxxxx	658	xxxx	xxxxx
Volume/Cap:	1.05	0.85	0.06	1.04	0.82	0.01	0.04	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.4	xxxx	xxxxx	0.9	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.9	xxxx	xxxxx	10.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	39	xxxxx	xxxx	32	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	8.2	xxxxx	xxxxx	6.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	670	xxxxx	xxxxx	680	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	F	*	*	*	*	*	*	*
ApproachDel:	670.3			680.0			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #15 Stuhr & Eastin

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative Plus Project PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #16 Stuhr & Villa Manucha

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: B[12.5]

Street Name:	Villa Manucha Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module: PM Peak Hour												
Base Vol:	0	0	0	2	0	140	73	281	0	0	244	3
Growth 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
Initial Bse:	0	0	0	2	0	140	73	281	0	0	244	3
Added Vol:	0	0	0	0	0	0	0	142	0	0	123	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	140	73	423	0	0	367	3
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	2	0	152	79	460	0	0	399	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	2	0	152	79	460	0	0	399	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1019	1019	401	402	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	263	237	649	1156	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	248	220	649	1156	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	0.00	0.23	0.07	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	5.5	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	635	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.9	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	12.5	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			12.5			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #16 Stuhr & Villa Manucha

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:							#91					
Dist(miles):							0.250					
Speed (mph):							1.00					
SignalIndex:							#1					
Cycle Time:							100 secs					
InitVolume:							83	274				
Saturation:							1612	969				
ArrivalType:							3	3				
G/C:							0.09	0.36				
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:							0.094	0.356				
gq1:							4.67	18.21				
gq2:							0.25	7.18				
gq:							4.92	25.39				
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:							0.550					
beta:							0.645					
ta (secs):							900.000					
F:							0.003					
f:							1.000	1.000				
vcmax:							25	74				
vcg:							25	80				
vcmin:							1000	1000				
tp:							0.0	0.0				
p:							0.000					
*** Computation 3: Platoon Event Periods												
pdom/psubo:							0.000/0.000/Unconstrained					
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	1095	1021	460	1019	1019	401	402	xxxxx	xxxxx	0	xxxxx	xxxxx
AdjCnflVol:	1095	1021	460	1019	1019	401	402	xxxxx	xxxxx	0	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
ConflictVol:	1095	1021	460	1019	1019	401	402	xxxxx	xxxxx	0	xxxxx	xxxxx
*** Computation 5: Capacity for Subject Movement During Unblocked Period												
InitPotCap:	191	236	601	263	237	649	1156	xxxxx	xxxxx	1623	xxxxx	xxxxx
UpstreamAdj:	1.00	1.000	1.000	1.00	1.000	1.000	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx
Potent Cap.:	191	236	601	263	237	649	1156	xxxxx	xxxxx	1623	xxxxx	xxxxx

Cumulative Plus Project PM Peak Hour

Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound -- T	Northbound -- R	Southbound L	Southbound -- T	Southbound -- R	Eastbound L	Eastbound -- T	Eastbound -- R	Westbound L	Westbound -- T	Westbound -- R
#4	[2Way95thQ]:	270	270	270	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1.0	1.0	xxxx
#5	[HCM2k95thQ]:	242	355	355	553	252	252	45	380	190	335	313	160
#6	[AllWayAvgQ]	5.4	5.4	5.4	5.0	5.0	5.0	84.6	84.6	84.6	88.8	88.8	88.8
#7	[2Way95thQ]:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.1	xxxx	xxxx	7.1	xxxx	xxxx
#8	[HCM2k95thQ]:	671	0	671	0	0	0	0	1057	1057	176	240	0
#9	[HCM2k95thQ]:	214	0	214	0	0	0	0	400	400	197	200	0
#13	[2Way95thQ]:	xxxx	xxxx	6.6	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#14	[DesignQueue]:	0	13	0	0	13	0	0	56	0	0	33	0
#15	[2Way95thQ]:	206	206	206	170	170	170	3.4	xxxx	xxxx	0.9	xxxx	xxxx
#16	[2Way95thQ]:	xxxx	xxxx	xxxx	23.7	23.7	23.7	5.5	5.5	xxxx	xxxx	xxxx	xxxx

LEVEL OF SERVICE CALCULATION WORKSHEETS

CUMULATIVE PLUS PROJECT WITH RECOMMENDED IMPROVEMENTS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	112	204	88	165	51	253	834	92	32	619	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	171.2	190.0	186.3	171.9	190.0
Adj Flow Rate, veh/h	114	135	246	106	199	61	305	1005	111	39	746	130
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	134	127	231	112	276	85	343	1453	160	52	912	159
Arrive On Green	0.08	0.21	0.21	0.06	0.20	0.20	0.19	0.49	0.49	0.03	0.33	0.33
Sat Flow, veh/h	1774	593	1080	1774	1369	420	1774	2954	326	1774	2782	485
Grp Volume(v), veh/h	114	0	381	106	0	260	305	553	563	39	438	438
Grp Sat Flow(s),veh/h/ln	1774	0	1672	1774	0	1789	1774	1626	1654	1774	1633	1634
Q Serve(g_s), s	5.0	0.0	17.0	4.7	0.0	10.8	13.3	20.8	20.8	1.7	19.5	19.6
Cycle Q Clear(g_c), s	5.0	0.0	17.0	4.7	0.0	10.8	13.3	20.8	20.8	1.7	19.5	19.6
Prop In Lane	1.00		0.65	1.00		0.23	1.00		0.20	1.00		0.30
Lane Grp Cap(c), veh/h	134	0	358	112	0	361	343	800	814	52	535	535
V/C Ratio(X)	0.85	0.00	1.06	0.95	0.00	0.72	0.89	0.69	0.69	0.76	0.82	0.82
Avail Cap(c_a), veh/h	134	0	358	112	0	361	358	800	814	89	535	535
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	36.2	0.0	31.2	37.0	0.0	29.6	31.2	15.5	15.5	38.2	24.5	24.5
Incr Delay (d2), s/veh	37.4	0.0	65.3	68.6	0.0	6.9	22.3	4.9	4.8	19.8	13.0	13.1
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(50%),veh/ln	3.9	0.0	14.3	4.4	0.0	6.0	8.7	10.3	10.5	1.1	10.7	10.7
LnGrp Delay(d),s/veh	73.6	0.0	96.5	105.7	0.0	36.5	53.5	20.4	20.3	58.1	37.5	37.6
LnGrp LOS	F		F	F		D	D	C	C	F	D	D
Approach Vol, veh/h		495			366			1421			915	
Approach Delay, s/veh		91.2			56.5			27.5			38.4	
Approach LOS		F			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	43.0	9.0	21.0	19.3	30.0	10.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	38.0	5.0	17.0	16.0	26.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	3.7	22.8	6.7	19.0	15.3	21.6	7.0	12.8
Green Ext Time (p_c), s	0.0	11.0	0.0	0.0	0.1	3.8	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	43.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	47	13	912	71	356	16	878	912	210	640	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	186.3	186.3	169.6	186.3	186.3	169.8	190.0
Adj Flow Rate, veh/h	5	57	16	1112	87	434	20	1071	0	256	780	6
Adj No. of Lanes	1	1	0	2	1	1	1	2	1	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	2	2	12	12
Cap, veh/h	9	92	26	1128	723	615	27	1124	552	260	1574	12
Arrive On Green	0.01	0.07	0.07	0.33	0.39	0.39	0.02	0.35	0.00	0.15	0.48	0.48
Sat Flow, veh/h	1774	1400	393	3442	1863	1583	1774	3223	1583	1774	3281	25
Grp Volume(v), veh/h	5	0	73	1112	87	434	20	1071	0	256	383	403
Grp Sat Flow(s),veh/h/ln	1774	0	1793	1721	1863	1583	1774	1612	1583	1774	1613	1693
Q Serve(g_s), s	0.4	0.0	5.7	46.0	4.3	33.1	1.6	46.5	0.0	20.6	23.3	23.3
Cycle Q Clear(g_c), s	0.4	0.0	5.7	46.0	4.3	33.1	1.6	46.5	0.0	20.6	23.3	23.3
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	9	0	117	1128	723	615	27	1124	552	260	774	812
V/C Ratio(X)	0.56	0.00	0.62	0.99	0.12	0.71	0.74	0.95	0.00	0.99	0.50	0.50
Avail Cap(c_a), veh/h	49	0	200	1128	766	651	62	1124	552	260	774	812
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	0.0	65.3	47.9	28.1	37.0	70.3	45.5	0.0	61.0	25.5	25.5
Incr Delay (d2), s/veh	45.0	0.0	5.3	23.3	0.1	3.3	31.5	17.7	0.0	51.6	2.3	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(50%),veh/ln	0.3	0.0	3.0	25.4	2.2	15.0	1.0	23.4	0.0	13.8	10.8	11.3
LnGrp Delay(d),s/veh	116.2	0.0	70.5	71.2	28.2	40.2	101.8	63.2	0.0	112.6	27.7	27.6
LnGrp LOS	F		F	F	C	D	F	F		F	C	C
Approach Vol, veh/h		78			1633			1091			1042	
Approach Delay, s/veh		73.5			60.7			63.9			48.5	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	54.0	51.0	13.4	6.2	72.8	4.7	59.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	50.0	47.0	16.0	5.0	66.0	4.0	59.0
Max Q Clear Time (g_c+I1), s	22.6	48.5	48.0	7.7	3.6	25.3	2.4	35.1
Green Ext Time (p_c), s	0.0	1.3	0.0	1.7	0.0	19.5	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	58.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	469	4	140	3	1	1	184	1604	1	1	1157	550
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	190.0	186.3	190.0	186.3	169.7	190.0	186.3	169.6	186.3
Adj Flow Rate, veh/h	572	5	171	4	1	1	224	1956	1	1	1411	671
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	2
Cap, veh/h	416	15	523	274	69	59	218	1780	1	55	1438	706
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.12	0.54	0.54	0.03	0.45	0.45
Sat Flow, veh/h	1409	45	1545	674	203	175	1774	3306	2	1774	3223	1583
Grp Volume(v), veh/h	572	0	176	6	0	0	224	953	1004	1	1411	671
Grp Sat Flow(s),veh/h/ln	1409	0	1590	1052	0	0	1774	1612	1696	1774	1612	1583
Q Serve(g_s), s	33.3	0.0	10.7	0.0	0.0	0.0	16.0	70.0	70.0	0.1	56.1	53.0
Cycle Q Clear(g_c), s	44.0	0.0	10.7	10.7	0.0	0.0	16.0	70.0	70.0	0.1	56.1	53.0
Prop In Lane	1.00		0.97	0.67		0.17	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	416	0	538	402	0	0	218	868	913	55	1438	706
V/C Ratio(X)	1.38	0.00	0.33	0.01	0.00	0.00	1.03	1.10	1.10	0.02	0.98	0.95
Avail Cap(c_a), veh/h	416	0	538	402	0	0	218	868	913	55	1438	706
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	32.0	28.9	0.0	0.0	57.0	30.0	30.0	61.1	35.5	34.6
Incr Delay (d2), s/veh	183.6	0.0	0.4	0.0	0.0	0.0	67.8	61.1	60.6	0.1	19.7	23.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	36.1	0.0	4.7	0.1	0.0	0.0	11.9	45.6	47.8	0.0	28.8	27.7
LnGrp Delay(d),s/veh	234.2	0.0	32.3	28.9	0.0	0.0	124.9	91.1	90.6	61.2	55.1	58.2
LnGrp LOS	F		C	C			F	F	F	F	F	F
Approach Vol, veh/h		748			6			2181			2083	
Approach Delay, s/veh		186.7			28.9			94.3			56.1	
Approach LOS		F			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	74.0		48.0	20.0	62.0		48.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	70.0		44.0	16.0	58.0		44.0
Max Q Clear Time (g_c+I1), s	2.1	72.0		46.0	18.0	58.1		12.7
Green Ext Time (p_c), s	1.7	0.0		0.0	0.0	0.0		3.2

Intersection Summary	
HCM 2010 Ctrl Delay	92.2
HCM 2010 LOS	F

Cumulative No Project AM Peak Hour
With Recommended Improvements

Scenario Report

Scenario:	Cumul No Proj AM
Command:	Cumul No Proj AM
Volume:	Cumul No Prj AM
Geometry:	Cumul No Proj
Impact Fee:	Default Impact Fee
Trip Generation:	AM Pk Hr
Trip Distribution:	AM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Cumulative No Project AM Peak Hour
With Recommended Improvements

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 4 Stuhr Road & Draper Road	C	24.3	0.853	C	24.3	0.853	+ 0.000 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	7.0	0.528	A	7.0	0.528	+ 0.000 D/V
# 7 Fig Lane & Yolo Street	B	16.8	0.773	B	16.8	0.773	+ 0.000 D/V

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Cycle (sec):	60	Critical Vol./Cap.(X):	0.853
Loss Time (sec):	9	Average Delay (sec/veh):	24.3
Optimal Cycle:	68	Level Of Service:	C

