Project No: 636-03

TRAFFIC STUDY

VA COMMUNITY-BASED OUTPATIENT CLINIC

KNUDSEN DRIVE

BAKERSFIELD, CALIFORNIA

Prepared for:

SASD DEVELOPMENT GROUP, LLC

February 2023

Prepared by:

RUETTGERS & SCHULER
CIVIL ENGINEERS

1800 30TH STREET, SUITE 260
BAKERSFIELD, CA 93301

Ian J. Parks, RCE 51825

REGISTERED PROFESSIONAL ENGINEER
IAN JEFFREY PARKS
No. C58155
Exp. 6-30-24
CIVIL
STATE OF CALIFORNIA

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INTRODUCTION

The purpose of this study is to evaluate the potential traffic impacts of a proposed VA outpatient clinic development located on the east side of Knudsen Drive, approximately 240 feet south of the Olive Drive in Bakersfield, CA. A vicinity map and location map are presented in Figures 1 and 2, respectively.

The proposed VA community-based outpatient clinic is anticipated to be 39,648 square feet with four proposed entrances.

A. Land Use, Site and Study Area Boundaries

The existing zoning is M-2 PD (Medium Industrial, Precise Development Combining) and the land use designation is SI (Service Industrial).

The study area includes a total of three intersections (two signalized, one stop-controlled) along Hageman Road and Knudsen Drive. The scope of the study was developed in association with the Kern County Public Works Department and the City of Bakersfield.

Also included in scoping was a safety analysis review on nearby Caltrans facilities. A review of project traffic that would utilize State Route 99 ramps shows that the traffic volumes are below the 50-trip threshold to analyze State facilities. Therefore, a review of traffic safety on Caltrans facilities is not warranted.

B. Existing Site Uses and Site Access

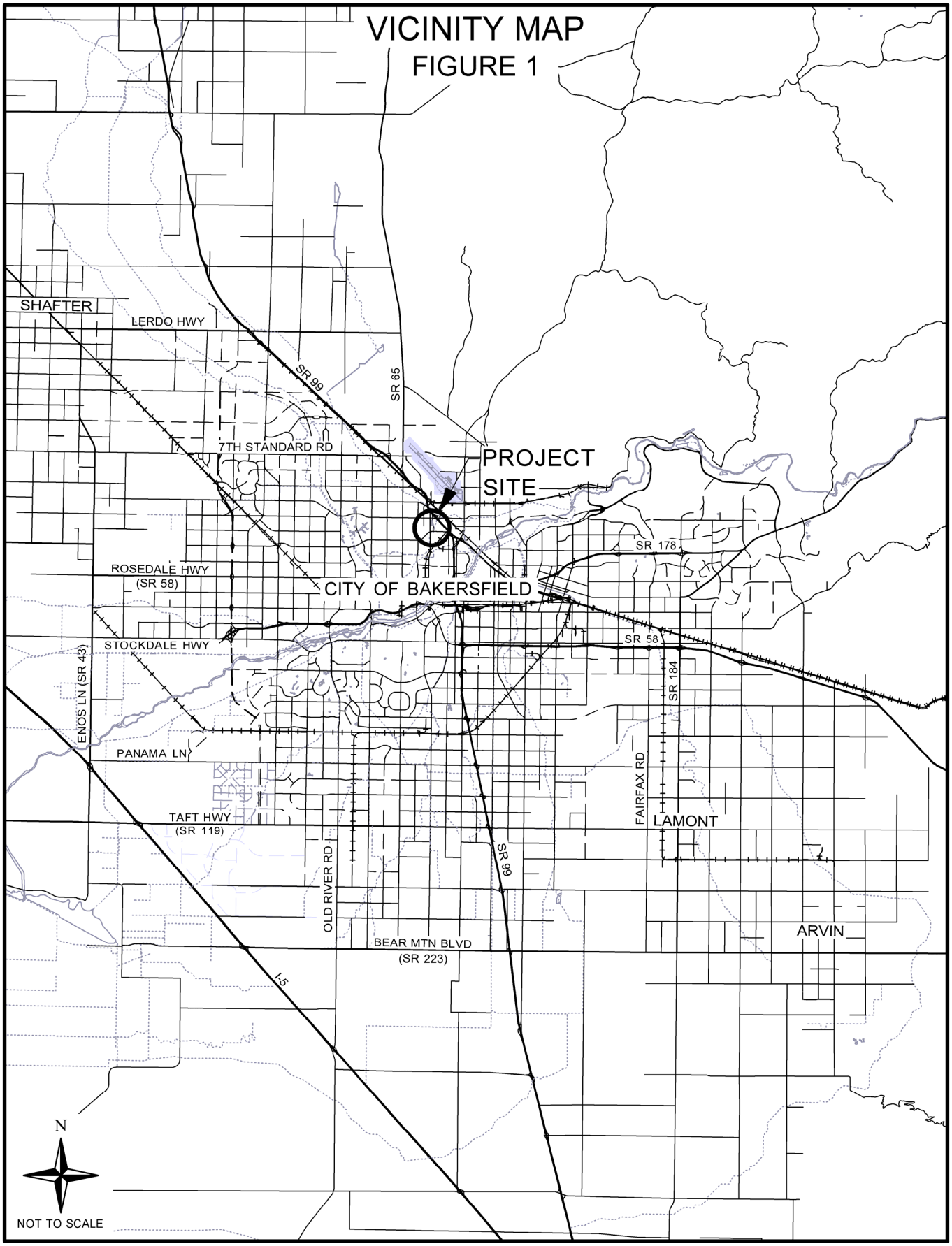
The site is currently vacant land. As currently planned, access to the proposed development would be provided along Knudsen Drive and Landco Drive.

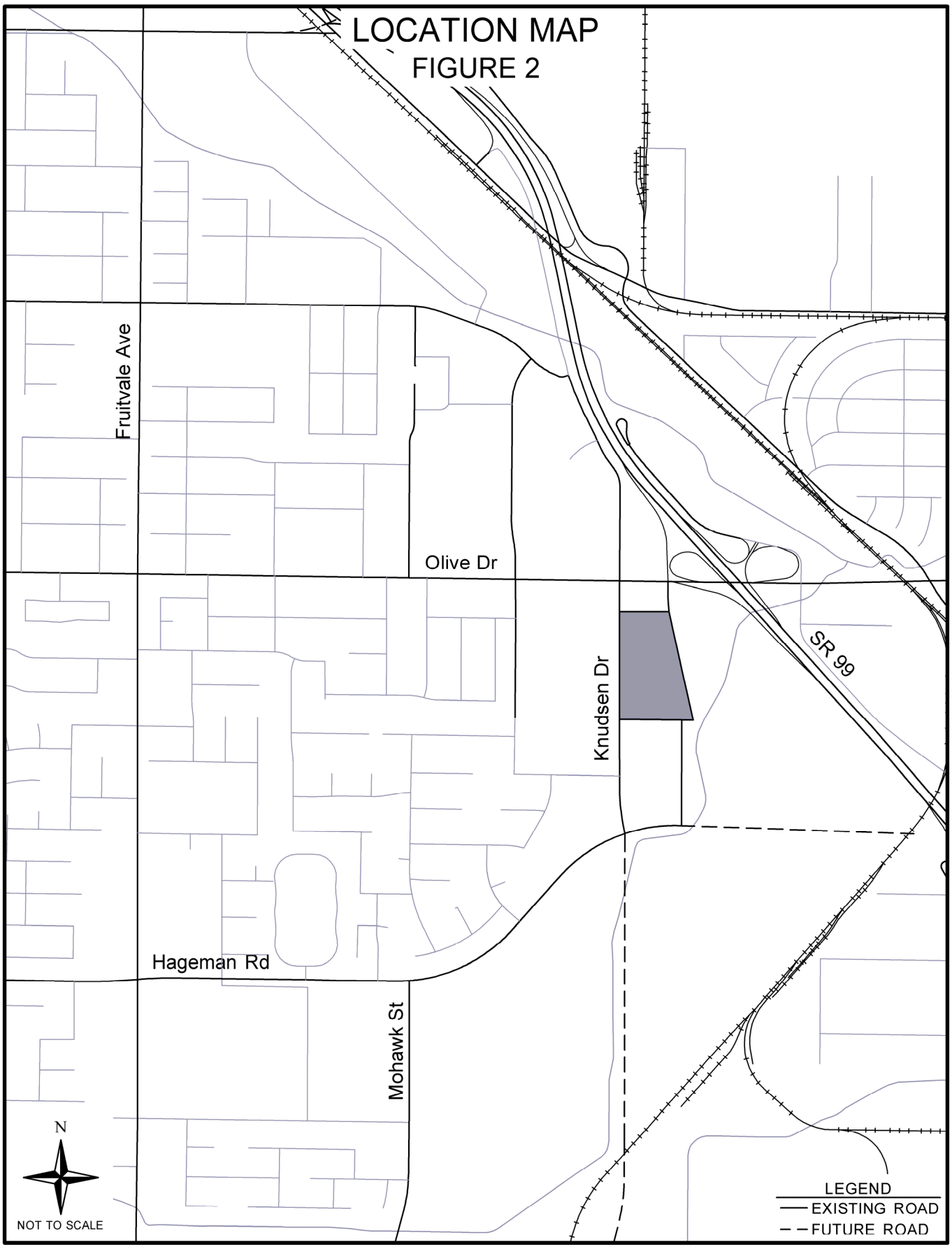
C. Existing Uses in Vicinity of the Site

Residential subdivisions lie to the west of the project. Commercial land uses lie to the north of the project. State Route 99 is to the east of the project with vacant land to the immediate east and south of the project.

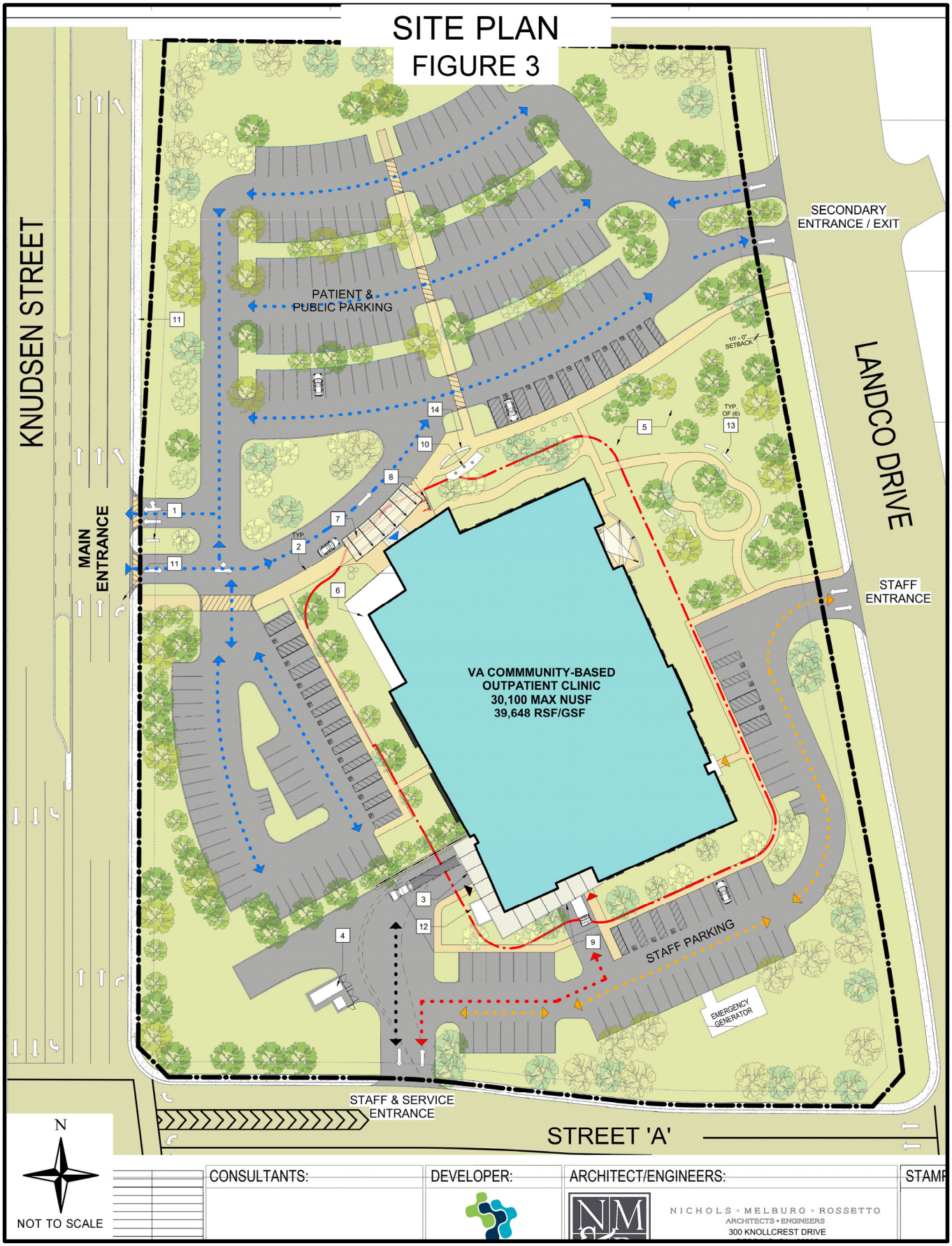
It is noted that the existing VA Clinic located on Westwind Drive will close when the new location on Knudsen is open. Following are the approximate daily and peak hour traffic volumes of the existing facility, based on the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition. The volumes are provided for information purposes.

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
630	Clinic	30.14 1000 sq ft GFA	eq	1116	eq	81% 60	19% 14	eq	30% 33	70% 77


VICINITY MAP
FIGURE 1
SHAFTER
LERDO HWY
SR 99
SR 65
7TH STANDARD RD
PROJECT SITE
SR 178
ROSEDALE HWY
(SR 58)
CITY OF BAKERSFIELD
STOCKDALE HWY
SR 58
SR 184
ENOS LN (SR 43)
PANAMA LN
FAIRFAX RD
LAMONT
TAFT HWY
(SR 119)
OLD RIVER RD
SR 99
ARVIN
BEAR MTN BLVD
(SR 223)
I-5
N
NOT TO SCALE


LOCATION MAP
FIGURE 2
Fruitvale Ave
Olive Dr
Knudsen Dr
SR 99
Hageman Rd
Mohawk St
N
NOT TO SCALE
LEGEND
EXISTING ROAD
FUTURE ROAD

SITE PLAN
FIGURE 3



D. Roadway Descriptions

Hageman Road is an east-west arterial that exists at full width between Bergamo Drive and Verdugo Lane and at various stages of widening adjacent to development west of Calloway Drive. Hageman Road provides access from residential, commercial and industrial areas to north-south arterials and collectors. Hageman Road is planned to extend east from Knudsen Drive and connect to State Route 204.

Knudsen Drive is a north-south collector that extends north from Hageman Road. Knudsen Drive is at various stages of widening and operates as a three-lane roadway south of Olive Drive and a two-lane roadway with a two-way left-turn lane north of Olive Drive. It provides access to commercial and industrial land uses.

Mohawk Street is an arterial that extends from California Avenue to Hageman Road and exists as a five-lane roadway between California Avenue and Truxtun Avenue, a six-lane roadway between Truxtun Avenue and Rosedale Highway, and a four-lane roadway between Rosedale Highway and Hageman Road. Mohawk Street provides access to industrial and commercial land uses and is one of five arterials that provide a Kern River and BNSF Railroad crossing.

Olive Drive is an east-west arterial with an interchange connection at State Route 99. It is a major access route for traffic between State Route 99 and commercial and residential areas to the west and the community of Oildale to the east.

PROJECT TRIP GENERATION

The trip generation volumes for the VA Outpatient Clinic were calculated using the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition. Trip generation and design hour volumes for all land uses are shown in Table 1.