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	0 1	1	0 1	0 0
Volume Module:	AM Peak Hour											
Base Vol:	557	0	71	0	0	0	0	338	435	61	455	0
Growth 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
Initial Bse:	557	0	71	0	0	0	0	338	435	61	455	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	605	0	77	0	0	0	0	367	473	66	495	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	605	0	77	0	0	0	0	367	473	66	495	0
PCE 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
MLF 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
FinalVolume:	605	0	77	0	0	0	0	367	473	66	495	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.98	0.83	0.93	0.98	1.00
Lanes:	0.89	0.00	0.11	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	1558	0	199	0	0	0	0	1862	1583	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.39	0.00	0.39	0.00	0.00	0.00	0.00	0.20	0.30	0.04	0.27	0.00
Crit Moves:	****								****	****		
Green/Cycle:	0.46	0.00	0.46	0.00	0.00	0.00	0.00	0.35	0.35	0.04	0.39	0.00
Volume/Cap:	0.85	0.00	0.85	0.00	0.00	0.00	0.00	0.56	0.85	0.85	0.67	0.00
Delay/Veh:	23.3	0.0	23.3	0.0	0.0	0.0	0.0	16.9	30.2	84.1	17.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.3	0.0	23.3	0.0	0.0	0.0	0.0	16.9	30.2	84.1	17.5	0.0
LOS by Move:	C	A	C	A	A	A	A	B	C	F	B	A
HCM2k95thQ:	644	0	644	0	0	0	0	298	519	81	362	0

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	0 1	1	0 1	0 0
Lane Group:	LTR			LTR	xxxx xxxx		xxxx	xxxx	T	R	L	T	xxxx
#LnsInGrps:	1			1	0		0	0	1	1	1	1	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12			12	12		12	12		12	12		12
CrsswalkWid:	8			8			8			8			
% Hev Veh:	2			0			2			2			
Grade:	0%			0%			0%			0%			
Parking/Hr:	No			No			No			No			
Bus Stp/Hr:	0			0			0			0			
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >												
Cnft Ped/Hr:	0			0			0			0			
ExclusiveRT:	Include			Include			Include			Include			
% RT Prtct:	0			0			0			0			
HCM Ops f(lt) Adj Case Module:													
f(lt) Case:	4	xxxx		4	xxxx xxxx		xxxx	xxxx xxxx		xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:													
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx xxxxx		xxxx	1.00	1.00	1.00	1.00	xxxxx	
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx xxxxx		xxxx	0.98	0.98	0.98	0.98	xxxxx	
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx xxxxx		xxxx	1.00	1.00	1.00	1.00	xxxxx	
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx xxxxx		xxxx	xxxx	1.00	xxxx	1.00	xxxxx	
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx xxxxx		xxxx	xxxx	1.00	xxxx	1.00	xxxxx	
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx xxxxx		xxxx	1.00	1.00	1.00	1.00	xxxxx	
RT Adj:	0.99	xxxx	0.99	xxxx	xxxx xxxxx		xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	
LT Adj:	0.96	xxxx	0.96	xxxx	xxxx xxxxx		xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	
PedBike 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	
HCM Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.98	0.83	0.93	0.98	1.00	
Usr Sat 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	
MLF Sat 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	
Fnl Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.98	0.83	0.93	0.98	1.00	
Delay Adjustment Factor Module:													
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >												
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >												
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.46	0.00	0.46	0.00	0.00	0.00	0.00	0.35	0.35	0.04	0.39	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	10.1	0.0	10.1	0.0	0.0	0.0	0.0	5.0	7.3	1.1	6.8	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.95	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.11	0.43	0.00
Q2:	4.4	0.0	4.4	0.0	0.0	0.0	0.0	1.2	4.1	0.5	0.9	0.0
HCM2KQueue:	14.6	0.0	14.6	0.0	0.0	0.0	0.0	6.2	11.4	1.6	7.7	0.0
70th%Factor:	1.17	1.20	1.17	1.20	1.20	1.20	1.20	1.19	1.18	1.20	1.18	1.20
HCM2k70thQ:	17.0	0.0	17.0	0.0	0.0	0.0	0.0	7.4	13.4	1.9	9.1	0.0
85th%Factor:	1.48	1.60	1.48	1.60	1.60	1.60	1.60	1.54	1.51	1.58	1.53	1.60
HCM2k85thQ:	21.6	0.0	21.6	0.0	0.0	0.0	0.0	9.6	17.2	2.5	11.7	0.0
90th%Factor:	1.59	1.80	1.59	1.80	1.80	1.80	1.80	1.69	1.63	1.77	1.67	1.80
HCM2k90thQ:	23.2	0.0	23.2	0.0	0.0	0.0	0.0	10.5	18.6	2.8	12.8	0.0
95th%Factor:	1.77	2.10	1.77	2.10	2.10	2.10	2.10	1.93	1.82	2.05	1.89	2.10
HCM2k95thQ:	25.8	0.0	25.8	0.0	0.0	0.0	0.0	11.9	20.8	3.2	14.5	0.0
98th%Factor:	2.03	2.70	2.03	2.70	2.70	2.70	2.70	2.32	2.12	2.59	2.25	2.70
HCM2k98thQ:	29.5	0.0	29.5	0.0	0.0	0.0	0.0	14.4	24.2	4.1	17.3	0.0

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.528
Loss Time (sec): 9 Average Delay (sec/veh): 7.0
Optimal Cycle: 60 Level Of Service: A

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0 0 1	0	0	1! 0	0	0	1! 0 0
Volume Module:	AM Peak Hour											
Base Vol:	116	2	8	1	1	11	13	481	90	6	623	1
Growth 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
Initial Bse:	116	2	8	1	1	11	13	481	90	6	623	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	126	2	9	1	1	12	14	523	98	7	677	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	126	2	9	1	1	12	14	523	98	7	677	1
PCE 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
MLF 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
FinalVolume:	126	2	9	1	1	12	14	523	98	7	677	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.86	0.86	0.93	0.84	0.84	0.95	0.95	0.95	0.98	0.98	0.98
Lanes:	1.00	0.20	0.80	1.00	0.08	0.92	0.02	0.83	0.15	0.01	0.98	0.01
Final Sat.:	1769	328	1311	1769	134	1471	40	1480	277	18	1834	3
Capacity Analysis Module:												
Vol/Sat:	0.07	0.01	0.01	0.00	0.01	0.01	0.35	0.35	0.35	0.37	0.37	0.37
Crit Moves:	****				****						****	
Green/Cycle:	0.14	0.14	0.14	0.01	0.02	0.02	0.70	0.70	0.70	0.70	0.70	0.70
Volume/Cap:	0.53	0.05	0.05	0.05	0.53	0.53	0.50	0.50	0.50	0.53	0.53	0.53
Delay/Veh:	26.4	22.5	22.5	30.1	49.0	49.0	4.5	4.5	4.5	4.7	4.7	4.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.4	22.5	22.5	30.1	49.0	49.0	4.5	4.5	4.5	4.7	4.7	4.7
LOS by Move:	C	C	C	C	D	D	A	A	A	A	A	A
HCM2k95thQ:	151	11	11	4	49	49	286	286	286	313	313	313

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LTR	LTR	LTR
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	5	5	5	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Area 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
RT Adj:	xxxx	0.88	0.88	xxxx	0.86	0.86	0.98	0.98	0.98	1.00	1.00	1.00
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.99	0.99	0.99	1.00	1.00	1.00
PedBike 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
HCM Sat Adj:	0.93	0.86	0.86	0.93	0.84	0.84	0.95	0.95	0.95	0.98	0.98	0.98
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.93	0.86	0.86	0.93	0.84	0.84	0.95	0.95	0.95	0.98	0.98	0.98
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	60	60
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	40.98	40.98
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	41.98	41.98
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	41.98	41.98
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	1	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	1	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	14	7
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	0.02	0.01
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	0.01	0.02
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	0.24	0.11
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	685	635
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	11.42	10.58
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	1.00	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	3.00	3.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	25.98	30.12
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	0.30	0.30
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	5.82	5.33
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	16.00	11.86
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	0.00	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	0.99	0.98
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	xxxxxx	xxxxxx	2.76	2.61
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	1.00	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	0.05	0.05
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	0.99	1.00
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	0.99	1.00

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.14	0.14	0.14	0.01	0.02	0.02	0.70	0.70	0.70	0.70	0.70	0.70
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	2.0	0.2	0.2	0.0	0.2	0.2	4.9	4.9	4.9	5.4	5.4	5.4
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	1.0	0.1	0.1	0.0	0.7	0.7	1.0	1.0	1.0	1.1	1.1	1.1
HCM2KQueue:	3.0	0.2	0.2	0.1	1.0	1.0	5.9	5.9	5.9	6.5	6.5	6.5
70th%Factor:	1.19	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.18	1.18	1.18
HCM2k70thQ:	3.6	0.2	0.2	0.1	1.1	1.1	7.0	7.0	7.0	7.7	7.7	7.7
85th%Factor:	1.57	1.60	1.60	1.60	1.59	1.59	1.55	1.55	1.55	1.54	1.54	1.54
HCM2k85thQ:	4.7	0.3	0.3	0.1	1.5	1.5	9.2	9.2	9.2	10.1	10.1	10.1
90th%Factor:	1.74	1.80	1.80	1.80	1.78	1.78	1.70	1.70	1.70	1.69	1.69	1.69
HCM2k90thQ:	5.2	0.4	0.4	0.1	1.7	1.7	10.1	10.1	10.1	11.0	11.0	11.0
95th%Factor:	2.01	2.09	2.09	2.10	2.07	2.07	1.93	1.93	1.93	1.92	1.92	1.92
HCM2k95thQ:	6.0	0.4	0.4	0.1	2.0	2.0	11.4	11.4	11.4	12.5	12.5	12.5
98th%Factor:	2.49	2.68	2.68	2.69	2.63	2.63	2.33	2.33	2.33	2.30	2.30	2.30
HCM2k98thQ:	7.5	0.6	0.6	0.2	2.5	2.5	13.8	13.8	13.8	15.1	15.1	15.1

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Cycle (sec):	60	Critical Vol./Cap.(X):	0.773
Loss Time (sec):	6	Average Delay (sec/veh):	16.8
Optimal Cycle:	60	Level Of Service:	B

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:	AM Peak Hour											
Base Vol:	164	162	95	26	113	55	52	321	132	84	436	40
Growth 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
Initial Bse:	164	162	95	26	113	55	52	321	132	84	436	40
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	178	176	103	28	123	60	57	349	143	91	474	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	178	176	103	28	123	60	57	349	143	91	474	43
PCE 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
MLF 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
FinalVolume:	178	176	103	28	123	60	57	349	143	91	474	43
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.76	0.76	0.76	0.87	0.87	0.87	0.87	0.87	0.87	0.85	0.85	0.85
Lanes:	0.39	0.38	0.23	0.13	0.59	0.28	0.10	0.64	0.26	0.15	0.78	0.07
Final Sat.:	562	555	326	221	961	468	169	1046	430	241	1251	115
Capacity Analysis Module:												
Vol/Sat:	0.32	0.32	0.32	0.13	0.13	0.13	0.33	0.33	0.33	0.38	0.38	0.38
Crit Moves:		****									****	
Green/Cycle:	0.41	0.41	0.41	0.41	0.41	0.41	0.49	0.49	0.49	0.49	0.49	0.49
Volume/Cap:	0.77	0.77	0.77	0.31	0.31	0.31	0.68	0.68	0.68	0.77	0.77	0.77
Delay/Veh:	21.5	21.5	21.5	12.2	12.2	12.2	14.1	14.1	14.1	17.3	17.3	17.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.5	21.5	21.5	12.2	12.2	12.2	14.1	14.1	14.1	17.3	17.3	17.3
LOS by Move:	C	C	C	B	B	B	B	B	B	B	B	B
HCM2k95thQ:	440	440	440	142	142	142	420	420	420	515	515	515

Note: Queue reported is the distance per lane in feet.

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Lane Group:	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	5	5	5	5	5	5	5	5	5	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking 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
Bus Stp 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
Area 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
RT Adj:	0.97	0.97	0.97	0.96	0.96	0.96	0.97	0.97	0.97	0.99	0.99	0.99
LT Adj:	0.80	0.80	0.80	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87
PedBike 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
HCM Sat Adj:	0.76	0.76	0.76	0.87	0.87	0.87	0.87	0.87	0.87	0.85	0.85	0.85
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.76	0.76	0.76	0.87	0.87	0.87	0.87	0.87	0.87	0.85	0.85	0.85
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North	South	East	West
Cycle Length, C:	60	60	60	60
Actual Green Time Per Lane Group, G:	23.61	23.61	28.39	28.39
Effective Green Time Per Lane Group, g:	24.61	24.61	29.39	29.39
Opposing Effective Green Time, go:	24.61	24.61	29.39	29.39
Number Of Opposing Lanes, No:	1	1	1	1
Number Of Lanes In Lane Group, N:	1	1	1	1
Adjusted Left-Turn Flow Rate, Vlt:	178	28	57	91
Proportion of Left Turns in Lane Group, Plt:	0.39	0.13	0.10	0.15
Proportion of Left Turns in Opp Flow, Plto:	0.13	0.39	0.15	0.10
Left Turns Per Cycle, LTC:	2.97	0.47	0.94	1.52
Adjusted Opposing Flow Rate, Vo:	211	458	609	549
Opposing Flow Per Lane Per Cycle, Volc:	3.52	7.63	10.15	9.15
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00
Lost Time Per Phase, tl:	3.00	3.00	3.00	3.00
Eff grn until arrival of left-turn car, gf:	1.29	10.82	9.40	6.26
Opposing Queue Ratio, qro:	0.59	0.59	0.51	0.51
Eff grn blocked by opposing queue, gq:	4.36	10.28	11.15	10.08
Eff grn while left turns filter thru, gu:	20.25	13.79	18.24	19.31
Max opposing cars arriving during gq-gf, n:	1.54	0.00	0.88	1.91
Proportion of Opposing Thru & RT cars, ptho:	0.87	0.61	0.85	0.90
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	1.72	2.22	2.53	2.40
Single Lane Through-car Equivalents, el2:	1.48	1.00	1.00	1.82
Minimum Left Turn Adjustment Factor, fmin:	0.11	0.09	0.08	0.08
Single Lane Left Turn Adjustment Factor, fm:	0.80	0.92	0.92	0.87
Left Turn Adjustment Factor, flt:	0.80	0.92	0.92	0.87

Cumulative No Project AM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #7 Fig Lane & Yolo Street

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.41	0.41	0.41	0.41	0.41	0.41	0.49	0.49	0.49	0.49	0.49	0.49
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	6.6	6.6	6.6	2.4	2.4	2.4	7.0	7.0	7.0	8.3	8.3	8.3
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	2.9	2.9	2.9	0.4	0.4	0.4	2.0	2.0	2.0	3.0	3.0	3.0
HCM2KQueue:	9.5	9.5	9.5	2.8	2.8	2.8	9.0	9.0	9.0	11.3	11.3	11.3
70th%Factor:	1.18	1.18	1.18	1.19	1.19	1.19	1.18	1.18	1.18	1.18	1.18	1.18
HCM2k70thQ:	11.2	11.2	11.2	3.4	3.4	3.4	10.6	10.6	10.6	13.3	13.3	13.3
85th%Factor:	1.52	1.52	1.52	1.57	1.57	1.57	1.52	1.52	1.52	1.51	1.51	1.51
HCM2k85thQ:	14.4	14.4	14.4	4.4	4.4	4.4	13.7	13.7	13.7	17.1	17.1	17.1
90th%Factor:	1.65	1.65	1.65	1.75	1.75	1.75	1.65	1.65	1.65	1.63	1.63	1.63
HCM2k90thQ:	15.6	15.6	15.6	4.9	4.9	4.9	14.9	14.9	14.9	18.4	18.4	18.4
95th%Factor:	1.85	1.85	1.85	2.01	2.01	2.01	1.86	1.86	1.86	1.82	1.82	1.82
HCM2k95thQ:	17.6	17.6	17.6	5.7	5.7	5.7	16.8	16.8	16.8	20.6	20.6	20.6
98th%Factor:	2.18	2.18	2.18	2.50	2.50	2.50	2.20	2.20	2.20	2.12	2.12	2.12
HCM2k98thQ:	20.7	20.7	20.7	7.1	7.1	7.1	19.8	19.8	19.8	24.0	24.0	24.0

Cumulative No Project AM Peak Hour
With Recommended Improvements

Base Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k95thQ]:	644	0	644	0	0	0	0	298	519	81	362	0
#6	[HCM2k95thQ]:	151	11	11	4	49	49	286	286	286	313	313	313
#7	[HCM2k95thQ]:	440	440	440	142	142	142	420	420	420	515	515	515

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	136	239	80	116	35	178	568	86	40	758	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	171.7	190.0	186.3	171.5	190.0
Adj Flow Rate, veh/h	101	164	288	96	140	42	214	684	104	48	913	124
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	129	144	253	111	313	94	244	1323	201	60	1045	142
Arrive On Green	0.07	0.24	0.24	0.06	0.23	0.23	0.14	0.47	0.47	0.03	0.36	0.36
Sat Flow, veh/h	1774	608	1067	1774	1377	413	1774	2840	431	1774	2883	392
Grp Volume(v), veh/h	101	0	452	96	0	182	214	393	395	48	516	521
Grp Sat Flow(s),veh/h/ln	1774	0	1674	1774	0	1790	1774	1631	1641	1774	1629	1646
Q Serve(g_s), s	4.5	0.0	19.0	4.3	0.0	7.0	9.5	13.5	13.6	2.1	23.6	23.6
Cycle Q Clear(g_c), s	4.5	0.0	19.0	4.3	0.0	7.0	9.5	13.5	13.6	2.1	23.6	23.6
Prop In Lane	1.00		0.64	1.00		0.23	1.00		0.26	1.00		0.24
Lane Grp Cap(c), veh/h	129	0	398	111	0	407	244	760	764	60	591	597
V/C Ratio(X)	0.79	0.00	1.14	0.87	0.00	0.45	0.88	0.52	0.52	0.79	0.87	0.87
Avail Cap(c_a), veh/h	155	0	398	111	0	407	244	760	764	133	591	597
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	36.5	0.0	30.5	37.2	0.0	26.6	33.8	15.0	15.0	38.4	23.8	23.8
Incr Delay (d2), s/veh	19.3	0.0	87.8	46.7	0.0	0.8	28.2	2.5	2.5	20.3	16.4	16.2
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(50%),veh/ln	2.9	0.0	18.4	3.5	0.0	3.5	6.5	6.6	6.7	1.4	13.3	13.4
LnGrp Delay(d),s/veh	55.8	0.0	118.3	83.8	0.0	27.3	62.0	17.5	17.5	58.6	40.1	40.0
LnGrp LOS	F		F	F		C	F	B	B	F	D	D
Approach Vol, veh/h		553			278			1002			1085	
Approach Delay, s/veh		106.9			46.8			27.0			40.9	
Approach LOS		F			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	41.3	9.0	23.0	15.0	33.0	9.8	22.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	34.0	5.0	19.0	11.0	29.0	7.0	17.0
Max Q Clear Time (g_c+I1), s	4.1	15.6	6.3	21.0	11.5	25.6	6.5	9.0
Green Ext Time (p_c), s	0.0	11.7	0.0	0.0	0.0	2.8	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	49.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	65	18	920	53	257	12	607	923	313	912	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	186.3	186.3	169.6	186.3	186.3	169.7	190.0
Adj Flow Rate, veh/h	5	79	22	1122	65	313	15	740	0	382	1112	6
Adj No. of Lanes	1	1	0	2	1	1	1	2	1	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	2	2	12	12
Cap, veh/h	9	109	30	1166	766	651	22	782	384	402	1503	8
Arrive On Green	0.01	0.08	0.08	0.34	0.41	0.41	0.01	0.24	0.00	0.23	0.46	0.46
Sat Flow, veh/h	1774	1403	391	3442	1863	1583	1774	3223	1583	1774	3289	18
Grp Volume(v), veh/h	5	0	101	1122	65	313	15	740	0	382	545	573
Grp Sat Flow(s),veh/h/ln	1774	0	1794	1721	1863	1583	1774	1612	1583	1774	1612	1694
Q Serve(g_s), s	0.4	0.0	7.7	44.8	3.0	20.3	1.2	31.6	0.0	29.7	38.9	38.9
Cycle Q Clear(g_c), s	0.4	0.0	7.7	44.8	3.0	20.3	1.2	31.6	0.0	29.7	38.9	38.9
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	9	0	139	1166	766	651	22	782	384	402	737	774
V/C Ratio(X)	0.56	0.00	0.73	0.96	0.08	0.48	0.67	0.95	0.00	0.95	0.74	0.74
Avail Cap(c_a), veh/h	51	0	205	1179	798	678	51	782	384	405	737	774
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	1.00	1.00	1.00	1.00	0.00	0.35	0.35	0.35
Uniform Delay (d), s/veh	69.5	0.0	63.2	45.4	25.2	30.3	68.9	52.1	0.0	53.4	31.2	31.2
Incr Delay (d2), s/veh	44.8	0.0	7.0	17.8	0.0	0.6	29.4	21.4	0.0	15.9	2.4	2.3
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(50%),veh/ln	0.3	0.0	4.1	24.2	1.5	9.0	0.8	16.4	0.0	16.3	17.8	18.6
LnGrp Delay(d),s/veh	114.3	0.0	70.2	63.2	25.2	30.8	98.2	73.5	0.0	69.2	33.6	33.5
LnGrp LOS	F		F	F	C	C	F	F		F	C	C
Approach Vol, veh/h		106			1500			755			1500	
Approach Delay, s/veh		72.3			54.8			74.0			42.6	
Approach LOS		E			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.8	43.9	51.5	14.9	5.8	73.9	4.7	61.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	32.0	34.0	48.0	16.0	4.0	62.0	4.0	60.0
Max Q Clear Time (g_c+I1), s	31.7	33.6	46.8	9.7	3.2	40.9	2.4	22.3
Green Ext Time (p_c), s	0.0	0.3	0.7	1.1	0.0	13.4	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	54.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	460	1	181	6	2	4	112	1074	0	5	1439	472
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	190.0	186.3	190.0	186.3	169.6	190.0	186.3	169.6	186.3
Adj Flow Rate, veh/h	561	1	221	7	2	5	137	1310	0	6	1755	576
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	2
Cap, veh/h	389	2	551	202	63	127	109	1744	0	49	1634	803
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.06	0.54	0.00	0.03	0.51	0.51
Sat Flow, veh/h	1403	7	1577	474	179	363	1774	3308	0	1774	3223	1583
Grp Volume(v), veh/h	561	0	222	14	0	0	137	1310	0	6	1755	576
Grp Sat Flow(s),veh/h/ln	1403	0	1584	1016	0	0	1774	1612	0	1774	1612	1583
Q Serve(g_s), s	35.4	0.0	15.5	0.1	0.0	0.0	9.0	45.9	0.0	0.5	74.0	41.2
Cycle Q Clear(g_c), s	51.0	0.0	15.5	15.6	0.0	0.0	9.0	45.9	0.0	0.5	74.0	41.2
Prop In Lane	1.00		1.00	0.50		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	389	0	553	392	0	0	109	1744	0	49	1634	803
V/C Ratio(X)	1.44	0.00	0.40	0.04	0.00	0.00	1.25	0.75	0.00	0.12	1.07	0.72
Avail Cap(c_a), veh/h	389	0	553	392	0	0	109	1744	0	49	1634	803
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	0.0	35.9	31.8	0.0	0.0	68.5	25.9	0.0	69.3	36.0	27.9
Incr Delay (d2), s/veh	212.6	0.0	0.5	0.0	0.0	0.0	168.7	3.0	0.0	1.1	45.2	5.5
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(50%),veh/ln	38.7	0.0	6.9	0.4	0.0	0.0	9.5	21.1	0.0	0.3	42.9	19.1
LnGrp Delay(d),s/veh	270.2	0.0	36.4	31.8	0.0	0.0	237.2	28.9	0.0	70.4	81.2	33.4
LnGrp LOS	F		D	C			F	C		F	F	C
Approach Vol, veh/h		783			14			1447			2337	
Approach Delay, s/veh		203.9			31.8			48.7			69.4	
Approach LOS		F			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	83.0		55.0	13.0	78.0		55.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	79.0		51.0	9.0	74.0		51.0
Max Q Clear Time (g_c+I1), s	2.5	47.9		53.0	11.0	76.0		17.6
Green Ext Time (p_c), s	1.4	12.6		0.0	0.0	0.0		3.7

Intersection Summary	
HCM 2010 Ctrl Delay	85.7
HCM 2010 LOS	F

Cumulative No Project PM Peak Hour
With Recommended Improvements

Scenario Report

Scenario:	Cumul No Proj PM
Command:	Cumul No Proj PM
Volume:	Cumul No Prj PM
Geometry:	Cumul No Proj
Impact Fee:	Default Impact Fee
Trip Generation:	PM Pk Hr
Trip Distribution:	PM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Cumulative No Project PM Peak Hour
With Recommended Improvements

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 4 Stuhr Road & Draper Road	C	20.0	0.811	C	20.0	0.811	+ 0.000 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	5.8	0.531	A	5.8	0.531	+ 0.000 D/V
# 7 Fig Lane & Yolo Street	B	13.3	0.674	B	13.3	0.674	+ 0.000 D/V

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Cycle (sec):	60	Critical Vol./Cap.(X):	0.811
Loss Time (sec):	9	Average Delay (sec/veh):	20.0
Optimal Cycle:	60	Level Of Service:	C

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	0 1	1	0 1	0 0
Volume Module:	PM Peak Hour											
Base Vol:	407	0	63	0	0	0	0	393	526	60	355	0
Growth 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
Initial Bse:	407	0	63	0	0	0	0	393	526	60	355	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	442	0	68	0	0	0	0	427	572	65	386	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	442	0	68	0	0	0	0	427	572	65	386	0
PCE 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
MLF 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
FinalVolume:	442	0	68	0	0	0	0	427	572	65	386	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.98	0.83	0.93	0.98	1.00
Lanes:	0.87	0.00	0.13	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	1517	0	235	0	0	0	0	1862	1583	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.23	0.36	0.04	0.21	0.00
Crit Moves:	****								****	****		
Green/Cycle:	0.36	0.00	0.36	0.00	0.00	0.00	0.00	0.45	0.45	0.05	0.49	0.00
Volume/Cap:	0.81	0.00	0.81	0.00	0.00	0.00	0.00	0.52	0.81	0.81	0.42	0.00
Delay/Veh:	25.2	0.0	25.2	0.0	0.0	0.0	0.0	12.5	21.5	72.6	10.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.2	0.0	25.2	0.0	0.0	0.0	0.0	12.5	21.5	72.6	10.1	0.0
LOS by Move:	C	A	C	A	A	A	A	B	C	E	B	A
HCM2k95thQ:	510	0	510	0	0	0	0	297	535	76	221	0