The ADT, AM and PM peak hour rate equations, and peak hour directional splits for ITE Land Use Code 630 (Clinic) were used to estimate the project traffic.

Table 1
Project Trip Generation

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
630	Clinic	39.648 1000 sq ft GFA	eq	1457	eq	81% 77	19% 18	eq	30% 43	70% 100

TRIP DISTRIBUTION AND ASSIGNMENT

The project trip distribution in Table 2 represents the most likely travel routes for traffic accessing the project. Project traffic distribution was estimated based on a review of the potential draw from population centers within the region and the types of land uses involved. Figure 4a shows the project trip distribution with the existing street network and Figure 4b shows the project trip distribution with the construction of the Hageman Flyover. KernCOG includes the Hageman Flyover in its future traffic model, and therefore, all growth and circulation assumptions are based on the Hageman Flyover being constructed. Additionally, the City Regional Transportation Impact Fee program includes the Hageman Flyover in the facilities list and the funding amount.

Table 2
Project Trip Distribution

Direction	Percent
North	30
East	15
South	30
West	25

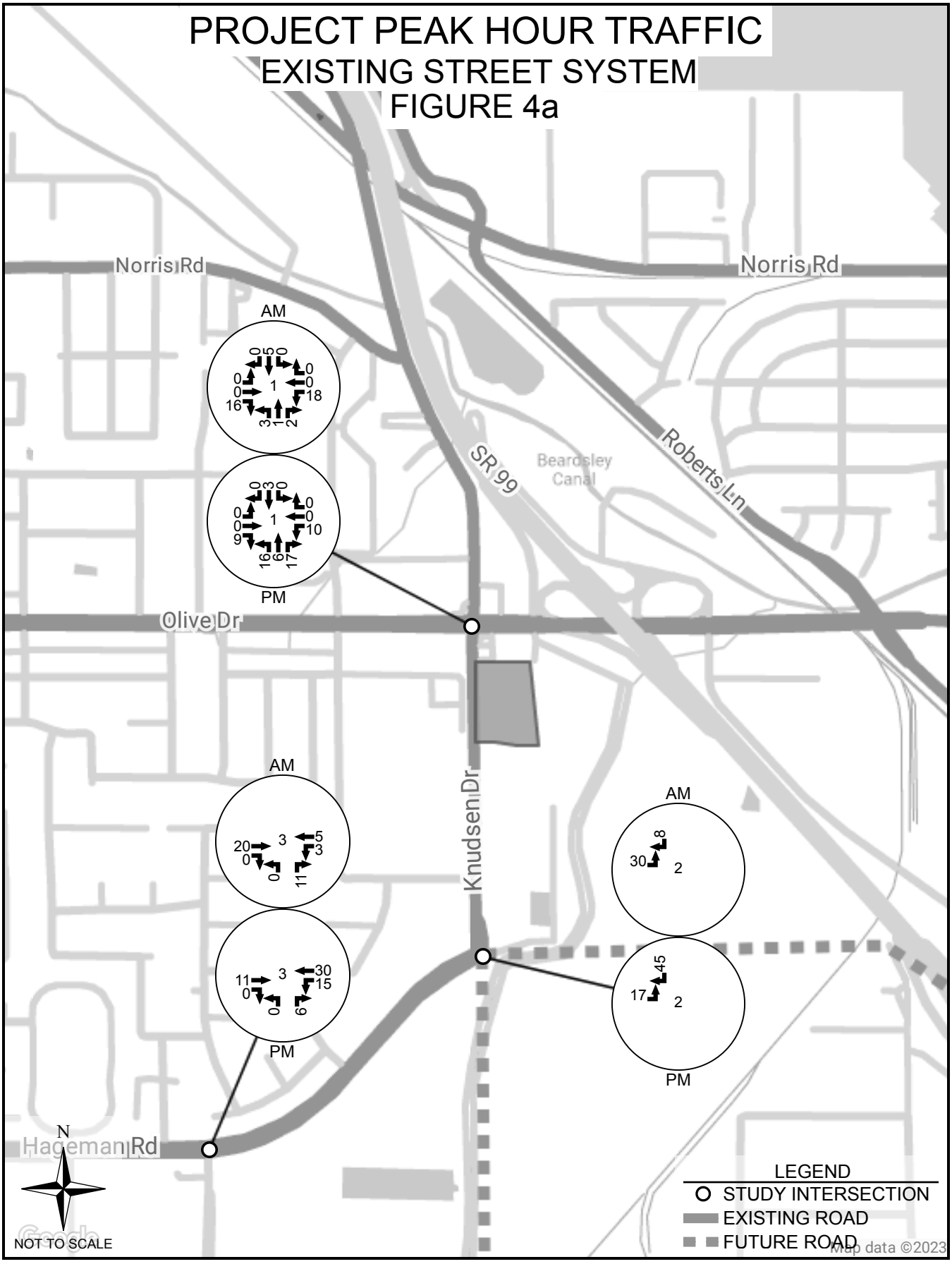
EXISTING AND FUTURE TRAFFIC

Weekday peak hour turning movements were counted at the following intersections in January 2022 (see Appendix for count data).

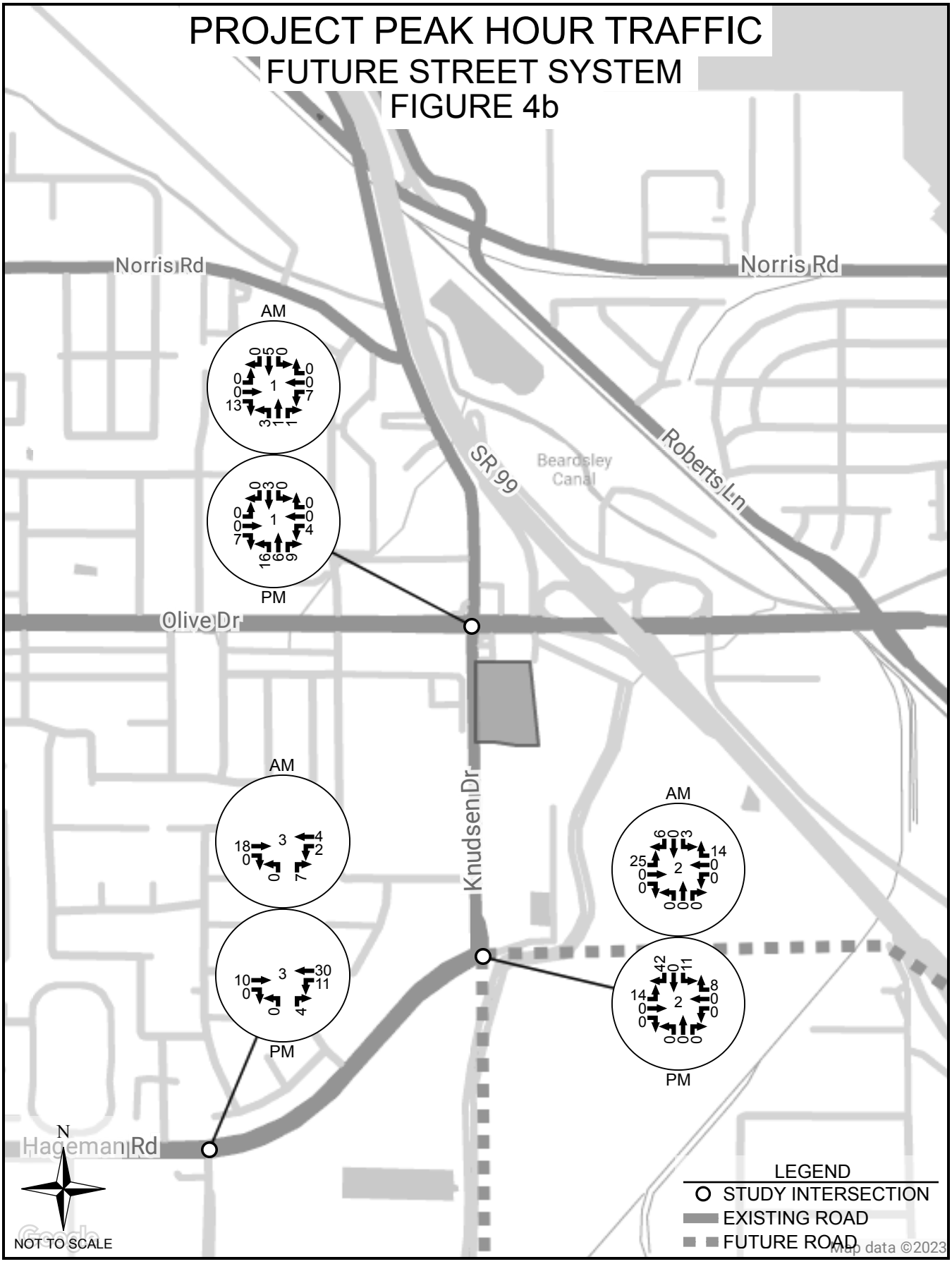
- Olive Drive & Knudsen Drive
- Hageman Drive & Knudsen Drive
- Hageman Drive & Mohawk Street

Traffic counts were conducted between the peak hours of 7:30 to 8:30 AM and 4:30 to 5:30 PM and are shown in Figure 5. Traffic counts were compared to pre-COVID 19 count data received in 2019 and found to accurately reflect normal traffic volumes. The scope of intersections was approved by the City of Bakersfield and Kern County Public Works departments. Existing + Project peak hour volumes are shown in Figure 6.

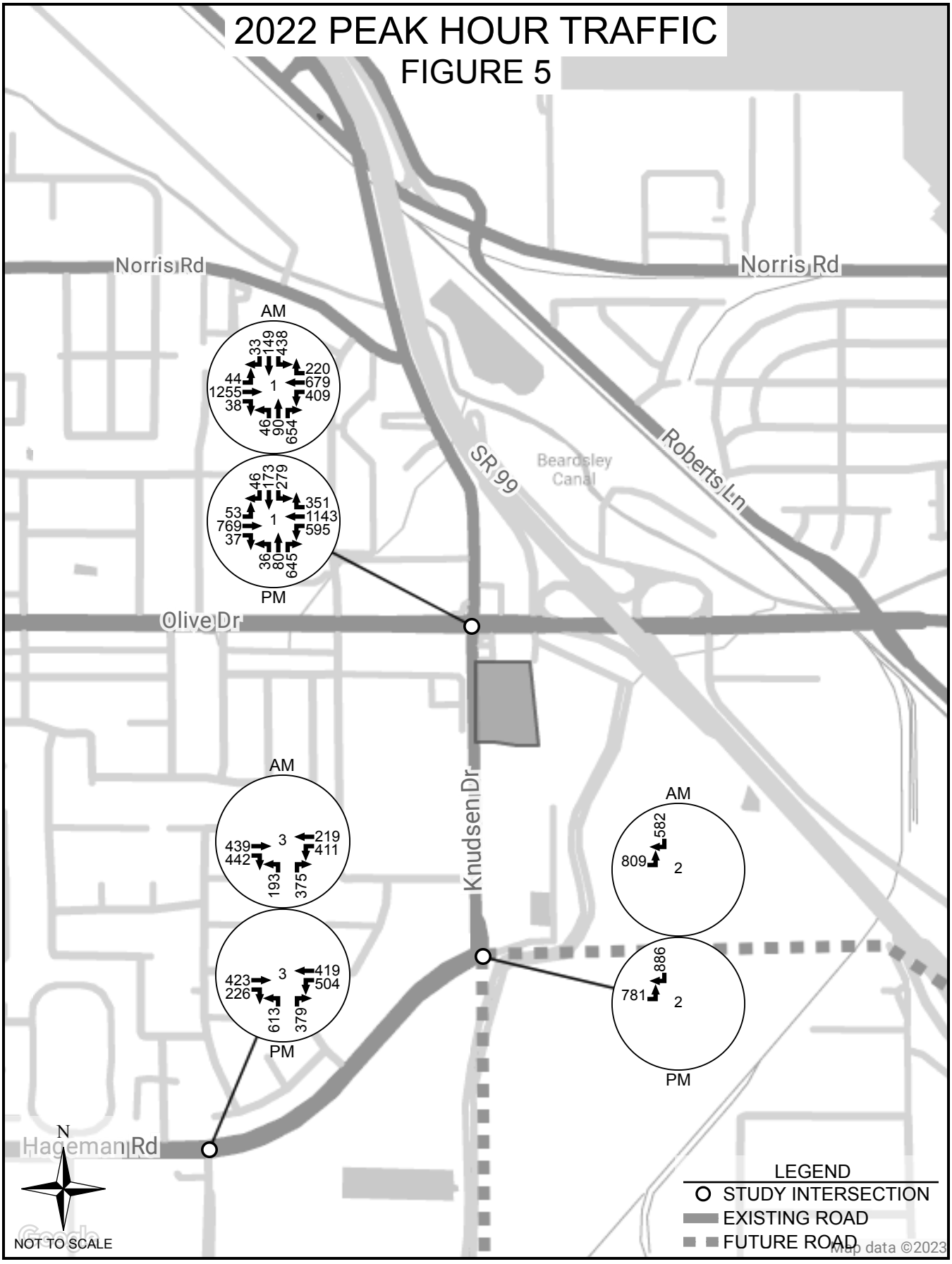
Annual growth rates ranging between 0.09% and 1.88% were applied to existing traffic volumes to estimate future traffic volumes for the year 2042. These growth rates were estimated based on the traffic volume output from the KernCOG general plan buildout model. Base volumes were used to determine growth rates on the study facilities using an adjustment factor for existing traffic counts. A search of current applications for general plan amendment/zone change (GPA/ZC) was performed within a three-mile radius of the project. Typically, projects within a three-mile radius are evaluated to determine if the land use change will have an influence on traffic. Only GPA/ZC are included in the cumulative evaluation as projects with confirming land use, whether built or not, are included in the KernCOG future model as they are part of the current general plan. The search did not show any GPA applications within a three-mile radius. Future peak hour volumes are shown in Figures 7 and 8.