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	0 1	1	0 1	0 0
Lane Group:	LTR			xxxx	xxxx		xxxx	T	R	L	T	xxxx
#LnsInGrps:	1	1	1	0	0	0	0	1	1	1	1	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			0			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	xxxx	4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx
LT Adj:	0.96	xxxx	0.96	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.98	0.83	0.93	0.98	1.00
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.92	1.00	0.92	1.00	1.00	1.00	1.00	0.98	0.83	0.93	0.98	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.36	0.00	0.36	0.00	0.00	0.00	0.00	0.45	0.45	0.05	0.49	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	7.7	0.0	7.7	0.0	0.0	0.0	0.0	5.1	8.3	1.1	4.1	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.27	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.97	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.12	0.50	0.00
Q2:	3.5	0.0	3.5	0.0	0.0	0.0	0.0	1.0	3.5	0.4	0.4	0.0
HCM2KQueue:	11.2	0.0	11.2	0.0	0.0	0.0	0.0	6.2	11.8	1.5	4.5	0.0
70th%Factor:	1.18	1.20	1.18	1.20	1.20	1.20	1.20	1.19	1.17	1.20	1.19	1.20
HCM2k70thQ:	13.1	0.0	13.1	0.0	0.0	0.0	0.0	7.3	13.9	1.8	5.3	0.0
85th%Factor:	1.51	1.60	1.51	1.60	1.60	1.60	1.60	1.54	1.50	1.59	1.56	1.60
HCM2k85thQ:	16.9	0.0	16.9	0.0	0.0	0.0	0.0	9.5	17.8	2.4	7.0	0.0
90th%Factor:	1.63	1.80	1.63	1.80	1.80	1.80	1.80	1.69	1.62	1.77	1.72	1.80
HCM2k90thQ:	18.2	0.0	18.2	0.0	0.0	0.0	0.0	10.4	19.2	2.6	7.7	0.0
95th%Factor:	1.82	2.10	1.82	2.10	2.10	2.10	2.10	1.93	1.81	2.05	1.97	2.10
HCM2k95thQ:	20.4	0.0	20.4	0.0	0.0	0.0	0.0	11.9	21.4	3.1	8.8	0.0
98th%Factor:	2.12	2.70	2.12	2.70	2.70	2.70	2.70	2.32	2.10	2.59	2.41	2.70
HCM2k98thQ:	23.7	0.0	23.7	0.0	0.0	0.0	0.0	14.3	24.9	3.9	10.8	0.0

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.531
Loss Time (sec): 9 Average Delay (sec/veh): 5.8
Optimal Cycle: 60 Level Of Service: A

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0	0	0	1! 0	0	0	1! 0
Volume Module:	PM Peak Hour											
Base Vol:	81	1	7	1	2	12	9	537	107	6	472	1
Growth 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
Initial Bse:	81	1	7	1	2	12	9	537	107	6	472	1
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	88	1	8	1	2	13	10	584	116	7	513	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	1	8	1	2	13	10	584	116	7	513	1
PCE 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
MLF 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
FinalVolume:	88	1	8	1	2	13	10	584	116	7	513	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.85	0.85	0.93	0.85	0.85	0.95	0.95	0.95	0.97	0.97	0.97
Lanes:	1.00	0.13	0.87	1.00	0.14	0.86	0.01	0.83	0.16	0.01	0.98	0.01
Final Sat.:	1769	202	1416	1769	232	1390	25	1489	297	23	1824	4
Capacity Analysis Module:												
Vol/Sat:	0.05	0.01	0.01	0.00	0.01	0.01	0.39	0.39	0.39	0.28	0.28	0.28
Crit Moves:	****				****			****				
Green/Cycle:	0.09	0.10	0.10	0.01	0.02	0.02	0.74	0.74	0.74	0.74	0.74	0.74
Volume/Cap:	0.53	0.05	0.05	0.05	0.53	0.53	0.53	0.53	0.53	0.38	0.38	0.38
Delay/Veh:	29.2	24.6	24.6	30.4	46.9	46.9	3.8	3.8	3.8	3.0	3.0	3.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.2	24.6	24.6	30.4	46.9	46.9	3.8	3.8	3.8	3.0	3.0	3.0
LOS by Move:	C	C	C	C	D	D	A	A	A	A	A	A
HCM2k95thQ:	123	10	10	4	53	53	299	299	299	187	187	187

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LTR	LTR	LTR
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	5	5	5	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Area 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
RT Adj:	xxxx	0.87	0.87	xxxx	0.87	0.87	0.98	0.98	0.98	1.00	1.00	1.00
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.99	0.99	0.99	0.99	0.99	0.99
PedBike 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
HCM Sat Adj:	0.93	0.85	0.85	0.93	0.85	0.85	0.95	0.95	0.95	0.97	0.97	0.97
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.93	0.85	0.85	0.93	0.85	0.85	0.95	0.95	0.95	0.97	0.97	0.97
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	60	60
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	43.31	43.31
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	44.31	44.31
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	44.31	44.31
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	1	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	1	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	10	7
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	0.01	0.01
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	0.01	0.01
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	0.16	0.11
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	521	710
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	8.68	11.83
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	1.00	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	3.00	3.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	29.91	32.01
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	0.26	0.26
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	3.18	4.83
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	14.40	12.30
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	0.00	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	0.99	0.99
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	xxxxxx	xxxxxx	2.34	2.83
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	1.00	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	0.05	0.05
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	0.99	0.99
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	0.99	0.99

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.09	0.10	0.10	0.01	0.02	0.02	0.74	0.74	0.74	0.74	0.74	0.74
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.4	0.1	0.1	0.0	0.3	0.3	5.1	5.1	5.1	3.2	3.2	3.2
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	1.0	0.1	0.1	0.1	0.8	0.8	1.1	1.1	1.1	0.6	0.6	0.6
HCM2KQueue:	2.4	0.2	0.2	0.1	1.0	1.0	6.2	6.2	6.2	3.8	3.8	3.8
70th%Factor:	1.19	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19
HCM2k70thQ:	2.9	0.2	0.2	0.1	1.2	1.2	7.4	7.4	7.4	4.5	4.5	4.5
85th%Factor:	1.58	1.60	1.60	1.60	1.59	1.59	1.54	1.54	1.54	1.56	1.56	1.56
HCM2k85thQ:	3.8	0.3	0.3	0.1	1.6	1.6	9.6	9.6	9.6	5.9	5.9	5.9
90th%Factor:	1.75	1.80	1.80	1.80	1.78	1.78	1.69	1.69	1.69	1.73	1.73	1.73
HCM2k90thQ:	4.3	0.3	0.3	0.1	1.8	1.8	10.5	10.5	10.5	6.5	6.5	6.5
95th%Factor:	2.02	2.09	2.09	2.10	2.07	2.07	1.93	1.93	1.93	1.99	1.99	1.99
HCM2k95thQ:	4.9	0.4	0.4	0.2	2.1	2.1	11.9	11.9	11.9	7.5	7.5	7.5
98th%Factor:	2.53	2.69	2.69	2.69	2.62	2.62	2.32	2.32	2.32	2.45	2.45	2.45
HCM2k98thQ:	6.1	0.5	0.5	0.2	2.7	2.7	14.4	14.4	14.4	9.2	9.2	9.2

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Cycle (sec):	60	Critical Vol./Cap.(X):	0.674
Loss Time (sec):	6	Average Delay (sec/veh):	13.3
Optimal Cycle:	60	Level Of Service:	B

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:	PM Peak Hour											
Base Vol:	114	106	84	33	149	55	44	375	159	82	325	28
Growth 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
Initial Bse:	114	106	84	33	149	55	44	375	159	82	325	28
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	124	115	91	36	162	60	48	408	173	89	353	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	115	91	36	162	60	48	408	173	89	353	30
PCE 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
MLF 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
FinalVolume:	124	115	91	36	162	60	48	408	173	89	353	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	0.74	0.74	0.88	0.88	0.88	0.89	0.89	0.89	0.81	0.81	0.81
Lanes:	0.37	0.35	0.28	0.14	0.63	0.23	0.08	0.65	0.27	0.19	0.75	0.06
Final Sat.:	526	489	387	234	1055	389	129	1099	466	291	1154	99
Capacity Analysis Module:												
Vol/Sat:	0.24	0.24	0.24	0.15	0.15	0.15	0.37	0.37	0.37	0.31	0.31	0.31
Crit Moves:		****						****				
Green/Cycle:	0.35	0.35	0.35	0.35	0.35	0.35	0.55	0.55	0.55	0.55	0.55	0.55
Volume/Cap:	0.67	0.67	0.67	0.44	0.44	0.44	0.67	0.67	0.67	0.56	0.56	0.56
Delay/Veh:	20.3	20.3	20.3	15.5	15.5	15.5	11.6	11.6	11.6	9.6	9.6	9.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.3	20.3	20.3	15.5	15.5	15.5	11.6	11.6	11.6	9.6	9.6	9.6
LOS by Move:	C	C	C	B	B	B	B	B	B	A	A	A
HCM2k95thQ:	315	315	315	201	201	201	438	438	438	304	304	304

Note: Queue reported is the distance per lane in feet.

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Lane Group:	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	5	5	5	5	5	5	5	5	5	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking 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
Bus Stp 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
Area 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
RT Adj:	0.96	0.96	0.96	0.97	0.97	0.97	0.96	0.96	0.96	0.99	0.99	0.99
LT Adj:	0.78	0.78	0.78	0.93	0.93	0.93	0.95	0.95	0.95	0.84	0.84	0.84
PedBike 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
HCM Sat Adj:	0.74	0.74	0.74	0.88	0.88	0.88	0.89	0.89	0.89	0.81	0.81	0.81
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.74	0.74	0.74	0.88	0.88	0.88	0.89	0.89	0.89	0.81	0.81	0.81
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North	South	East	West
Cycle Length, C:	60	60	60	60
Actual Green Time Per Lane Group, G:	20.00	20.00	32.00	32.00
Effective Green Time Per Lane Group, g:	21.00	21.00	33.00	33.00
Opposing Effective Green Time, go:	21.00	21.00	33.00	33.00
Number Of Opposing Lanes, No:	1	1	1	1
Number Of Lanes In Lane Group, N:	1	1	1	1
Adjusted Left-Turn Flow Rate, Vlt:	124	36	48	89
Proportion of Left Turns in Lane Group, Plt:	0.38	0.14	0.08	0.19
Proportion of Left Turns in Opp Flow, Plto:	0.14	0.38	0.19	0.08
Left Turns Per Cycle, LTC:	2.07	0.60	0.80	1.49
Adjusted Opposing Flow Rate, Vo:	258	330	473	628
Opposing Flow Per Lane Per Cycle, Volc:	4.30	5.50	7.88	10.47
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00
Lost Time Per Phase, tl:	3.00	3.00	3.00	3.00
Eff grn until arrival of left-turn car, gf:	2.15	7.73	12.18	7.62
Opposing Queue Ratio, qro:	0.65	0.65	0.45	0.45
Eff grn blocked by opposing queue, gq:	6.51	8.47	7.22	9.68
Eff grn while left turns filter thru, gu:	14.49	12.53	20.82	23.32
Max opposing cars arriving during gq-gf, n:	2.18	0.37	0.00	1.03
Proportion of Opposing Thru & RT cars, ptho:	0.86	0.63	0.81	0.92
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	1.82	1.96	2.25	2.58
Single Lane Through-car Equivalents, el2:	2.00	1.00	1.00	1.03
Minimum Left Turn Adjustment Factor, fmin:	0.13	0.11	0.07	0.07
Single Lane Left Turn Adjustment Factor, fm:	0.78	0.93	0.95	0.84
Left Turn Adjustment Factor, flt:	0.78	0.93	0.95	0.84

Cumulative No Project PM Peak Hour
With Recommended Improvements

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #7 Fig Lane & Yolo Street

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.35	0.35	0.35	0.35	0.35	0.35	0.55	0.55	0.55	0.55	0.55	0.55
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	4.7	4.7	4.7	3.3	3.3	3.3	7.5	7.5	7.5	5.1	5.1	5.1
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	1.9	1.9	1.9	0.8	0.8	0.8	2.0	2.0	2.0	1.2	1.2	1.2
HCM2KQueue:	6.6	6.6	6.6	4.1	4.1	4.1	9.4	9.4	9.4	6.3	6.3	6.3
70th%Factor:	1.18	1.18	1.18	1.19	1.19	1.19	1.18	1.18	1.18	1.19	1.19	1.19
HCM2k70thQ:	7.8	7.8	7.8	4.8	4.8	4.8	11.1	11.1	11.1	7.5	7.5	7.5
85th%Factor:	1.54	1.54	1.54	1.56	1.56	1.56	1.52	1.52	1.52	1.54	1.54	1.54
HCM2k85thQ:	10.1	10.1	10.1	6.4	6.4	6.4	14.4	14.4	14.4	9.8	9.8	9.8
90th%Factor:	1.69	1.69	1.69	1.73	1.73	1.73	1.65	1.65	1.65	1.69	1.69	1.69
HCM2k90thQ:	11.1	11.1	11.1	7.0	7.0	7.0	15.6	15.6	15.6	10.7	10.7	10.7
95th%Factor:	1.92	1.92	1.92	1.98	1.98	1.98	1.85	1.85	1.85	1.92	1.92	1.92
HCM2k95thQ:	12.6	12.6	12.6	8.0	8.0	8.0	17.5	17.5	17.5	12.2	12.2	12.2
98th%Factor:	2.30	2.30	2.30	2.43	2.43	2.43	2.18	2.18	2.18	2.31	2.31	2.31
HCM2k98thQ:	15.1	15.1	15.1	9.9	9.9	9.9	20.6	20.6	20.6	14.7	14.7	14.7

Cumulative No Project PM Peak Hour
With Recommended Improvements

Base Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k95thQ]:	510	0	510	0	0	0	0	297	535	76	221	0
#6	[HCM2k95thQ]:	123	10	10	4	53	53	299	299	299	187	187	187
#7	[HCM2k95thQ]:	315	315	315	201	201	201	438	438	438	304	304	304

LEVEL OF SERVICE CALCULATION WORKSHEETS

CUMULATIVE PLUS PROJECT WITH MITIGATION

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	131	231	185	119	325	104	228	780	128	67	573	147
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	169.6	186.3	186.3	169.6	186.3
Adj Flow Rate, veh/h	158	278	223	143	392	125	275	940	154	81	690	177
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	2	2	12	2
Cap, veh/h	186	577	491	174	411	131	308	1226	602	106	858	422
Arrive On Green	0.10	0.31	0.31	0.10	0.30	0.30	0.06	0.13	0.13	0.06	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	1774	1355	432	1774	3223	1583	1774	3223	1583
Grp Volume(v), veh/h	158	278	223	143	0	517	275	940	154	81	690	177
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1787	1774	1612	1583	1774	1612	1583
Q Serve(g_s), s	9.2	12.7	11.9	8.3	0.0	29.8	16.2	29.7	6.6	4.7	21.0	9.7
Cycle Q Clear(g_c), s	9.2	12.7	11.9	8.3	0.0	29.8	16.2	29.7	6.6	4.7	21.0	9.7
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	577	491	174	0	542	308	1226	602	106	858	422
V/C Ratio(X)	0.85	0.48	0.45	0.82	0.00	0.95	0.89	0.77	0.26	0.77	0.80	0.42
Avail Cap(c_a), veh/h	186	577	491	253	0	544	321	1226	602	118	858	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	29.4	29.1	46.5	0.0	35.9	48.6	41.5	16.8	48.7	36.0	31.9
Incr Delay (d2), s/veh	29.6	0.6	0.7	13.2	0.0	27.4	23.7	4.3	1.0	23.2	7.9	3.1
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(50%),veh/ln	6.0	6.7	5.3	4.7	0.0	18.8	10.0	14.0	4.0	3.0	10.2	4.6
LnGrp Delay(d),s/veh	75.8	30.0	29.8	59.7	0.0	63.3	72.3	45.8	17.8	72.0	43.9	34.9
LnGrp LOS	E	C	C	E		E	E	D	B	E	D	C
Approach Vol, veh/h		659			660			1369			948	
Approach Delay, s/veh		40.9			62.6			48.0			44.6	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	44.0	14.3	36.6	22.3	32.8	15.0	35.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	40.0	15.0	28.0	19.0	28.0	11.0	32.0
Max Q Clear Time (g_c+I1), s	6.7	31.7	10.3	14.7	18.2	23.0	11.2	31.8
Green Ext Time (p_c), s	0.2	4.4	0.1	5.0	0.1	2.4	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	48.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	586	453	521	848	156	561	1102	550	97	801	122
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	169.6	186.3	186.3	169.6	186.3
Adj Flow Rate, veh/h	134	715	552	635	1034	190	684	1344	0	118	977	149
Adj No. of Lanes	1	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	2	2	12	2
Cap, veh/h	117	701	314	617	930	171	617	1308	642	117	943	463
Arrive On Green	0.07	0.20	0.20	0.18	0.31	0.31	0.18	0.41	0.00	0.07	0.29	0.29
Sat Flow, veh/h	1774	3539	1583	3442	2988	548	3442	3223	1583	1774	3223	1583
Grp Volume(v), veh/h	134	715	552	635	612	612	684	1344	0	118	977	149
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1766	1721	1612	1583	1774	1612	1583
Q Serve(g_s), s	7.0	21.0	21.0	19.0	33.0	33.0	19.0	43.0	0.0	7.0	31.0	6.2
Cycle Q Clear(g_c), s	7.0	21.0	21.0	19.0	33.0	33.0	19.0	43.0	0.0	7.0	31.0	6.2
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	117	701	314	617	551	550	617	1308	642	117	943	463
V/C Ratio(X)	1.14	1.02	1.76	1.03	1.11	1.11	1.11	1.03	0.00	1.01	1.04	0.32
Avail Cap(c_a), veh/h	117	701	314	617	551	550	617	1308	642	117	943	463
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	49.5	42.5	42.5	43.5	36.5	36.5	43.5	31.5	0.0	49.5	37.5	18.7
Incr Delay (d2), s/veh	127.0	39.0	354.7	44.0	72.2	73.6	69.8	32.3	0.0	81.6	38.0	1.7
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(50%),veh/ln	7.5	14.0	40.1	12.8	27.1	27.3	15.0	24.9	0.0	6.1	18.7	3.3
LnGrp Delay(d),s/veh	176.5	81.5	397.2	87.5	108.7	110.1	113.3	63.8	0.0	131.1	75.5	20.4
LnGrp LOS	F	F	F	F	F	F	F	F		F	F	C
Approach Vol, veh/h		1401			1859			2028			1244	
Approach Delay, s/veh		215.0			101.9			80.5			74.1	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	47.0	23.0	25.0	23.0	35.0	11.0	37.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	43.0	19.0	21.0	19.0	31.0	7.0	33.0
Max Q Clear Time (g_c+I1), s	9.0	45.0	21.0	23.0	21.0	33.0	9.0	35.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	114.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	478	4	38	3	1	1	50	2202	1	1	1609	575
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	190.0	186.3	190.0	186.3	169.6	190.0	186.3	169.6	186.3
Adj Flow Rate, veh/h	583	5	46	4	1	1	61	2685	1	1	1962	701
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	2
Cap, veh/h	438	47	435	308	77	69	59	1962	1	47	1891	929
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.03	0.59	0.59	0.05	1.00	1.00
Sat Flow, veh/h	1409	158	1449	893	257	230	1774	3307	1	1774	3223	1583
Grp Volume(v), veh/h	583	0	51	6	0	0	61	1309	1377	1	1962	701
Grp Sat Flow(s),veh/h/ln	1409	0	1607	1380	0	0	1774	1612	1696	1774	1612	1583
Q Serve(g_s), s	41.5	0.0	3.4	0.0	0.0	0.0	5.0	89.0	89.0	0.1	88.0	0.0
Cycle Q Clear(g_c), s	45.0	0.0	3.4	3.5	0.0	0.0	5.0	89.0	89.0	0.1	88.0	0.0
Prop In Lane	1.00		0.90	0.67		0.17	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	438	0	482	454	0	0	59	956	1006	47	1891	929
V/C Ratio(X)	1.33	0.00	0.11	0.01	0.00	0.00	1.03	1.37	1.37	0.02	1.04	0.75
Avail Cap(c_a), veh/h	438	0	482	454	0	0	59	956	1006	47	1891	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	56.5	0.0	38.0	36.9	0.0	0.0	72.5	30.5	30.5	69.1	0.0	0.0
Incr Delay (d2), s/veh	163.5	0.0	0.1	0.0	0.0	0.0	126.2	172.5	172.3	0.1	28.4	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	38.1	0.0	1.5	0.2	0.0	0.0	4.5	85.1	89.5	0.0	7.5	1.1
LnGrp Delay(d),s/veh	220.0	0.0	38.1	36.9	0.0	0.0	199.2	203.0	202.8	69.3	28.4	4.2
LnGrp LOS	F		D	D			F	F	F	F	F	A
Approach Vol, veh/h		634			6			2747			2664	
Approach Delay, s/veh		205.4			36.9			202.8			22.0	
Approach LOS		F			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	93.0		49.0	9.0	92.0		49.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	89.0		45.0	5.0	88.0		45.0
Max Q Clear Time (g_c+I1), s	2.1	91.0		47.0	7.0	90.0		5.5
Green Ext Time (p_c), s	1.8	0.0		0.0	0.0	0.0		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	123.3
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	3	109	1166	962	23
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	1	3	118	1267	1046	25
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	8	7	373	3211	2310	1034
Arrive On Green	0.00	0.00	0.42	1.00	0.87	0.87
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	1	3	118	1267	1046	25
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	0.1	0.2	4.0	0.0	5.8	0.2
Cycle Q Clear(g_c), s	0.1	0.2	4.0	0.0	5.8	0.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	8	7	373	3211	2310	1034
V/C Ratio(X)	0.13	0.45	0.32	0.39	0.45	0.02
Avail Cap(c_a), veh/h	314	280	373	3211	2310	1034
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.33	1.33
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.68	0.68
Uniform Delay (d), s/veh	44.8	44.9	21.8	0.0	2.5	2.1
Incr Delay (d2), s/veh	7.8	40.5	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	2.0	0.0	2.8	0.1
LnGrp Delay(d),s/veh	52.7	85.4	21.9	0.0	2.9	2.1
LnGrp LOS	D	F	C	A	A	A
Approach Vol, veh/h	4			1385	1071	
Approach Delay, s/veh	77.2			1.9	2.9	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		101.6		4.4	38.6	63.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		82.0		16.0	19.0	59.0		
Max Q Clear Time (g_c+I1), s		2.0		2.2	6.0	7.8		
Green Ext Time (p_c), s		15.1		0.0	7.6	10.2		

Intersection Summary	
HCM 2010 Ctrl Delay	2.4
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	27	22	64	2554	1715	19
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	29	24	70	2776	1864	21
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	48	43	155	3238	2827	1265
Arrive On Green	0.03	0.03	0.17	1.00	0.80	0.80
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	29	24	70	2776	1864	21
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	2.2	2.1	4.9	0.0	30.9	0.4
Cycle Q Clear(g_c), s	2.2	2.1	4.9	0.0	30.9	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	48	43	155	3238	2827	1265
V/C Ratio(X)	0.60	0.56	0.45	0.86	0.66	0.02
Avail Cap(c_a), veh/h	206	184	155	3238	2827	1265
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	66.3	66.2	53.9	0.0	5.9	2.8
Incr Delay (d2), s/veh	11.6	10.9	0.2	0.3	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.9	2.4	0.1	15.2	0.2
LnGrp Delay(d),s/veh	77.9	77.1	54.1	0.3	7.1	2.9
LnGrp LOS	E	E	D	A	A	A
Approach Vol, veh/h	53			2846	1885	
Approach Delay, s/veh	77.5			1.6	7.1	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		142.3		7.7	28.3	114.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		126.0		16.0	12.0	110.0		
Max Q Clear Time (g_c+I1), s		2.0		4.2	6.9	32.9		
Green Ext Time (p_c), s		94.0		0.1	5.0	31.7		

Intersection Summary	
HCM 2010 Ctrl Delay	4.6
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	22	0	2474	1659	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	-	200
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	24	0	2689	1803	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	-	1803	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	-
Pot Cap-1 Maneuver	0	0	338	-	-	-
Stage 1	0	0	-	-	-	-
Stage 2	0	0	-	-	-	-
Platoon blocked, %	-			-	-	-
Mov Cap-1 Maneuver	-	-	338	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	338	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Scenario Report

Scenario:	Cumul Plus Proj AM
Command:	Cumul Plus Proj AM
Volume:	Cumul Prj Bckgr AM
Geometry:	Cumul Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	AM Pk Hr
Trip Distribution:	AM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 4 Stuhr Road & Draper Road	B	10.2	0.702	B	11.2	0.756	+ 1.007 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	5.9	0.376	A	8.4	0.432	+ 2.485 D/V
# 7 Fig Lane & Yolo Street	B	13.7	0.631	C	24.6	0.890	+10.913 D/V

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Cycle (sec):	60	Critical Vol./Cap.(X):	0.756
Loss Time (sec):	9	Average Delay (sec/veh):	11.2
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0 0	0	0	1 0	1	0	1 0
Volume Module:	AM Peak Hour											
Base Vol:	181	0	5	0	0	0	0	638	139	4	827	0
Growth 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
Initial Bse:	181	0	5	0	0	0	0	638	139	4	827	0
Added Vol:	0	0	5	0	0	0	0	35	0	1	72	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	181	0	10	0	0	0	0	673	139	5	899	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	197	0	11	0	0	0	0	732	151	5	977	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	197	0	11	0	0	0	0	732	151	5	977	0
PCE 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
MLF 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
FinalVolume:	197	0	11	0	0	0	0	732	151	5	977	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.96	0.96	0.93	0.98	1.00
Lanes:	0.95	0.00	0.05	0.00	0.00	0.00	0.00	0.83	0.17	1.00	1.00	0.00
Final Sat.:	1673	0	92	0	0	0	0	1508	311	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.12	0.00	0.12	0.00	0.00	0.00	0.00	0.49	0.49	0.00	0.52	0.00
Crit Moves:	****						****				****	
Green/Cycle:	0.16	0.00	0.16	0.00	0.00	0.00	0.00	0.69	0.69	0.00	0.69	0.00
Volume/Cap:	0.76	0.00	0.76	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.76	0.00
Delay/Veh:	35.6	0.0	35.6	0.0	0.0	0.0	0.0	7.4	7.4	174.1	8.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.6	0.0	35.6	0.0	0.0	0.0	0.0	7.4	7.4	174.1	8.5	0.0
LOS by Move:	D	A	D	A	A	A	A	A	A	F	A	A
HCM2k95thQ:	277	0	277	0	0	0	0	507	507	7	548	0