PROJECT PEAK HOUR TRAFFIC
EXISTING STREET SYSTEM
FIGURE 4a
Norris Rd
Norris Rd
Olive Dr
Hageman Rd
Knudsen Dr
SR 99
Beardsley Canal
Roberts Ln
AM
PM
AM
PM
AM
PM
N
NOT TO SCALE
LEGEND
STUDY INTERSECTION
EXISTING ROAD
FUTURE ROAD
Map data ©2023

PROJECT PEAK HOUR TRAFFIC
FUTURE STREET SYSTEM
FIGURE 4b

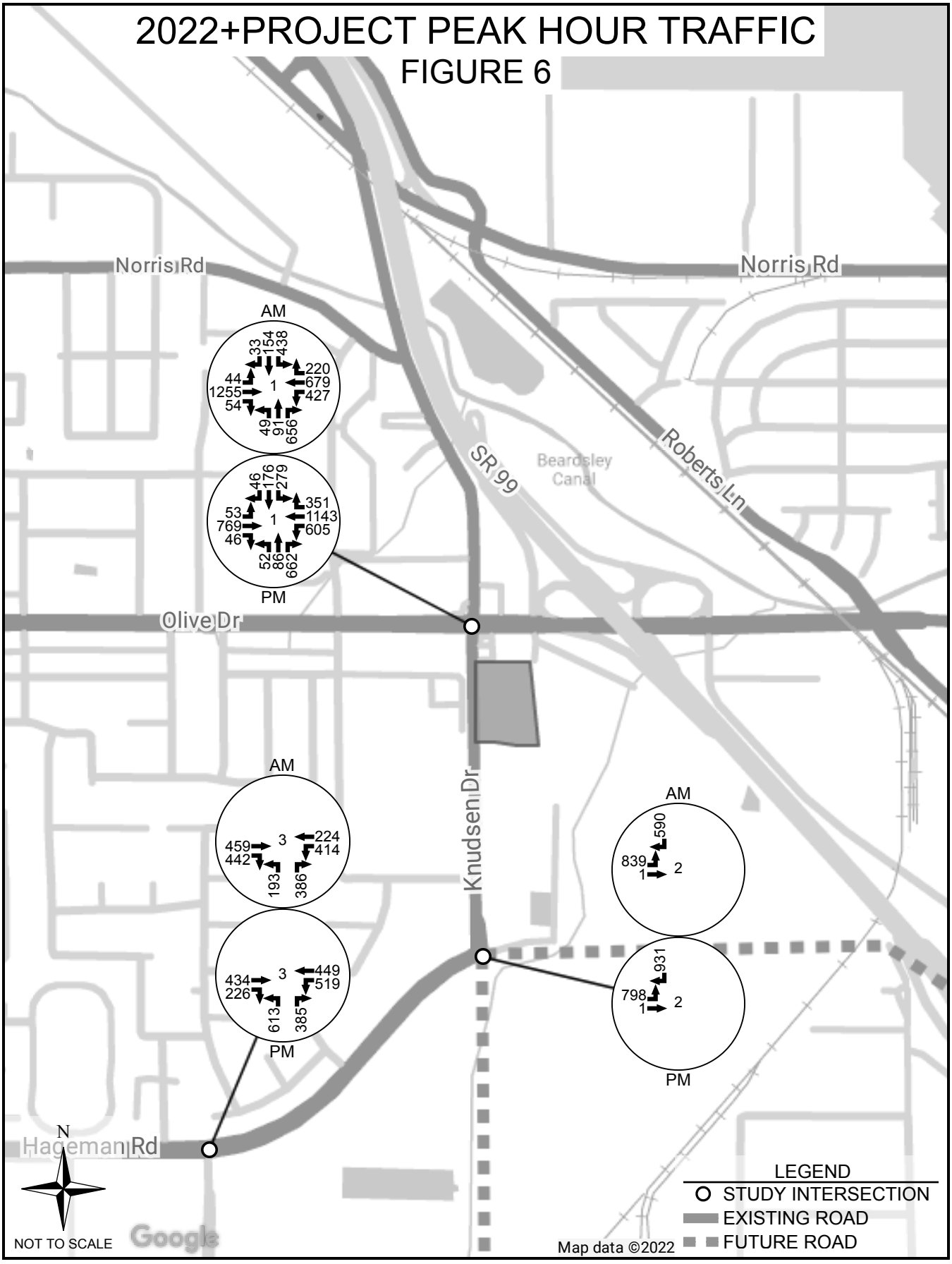


2022 PEAK HOUR TRAFFIC
FIGURE 5

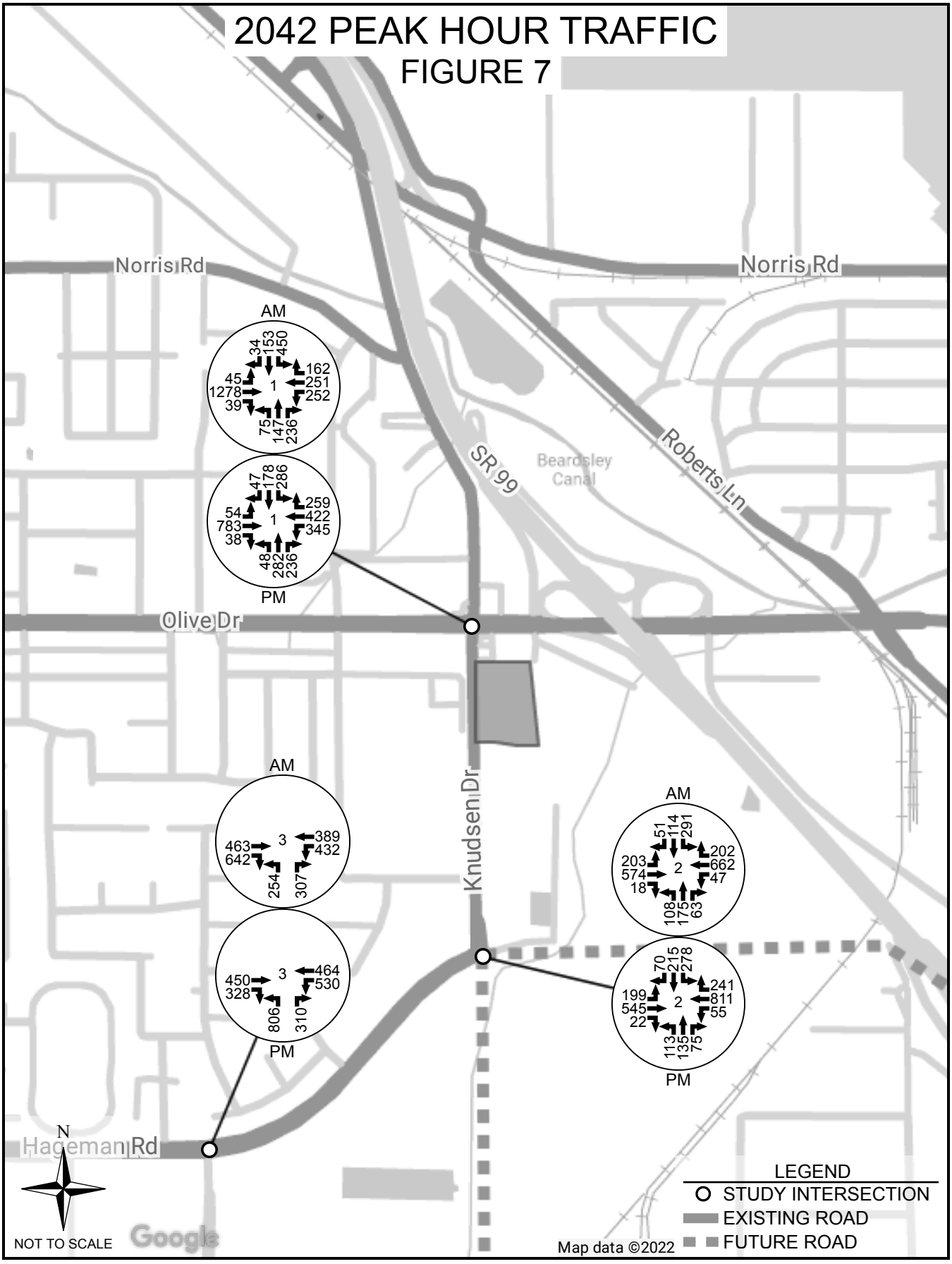


2022+PROJECT PEAK HOUR TRAFFIC

FIGURE 6

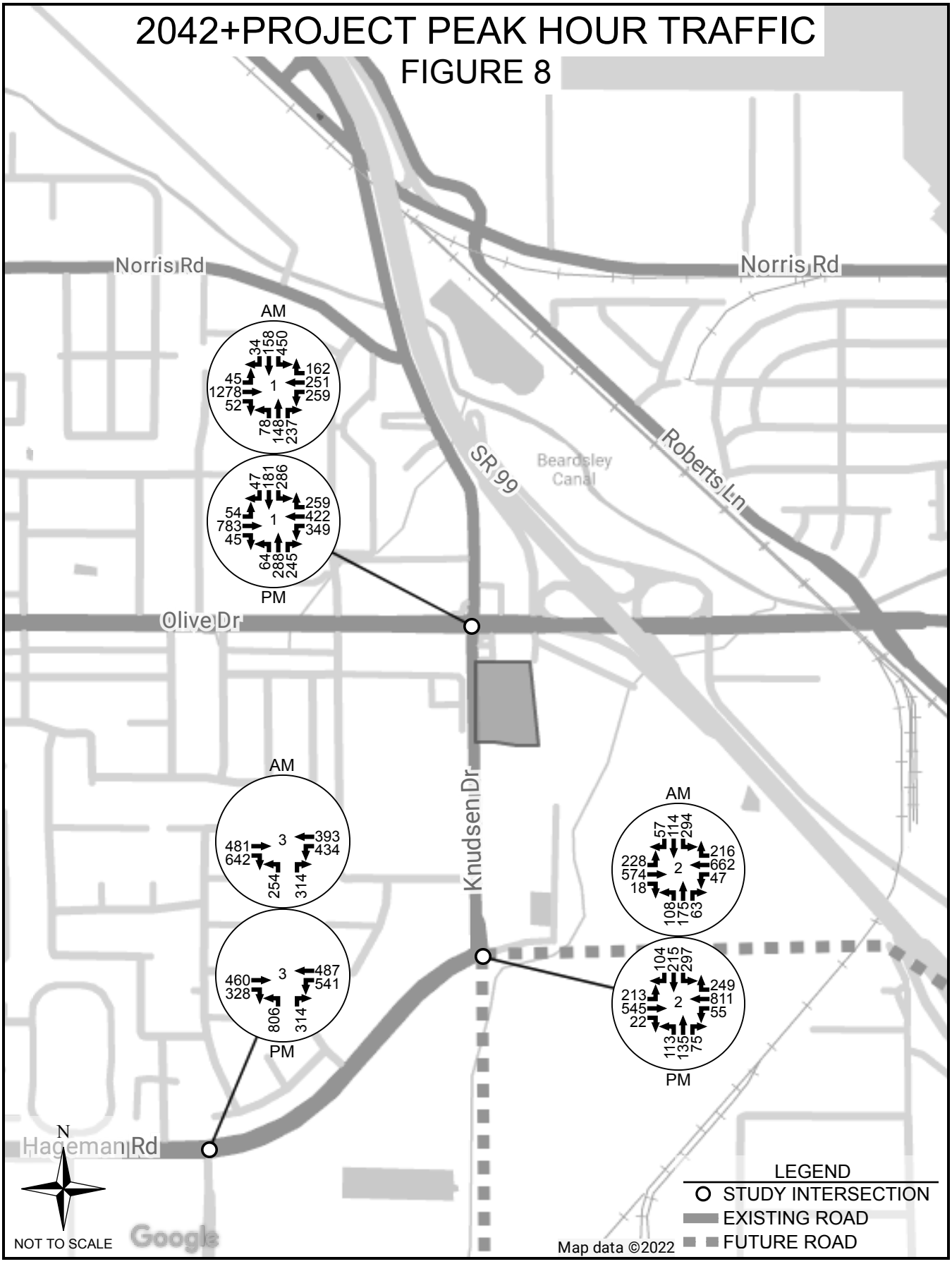


2042 PEAK HOUR TRAFFIC
FIGURE 7



2042+PROJECT PEAK HOUR TRAFFIC

FIGURE 8



INTERSECTION ANALYSIS

A capacity analysis of the study intersections was conducted using Synchro 9 software from Trafficware. This software utilizes the 2010 capacity analysis methodology in the Transportation Research Board's Highway Capacity Manual.

- Existing (2022)
- Existing (2022) + Project
- Future Cumulative (2042)
- Future Cumulative (2042) + Project

Level of Service Criteria

The City of Bakersfield generally utilizes three performance criteria for determining whether a traffic forecast to be generated by a project would cause a significant impact and therefore require mitigation. First, a significant impact is found where the addition of project traffic causes the level of service of an intersection or roadway segment to drop below LOS C. Second, a significant impact is found if an intersection or roadway segment operates below LOS C in the base year prior to the addition of project traffic, and the added project traffic lowers the level of service below its pre-project status. Third, mitigation is required if the addition of the project traffic creates an additional control or average delay per vehicle of more than 5 seconds to the existing or projected congestion at an intersection already or projected to operate at LOS D, E, or F.

These performance criteria have been adopted by the City of Bakersfield, and are also contained within various planning documents such as the Circulation Element of the Metropolitan Bakersfield General Plan and the County's congestion management plan. These performance criteria are the basis on which the City determines if a "substantial" or "significant" impact, or increase to the existing traffic load and the capacity of the street system, exists as a result of project traffic. Criteria for intersection level of service (LOS) are shown in the following tables.

Criteria for intersection level of service (LOS) are shown in the tables below.

LEVEL OF SERVICE CRITERIA
UNSIGNALIZED INTERSECTION

Average Control Delay (sec/veh)	Level of Service	Expected Delay to Minor Street Traffic
≤ 10	A	Little or no delay
> 10 and ≤ 15	B	Short traffic delays
> 15 and ≤ 25	C	Average traffic delays
> 25 and ≤ 35	D	Long traffic delays
> 35 and ≤ 50	E	Very long traffic delays
> 50	F	Extreme delays

LEVEL OF SERVICE CRITERIA
SIGNALIZED INTERSECTIONS

Volume/Capacity	Control Delay (sec/veh)	Level of Service
< 0.60	≤ 10	A
0.61 - 0.70	> 10 and ≤ 20	B
0.71 - 0.80	> 20 and ≤ 35	C
0.81 - 0.90	> 35 and ≤ 55	D
0.91 - 1.00	> 55 and ≤ 80	E
> 1.0	> 80	F

Level of service for the study intersections are presented in Tables 3a & 3b. The level of service goal for roadway facilities in the City of Bakersfield is LOS "C". Intersection delays are shown for all intersections that operate below LOS "C".

Table 3a
PM Intersection Level of Service

#	Intersection	Control Type	2022	2022+ Project	2042	2042+ Project	2042+ Project w/Mitigation
1	Knudsen Dr & Olive Dr	Signal	E (67.4)	E (71.5)	C	C	-
2	Knudsen Dr & Hageman Rd	SB	A	A	C	C	-
3	Mohawk St & Hageman Rd	Signal	D (40.2)	D (41.0)	D (50.8)	D (51.6)	-[1]

[1]Per Section 6.2.2.7 of the COB design manual, mitigation is not required since the project traffic does not increase the average delay by more than five seconds.

Table 3b
AM Intersection Level of Service

#	Intersection	Control Type	2022	2022+ Project	2042	2042+ Project	2042+ Project w/Mitigation
1	Knudsen Dr & Olive Dr	Signal	F (91.1)	F (94.1)	C	C	-
2	Knudsen Dr & Hageman Rd	SB	C	C	C	C	-
3	Mohawk St & Hageman Rd	Signal	E (58.8)	E (60.6)	F (80.3)	F (82.6)	-[1]

[1]Per Section 6.2.2.7 of the COB design manual, mitigation is not required since the project traffic does not increase the average delay by more than five seconds.

It is noted that there is project funding in the Regional Transportation Facilities List for expanding the intersection of Knudsen Drive & Olive Drive.

TRAFFIC SIGNAL WARRANT ANALYSIS

Peak hour signal warrants were evaluated for the unsignalized intersection within the study based on the California Manual on Uniform Traffic Control Devices (MUTCD). Peak hour signal warrants assess delay to traffic on the minor street approaches when entering or crossing a major street. Signal warrant analysis results for the AM and PM hours are shown in Tables 4a and 4b.

Table 4a
PM Traffic Signal Warrants

		2022			2022+Project			2042			2042+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
2	Knudsen Dr at Hageman Rd	886	782	YES	935	799	YES	1873	563	YES	1895	616	YES

Table 4b
AM Traffic Signal Warrants

		2022			2022+Project			2042			2042+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
2	Knudsen Dr at Hageman Rd	811	584	YES	841	592	YES	1706	456	YES	1745	465	YES

As currently configured, the intersection of Knudsen Drive and Hageman Road does not have any conflicting movements and therefore does not warrant a signal. It is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered in order to determine whether signals are truly justified.

It is also noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above an acceptable level of service or operate below an acceptable level of service and not meet signal warrant criteria.

ROADWAY ANALYSIS

Published ADT information and future projected traffic, as shown in Table 5a, were used to calculate the volume-to-capacity ratios shown in Table 5b.