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	1! 0	0	0	0	0	0	0	1	0	1 0
Lane Group:	LTR		LTR	xxxx	xxxx	xxxx	xxxx	RT	RT	L	T	xxxx
#LnsInGrps:	1		1	0	0	0	0	1	1	1	1	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12		12	12		12	12		12	12		12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			0			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	xxxx	4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	0.99	xxxx	0.99	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	xxxx	xxxx	xxxxx
LT Adj:	0.96	xxxx	0.96	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.96	0.96	0.93	0.98	1.00
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.96	0.96	0.93	0.98	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.16	0.00	0.16	0.00	0.00	0.00	0.00	0.69	0.69	0.00	0.69	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	3.3	0.0	3.3	0.0	0.0	0.0	0.0	8.9	8.9	0.1	10.5	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.46	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.89	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.03	0.56	0.00
Q2:	2.4	0.0	2.4	0.0	0.0	0.0	0.0	2.3	2.3	0.1	1.7	0.0
HCM2KQueue:	5.7	0.0	5.7	0.0	0.0	0.0	0.0	11.1	11.1	0.1	12.1	0.0
70th%Factor:	1.19	1.20	1.19	1.20	1.20	1.20	1.20	1.18	1.18	1.20	1.17	1.20
HCM2k70thQ:	6.8	0.0	6.8	0.0	0.0	0.0	0.0	13.1	13.1	0.2	14.2	0.0
85th%Factor:	1.55	1.60	1.55	1.60	1.60	1.60	1.60	1.51	1.51	1.60	1.50	1.60
HCM2k85thQ:	8.8	0.0	8.8	0.0	0.0	0.0	0.0	16.8	16.8	0.2	18.2	0.0
90th%Factor:	1.70	1.80	1.70	1.80	1.80	1.80	1.80	1.63	1.63	1.80	1.62	1.80
HCM2k90thQ:	9.7	0.0	9.7	0.0	0.0	0.0	0.0	18.1	18.1	0.3	19.6	0.0
95th%Factor:	1.94	2.10	1.94	2.10	2.10	2.10	2.10	1.82	1.82	2.10	1.81	2.10
HCM2k95thQ:	11.1	0.0	11.1	0.0	0.0	0.0	0.0	20.3	20.3	0.3	21.9	0.0
98th%Factor:	2.34	2.70	2.34	2.70	2.70	2.70	2.70	2.13	2.13	2.69	2.09	2.70
HCM2k98thQ:	13.4	0.0	13.4	0.0	0.0	0.0	0.0	23.6	23.6	0.4	25.4	0.0

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.432
Loss Time (sec): 9 Average Delay (sec/veh): 8.4
Optimal Cycle: OPTIMIZED Level Of Service: A

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0 0 1	0	0	1! 0	0	0	1! 0 0
Volume Module:	AM Peak Hour											
Base Vol:	62	6	12	2	3	15	16	341	49	10	443	4
Growth 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
Initial Bse:	62	6	12	2	3	15	16	341	49	10	443	4
Added Vol:	2	9	0	68	28	1	4	74	5	1	20	25
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	15	12	70	31	16	20	415	54	11	463	29
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	70	16	13	76	34	17	22	451	59	12	503	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	16	13	76	34	17	22	451	59	12	503	32
PCE 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
MLF 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
FinalVolume:	70	16	13	76	34	17	22	451	59	12	503	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96
Lanes:	1.00	0.56	0.44	1.00	0.66	0.34	0.04	0.85	0.11	0.02	0.92	0.06
Final Sat.:	1769	965	772	1769	1165	602	73	1519	198	40	1683	105
Capacity Analysis Module:												
Vol/Sat:	0.04	0.02	0.02	0.04	0.03	0.03	0.30	0.30	0.30	0.30	0.30	0.30
Crit Moves:	****				****						****	
Green/Cycle:	0.09	0.04	0.04	0.11	0.07	0.07	0.69	0.69	0.69	0.69	0.69	0.69
Volume/Cap:	0.43	0.38	0.38	0.38	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Delay/Veh:	27.7	31.0	31.0	25.8	29.4	29.4	4.3	4.3	4.3	4.3	4.3	4.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.7	31.0	31.0	25.8	29.4	29.4	4.3	4.3	4.3	4.3	4.3	4.3
LOS by Move:	C	C	C	C	C	C	A	A	A	A	A	A
HCM2k95thQ:	93	53	53	90	78	78	227	227	227	233	233	233

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LTR	LTR	LTR
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	5	5	5	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Area 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
RT Adj:	xxxx	0.93	0.93	xxxx	0.95	0.95	0.99	0.99	0.99	0.99	0.99	0.99
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.98	0.98	0.98	0.99	0.99	0.99
PedBike 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
HCM Sat Adj:	0.93	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.93	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	60	60
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	40.53	40.53
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	41.53	41.53
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	41.53	41.53
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	1	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	1	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	22	12
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	0.04	0.02
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	0.02	0.04
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	0.36	0.20
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	547	532
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	9.12	8.87
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	1.00	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	3.00	3.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	22.73	26.67
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	0.31	0.31
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	4.63	4.47
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	18.80	14.86
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	0.00	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	0.98	0.96
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	xxxxxx	xxxxxx	2.39	2.36
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	1.00	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	0.05	0.05
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	0.98	0.99
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	0.98	0.99

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

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Intersection #6 Orestimba/Yolo St & Hardin Rd

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.09	0.04	0.04	0.11	0.07	0.07	0.69	0.69	0.69	0.69	0.69	0.69
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.1	0.5	0.5	1.2	0.8	0.8	3.9	3.9	3.9	4.0	4.0	4.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
HCM2KQueue:	1.8	1.0	1.0	1.8	1.5	1.5	4.6	4.6	4.6	4.8	4.8	4.8
70th%Factor:	1.20	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19
HCM2k70thQ:	2.2	1.2	1.2	2.1	1.8	1.8	5.5	5.5	5.5	5.7	5.7	5.7
85th%Factor:	1.58	1.59	1.59	1.58	1.59	1.59	1.56	1.56	1.56	1.56	1.56	1.56
HCM2k85thQ:	2.9	1.6	1.6	2.8	2.4	2.4	7.2	7.2	7.2	7.4	7.4	7.4
90th%Factor:	1.77	1.78	1.78	1.77	1.77	1.77	1.72	1.72	1.72	1.72	1.72	1.72
HCM2k90thQ:	3.2	1.8	1.8	3.1	2.7	2.7	7.9	7.9	7.9	8.2	8.2	8.2
95th%Factor:	2.04	2.07	2.07	2.04	2.05	2.05	1.96	1.96	1.96	1.96	1.96	1.96
HCM2k95thQ:	3.7	2.1	2.1	3.6	3.1	3.1	9.1	9.1	9.1	9.3	9.3	9.3
98th%Factor:	2.57	2.62	2.62	2.57	2.59	2.59	2.40	2.40	2.40	2.39	2.39	2.39
HCM2k98thQ:	4.7	2.7	2.7	4.5	3.9	3.9	11.1	11.1	11.1	11.4	11.4	11.4

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #7 Fig Lane & Yolo Street

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Cycle (sec): 60 Critical Vol./Cap.(X): 0.890
Loss Time (sec): 6 Average Delay (sec/veh): 24.6
Optimal Cycle: OPTIMIZED Level Of Service: C

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Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:	AM Peak Hour											
Base Vol:	151	163	90	18	115	38	35	208	122	81	288	29
Growth 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
Initial Bse:	151	163	90	18	115	38	35	208	122	81	288	29
Added Vol:	18	93	3	36	157	7	32	61	48	-2	21	121
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	169	256	93	54	272	45	67	269	170	79	309	150
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	184	278	101	59	296	49	73	292	185	86	336	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	184	278	101	59	296	49	73	292	185	86	336	163
PCE 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
MLF 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
FinalVolume:	184	278	101	59	296	49	73	292	185	86	336	163
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.70	0.70	0.70	0.86	0.86	0.86	0.82	0.82	0.82	0.81	0.81	0.81
Lanes:	0.33	0.49	0.18	0.15	0.73	0.12	0.13	0.53	0.34	0.15	0.57	0.28
Final Sat.:	437	662	240	238	1200	198	206	826	522	225	882	428
Capacity Analysis Module:												
Vol/Sat:	0.42	0.42	0.42	0.25	0.25	0.25	0.35	0.35	0.35	0.38	0.38	0.38
Crit Moves:		****									****	
Green/Cycle:	0.47	0.47	0.47	0.47	0.47	0.47	0.43	0.43	0.43	0.43	0.43	0.43
Volume/Cap:	0.89	0.89	0.89	0.52	0.52	0.52	0.83	0.83	0.83	0.89	0.89	0.89
Delay/Veh:	29.1	29.1	29.1	11.7	11.7	11.7	23.7	23.7	23.7	30.1	30.1	30.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.1	29.1	29.1	11.7	11.7	11.7	23.7	23.7	23.7	30.1	30.1	30.1
LOS by Move:	C	C	C	B	B	B	C	C	C	C	C	C
HCM2k95thQ:	608	608	608	279	279	279	539	539	539	628	628	628

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Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Lane Group:	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	5	5	5	5	5	5	5	5	5	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking 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
Bus Stp 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
Area 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
RT Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.96	0.96	0.96	0.96	0.96	0.96
LT Adj:	0.74	0.74	0.74	0.89	0.89	0.89	0.87	0.87	0.87	0.86	0.86	0.86
PedBike 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
HCM Sat Adj:	0.70	0.70	0.70	0.86	0.86	0.86	0.82	0.82	0.82	0.81	0.81	0.81
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.70	0.70	0.70	0.86	0.86	0.86	0.82	0.82	0.82	0.81	0.81	0.81
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North	South	East	West
Cycle Length, C:	60	60	60	60
Actual Green Time Per Lane Group, G:	27.32	27.32	24.68	24.68
Effective Green Time Per Lane Group, g:	28.32	28.32	25.68	25.68
Opposing Effective Green Time, go:	28.32	28.32	25.68	25.68
Number Of Opposing Lanes, No:	1	1	1	1
Number Of Lanes In Lane Group, N:	1	1	1	1
Adjusted Left-Turn Flow Rate, Vlt:	184	59	73	86
Proportion of Left Turns in Lane Group, Plt:	0.33	0.15	0.13	0.15
Proportion of Left Turns in Opp Flow, Plto:	0.15	0.33	0.15	0.13
Left Turns Per Cycle, LTC:	3.06	0.98	1.21	1.43
Adjusted Opposing Flow Rate, Vo:	403	563	585	550
Opposing Flow Per Lane Per Cycle, Volc:	6.72	9.38	9.75	9.17
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00
Lost Time Per Phase, tl:	3.00	3.00	3.00	3.00
Eff grn until arrival of left-turn car, gf:	1.80	8.70	6.34	5.40
Opposing Queue Ratio, qro:	0.53	0.53	0.57	0.57
Eff grn blocked by opposing queue, gq:	7.71	10.82	12.50	11.79
Eff grn while left turns filter thru, gu:	20.61	17.50	13.18	13.89
Max opposing cars arriving during gq-gf, n:	2.96	1.06	3.08	3.19
Proportion of Opposing Thru & RT cars, ptho:	0.85	0.67	0.85	0.87
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	2.11	2.43	2.47	2.40
Single Lane Through-car Equivalents, el2:	2.55	1.05	2.63	2.76
Minimum Left Turn Adjustment Factor, fmin:	0.09	0.08	0.09	0.09
Single Lane Left Turn Adjustment Factor, fm:	0.74	0.89	0.87	0.86
Left Turn Adjustment Factor, flt:	0.74	0.89	0.87	0.86

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

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Intersection #7 Fig Lane & Yolo Street

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.47	0.47	0.47	0.47	0.47	0.47	0.43	0.43	0.43	0.43	0.43	0.43
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	8.5	8.5	8.5	4.7	4.7	4.7	8.1	8.1	8.1	9.0	9.0	9.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	5.1	5.1	5.1	1.1	1.1	1.1	3.8	3.8	3.8	5.2	5.2	5.2
HCM2KQueue:	13.7	13.7	13.7	5.8	5.8	5.8	11.9	11.9	11.9	14.2	14.2	14.2
70th%Factor:	1.17	1.17	1.17	1.19	1.19	1.19	1.17	1.17	1.17	1.17	1.17	1.17
HCM2k70thQ:	16.0	16.0	16.0	6.9	6.9	6.9	14.0	14.0	14.0	16.6	16.6	16.6
85th%Factor:	1.49	1.49	1.49	1.55	1.55	1.55	1.50	1.50	1.50	1.49	1.49	1.49
HCM2k85thQ:	20.4	20.4	20.4	8.9	8.9	8.9	17.9	17.9	17.9	21.1	21.1	21.1
90th%Factor:	1.60	1.60	1.60	1.70	1.70	1.70	1.62	1.62	1.62	1.60	1.60	1.60
HCM2k90thQ:	21.9	21.9	21.9	9.8	9.8	9.8	19.3	19.3	19.3	22.6	22.6	22.6
95th%Factor:	1.78	1.78	1.78	1.94	1.94	1.94	1.81	1.81	1.81	1.77	1.77	1.77
HCM2k95thQ:	24.3	24.3	24.3	11.2	11.2	11.2	21.5	21.5	21.5	25.1	25.1	25.1
98th%Factor:	2.05	2.05	2.05	2.34	2.34	2.34	2.10	2.10	2.10	2.04	2.04	2.04
HCM2k98thQ:	28.0	28.0	28.0	13.5	13.5	13.5	25.0	25.0	25.0	28.9	28.9	28.9

Cumulative Plus Project AM Peak Hour
With Mitigation Measures

Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k95thQ]:	277	0	277	0	0	0	0	507	507	7	548	0
#6	[HCM2k95thQ]:	93	53	53	90	78	78	227	227	227	233	233	233
#7	[HCM2k95thQ]:	608	608	608	279	279	279	539	539	539	628	628	628

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	116	274	218	110	231	72	157	523	116	83	708	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	169.6	186.3	186.3	169.6	186.3
Adj Flow Rate, veh/h	140	330	263	133	278	87	189	630	140	100	853	167
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	2	2	12	2
Cap, veh/h	153	389	331	186	310	97	224	1239	609	128	1064	523
Arrive On Green	0.09	0.21	0.21	0.10	0.23	0.23	0.25	0.77	0.77	0.07	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	1774	1361	426	1774	3223	1583	1774	3223	1583
Grp Volume(v), veh/h	140	330	263	133	0	365	189	630	140	100	853	167
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1788	1774	1612	1583	1774	1612	1583
Q Serve(g_s), s	5.5	11.9	11.0	5.1	0.0	13.8	7.0	5.2	1.1	3.9	16.8	3.9
Cycle Q Clear(g_c), s	5.5	11.9	11.0	5.1	0.0	13.8	7.0	5.2	1.1	3.9	16.8	3.9
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	389	331	186	0	407	224	1239	609	128	1064	523
V/C Ratio(X)	0.92	0.85	0.80	0.71	0.00	0.90	0.84	0.51	0.23	0.78	0.80	0.32
Avail Cap(c_a), veh/h	153	428	364	186	0	411	229	1239	609	178	1064	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	26.5	26.2	30.2	0.0	26.1	25.4	5.6	2.1	31.8	21.3	8.6
Incr Delay (d2), s/veh	48.8	13.8	10.7	12.2	0.0	21.7	22.5	1.4	0.8	13.7	6.4	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(50%),veh/ln	4.7	7.5	5.7	3.1	0.0	9.2	4.8	2.4	0.8	2.4	8.4	2.4
LnGrp Delay(d),s/veh	80.4	40.3	36.9	42.4	0.0	47.9	47.9	7.0	3.0	45.4	27.6	10.2
LnGrp LOS	F	D	D	D		D	D	A	A	D	C	B
Approach Vol, veh/h		733			498			959			1120	
Approach Delay, s/veh		46.8			46.4			14.5			26.6	
Approach LOS		D			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	31.1	11.3	18.5	13.1	27.0	10.0	19.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	25.0	6.0	16.0	9.0	23.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	5.9	7.2	7.1	13.9	9.0	18.8	7.5	15.8
Green Ext Time (p_c), s	0.0	5.2	0.0	0.7	0.0	2.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	99	726	553	499	628	110	402	751	517	129	1046	123
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	169.6	186.3	186.3	169.6	186.3
Adj Flow Rate, veh/h	121	885	0	609	766	134	490	916	0	157	1276	150
Adj No. of Lanes	1	2	1	2	2	0	2	2	1	1	2	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	2	2	12	2
Cap, veh/h	144	931	416	517	1000	175	419	1153	567	203	1130	555
Arrive On Green	0.08	0.26	0.00	0.15	0.33	0.33	0.12	0.36	0.00	0.23	0.70	0.70
Sat Flow, veh/h	1774	3539	1583	3442	3012	527	3442	3223	1583	1774	3223	1583
Grp Volume(v), veh/h	121	885	0	609	450	450	490	916	0	157	1276	150
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1770	1721	1612	1583	1774	1612	1583
Q Serve(g_s), s	9.4	34.3	0.0	21.0	31.8	31.8	17.0	35.6	0.0	11.6	49.0	3.8
Cycle Q Clear(g_c), s	9.4	34.3	0.0	21.0	31.8	31.8	17.0	35.6	0.0	11.6	49.0	3.8
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	931	416	517	588	588	419	1153	567	203	1130	555
V/C Ratio(X)	0.84	0.95	0.00	1.18	0.77	0.77	1.17	0.79	0.00	0.77	1.13	0.27
Avail Cap(c_a), veh/h	165	937	419	517	588	588	419	1153	567	203	1130	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	63.3	50.6	0.0	59.4	41.8	41.8	61.4	40.3	0.0	52.2	20.9	8.8
Incr Delay (d2), s/veh	27.7	18.6	0.0	98.6	6.0	6.0	99.4	5.7	0.0	15.1	68.6	1.1
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(50%),veh/ln	5.7	19.2	0.0	17.0	16.5	16.5	13.8	16.8	0.0	6.5	31.8	1.9
LnGrp Delay(d),s/veh	91.0	69.2	0.0	157.9	47.8	47.8	160.8	45.9	0.0	67.3	89.4	9.9
LnGrp LOS	F	F		F	D	D	F	D		F	F	A
Approach Vol, veh/h		1006			1509			1406			1583	
Approach Delay, s/veh		71.8			92.2			86.0			79.7	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	54.0	25.0	40.7	21.3	53.0	15.3	50.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	50.0	21.0	37.0	17.0	49.0	13.0	45.0
Max Q Clear Time (g_c+I1), s	13.6	37.6	23.0	36.3	19.0	51.0	11.4	33.8
Green Ext Time (p_c), s	0.7	5.2	0.0	0.4	0.0	0.0	0.0	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	83.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	512	1	37	6	2	4	34	1936	5	5	1456	438
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	190.0	186.3	190.0	186.3	169.7	190.0	186.3	173.2	190.0
Adj Flow Rate, veh/h	624	1	45	7	2	5	41	2361	6	6	1776	534
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	12	12	2	12	12
Cap, veh/h	484	11	511	268	82	173	51	1838	5	51	1408	403
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.03	0.56	0.56	0.01	0.18	0.18
Sat Flow, veh/h	1403	35	1554	699	249	527	1774	3299	8	1774	2527	723
Grp Volume(v), veh/h	624	0	46	14	0	0	41	1153	1214	6	1125	1185
Grp Sat Flow(s),veh/h/ln	1403	0	1589	1475	0	0	1774	1612	1695	1774	1646	1605
Q Serve(g_s), s	43.2	0.0	2.8	0.0	0.0	0.0	3.2	78.0	78.0	0.5	78.0	78.0
Cycle Q Clear(g_c), s	46.0	0.0	2.8	2.8	0.0	0.0	3.2	78.0	78.0	0.5	78.0	78.0
Prop In Lane	1.00		0.98	0.50		0.36	1.00		0.00	1.00		0.45
Lane Grp Cap(c), veh/h	484	0	522	523	0	0	51	898	945	51	917	894
V/C Ratio(X)	1.29	0.00	0.09	0.03	0.00	0.00	0.81	1.28	1.29	0.12	1.23	1.33
Avail Cap(c_a), veh/h	484	0	522	523	0	0	51	898	945	51	917	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	50.7	0.0	32.5	31.8	0.0	0.0	67.6	31.0	31.0	67.6	57.1	57.1
Incr Delay (d2), s/veh	144.8	0.0	0.1	0.0	0.0	0.0	61.4	136.3	136.4	0.1	103.3	147.0
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(50%),veh/ln	38.2	0.0	1.2	0.4	0.0	0.0	2.4	68.4	72.0	0.2	61.9	71.2
LnGrp Delay(d),s/veh	195.5	0.0	32.6	31.8	0.0	0.0	129.0	167.3	167.4	67.7	160.4	204.2
LnGrp LOS	F		C	C			F	F	F	F	F	F
Approach Vol, veh/h		670			14			2408			2316	
Approach Delay, s/veh		184.3			31.8			166.7			182.6	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	82.0		50.0	8.0	82.0		50.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	78.0		46.0	4.0	78.0		46.0
Max Q Clear Time (g_c+I1), s	2.5	80.0		48.0	5.2	80.0		4.8
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	175.3
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	16	88	11	876	1184	3
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	17	96	12	952	1287	3
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	144	129	21	2769	2486	1112
Arrive On Green	0.08	0.08	0.02	1.00	1.00	1.00
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	17	96	12	952	1287	3
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	0.5	3.5	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	3.5	0.4	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	144	129	21	2769	2486	1112
V/C Ratio(X)	0.12	0.74	0.56	0.34	0.52	0.00
Avail Cap(c_a), veh/h	483	431	121	2769	2486	1112
HCM Platoon Ratio	1.00	1.00	1.33	1.33	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.51	0.51	0.61	0.61
Uniform Delay (d), s/veh	25.0	26.4	28.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	8.2	11.1	0.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.3	0.3	0.1	0.2	0.0
LnGrp Delay(d),s/veh	25.4	34.6	39.8	0.2	0.5	0.0
LnGrp LOS	C	C	D	A	A	A
Approach Vol, veh/h	113			964	1290	
Approach Delay, s/veh	33.2			0.7	0.5	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		61.2		8.8	4.7	56.5		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		46.0		16.0	4.0	38.0		
Max Q Clear Time (g_c+I1), s		2.0		5.5	2.4	2.0		
Green Ext Time (p_c), s		27.2		0.2	0.0	23.9		

Intersection Summary	
HCM 2010 Ctrl Delay	2.1
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	153	149	208	1701	2332	111
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
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
Adj Sat Flow, veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	166	162	226	1849	2535	121
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	203	181	215	2932	2402	1074
Arrive On Green	0.11	0.11	0.16	1.00	0.68	0.68
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	166	162	226	1849	2535	121
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	12.8	14.1	17.0	0.0	95.0	3.7
Cycle Q Clear(g_c), s	12.8	14.1	17.0	0.0	95.0	3.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	203	181	215	2932	2402	1074
V/C Ratio(X)	0.82	0.90	1.05	0.63	1.06	0.11
Avail Cap(c_a), veh/h	203	181	215	2932	2402	1074
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	60.6	61.2	58.7	0.0	22.5	7.8
Incr Delay (d2), s/veh	22.5	38.9	32.9	0.1	35.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	13.8	10.3	0.0	57.4	1.7
LnGrp Delay(d),s/veh	83.1	100.1	91.6	0.1	57.6	8.0
LnGrp LOS	F	F	F	A	F	A
Approach Vol, veh/h	328			2075	2656	
Approach Delay, s/veh	91.5			10.1	55.4	
Approach LOS	F			B	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		120.0		20.0	21.0	99.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		116.0		16.0	17.0	95.0		
Max Q Clear Time (g_c+I1), s		2.0		16.1	19.0	97.0		
Green Ext Time (p_c), s		110.0		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	39.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	147	0	1664	2233	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	-	-	-	200
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	160	0	1809	2427	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	-	2427	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	-
Pot Cap-1 Maneuver	0	0	192	-	-	-
Stage 1	0	0	-	-	-	-
Stage 2	0	0	-	-	-	-
Platoon blocked, %	-			-	-	-
Mov Cap-1 Maneuver	-	-	192	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	192	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Scenario Report

Scenario:	Cumul Plus Proj PM
Command:	Cumul Plus Proj PM
Volume:	Cumul Prj Bckgr PM
Geometry:	Cumul Plus Proj
Impact Fee:	Default Impact Fee
Trip Generation:	PM Pk Hr
Trip Distribution:	PM Pk Hr
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 4 Stuhr Road & Draper Road	A	8.3	0.715	A	9.8	0.777	+ 1.486 D/V
# 6 Orestimba/Yolo St & Hardin Rd	A	5.2	0.366	A	7.6	0.431	+ 2.373 D/V
# 7 Fig Lane & Yolo Street	B	12.0	0.541	C	26.6	0.884	+14.643 D/V

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Stuhr Road & Draper Road

Cycle (sec): 60 Critical Vol./Cap.(X): 0.777
Loss Time (sec): 9 Average Delay (sec/veh): 9.8
Optimal Cycle: OPTIMIZED Level Of Service: A

Street Name:	Draper Road						Stuhr Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	0 0	0	0	1 0	1	0	1 0
Volume Module:	PM Peak Hour											
Base Vol:	128	0	4	0	0	0	0	711	165	4	632	0
Growth 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
Initial Bse:	128	0	4	0	0	0	0	711	165	4	632	0
Added Vol:	0	0	3	0	0	0	0	82	0	4	57	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	128	0	7	0	0	0	0	793	165	8	689	0
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	139	0	8	0	0	0	0	862	179	9	749	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	139	0	8	0	0	0	0	862	179	9	749	0
PCE 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
MLF 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
FinalVolume:	139	0	8	0	0	0	0	862	179	9	749	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.96	0.96	0.93	0.98	1.00
Lanes:	0.95	0.00	0.05	0.00	0.00	0.00	0.00	0.83	0.17	1.00	1.00	0.00
Final Sat.:	1674	0	92	0	0	0	0	1506	313	1769	1862	0
Capacity Analysis Module:												
Vol/Sat:	0.08	0.00	0.08	0.00	0.00	0.00	0.00	0.57	0.57	0.00	0.40	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.11	0.00	0.11	0.00	0.00	0.00	0.00	0.74	0.74	0.01	0.74	0.00
Volume/Cap:	0.78	0.00	0.78	0.00	0.00	0.00	0.00	0.78	0.78	0.78	0.54	0.00
Delay/Veh:	44.3	0.0	44.3	0.0	0.0	0.0	0.0	7.8	7.8	176.9	3.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.3	0.0	44.3	0.0	0.0	0.0	0.0	7.8	7.8	176.9	3.8	0.0
LOS by Move:	D	A	D	A	A	A	A	A	A	F	A	A
HCM2k95thQ:	234	0	234	0	0	0	0	617	617	12	294	0

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	1! 0	0	0	0	0	0	0	1	0	1 0
Lane Group:	LTR		LTR	xxxx	xxxx	xxxx	xxxx	RT	RT	L	T	xxxx
#LnsInGrps:	1		1	0	0	0	0	1	1	1	1	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12		12	12		12	12		12	12		12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			0			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	xxxx	4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	0.99	xxxx	0.99	xxxx	xxxx	xxxxx	xxxx	0.98	0.98	xxxx	xxxx	xxxxx
LT Adj:	0.96	xxxx	0.96	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike 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
HCM Sat Adj:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.96	0.96	0.93	0.98	1.00
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.96	0.96	0.93	0.98	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #4 Stuhr Road & Draper Road