A volume-to-capacity ratio (v/c) of greater than 0.80 corresponds to a LOS of less than "C", as defined in the Highway Capacity Manual. As mentioned previously, a level of service "C" is an accepted standard in the City of Bakersfield within the metropolitan Bakersfield areas. A significant impact is generally defined as a condition where the addition of project traffic reduces the LOS to below LOS C, or where the pre-existing condition of the roadway is below LOS C, and the LOS degrades below the pre-existing level of service with the addition of the project.

Table 5a
Roadway ADT & Capacity

Roadway Segment	2022	Project ADT	2022 ADT	2022+Proj ADT	2042 ADT	2042+Proj ADT
Knudsen Dr: Olive Dr to Project Entrance	6,210	621	6,333	6,954	7,556	8,177
Knudsen Dr: Project Entrance to Hageman Rd	16,670	632	17,000	17,632	20,283	20,915
Hageman Rd: Knudsen Dr to Mohawk St	15,660	632	15,894	16,526	18,162	18,794

Table 5b
Roadway Level of Service

Roadway Segment	Existing Capacity	Future Capacity	v/c 2022	v/c 2022+Proj	v/c 2022	v/c 2022+Proj	v/c 2042	v/c 2042+Proj
Knudsen Dr: Olive Dr to Project Entrance	22,500	40000	0.28	0.30	0.28	0.31	0.19	0.20
Knudsen Dr: Project Entrance to Hageman Rd	22,500	40000	0.74	0.77	0.76	0.78	0.51	0.52
Hageman Rd: Knudsen Dr to Mohawk St	30,000	-	0.52	0.54	0.53	0.55	0.61	0.63

VMT ANALYSIS

An analysis of project vehicle miles traveled (VMT) was conducted based on applicable California Environmental Quality Act (CEQA) Guidelines. The analysis involved comparing an estimate of VMT attributable to the project to a threshold VMT and assessing whether the project would result in a significant transportation impact.

Guidelines for assessing project VMT as part of a transportation impact analysis under CEQA are contained in the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, dated December 2018, from the State of California, Office of Planning and Research (OPR). The advisory contains recommendations regarding VMT assessment, significance thresholds and mitigation measures. Under CEQA, lead agencies have the authority to establish their own VMT significance thresholds and analysis methodologies or rely on thresholds and methodologies recommended by other agencies, provided such guidelines are supported by substantial evidence. At the time of this study, the City of Bakersfield had not developed or adopted a VMT policy, so the VMT analysis for this study was conducted following OPR Technical Advisory (OPR TA) guidelines.

A detailed VMT analysis is required since the project does not meet one or more of the "screening thresholds" contained in the OPR TA guidelines for identifying whether a land use project should be expected to result in a less than significant transportation impact under CEQA. The detailed analysis was conducted by LSA Associates, Inc. (Riverside, California) using the KernCOG travel demand model. The VMT analysis results are presented in Table 6 (see Appendix for VMT analysis memorandum).

Table 6
VMT Analysis Results

Analysis Metric (Region)	Baseline Year	Baseline VMT	Threshold VMT	Project VMT	Significant Impact
VMT per Employee[1] (Kern County)	2021	17.13[2]	14.56[3]	12.0[2]	NO

[1] OPR TA metric for office projects

[2] Source: KernCOG VMIP II travel demand model

[3] OPR TA significance threshold for office projects equivalent to 85 percent of Baseline VMT

The project VMT per employee of 12.0 is less than the countywide significance threshold of 14.56 VMT per employee. Therefore, the project is not expected to result in a significant transportation impact under CEQA.

SUMMARY AND CONCLUSIONS

The purpose of this study is to evaluate the potential traffic impacts of a proposed VA outpatient clinic development located on the east side of Knudsen Drive, approximately 240 feet south of the Olive Drive in Bakersfield, CA. The study included both level of service (LOS) and vehicle miles traveled (VMT) analyses.

Level of Service Analysis

The intersections Knudsen Drive & Olive Drive and Mohawk Street & Hageman Rd currently operate below an acceptable level of service, prior to the addition of the project traffic.

With the addition of the Hageman Flyover, which is projected to be completed by 2042, the intersection of Knudsen Drive & Olive Drive will operate at an acceptable level of service in the year 2042 prior to and with the addition of project traffic.

Section 6.2.2.7 of the City of Bakersfield design manual defines the threshold of significance for level of service. Based on these thresholds, no mitigation is required.

Roadway Capacity

All roadway segments within the scope of the study currently operate at or above LOS C and are expected to continue to do so through the year 2042, both with and without the project. Therefore, no improvements are required.

VMT

It was determined that project VMT is less than the threshold of significance, therefore the project does not create a significant transportation impact.

REFERENCES

1. Annual Traffic Census, KernCOG
2. City of Bakersfield General Plan, approved 2010
3. Highway Capacity Manual, Special Report 209, Transportation Research Board
4. California Manual on Uniform Traffic Control Devices for Streets and Highways, 2014 Edition, Federal Highway Administration (FHA)
5. Trip Generation, 11th Edition, Institute of Transportation Engineers (ITE)

APPENDIX

LEVEL OF SERVICE ANALYSIS

Intersection 1
Knudsen Dr & Olive Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	769	37	595	1143	351	36	80	645	279	173	46
Future Volume (veh/h)	53	769	37	595	1143	351	36	80	645	279	173	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		0.97	1.00		1.00	1.00		0.98	1.00		0.99
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	1716	1863	1750	1716	1863	1716	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	58	845	41	669	1284	394	41	0	802	248	272	51
Adj No. of Lanes	1	3	0	2	2	1	1	0	2	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.87	0.87	0.87	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	1181	57	718	1433	590	316	0	612	278	356	276
Arrive On Green	0.06	0.24	0.22	0.23	0.40	0.40	0.19	0.00	0.21	0.17	0.19	0.19
Sat Flow, veh/h	1634	4961	240	3170	3539	1458	1634	0	2856	1634	1863	1447
Grp Volume(v), veh/h	58	577	309	669	1284	394	41	0	802	248	272	51
Grp Sat Flow(s),veh/h/ln	1634	1695	1810	1585	1770	1458	1634	0	1428	1634	1863	1447
Q Serve(g_s), s	3.7	16.5	16.6	21.9	35.9	12.5	2.2	0.0	22.7	15.7	14.6	3.1
Cycle Q Clear(g_c), s	3.7	16.5	16.6	21.9	35.9	12.5	2.2	0.0	22.7	15.7	14.6	3.1
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	807	431	718	1433	590	316	0	612	278	356	276
V/C Ratio(X)	0.59	0.71	0.72	0.93	0.90	0.67	0.13	0.00	1.31	0.89	0.76	0.18
Avail Cap(c_a), veh/h	103	874	467	718	1490	614	316	0	612	278	589	458
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	37.0	37.2	40.1	29.4	7.3	35.3	0.0	41.6	43.0	40.6	35.9
Incr Delay (d2), s/veh	8.0	2.6	4.8	18.8	7.3	2.6	0.2	0.0	151.1	28.3	3.4	0.3
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	1.9	8.1	8.9	11.4	18.9	5.4	1.0	0.0	21.8	9.3	7.9	1.3
LnGrp Delay(d),s/veh	56.6	39.6	42.0	59.0	36.8	10.0	35.5	0.0	192.7	71.4	44.0	36.2
LnGrp LOS	E	D	D	E	D	A	D		F	E	D	D
Approach Vol, veh/h		944			2347			843			571	
Approach Delay, s/veh		41.4			38.6			185.1			55.2	
Approach LOS		D			D			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	22.0	26.7	28.0	29.2	24.5	24.2	10.3	46.9
Change Period (Y+Rc), s	4.9	4.9	5.7	5.7	4.9	4.9	5.7	5.7
Max Green Setting (Gmax), s	17.1	21.8	22.3	25.6	6.3	32.6	5.0	42.9
Max Q Clear Time (g_c+I1), s	17.7	24.7	23.9	18.6	4.2	16.6	5.7	37.9
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	1.0	1.0	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	67.4
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	769	46	605	1143	351	52	86	662	279	176	46
Future Volume (veh/h)	53	769	46	605	1143	351	52	86	662	279	176	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		0.97	1.00		1.00	1.00		0.98	1.00		0.99
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	1716	1863	1750	1716	1863	1716	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	58	845	51	680	1284	394	60	0	827	250	273	51
Adj No. of Lanes	1	3	0	2	2	1	1	0	2	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.87	0.87	0.87	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	1165	70	718	1433	590	315	0	612	278	357	277
Arrive On Green	0.06	0.24	0.22	0.23	0.40	0.40	0.19	0.00	0.21	0.17	0.19	0.19
Sat Flow, veh/h	1634	4894	294	3170	3539	1458	1634	0	2856	1634	1863	1447
Grp Volume(v), veh/h	58	584	312	680	1284	394	60	0	827	250	273	51
Grp Sat Flow(s),veh/h/ln	1634	1695	1798	1585	1770	1458	1634	0	1428	1634	1863	1447
Q Serve(g_s), s	3.7	16.8	16.9	22.4	35.9	12.5	3.3	0.0	22.7	15.9	14.7	3.1
Cycle Q Clear(g_c), s	3.7	16.8	16.9	22.4	35.9	12.5	3.3	0.0	22.7	15.9	14.7	3.1
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	807	428	718	1433	590	315	0	612	278	357	277
V/C Ratio(X)	0.59	0.72	0.73	0.95	0.90	0.67	0.19	0.00	1.35	0.90	0.77	0.18
Avail Cap(c_a), veh/h	103	874	464	718	1490	614	315	0	612	278	589	458
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	37.1	37.3	40.3	29.4	7.3	35.8	0.0	41.6	43.1	40.6	35.9
Incr Delay (d2), s/veh	8.0	2.8	5.2	21.5	7.3	2.6	0.3	0.0	168.6	29.7	3.4	0.3
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	1.9	8.2	9.0	12.0	18.9	5.4	1.5	0.0	23.3	9.4	7.9	1.3
LnGrp Delay(d),s/veh	56.6	39.9	42.6	61.8	36.8	10.0	36.1	0.0	210.2	72.8	44.0	36.2
LnGrp LOS	E	D	D	E	D	A	D		F	E	D	D
Approach Vol, veh/h		954			2358			887			574	
Approach Delay, s/veh		41.8			39.5			198.4			55.8	
Approach LOS		D			D			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	22.0	26.7	28.0	29.2	24.4	24.3	10.3	46.9
Change Period (Y+Rc), s	4.9	4.9	5.7	5.7	4.9	4.9	5.7	5.7
Max Green Setting (Gmax), s	17.1	21.8	22.3	25.6	6.3	32.6	5.0	42.9
Max Q Clear Time (g_c+I1), s	17.9	24.7	24.4	18.9	5.3	16.7	5.7	37.9
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.5	1.0	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	71.5
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	783	38	345	422	259	48	282	236	286	178	47
Future Volume (veh/h)	54	783	38	345	422	259	48	282	236	286	178	47
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		0.98	1.00		1.00	1.00		0.98	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	1716	1863	1750	1716	1863	1716	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	59	860	42	388	474	291	55	324	271	255	279	52
Adj No. of Lanes	1	3	0	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.87	0.87	0.87	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	1171	57	550	1225	505	84	418	320	306	671	523
Arrive On Green	0.06	0.24	0.22	0.17	0.35	0.35	0.05	0.22	0.22	0.19	0.36	0.36
Sat Flow, veh/h	1634	4963	242	3170	3539	1458	1634	1863	1428	1634	1863	1452
Grp Volume(v), veh/h	59	587	315	388	474	291	55	324	271	255	279	52
Grp Sat Flow(s),veh/h/ln	1634	1695	1814	1585	1770	1458	1634	1863	1428	1634	1863	1452
Q Serve(g_s), s	3.1	14.3	14.4	10.3	9.1	14.6	3.0	14.6	10.3	13.5	10.1	2.1
Cycle Q Clear(g_c), s	3.1	14.3	14.4	10.3	9.1	14.6	3.0	14.6	10.3	13.5	10.1	2.1
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	800	428	550	1225	505	84	418	320	306	671	523
V/C Ratio(X)	0.57	0.73	0.74	0.71	0.39	0.58	0.65	0.78	0.85	0.83	0.42	0.10
Avail Cap(c_a), veh/h	181	1033	553	602	1359	560	175	555	426	420	834	650
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	40.8	31.6	31.8	34.9	22.1	23.9	41.7	32.6	13.4	35.0	21.6	19.0
Incr Delay (d2), s/veh	4.8	2.0	3.7	3.4	0.2	1.2	8.2	4.9	11.4	9.9	0.4	0.1
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	1.6	6.9	7.6	4.8	4.4	6.0	1.5	8.0	6.1	6.9	5.3	0.9
LnGrp Delay(d),s/veh	45.6	33.6	35.5	38.2	22.3	25.1	49.9	37.5	24.8	44.9	22.0	19.1
LnGrp LOS	D	C	D	D	C	C	D	D	C	D	C	B
Approach Vol, veh/h		961			1153			650			586	
Approach Delay, s/veh		34.9			28.4			33.3			31.7	
Approach LOS		C			C			C			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	20.8	24.1	19.5	25.1	8.6	36.3	9.7	35.0
Change Period (Y+Rc), s	4.9	4.9	5.7	5.7	4.9	4.9	5.7	5.7
Max Green Setting (Gmax), s	22.1	25.8	15.3	25.6	8.7	39.2	8.2	32.7
Max Q Clear Time (g_c+I1), s	15.5	16.6	12.3	16.4	5.0	12.1	5.1	16.6
Green Ext Time (p_c), s	0.5	2.6	1.5	2.6	0.0	3.6	0.0	4.6

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	783	45	349	422	259	64	288	245	286	181	47
Future Volume (veh/h)	54	783	45	349	422	259	64	288	245	286	181	47
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		0.98	1.00		1.00	1.00		0.98	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	1716	1863	1750	1716	1863	1716	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	59	860	49	392	474	291	74	331	282	256	279	52
Adj No. of Lanes	1	3	0	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.87	0.87	0.87	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	1167	66	524	1204	496	108	434	333	314	669	522
Arrive On Green	0.06	0.24	0.22	0.17	0.34	0.34	0.07	0.23	0.23	0.19	0.36	0.36
Sat Flow, veh/h	1634	4917	279	3170	3539	1458	1634	1863	1429	1634	1863	1452
Grp Volume(v), veh/h	59	592	317	392	474	291	74	331	282	256	279	52
Grp Sat Flow(s),veh/h/ln	1634	1695	1806	1585	1770	1458	1634	1863	1429	1634	1863	1452
Q Serve(g_s), s	3.3	15.0	15.1	11.0	9.5	8.0	4.1	15.4	17.6	14.0	10.5	2.2
Cycle Q Clear(g_c), s	3.3	15.0	15.1	11.0	9.5	8.0	4.1	15.4	17.6	14.0	10.5	2.2
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	103	805	429	524	1204	496	108	434	333	314	669	522
V/C Ratio(X)	0.58	0.74	0.74	0.75	0.39	0.59	0.68	0.76	0.85	0.81	0.42	0.10
Avail Cap(c_a), veh/h	174	1092	582	544	1371	565	191	520	399	386	742	578
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	42.5	32.8	33.0	37.0	23.4	6.9	42.6	33.3	34.1	36.0	22.5	19.8
Incr Delay (d2), s/veh	5.0	1.7	3.3	5.4	0.2	1.2	7.4	5.4	13.5	10.5	0.4	0.1
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	1.6	7.2	8.0	5.2	4.6	5.0	2.1	8.6	8.2	7.2	5.5	0.9
LnGrp Delay(d),s/veh	47.5	34.6	36.3	42.5	23.6	8.2	50.0	38.8	47.6	46.6	22.9	19.9
LnGrp LOS	D	C	D	D	C	A	D	D	D	D	C	B
Approach Vol, veh/h		968			1157			687			587	
Approach Delay, s/veh		35.9			26.1			43.6			33.0	
Approach LOS		D			C			D			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	21.9	25.7	19.4	26.1	10.2	37.5	9.8	35.7
Change Period (Y+Rc), s	4.9	4.9	5.7	5.7	4.9	4.9	5.7	5.7
Max Green Setting (Gmax), s	21.1	25.1	14.3	28.3	10.0	36.2	8.2	34.4
Max Q Clear Time (g_c+I1), s	16.0	19.6	13.0	17.1	6.1	12.5	5.3	11.5
Green Ext Time (p_c), s	1.1	1.2	0.7	2.9	0.0	2.1	0.0	5.1