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.11	0.00	0.11	0.00	0.00	0.00	0.00	0.74	0.74	0.01	0.74	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	2.4	0.0	2.4	0.0	0.0	0.0	0.0	10.7	10.7	0.1	5.4	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.96	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.04	0.63	0.00
Q2:	2.4	0.0	2.4	0.0	0.0	0.0	0.0	3.2	3.2	0.1	0.7	0.0
HCM2KQueue:	4.8	0.0	4.8	0.0	0.0	0.0	0.0	13.9	13.9	0.2	6.1	0.0
70th%Factor:	1.19	1.20	1.19	1.20	1.20	1.20	1.20	1.17	1.17	1.20	1.19	1.20
HCM2k70thQ:	5.7	0.0	5.7	0.0	0.0	0.0	0.0	16.3	16.3	0.3	7.2	0.0
85th%Factor:	1.56	1.60	1.56	1.60	1.60	1.60	1.60	1.49	1.49	1.60	1.54	1.60
HCM2k85thQ:	7.4	0.0	7.4	0.0	0.0	0.0	0.0	20.7	20.7	0.4	9.4	0.0
90th%Factor:	1.72	1.80	1.72	1.80	1.80	1.80	1.80	1.60	1.60	1.80	1.69	1.80
HCM2k90thQ:	8.2	0.0	8.2	0.0	0.0	0.0	0.0	22.2	22.2	0.4	10.3	0.0
95th%Factor:	1.96	2.10	1.96	2.10	2.10	2.10	2.10	1.78	1.78	2.09	1.93	2.10
HCM2k95thQ:	9.4	0.0	9.4	0.0	0.0	0.0	0.0	24.7	24.7	0.5	11.8	0.0
98th%Factor:	2.39	2.70	2.39	2.70	2.70	2.70	2.70	2.04	2.04	2.68	2.33	2.70
HCM2k98thQ:	11.4	0.0	11.4	0.0	0.0	0.0	0.0	28.4	28.4	0.6	14.2	0.0

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Orestimba/Yolo St & Hardin Rd

Cycle (sec): 60 Critical Vol./Cap.(X): 0.431
Loss Time (sec): 9 Average Delay (sec/veh): 7.6
Optimal Cycle: OPTIMIZED Level Of Service: A

Street Name:	Hardin Road						Orestimba Road / Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0 0 1	0	0	1! 0	0	0	1! 0 0
Volume Module:	PM Peak Hour											
Base Vol:	43	3	10	3	5	16	12	382	58	10	333	3
Growth 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
Initial Bse:	43	3	10	3	5	16	12	382	58	10	333	3
Added Vol:	6	31	1	45	18	1	2	47	3	0	84	84
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	49	34	11	48	23	17	14	429	61	10	417	87
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	53	37	12	52	25	18	15	466	66	11	453	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	37	12	52	25	18	15	466	66	11	453	95
PCE 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
MLF 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
FinalVolume:	53	37	12	52	25	18	15	466	66	11	453	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.94	0.94	0.93	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	0.76	0.24	1.00	0.58	0.42	0.03	0.85	0.12	0.02	0.81	0.17
Final Sat.:	1769	1355	438	1769	1002	741	50	1536	218	35	1463	305
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.03	0.03	0.02	0.02	0.30	0.30	0.30	0.31	0.31	0.31
Crit Moves:		****		****							****	
Green/Cycle:	0.07	0.06	0.06	0.07	0.06	0.06	0.72	0.72	0.72	0.72	0.72	0.72
Volume/Cap:	0.42	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.43	0.43	0.43
Delay/Veh:	28.9	29.7	29.7	29.3	29.9	29.9	3.6	3.6	3.6	3.7	3.7	3.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.9	29.7	29.7	29.3	29.9	29.9	3.6	3.6	3.6	3.7	3.7	3.7
LOS by Move:	C	C	C	C	C	C	A	A	A	A	A	A
HCM2k95thQ:	78	76	76	79	70	70	218	218	218	224	224	224

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LTR	LTR	LTR
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1 xxxx	xxxx		1 xxxx	xxxx		5	5	5	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Area 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
RT Adj:	xxxx	0.96	0.96	xxxx	0.94	0.94	0.98	0.98	0.98	0.98	0.98	0.98
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.99	0.99	0.99	0.99	0.99	0.99
PedBike 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
HCM Sat Adj:	0.93	0.94	0.94	0.93	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.93	0.94	0.94	0.93	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	60	60
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	42.10	42.10
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	43.10	43.10
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	43.10	43.10
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	1	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	1	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	15	11
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	0.03	0.02
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	0.02	0.03
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	0.25	0.18
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	559	548
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	9.32	9.13
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	1.00	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	3.00	3.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	26.29	28.39
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	0.28	0.28
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	4.06	3.95
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	16.81	14.71
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	0.00	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	0.98	0.97
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	xxxxxx	xxxxxx	2.42	2.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	1.00	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	0.05	0.05
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	0.99	0.99
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	0.99	0.99

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #6 Orestimba/Yolo St & Hardin Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.07	0.06	0.06	0.07	0.06	0.06	0.72	0.72	0.72	0.72	0.72	0.72
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.8	0.8	0.8	0.8	0.7	0.7	3.7	3.7	3.7	3.8	3.8	3.8
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
HCM2KQueue:	1.5	1.5	1.5	1.5	1.4	1.4	4.4	4.4	4.4	4.6	4.6	4.6
70th%Factor:	1.20	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19
HCM2k70thQ:	1.8	1.8	1.8	1.8	1.6	1.6	5.3	5.3	5.3	5.4	5.4	5.4
85th%Factor:	1.59	1.59	1.59	1.59	1.59	1.59	1.56	1.56	1.56	1.56	1.56	1.56
HCM2k85thQ:	2.4	2.4	2.4	2.4	2.2	2.2	6.9	6.9	6.9	7.1	7.1	7.1
90th%Factor:	1.77	1.77	1.77	1.77	1.77	1.77	1.72	1.72	1.72	1.72	1.72	1.72
HCM2k90thQ:	2.7	2.6	2.6	2.7	2.4	2.4	7.6	7.6	7.6	7.8	7.8	7.8
95th%Factor:	2.05	2.05	2.05	2.05	2.06	2.06	1.97	1.97	1.97	1.97	1.97	1.97
HCM2k95thQ:	3.1	3.0	3.0	3.2	2.8	2.8	8.7	8.7	8.7	8.9	8.9	8.9
98th%Factor:	2.59	2.59	2.59	2.59	2.60	2.60	2.41	2.41	2.41	2.40	2.40	2.40
HCM2k98thQ:	3.9	3.8	3.8	4.0	3.5	3.5	10.7	10.7	10.7	10.9	10.9	10.9

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Fig Lane & Yolo Street

Cycle (sec): 60 Critical Vol./Cap.(X): 0.884
Loss Time (sec): 6 Average Delay (sec/veh): 26.6
Optimal Cycle: OPTIMIZED Level Of Service: C

Street Name:	Fig Lane						Yolo Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Volume Module:	PM Peak Hour											
Base Vol:	107	108	81	24	151	39	31	247	147	78	215	20
Growth 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
Initial Bse:	107	108	81	24	151	39	31	247	147	78	215	20
Added Vol:	62	178	5	124	141	32	11	51	32	6	75	52
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	169	286	86	148	292	71	42	298	179	84	290	72
User 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
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	184	311	93	161	317	77	46	324	195	91	315	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	184	311	93	161	317	77	46	324	195	91	315	78
PCE 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
MLF 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
FinalVolume:	184	311	93	161	317	77	46	324	195	91	315	78
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.69	0.69	0.69	0.70	0.70	0.70	0.88	0.88	0.88	0.74	0.74	0.74
Lanes:	0.31	0.53	0.16	0.29	0.57	0.14	0.08	0.58	0.34	0.19	0.65	0.16
Final Sat.:	407	688	207	388	765	186	136	963	578	266	918	228
Capacity Analysis Module:												
Vol/Sat:	0.45	0.45	0.45	0.41	0.41	0.41	0.34	0.34	0.34	0.34	0.34	0.34
Crit Moves:		****									****	
Green/Cycle:	0.51	0.51	0.51	0.51	0.51	0.51	0.39	0.39	0.39	0.39	0.39	0.39
Volume/Cap:	0.88	0.88	0.88	0.81	0.81	0.81	0.87	0.87	0.87	0.88	0.88	0.88
Delay/Veh:	26.4	26.4	26.4	19.5	19.5	19.5	28.6	28.6	28.6	32.7	32.7	32.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.4	26.4	26.4	19.5	19.5	19.5	28.6	28.6	28.6	32.7	32.7	32.7
LOS by Move:	C	C	C	B	B	B	C	C	C	C	C	C
HCM2k95thQ:	611	611	611	513	513	513	590	590	590	554	554	554

Note: Queue reported is the distance per lane in feet.

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Lane Group:	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR	LTR
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	5	5	5	5	5	5	5	5	5	5	5	5
HCM Ops Saturation Adj Module:												
Ln Wid 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
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade 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
Parking 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
Bus Stp 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
Area 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
RT Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.95	0.95	0.95	0.98	0.98	0.98
LT Adj:	0.71	0.71	0.71	0.73	0.73	0.73	0.95	0.95	0.95	0.78	0.78	0.78
PedBike 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
HCM Sat Adj:	0.69	0.69	0.69	0.70	0.70	0.70	0.88	0.88	0.88	0.74	0.74	0.74
Usr Sat 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
MLF Sat 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
Fnl Sat Adj:	0.69	0.69	0.69	0.70	0.70	0.70	0.88	0.88	0.88	0.74	0.74	0.74
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #7 Fig Lane & Yolo Street

Approach:	North	South	East	West
Cycle Length, C:	60	60	60	60
Actual Green Time Per Lane Group, G:	29.67	29.67	22.33	22.33
Effective Green Time Per Lane Group, g:	30.67	30.67	23.33	23.33
Opposing Effective Green Time, go:	30.67	30.67	23.33	23.33
Number Of Opposing Lanes, No:	1	1	1	1
Number Of Lanes In Lane Group, N:	1	1	1	1
Adjusted Left-Turn Flow Rate, Vlt:	184	161	46	91
Proportion of Left Turns in Lane Group, Plt:	0.31	0.29	0.08	0.19
Proportion of Left Turns in Opp Flow, Plto:	0.29	0.31	0.19	0.08
Left Turns Per Cycle, LTC:	3.06	2.68	0.76	1.52
Adjusted Opposing Flow Rate, Vo:	555	588	485	564
Opposing Flow Per Lane Per Cycle, Volc:	9.25	9.80	8.08	9.40
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00
Lost Time Per Phase, tl:	3.00	3.00	3.00	3.00
Eff grn until arrival of left-turn car, gf:	2.22	2.99	7.83	4.29
Opposing Queue Ratio, qro:	0.49	0.49	0.61	0.61
Eff grn blocked by opposing queue, gq:	9.60	10.17	11.41	13.17
Eff grn while left turns filter thru, gu:	21.07	20.50	11.92	10.16
Max opposing cars arriving during gq-gf, n:	3.69	3.59	1.79	4.44
Proportion of Opposing Thru & RT cars, ptho:	0.71	0.69	0.81	0.92
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Through-car Equivalents, el1:	2.41	2.48	2.27	2.43
Single Lane Through-car Equivalents, el2:	2.47	2.37	1.66	3.86
Minimum Left Turn Adjustment Factor, fmin:	0.09	0.08	0.09	0.10
Single Lane Left Turn Adjustment Factor, fm:	0.71	0.73	0.94	0.77
Left Turn Adjustment Factor, flt:	0.71	0.73	0.94	0.77

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

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Intersection #7 Fig Lane & Yolo Street

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.51	0.51	0.51	0.51	0.51	0.51	0.39	0.39	0.39	0.39	0.39	0.39
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	8.7	8.7	8.7	7.7	7.7	7.7	8.7	8.7	8.7	7.5	7.5	7.5
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	5.0	5.0	5.0	3.5	3.5	3.5	4.5	4.5	4.5	4.8	4.8	4.8
HCM2KQueue:	13.7	13.7	13.7	11.3	11.3	11.3	13.2	13.2	13.2	12.3	12.3	12.3
70th%Factor:	1.17	1.17	1.17	1.18	1.18	1.18	1.17	1.17	1.17	1.17	1.17	1.17
HCM2k70thQ:	16.1	16.1	16.1	13.2	13.2	13.2	15.5	15.5	15.5	14.4	14.4	14.4
85th%Factor:	1.49	1.49	1.49	1.51	1.51	1.51	1.49	1.49	1.49	1.50	1.50	1.50
HCM2k85thQ:	20.5	20.5	20.5	17.0	17.0	17.0	19.7	19.7	19.7	18.4	18.4	18.4
90th%Factor:	1.60	1.60	1.60	1.63	1.63	1.63	1.61	1.61	1.61	1.62	1.62	1.62
HCM2k90thQ:	22.0	22.0	22.0	18.3	18.3	18.3	21.2	21.2	21.2	19.9	19.9	19.9
95th%Factor:	1.78	1.78	1.78	1.82	1.82	1.82	1.79	1.79	1.79	1.80	1.80	1.80
HCM2k95thQ:	24.5	24.5	24.5	20.5	20.5	20.5	23.6	23.6	23.6	22.1	22.1	22.1
98th%Factor:	2.05	2.05	2.05	2.12	2.12	2.12	2.06	2.06	2.06	2.09	2.09	2.09
HCM2k98thQ:	28.1	28.1	28.1	23.9	23.9	23.9	27.2	27.2	27.2	25.7	25.7	25.7

Cumulative Plus Project PM Peak Hour
With Mitigation Measures

Future Queue Length Report (feet)

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
#4	[HCM2k95thQ]:	234	0	234	0	0	0	0	617	617	12	294	0
#6	[HCM2k95thQ]:	78	76	76	79	70	70	218	218	218	224	224	224
#7	[HCM2k95thQ]:	611	611	611	513	513	513	590	590	590	554	554	554