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	783	45	349	422	259	64	288	245	286	181	47
Future Volume (veh/h)	54	783	45	349	422	259	64	288	245	286	181	47
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		0.98	1.00		1.00	1.00		0.98	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	1716	1863	1750	1716	1863	1716	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	59	860	49	392	474	291	74	331	282	256	279	52
Adj No. of Lanes	1	3	0	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.87	0.87	0.87	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	1153	66	515	727	300	108	459	352	300	678	528
Arrive On Green	0.19	0.23	0.22	0.16	0.21	0.21	0.07	0.25	0.25	0.18	0.36	0.36
Sat Flow, veh/h	1634	4917	279	3170	3539	1458	1634	1863	1430	1634	1863	1452
Grp Volume(v), veh/h	59	592	317	392	474	291	74	331	282	256	279	52
Grp Sat Flow(s),veh/h/ln	1634	1695	1806	1585	1770	1458	1634	1863	1430	1634	1863	1452
Q Serve(g_s), s	2.8	15.0	15.1	10.9	11.4	11.2	4.1	15.1	17.1	14.0	10.4	1.2
Cycle Q Clear(g_c), s	2.8	15.0	15.1	10.9	11.4	11.2	4.1	15.1	17.1	14.0	10.4	1.2
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	795	424	515	727	300	108	459	352	300	678	528
V/C Ratio(X)	0.19	0.74	0.75	0.76	0.65	0.97	0.68	0.72	0.80	0.85	0.41	0.10
Avail Cap(c_a), veh/h	313	1001	533	583	1435	591	170	610	468	307	768	598
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	31.3	32.8	33.0	37.0	33.7	13.8	42.2	31.9	32.7	36.6	22.0	5.5
Incr Delay (d2), s/veh	0.3	2.3	4.4	5.2	1.0	18.2	7.4	2.8	7.1	20.0	0.4	0.1
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	1.3	7.2	8.0	5.2	5.6	7.4	2.1	8.1	7.4	8.0	5.4	0.8
LnGrp Delay(d),s/veh	31.6	35.2	37.4	42.1	34.7	32.0	49.7	34.7	39.8	56.5	22.4	5.6
LnGrp LOS	C	D	D	D	C	C	D	C	D	E	C	A
Approach Vol, veh/h		968			1157			687			587	
Approach Delay, s/veh		35.7			36.5			38.4			35.8	
Approach LOS		D			D			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	21.0	26.8	19.0	25.7	10.1	37.6	21.7	23.0
Change Period (Y+Rc), s	4.9	4.9	5.7	5.7	4.9	4.9	5.7	5.7
Max Green Setting (Gmax), s	16.5	29.4	15.3	25.6	8.7	37.2	5.1	35.8
Max Q Clear Time (g_c+I1), s	16.0	19.1	12.9	17.1	6.1	12.4	4.8	13.4
Green Ext Time (p_c), s	0.0	2.8	0.4	2.5	0.0	3.7	0.1	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	1255	38	409	679	220	46	90	654	438	149	33
Future Volume (veh/h)	44	1255	38	409	679	220	46	90	654	438	149	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		0.98	1.00		1.00	1.00		0.98	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	1716	1863	1750	1716	1863	1716	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	53	1512	46	487	808	262	54	0	840	326	391	37
Adj No. of Lanes	1	3	0	2	2	1	1	0	2	1	1	1
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1525	46	494	1424	587	80	0	595	330	673	525
Arrive On Green	0.05	0.30	0.29	0.16	0.40	0.40	0.05	0.00	0.21	0.20	0.36	0.36
Sat Flow, veh/h	1634	5068	154	3170	3539	1458	1634	0	2855	1634	1863	1452
Grp Volume(v), veh/h	53	1011	547	487	808	262	54	0	840	326	391	37
Grp Sat Flow(s),veh/h/ln	1634	1695	1832	1585	1770	1458	1634	0	1427	1634	1863	1452
Q Serve(g_s), s	3.8	35.7	35.7	18.4	21.2	15.7	3.9	0.0	25.0	23.9	20.4	2.0
Cycle Q Clear(g_c), s	3.8	35.7	35.7	18.4	21.2	15.7	3.9	0.0	25.0	23.9	20.4	2.0
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	1020	551	494	1424	587	80	0	595	330	673	525
V/C Ratio(X)	0.60	0.99	0.99	0.99	0.57	0.45	0.68	0.00	1.41	0.99	0.58	0.07
Avail Cap(c_a), veh/h	133	1020	551	494	1424	587	139	0	595	330	673	525
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	41.8	41.9	50.5	27.8	26.1	56.2	0.0	47.5	47.8	31.0	25.1
Incr Delay (d2), s/veh	6.3	26.1	36.1	36.7	0.5	0.5	9.6	0.0	195.4	46.6	1.3	0.1
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	1.9	20.4	23.6	10.6	10.4	6.4	2.0	0.0	26.0	15.0	10.7	0.8
LnGrp Delay(d),s/veh	61.7	67.9	78.0	87.2	28.3	26.7	65.8	0.0	242.9	94.3	32.2	25.2
LnGrp LOS	E	E	E	F	C	C	E		F	F	C	C
Approach Vol, veh/h		1611			1557			894			754	
Approach Delay, s/veh		71.1			46.5			232.2			58.7	
Approach LOS		E			D			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	28.2	29.0	22.7	40.1	9.8	47.4	10.5	52.3
Change Period (Y+Rc), s	4.9	4.9	5.7	5.7	4.9	4.9	5.7	5.7
Max Green Setting (Gmax), s	23.3	24.1	17.0	34.4	9.3	38.1	8.1	43.3
Max Q Clear Time (g_c+I1), s	25.9	27.0	20.4	37.7	5.9	22.4	5.8	23.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.5	0.0	12.4

Intersection Summary	
HCM 2010 Ctrl Delay	91.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	1255	54	427	679	220	49	91	656	438	154	33
Future Volume (veh/h)	44	1255	54	427	679	220	49	91	656	438	154	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		0.98	1.00		1.00	1.00		0.98	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	1716	1863	1750	1716	1863	1716	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	53	1512	65	508	808	262	58	0	843	329	392	37
Adj No. of Lanes	1	3	0	2	2	1	1	0	2	1	1	1
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1503	65	494	1424	587	85	0	595	330	667	520
Arrive On Green	0.05	0.30	0.29	0.16	0.40	0.40	0.05	0.00	0.21	0.20	0.36	0.36
Sat Flow, veh/h	1634	4996	215	3170	3539	1458	1634	0	2855	1634	1863	1452
Grp Volume(v), veh/h	53	1026	551	508	808	262	58	0	843	329	392	37
Grp Sat Flow(s),veh/h/ln	1634	1695	1820	1585	1770	1458	1634	0	1427	1634	1863	1452
Q Serve(g_s), s	3.8	36.1	36.1	18.7	21.2	15.7	4.2	0.0	25.0	24.2	20.5	2.0
Cycle Q Clear(g_c), s	3.8	36.1	36.1	18.7	21.2	15.7	4.2	0.0	25.0	24.2	20.5	2.0
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	1020	548	494	1424	587	85	0	595	330	667	520
V/C Ratio(X)	0.60	1.01	1.01	1.03	0.57	0.45	0.69	0.00	1.42	1.00	0.59	0.07
Avail Cap(c_a), veh/h	133	1020	548	494	1424	587	139	0	595	330	667	520
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	42.0	42.1	50.6	27.8	26.1	55.9	0.0	47.5	47.9	31.3	25.4
Incr Delay (d2), s/veh	6.3	29.7	40.0	47.9	0.5	0.5	9.4	0.0	197.6	49.1	1.3	0.1
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	1.9	21.1	24.2	11.5	10.4	6.4	2.1	0.0	26.2	15.4	10.8	0.8
LnGrp Delay(d),s/veh	61.7	71.6	82.1	98.6	28.3	26.7	65.3	0.0	245.1	97.0	32.6	25.4
LnGrp LOS	E	F	F	F	C	C	E		F	F	C	C
Approach Vol, veh/h		1630			1578			901			758	
Approach Delay, s/veh		74.8			50.7			233.5			60.2	
Approach LOS		E			D			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	28.2	29.0	22.7	40.1	10.2	47.0	10.5	52.3
Change Period (Y+Rc), s	4.9	4.9	5.7	5.7	4.9	4.9	5.7	5.7
Max Green Setting (Gmax), s	23.3	24.1	17.0	34.4	9.3	38.1	8.1	43.3
Max Q Clear Time (g_c+I1), s	26.2	27.0	20.7	38.1	6.2	22.5	5.8	23.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.5	0.0	12.5

Intersection Summary	
HCM 2010 Ctrl Delay	94.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1278	39	252	251	162	75	147	236	450	153	34
Future Volume (veh/h)	45	1278	39	252	251	162	75	147	236	450	153	34
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		0.98	1.00		1.00	1.00		0.98	1.00		0.99
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	1716	1863	1750	1716	1863	1716	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	54	1540	47	300	299	193	88	252	226	335	401	38
Adj No. of Lanes	1	3	0	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	1705	52	375	1410	581	250	322	246	371	460	358
Arrive On Green	0.06	0.34	0.32	0.12	0.40	0.40	0.05	0.06	0.06	0.23	0.25	0.25
Sat Flow, veh/h	1634	5068	155	3170	3539	1458	1634	1863	1425	1634	1863	1449
Grp Volume(v), veh/h	54	1030	557	300	299	193	88	252	226	335	401	38
Grp Sat Flow(s),veh/h/ln	1634	1695	1832	1585	1770	1458	1634	1863	1425	1634	1863	1449
Q Serve(g_s), s	3.5	31.9	31.9	10.1	6.1	4.5	5.7	14.7	17.4	21.9	22.7	1.8
Cycle Q Clear(g_c), s	3.5	31.9	31.9	10.1	6.1	4.5	5.7	14.7	17.4	21.9	22.7	1.8
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1140	616	375	1410	581	250	322	246	371	460	358
V/C Ratio(X)	0.59	0.90	0.90	0.80	0.21	0.33	0.35	0.78	0.92	0.90	0.87	0.11
Avail Cap(c_a), veh/h	143	1140	616	375	1410	581	250	322	246	386	544	423
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	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	34.8	34.9	47.2	21.8	4.7	46.9	49.8	51.1	41.3	39.8	20.9
Incr Delay (d2), s/veh	5.8	11.6	19.0	11.7	0.3	1.5	0.8	11.1	34.2	23.2	12.9	0.1
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	1.8	16.7	19.3	5.1	3.1	2.1	2.6	8.6	9.2	12.3	13.3	0.7
LnGrp Delay(d),s/veh	56.5	46.4	53.9	58.9	22.1	6.2	47.7	60.9	85.3	64.5	52.6	21.0
LnGrp LOS	E	D	D	E	C	A	D	E	F	E	D	C
Approach Vol, veh/h		1641			792			566			774	
Approach Delay, s/veh		49.3			32.2			68.6			56.2	
Approach LOS		D			C			E			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	29.0	23.0	17.0	41.0	20.8	31.1	10.2	47.8
Change Period (Y+Rc), s	4.9	4.9	5.7	5.7	4.9	4.9	5.7	5.7
Max Green Setting (Gmax), s	25.1	18.1	10.3	35.3	12.0	31.2	7.9	37.7
Max Q Clear Time (g_c+I1), s	23.9	19.4	12.1	33.9	7.7	24.7	5.5	8.1
Green Ext Time (p_c), s	0.2	0.0	0.0	1.0	0.6	0.9	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	50.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1278	52	259	251	162	78	148	237	450	158	34
Future Volume (veh/h)	45	1278	52	259	251	162	78	148	237	450	158	34
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		0.98	1.00		1.00	1.00		0.98	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	1716	1863	1750	1716	1863	1716	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	54	1540	63	308	299	193	92	253	226	338	403	38
Adj No. of Lanes	1	3	0	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	532	1753	72	369	499	206	126	307	235	375	591	461
Arrive On Green	0.33	0.35	0.34	0.12	0.14	0.14	0.08	0.17	0.17	0.23	0.32	0.32
Sat Flow, veh/h	1634	5008	205	3170	3539	1458	1634	1863	1424	1634	1863	1451
Grp Volume(v), veh/h	54	1043	560	308	299	193	92	253	226	338	403	38
Grp Sat Flow(s),veh/h/ln	1634	1695	1822	1585	1770	1458	1634	1863	1424	1634	1863	1451
Q Serve(g_s), s	2.7	33.2	33.2	10.9	9.1	9.3	6.3	15.1	18.1	23.1	21.7	0.8
Cycle Q Clear(g_c), s	2.7	33.2	33.2	10.9	9.1	9.3	6.3	15.1	18.1	23.1	21.7	0.8
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	532	1187	638	369	499	206	126	307	235	375	591	461
V/C Ratio(X)	0.10	0.88	0.88	0.83	0.60	0.94	0.73	0.82	0.96	0.90	0.68	0.08
Avail Cap(c_a), veh/h	532	1255	674	369	1417	584	196	307	235	412	591	461
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	27.1	35.1	35.2	49.8	46.4	18.7	51.9	46.4	47.7	43.1	34.2	4.4
Incr Delay (d2), s/veh	0.1	7.1	12.3	15.1	1.2	17.7	7.9	16.3	47.8	21.4	3.2	0.1
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	1.2	16.7	18.8	5.6	4.5	6.2	3.1	9.2	10.2	12.6	11.7	0.8
LnGrp Delay(d),s/veh	27.2	42.2	47.4	64.9	47.5	36.3	59.8	62.7	95.5	64.5	37.4	4.4
LnGrp LOS	C	D	D	E	D	D	E	E	F	E	D	A
Approach Vol, veh/h		1657			800			571			779	
Approach Delay, s/veh		43.5			51.5			75.2			47.5	
Approach LOS		D			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	30.4	23.0	17.4	44.3	12.9	40.5	41.5	20.2
Change Period (Y+Rc), s	4.9	4.9	5.7	5.7	4.9	4.9	5.7	5.7
Max Green Setting (Gmax), s	28.1	18.1	11.7	40.9	12.9	33.3	8.2	44.4
Max Q Clear Time (g_c+I1), s	25.1	20.1	12.9	35.2	8.3	23.7	4.7	11.3
Green Ext Time (p_c), s	0.4	0.0	0.0	3.4	0.1	2.6	2.4	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	50.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1278	52	259	251	162	78	148	237	450	158	34
Future Volume (veh/h)	45	1278	52	259	251	162	78	148	237	450	158	34
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		0.98	1.00		1.00	1.00		0.98	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	1716	1863	1750	1716	1863	1716	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	54	1540	63	308	299	193	92	253	226	338	403	38
Adj No. of Lanes	1	3	0	2	2	1	1	1	1	1	1	1
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1602	66	415	1397	576	126	359	275	350	616	480
Arrive On Green	0.06	0.32	0.30	0.13	0.39	0.39	0.08	0.19	0.19	0.21	0.33	0.33
Sat Flow, veh/h	1634	5007	205	3170	3539	1458	1634	1863	1426	1634	1863	1452
Grp Volume(v), veh/h	54	1043	560	308	299	193	92	253	226	338	403	38
Grp Sat Flow(s),veh/h/ln	1634	1695	1822	1585	1770	1458	1634	1863	1426	1634	1863	1452
Q Serve(g_s), s	3.6	34.1	34.1	10.6	6.3	10.4	6.2	14.3	17.1	23.1	20.9	2.0
Cycle Q Clear(g_c), s	3.6	34.1	34.1	10.6	6.3	10.4	6.2	14.3	17.1	23.1	20.9	2.0
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	1085	583	415	1397	576	126	359	275	350	616	480
V/C Ratio(X)	0.59	0.96	0.96	0.74	0.21	0.34	0.73	0.70	0.82	0.96	0.65	0.08
Avail Cap(c_a), veh/h	142	1085	583	525	1412	582	148	413	316	350	644	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	52.0	37.7	37.8	47.2	22.6	23.8	50.9	42.5	43.7	43.9	32.3	26.0
Incr Delay (d2), s/veh	5.9	18.6	27.8	4.2	0.1	0.3	14.3	4.5	14.1	38.6	2.3	0.1
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	1.8	18.7	21.6	4.9	3.1	4.3	3.3	7.8	7.8	14.2	11.1	0.8
LnGrp Delay(d),s/veh	57.9	56.3	65.5	51.5	22.6	24.2	65.3	47.0	57.8	82.4	34.5	26.0
LnGrp LOS	E	E	E	D	C	C	E	D	E	F	C	C
Approach Vol, veh/h		1657			800			571			779	
Approach Delay, s/veh		59.5			34.1			54.2			54.9	
Approach LOS		E			C			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	28.2	25.8	18.8	40.1	12.7	41.3	10.3	48.5
Change Period (Y+Rc), s	4.9	4.9	5.7	5.7	4.9	4.9	5.7	5.7
Max Green Setting (Gmax), s	23.3	24.1	17.0	34.4	9.3	38.1	8.1	43.3
Max Q Clear Time (g_c+I1), s	25.1	19.1	12.6	36.1	8.2	22.9	5.6	12.4
Green Ext Time (p_c), s	0.0	1.7	0.5	0.0	0.0	3.2	0.0	11.6

Intersection Summary	
HCM 2010 Ctrl Delay	52.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection 2
Knudsen Dr & Hageman Rd

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	781	1	0	0	0	886
Future Vol, veh/h	781	1	0	0	0	886
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	270	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	92	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	878	1	0	0	0	996

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	0	0	-	0	1756	0
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	1756	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	152	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	93	-
Mov Cap-2 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	152	-

Approach	EB	WB	SB
HCM Control Delay, s		0	
HCM LOS			-

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)					

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	798	1	0	0	0	931
Future Vol, veh/h	798	1	0	0	0	931
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	270	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	92	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	897	1	0	0	0	1046

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	0	0	-	0	1794	0
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	1794	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	-	-	89	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	146	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	89	-
Mov Cap-2 Maneuver	-	-	-	-	89	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	146	-

Approach	EB	WB	SB
HCM Control Delay, s		0	
HCM LOS			-

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	545	22	55	811	241	113	135	75	278	215	70
Future Volume (veh/h)	199	545	22	55	811	241	113	135	75	278	215	70
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	1716	1863	1863	1863	1863	1716	1863	1863	1863	1716	1863	1716
Adj Flow Rate, veh/h	224	612	24	60	882	262	123	147	82	312	234	79
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.89	0.92	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	2432	733	105	2090	577	183	1071	333	386	1419	563
Arrive On Green	0.10	0.48	0.46	0.03	0.41	0.40	0.05	0.21	0.21	0.12	0.28	0.29
Sat Flow, veh/h	3170	5085	1583	3442	5085	1458	3442	5085	1583	3170	5085	1458
Grp Volume(v), veh/h	224	612	24	60	882	262	123	147	82	312	234	79
Grp Sat Flow(s),veh/h/ln	1585	1695	1583	1721	1695	1458	1721	1695	1583	1585	1695	1458
Q Serve(g_s), s	7.5	7.9	0.9	1.9	13.6	14.6	3.9	2.6	4.7	10.5	3.8	3.9
Cycle Q Clear(g_c), s	7.5	7.9	0.9	1.9	13.6	14.6	3.9	2.6	4.7	10.5	3.8	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	2432	733	105	2090	577	183	1071	333	386	1419	563
V/C Ratio(X)	0.72	0.25	0.03	0.57	0.42	0.45	0.67	0.14	0.25	0.81	0.16	0.14
Avail Cap(c_a), veh/h	478	2432	733	203	2090	577	329	1071	333	620	1419	563
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	0.56	0.56	0.56
Uniform Delay (d), s/veh	48.1	17.0	16.1	52.6	23.1	24.5	51.1	35.3	36.2	47.1	30.0	21.9
Incr Delay (d2), s/veh	3.1	0.2	0.1	4.8	0.6	2.6	4.3	0.3	1.8	2.4	0.1	0.3
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	3.4	3.7	0.4	1.0	6.5	6.3	2.0	1.2	2.2	4.8	1.8	1.6
LnGrp Delay(d),s/veh	51.1	17.3	16.2	57.4	23.7	27.1	55.4	35.6	37.9	49.4	30.1	22.2
LnGrp LOS	D	B	B	E	C	C	E	D	D	D	C	C
Approach Vol, veh/h		860			1204			352			625	
Approach Delay, s/veh		26.1			26.1			43.0			38.8	
Approach LOS		C			C			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	17.9	28.5	7.9	55.8	10.3	36.0	15.3	48.4
Change Period (Y+Rc), s	4.5	5.3	4.5	4.9	4.5	5.3	5.3	4.9
Max Green Setting (Gmax), s	21.5	19.7	6.5	43.1	10.5	30.7	15.7	33.1
Max Q Clear Time (g_c+I1), s	12.5	6.7	3.9	9.9	5.9	5.9	9.5	16.6
Green Ext Time (p_c), s	0.8	2.2	0.0	9.7	0.1	2.7	0.4	7.5

Intersection Summary	
HCM 2010 Ctrl Delay	30.7
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	545	22	55	811	249	113	135	75	297	215	104
Future Volume (veh/h)	213	545	22	55	811	249	113	135	75	297	215	104
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	1716	1863	1863	1863	1863	1716	1863	1863	1863	1716	1863	1716
Adj Flow Rate, veh/h	239	612	24	60	882	271	123	147	82	334	234	117
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.89	0.92	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	2385	718	105	2020	557	183	1079	336	409	1465	583
Arrive On Green	0.10	0.47	0.45	0.03	0.40	0.38	0.05	0.21	0.21	0.13	0.29	0.30
Sat Flow, veh/h	3170	5085	1583	3442	5085	1458	3442	5085	1583	3170	5085	1458
Grp Volume(v), veh/h	239	612	24	60	882	271	123	147	82	334	234	117
Grp Sat Flow(s),veh/h/ln	1585	1695	1583	1721	1695	1458	1721	1695	1583	1585	1695	1458
Q Serve(g_s), s	8.0	8.0	0.9	1.9	13.9	15.5	3.9	2.6	4.7	11.3	3.8	5.8
Cycle Q Clear(g_c), s	8.0	8.0	0.9	1.9	13.9	15.5	3.9	2.6	4.7	11.3	3.8	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	2385	718	105	2020	557	183	1079	336	409	1465	583
V/C Ratio(X)	0.73	0.26	0.03	0.57	0.44	0.49	0.67	0.14	0.24	0.82	0.16	0.20
Avail Cap(c_a), veh/h	478	2385	718	203	2020	557	329	1079	336	648	1465	583
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	0.53	0.53	0.53
Uniform Delay (d), s/veh	47.8	17.6	16.7	52.6	24.2	25.8	51.1	35.2	36.0	46.6	29.2	21.5
Incr Delay (d2), s/veh	3.1	0.3	0.1	4.8	0.7	3.0	4.3	0.3	1.7	2.4	0.1	0.4
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	3.7	3.8	0.4	1.0	6.7	6.7	2.0	1.2	2.2	5.1	1.8	2.4
LnGrp Delay(d),s/veh	50.9	17.9	16.8	57.4	24.9	28.8	55.4	35.4	37.7	49.0	29.3	22.0
LnGrp LOS	D	B	B	E	C	C	E	D	D	D	C	C
Approach Vol, veh/h		875			1213			352			685	
Approach Delay, s/veh		26.9			27.4			42.9			37.7	
Approach LOS		C			C			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	18.7	28.6	7.9	54.8	10.3	37.0	15.8	46.9
Change Period (Y+Rc), s	4.5	5.3	4.5	4.9	4.5	5.3	5.3	4.9
Max Green Setting (Gmax), s	22.5	19.7	6.5	42.1	10.5	31.7	15.7	32.1
Max Q Clear Time (g_c+I1), s	13.3	6.7	3.9	10.0	5.9	7.8	10.0	17.5
Green Ext Time (p_c), s	0.9	2.4	0.0	9.7	0.1	2.9	0.4	7.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	545	22	55	811	249	113	135	75	297	215	104
Future Volume (veh/h)	213	545	22	55	811	249	113	135	75	297	215	104
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	1716	1863	1863	1863	1863	1716	1863	1863	1863	1716	1863	1716
Adj Flow Rate, veh/h	239	612	24	60	882	271	123	147	82	334	234	117
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.89	0.92	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	1590	453	141	1417	368	202	1579	492	198	1598	590
Arrive On Green	0.08	0.31	0.29	0.04	0.28	0.25	0.06	0.31	0.31	0.06	0.31	0.33
Sat Flow, veh/h	3170	5085	1583	3442	5085	1458	3442	5085	1583	3170	5085	1458
Grp Volume(v), veh/h	239	612	24	60	882	271	123	147	82	334	234	117
Grp Sat Flow(s),veh/h/ln	1585	1695	1583	1721	1695	1458	1721	1695	1583	1585	1695	1458
Q Serve(g_s), s	4.8	6.0	0.7	1.1	9.7	10.9	2.2	1.3	2.4	4.0	2.1	3.3
Cycle Q Clear(g_c), s	4.8	6.0	0.7	1.1	9.7	10.9	2.2	1.3	2.4	4.0	2.1	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	1590	453	141	1417	368	202	1579	492	198	1598	590
V/C Ratio(X)	0.98	0.38	0.05	0.43	0.62	0.74	0.61	0.09	0.17	1.69	0.15	0.20
Avail Cap(c_a), veh/h	243	1590	453	215	1565	410	215	1579	492	198	1598	590
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	0.48	0.48	0.48
Uniform Delay (d), s/veh	29.5	17.2	16.6	30.0	20.1	22.0	29.4	15.7	16.0	30.0	15.8	12.3
Incr Delay (d2), s/veh	53.3	0.2	0.0	2.0	0.7	6.1	4.4	0.1	0.7	319.0	0.1	0.4
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	3.9	2.8	0.3	0.6	4.6	5.0	1.2	0.6	1.2	10.5	1.0	1.4
LnGrp Delay(d),s/veh	82.8	17.3	16.6	32.0	20.8	28.1	33.8	15.8	16.8	349.0	15.9	12.7
LnGrp LOS	F	B	B	C	C	C	C	B	B	F	B	B
Approach Vol, veh/h		875			1213			352			685	
Approach Delay, s/veh		35.2			23.0			22.3			177.8	
Approach LOS		D			C			C			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	8.5	25.2	7.1	23.2	8.3	25.4	9.3	21.0
Change Period (Y+Rc), s	4.5	5.3	4.5	4.9	4.5	5.3	5.3	4.9
Max Green Setting (Gmax), s	4.0	18.0	4.0	18.0	4.0	18.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	6.0	4.4	3.1	8.0	4.2	5.3	6.8	12.9
Green Ext Time (p_c), s	0.0	2.4	0.0	5.6	0.0	2.3	0.0	3.2

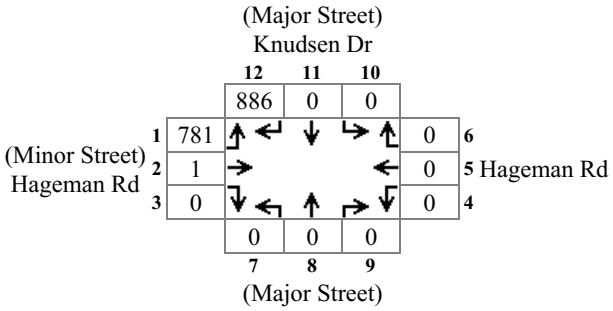
Intersection Summary	
HCM 2010 Ctrl Delay	60.3
HCM 2010 LOS	E

Notes

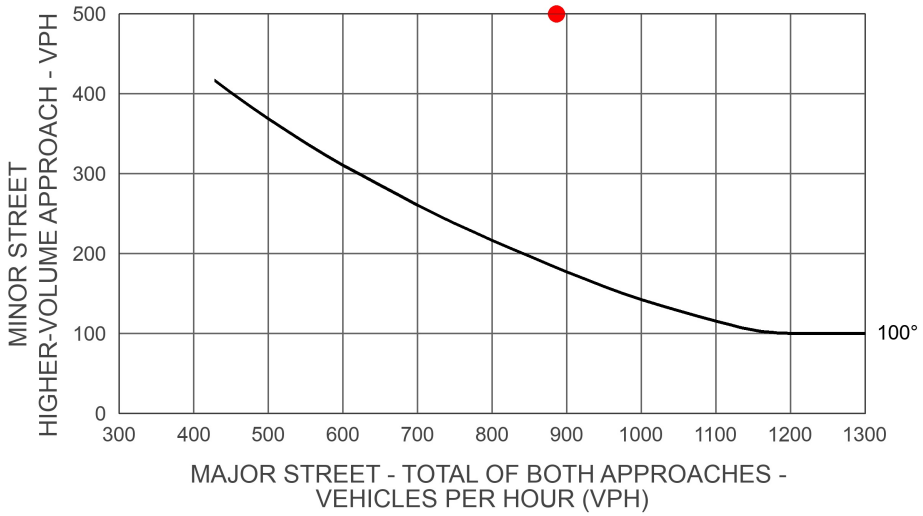
User approved changes to right turn type.

Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: PM Existing
Intersection #: 2

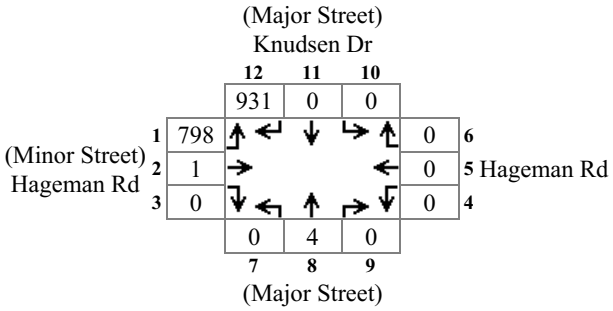


Major Total: 886
Minor High Volume: 782

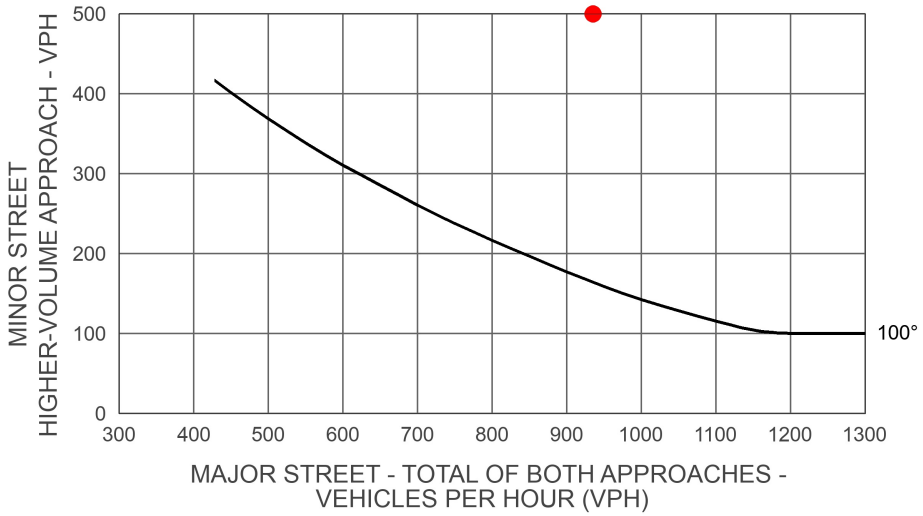


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: PM Existing+Project
Intersection #: 2

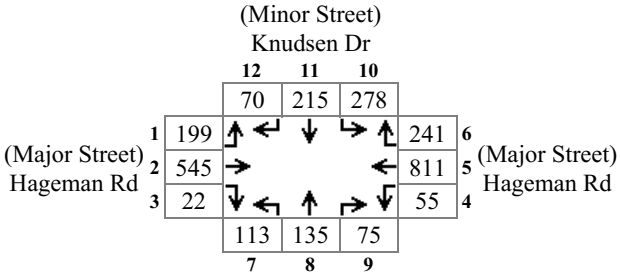


Major Total: 935
Minor High Volume: 799

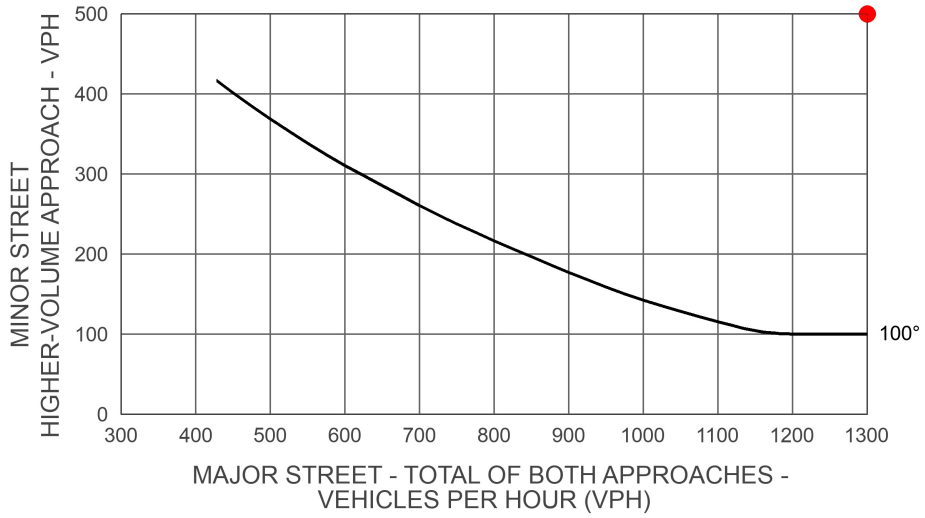


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: PM Future
Intersection #: 2

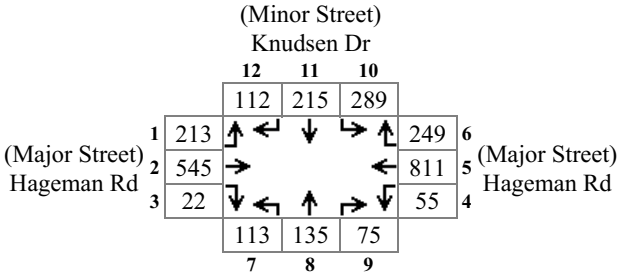


Major Total: 1873
Minor High Volume: 563

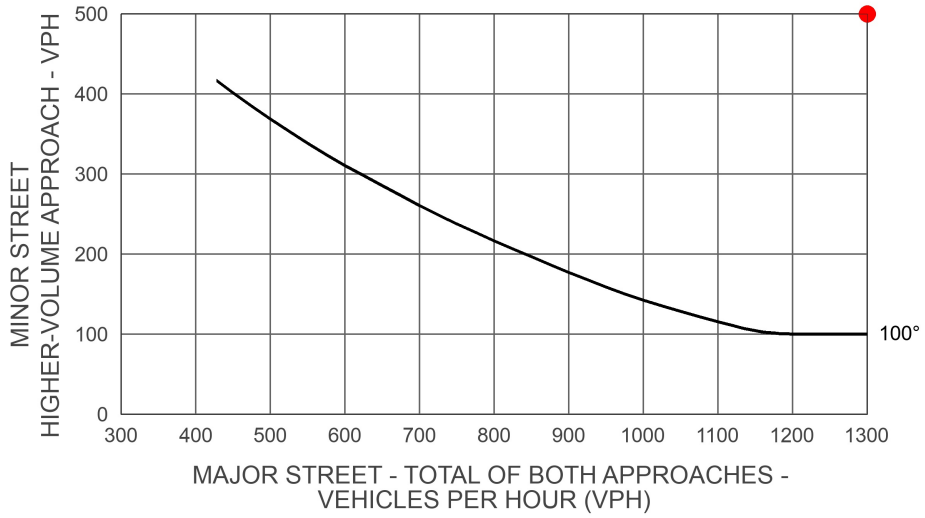


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: PM Future+Project
Intersection #: 2



Major Total: 1895
Minor High Volume: 616



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	809	1	0	0	0	0	0	0	0	0	0	582
Future Volume (veh/h)	809	1	0	0	0	0	0	0	0	0	0	582
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	1716	1863	1863	1863	1863	1716	1863	1863	1863	1716	1863	1716
Adj Flow Rate, veh/h	952	1	0	0	0	0	0	0	0	0	0	619
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	0.85	0.85	0.92	0.92	0.25	0.25	0.92	0.92	0.92	0.94	0.92	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1060	1735	518	3	4	1	3	2973	926	3	2973	1351
Arrive On Green	0.33	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
Sat Flow, veh/h	3170	5085	1583	3442	5085	1458	3442	5085	1583	3170	5085	1458
Grp Volume(v), veh/h	952	1	0	0	0	0	0	0	0	0	0	619
Grp Sat Flow(s),veh/h/ln	1585	1695	1583	1721	1695	1458	1721	1695	1583	1585	1695	1458
Q Serve(g_s), s	34.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	34.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1060	1735	518	3	4	1	3	2973	926	3	2973	1351
V/C Ratio(X)	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
Avail Cap(c_a), veh/h	1205	2577	780	115	835	219	115	2973	926	475	2973	1351
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
Uniform Delay (d), s/veh	38.0	26.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
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	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
LnGrp Delay(d),s/veh	46.4	26.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
LnGrp LOS	D	C										A
Approach Vol, veh/h		953			0			0			619	
Approach Delay, s/veh		46.4			0.0			0.0			0.2	
Approach LOS		D									A	

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	0.0	75.5	0.0	44.5	0.0	75.5	44.5	0.0
Change Period (Y+Rc), s	5.3	5.3	4.9	* 5.3	5.3	5.3	5.3	4.9
Max Green Setting (Gmax), s	18.0	18.5	4.0	* 59	4.0	32.5	44.7	18.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	2.0	0.0	2.0	36.3	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	4.9	0.0	3.0	3.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	839	1	0	0	0	0	0	0	0	0	0	590
Future Volume (veh/h)	839	1	0	0	0	0	0	0	0	0	0	590
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	1716	1863	1863	1863	1863	1716	1863	1863	1863	1716	1863	1716
Adj Flow Rate, veh/h	987	1	0	0	0	0	0	0	0	0	0	628
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	0.85	0.85	0.92	0.92	0.25	0.25	0.92	0.92	0.92	0.94	0.92	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1090	1783	533	3	4	1	3	2926	911	3	2926	1351
Arrive On Green	0.34	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
Sat Flow, veh/h	3170	5085	1583	3442	5085	1458	3442	5085	1583	3170	5085	1458
Grp Volume(v), veh/h	987	1	0	0	0	0	0	0	0	0	0	628
Grp Sat Flow(s),veh/h/ln	1585	1695	1583	1721	1695	1458	1721	1695	1583	1585	1695	1458
Q Serve(g_s), s	35.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	35.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1090	1783	533	3	4	1	3	2926	911	3	2926	1351
V/C Ratio(X)	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
Avail Cap(c_a), veh/h	1205	2577	780	115	835	219	115	2926	911	475	2926	1351
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
Uniform Delay (d), s/veh	37.5	25.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
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	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
LnGrp Delay(d),s/veh	46.8	25.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
LnGrp LOS	D	C										A
Approach Vol, veh/h		988			0			0			628	
Approach Delay, s/veh		46.8			0.0			0.0			0.1	
Approach LOS		D									A	

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	0.0	74.3	0.0	45.7	0.0	74.3	45.7	0.0
Change Period (Y+Rc), s	5.3	5.3	4.9	* 5.3	5.3	5.3	5.3	4.9
Max Green Setting (Gmax), s	18.0	18.5	4.0	* 59	4.0	32.5	44.7	18.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	2.0	0.0	2.0	37.6	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	5.2	0.0	3.1	2.8	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	574	18	47	662	202	108	175	63	291	114	51
Future Volume (veh/h)	203	574	18	47	662	202	108	175	63	291	114	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	1716	1863	1863	1863	1863	1716	1863	1863	1863	1716	1863	1716
Adj Flow Rate, veh/h	239	675	21	51	720	220	117	190	68	310	121	54
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	0.85	0.85	0.85	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	329	2115	634	99	1756	481	176	911	284	654	1700	651
Arrive On Green	0.10	0.42	0.40	0.03	0.35	0.33	0.05	0.18	0.18	0.21	0.33	0.34
Sat Flow, veh/h	3170	5085	1583	3442	5085	1458	3442	5085	1583	3170	5085	1458
Grp Volume(v), veh/h	239	675	21	51	720	220	117	190	68	310	121	54
Grp Sat Flow(s),veh/h/ln	1585	1695	1583	1721	1695	1458	1721	1695	1583	1585	1695	1458
Q Serve(g_s), s	8.0	9.8	0.9	1.6	11.9	13.1	3.7	3.5	4.1	9.5	1.8	2.3
Cycle Q Clear(g_c), s	8.0	9.8	0.9	1.6	11.9	13.1	3.7	3.5	4.1	9.5	1.8	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	2115	634	99	1756	481	176	911	284	654	1700	651
V/C Ratio(X)	0.73	0.32	0.03	0.52	0.41	0.46	0.66	0.21	0.24	0.47	0.07	0.08
Avail Cap(c_a), veh/h	507	2115	634	222	1756	481	335	911	284	654	1700	651
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	0.39	0.39	0.39
Uniform Delay (d), s/veh	47.8	21.6	20.0	52.7	27.5	29.1	51.3	38.5	38.7	38.4	25.0	17.5
Incr Delay (d2), s/veh	3.1	0.4	0.1	4.1	0.7	3.1	4.3	0.5	2.0	1.0	0.0	0.1
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	3.7	4.6	0.4	0.8	5.6	5.7	1.9	1.7	1.9	4.2	0.8	1.0
LnGrp Delay(d),s/veh	50.8	22.0	20.1	56.8	28.2	32.2	55.5	39.0	40.7	39.4	25.0	17.6
LnGrp LOS	D	C	C	E	C	C	E	D	D	D	C	B
Approach Vol, veh/h		935			991			375			485	
Approach Delay, s/veh		29.4			30.5			44.5			33.4	
Approach LOS		C			C			D			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	28.0	25.0	8.1	48.9	10.9	42.1	15.8	41.2
Change Period (Y+Rc), s	5.3	5.3	4.9	4.9	5.3	5.3	5.3	4.9
Max Green Setting (Gmax), s	22.7	19.7	7.1	40.1	10.7	31.7	16.7	30.1
Max Q Clear Time (g_c+I1), s	11.5	6.1	3.6	11.8	5.7	4.3	10.0	15.1
Green Ext Time (p_c), s	0.9	1.8	0.0	8.3	0.1	2.2	0.5	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	574	18	47	662	216	108	175	63	294	114	57
Future Volume (veh/h)	228	574	18	47	662	216	108	175	63	294	114	57
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	1716	1863	1863	1863	1863	1716	1863	1863	1863	1716	1863	1716
Adj Flow Rate, veh/h	268	675	21	51	720	235	117	190	68	313	121	61
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	0.85	0.85	0.85	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	377	1492	435	110	1079	282	153	1357	422	634	2148	804
Arrive On Green	0.12	0.29	0.27	0.03	0.21	0.19	0.04	0.27	0.27	0.20	0.42	0.43
Sat Flow, veh/h	3170	5085	1583	3442	5085	1458	3442	5085	1583	3170	5085	1458
Grp Volume(v), veh/h	268	675	21	51	720	235	117	190	68	313	121	61
Grp Sat Flow(s),veh/h/ln	1585	1695	1583	1721	1695	1458	1721	1695	1583	1585	1695	1458
Q Serve(g_s), s	7.3	9.7	0.9	1.3	11.7	13.9	3.0	2.6	3.0	7.9	1.3	1.8
Cycle Q Clear(g_c), s	7.3	9.7	0.9	1.3	11.7	13.9	3.0	2.6	3.0	7.9	1.3	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	377	1492	435	110	1079	282	153	1357	422	634	2148	804
V/C Ratio(X)	0.71	0.45	0.05	0.46	0.67	0.83	0.76	0.14	0.16	0.49	0.06	0.08
Avail Cap(c_a), veh/h	549	1740	512	153	1113	292	153	1357	422	634	2148	804
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	0.42	0.42	0.42
Uniform Delay (d), s/veh	38.2	25.9	24.0	42.8	32.5	34.9	42.5	25.1	25.3	32.0	15.4	9.5
Incr Delay (d2), s/veh	2.5	0.2	0.0	3.0	1.5	18.0	20.3	0.2	0.8	1.2	0.0	0.1
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	3.3	4.6	0.4	0.7	5.6	7.0	1.9	1.2	1.4	3.5	0.6	0.7
LnGrp Delay(d),s/veh	40.7	26.1	24.0	45.8	34.0	52.9	62.8	25.3	26.1	33.1	15.4	9.5
LnGrp LOS	D	C	C	D	C	D	E	C	C	C	B	A
Approach Vol, veh/h		964			1006			375			495	
Approach Delay, s/veh		30.1			39.0			37.2			25.9	
Approach LOS		C			D			D			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	23.3	29.3	7.8	29.6	9.3	43.3	15.1	22.3
Change Period (Y+Rc), s	5.3	5.3	4.9	4.9	5.3	5.3	5.3	4.9
Max Green Setting (Gmax), s	18.0	18.5	4.0	29.1	4.0	32.5	14.7	18.0
Max Q Clear Time (g_c+I1), s	9.9	5.0	3.3	11.7	5.0	3.8	9.3	15.9
Green Ext Time (p_c), s	0.8	1.8	0.0	7.1	0.0	2.2	0.5	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	574	18	47	662	216	108	175	63	294	114	57
Future Volume (veh/h)	228	574	18	47	662	216	108	175	63	294	114	57
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	1716	1863	1863	1863	1863	1716	1863	1863	1863	1716	1863	1716
Adj Flow Rate, veh/h	268	675	20	51	2648	864	117	190	68	313	124	61
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	0.85	0.85	0.92	0.92	0.25	0.25	0.92	0.92	0.92	0.94	0.92	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	1378	395	117	1268	332	174	1172	365	722	2073	701
Arrive On Green	0.06	0.27	0.25	0.03	0.25	0.23	0.05	0.23	0.23	0.23	0.41	0.42
Sat Flow, veh/h	3170	5085	1583	3442	5085	1458	3442	5085	1583	3170	5085	1458
Grp Volume(v), veh/h	268	675	20	51	2648	864	117	190	68	313	124	61
Grp Sat Flow(s),veh/h/ln	1585	1695	1583	1721	1695	1458	1721	1695	1583	1585	1695	1458
Q Serve(g_s), s	4.9	8.8	0.8	1.1	19.7	18.0	2.6	2.4	2.7	6.7	1.2	1.8
Cycle Q Clear(g_c), s	4.9	8.8	0.8	1.1	19.7	18.0	2.6	2.4	2.7	6.7	1.2	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	1378	395	117	1268	332	174	1172	365	722	2073	701
V/C Ratio(X)	1.36	0.49	0.05	0.43	2.09	2.60	0.67	0.16	0.19	0.43	0.06	0.09
Avail Cap(c_a), veh/h	197	1378	395	174	1268	332	174	1172	365	722	2073	701
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	0.45	0.45	0.45
Uniform Delay (d), s/veh	37.0	24.2	22.5	37.4	29.6	30.5	36.9	24.3	24.4	26.1	14.2	11.1
Incr Delay (d2), s/veh	192.5	0.3	0.1	2.5	492.4	728.8	9.6	0.3	1.1	0.9	0.0	0.1
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	7.4	4.2	0.3	0.6	67.0	74.5	1.5	1.1	1.3	3.0	0.6	0.7
LnGrp Delay(d),s/veh	229.6	24.5	22.6	39.9	522.0	759.3	46.5	24.6	25.6	27.0	14.2	11.2
LnGrp LOS	F	C	C	D	F	F	D	C	C	C	B	B
Approach Vol, veh/h		963			3563			375			498	
Approach Delay, s/veh		81.5			572.7			31.6			21.9	
Approach LOS		F			F			C			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	23.3	23.5	7.6	24.6	9.3	37.5	9.3	22.9
Change Period (Y+Rc), s	5.3	5.3	4.9	4.9	5.3	5.3	5.3	4.9
Max Green Setting (Gmax), s	18.0	18.0	4.0	18.0	4.0	18.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	8.7	4.7	3.1	10.8	4.6	3.8	6.9	21.7
Green Ext Time (p_c), s	0.9	1.8	0.0	7.0	0.0	1.9	0.0	0.0

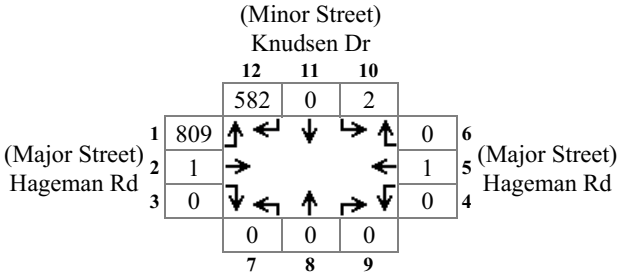
Intersection Summary	
HCM 2010 Ctrl Delay	396.7
HCM 2010 LOS	F

Notes

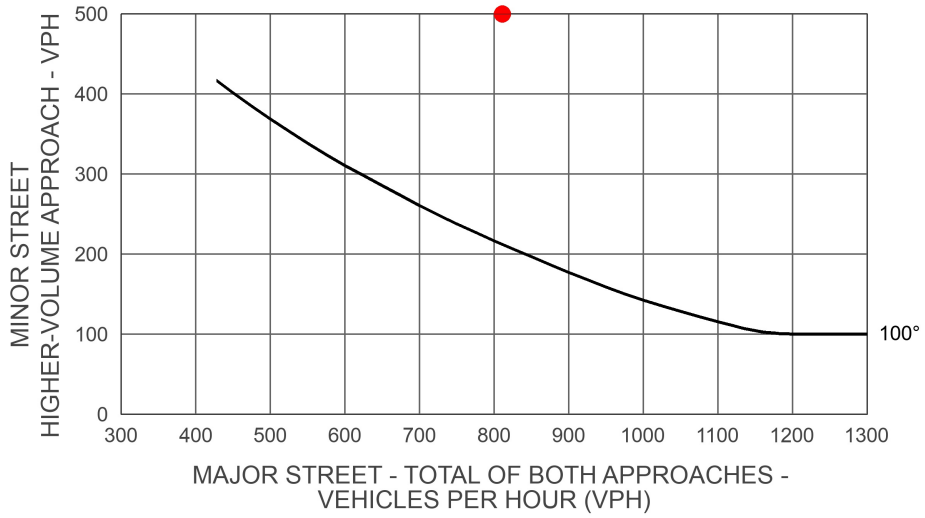
User approved changes to right turn type.

Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: AM Existing
Intersection #: 2

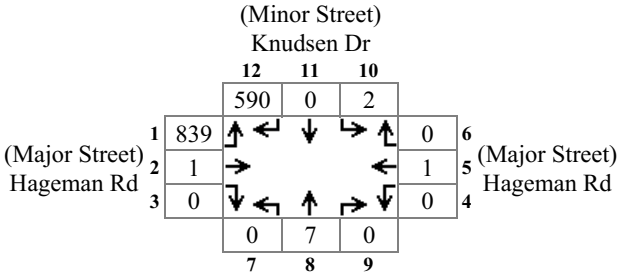


Major Total: 811
Minor High Volume: 584

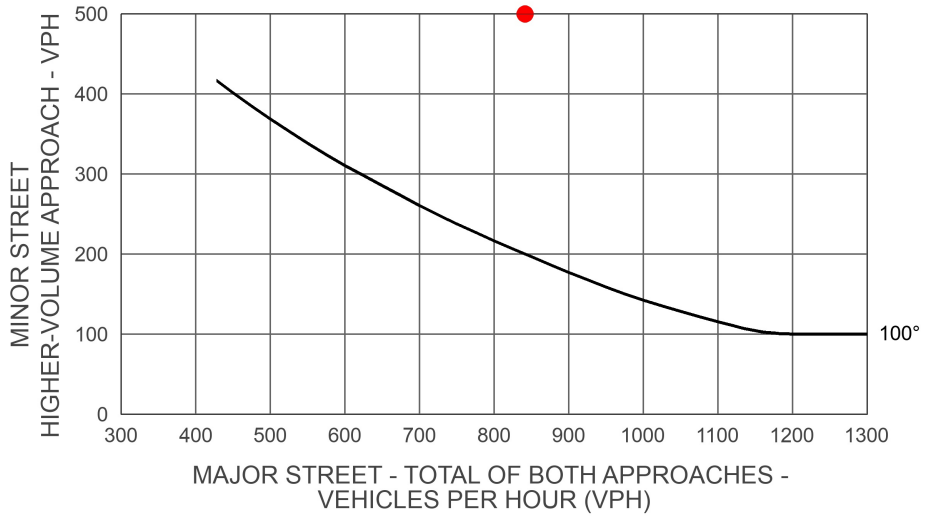


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: AM Existing+Project
Intersection #: 2

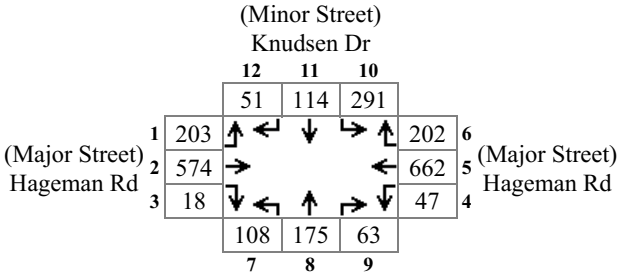


Major Total: 841
Minor High Volume: 592

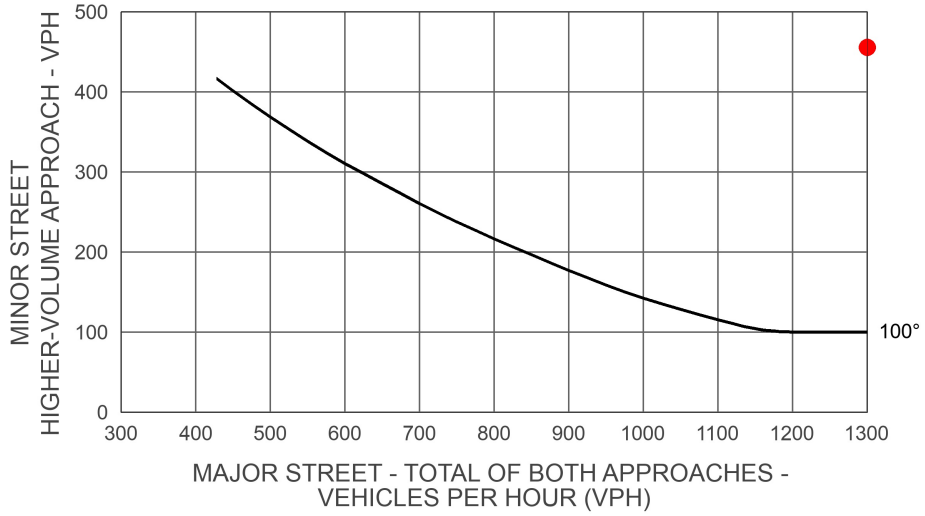


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: AM Future
Intersection #: 2

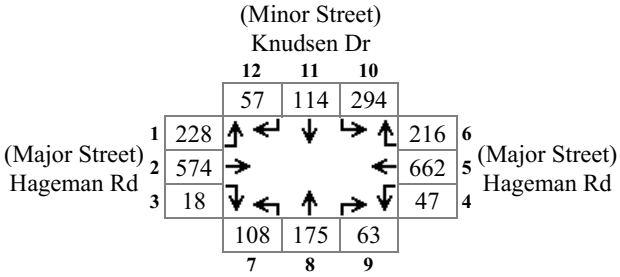


Major Total: 1706
Minor High Volume: 456

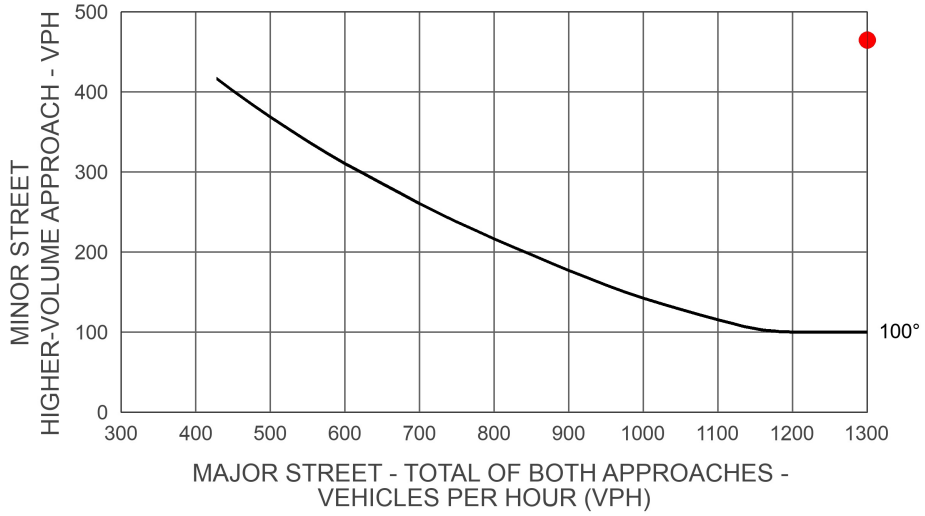


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: AM Future+Project
Intersection #: 2



Major Total: 1745
Minor High Volume: 465



Intersection 3
Mohawk St & Hageman Rd

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	423	226	504	419	613	379
Future Volume (veh/h)	423	226	504	419	613	379
Number	4	14	3	8	5	12
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	1863	1750	1716	1863	1716	1716
Adj Flow Rate, veh/h	475	254	536	446	659	408
Adj No. of Lanes	3	0	1	2	2	1
Peak Hour Factor	0.89	0.89	0.94	0.94	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	675	315	590	2106	1063	489
Arrive On Green	0.20	0.18	0.36	0.59	0.34	0.34
Sat Flow, veh/h	3558	1583	1634	3632	3170	1458
Grp Volume(v), veh/h	475	254	536	446	659	408
Grp Sat Flow(s),veh/h/ln	1695	1583	1634	1770	1585	1458
Q Serve(g_s), s	15.0	17.7	35.9	6.7	20.1	29.7
Cycle Q Clear(g_c), s	15.0	17.7	35.9	6.7	20.1	29.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	675	315	590	2106	1063	489
V/C Ratio(X)	0.70	0.81	0.91	0.21	0.62	0.83
Avail Cap(c_a), veh/h	784	366	634	2314	1063	489
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	42.9	44.8	34.9	10.8	32.1	35.3
Incr Delay (d2), s/veh	2.4	11.0	16.4	0.0	2.7	15.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	8.7	18.8	3.3	9.2	14.0
LnGrp Delay(d),s/veh	45.3	55.7	51.3	10.8	34.8	50.6
LnGrp LOS	D	E	D	B	C	D
Approach Vol, veh/h	729			982	1067	
Approach Delay, s/veh	48.9			32.9	40.8	
Approach LOS	D			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		42.6	45.5	26.9				72.4
Change Period (Y+Rc), s		6.0	5.7	5.7				5.7
Max Green Setting (Gmax), s		29.8	42.9	24.9				73.5
Max Q Clear Time (g_c+I1), s		31.7	37.9	19.7				8.7
Green Ext Time (p_c), s		0.0	2.0	1.5				4.4

Intersection Summary	
HCM 2010 Ctrl Delay	40.2
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	434	226	519	449	613	385
Future Volume (veh/h)	434	226	519	449	613	385
Number	4	14	3	8	5	12
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	1863	1750	1716	1863	1716	1716
Adj Flow Rate, veh/h	488	254	552	478	659	414
Adj No. of Lanes	3	0	1	2	2	1
Peak Hour Factor	0.89	0.89	0.94	0.94	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	676	316	603	2134	1038	478
Arrive On Green	0.20	0.18	0.37	0.60	0.33	0.33
Sat Flow, veh/h	3558	1583	1634	3632	3170	1458
Grp Volume(v), veh/h	488	254	552	478	659	414
Grp Sat Flow(s),veh/h/ln	1695	1583	1634	1770	1585	1458
Q Serve(g_s), s	15.5	17.7	37.0	7.1	20.3	30.7
Cycle Q Clear(g_c), s	15.5	17.7	37.0	7.1	20.3	30.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	676	316	603	2134	1038	478
V/C Ratio(X)	0.72	0.81	0.92	0.22	0.63	0.87
Avail Cap(c_a), veh/h	784	366	634	2314	1038	478
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	43.1	44.8	34.6	10.5	32.8	36.3
Incr Delay (d2), s/veh	2.8	10.9	17.7	0.1	3.0	18.7
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	8.7	19.7	3.5	9.3	14.8
LnGrp Delay(d),s/veh	45.8	55.6	52.3	10.5	35.8	55.0
LnGrp LOS	D	E	D	B	D	E
Approach Vol, veh/h	742			1030	1073	
Approach Delay, s/veh	49.2			32.9	43.2	
Approach LOS	D			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		41.7	46.4	26.9				73.3
Change Period (Y+Rc), s		6.0	5.7	5.7				5.7
Max Green Setting (Gmax), s		29.8	42.9	24.9				73.5
Max Q Clear Time (g_c+I1), s		32.7	39.0	19.7				9.1
Green Ext Time (p_c), s		0.0	1.7	1.5				4.7

Intersection Summary	
HCM 2010 Ctrl Delay	41.0
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	450	328	530	464	806	310
Future Volume (veh/h)	450	328	530	464	806	310
Number	4	14	3	8	5	12
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	1863	1750	1716	1863	1716	1716
Adj Flow Rate, veh/h	506	369	564	494	867	333
Adj No. of Lanes	3	0	1	2	2	1
Peak Hour Factor	0.89	0.89	0.94	0.94	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	819	383	533	2128	1053	484
Arrive On Green	0.24	0.23	0.33	0.60	0.33	0.33
Sat Flow, veh/h	3558	1583	1634	3632	3170	1458
Grp Volume(v), veh/h	506	369	564	494	867	333
Grp Sat Flow(s),veh/h/ln	1695	1583	1634	1770	1585	1458
Q Serve(g_s), s	16.0	27.7	39.1	7.8	30.2	23.7
Cycle Q Clear(g_c), s	16.0	27.7	39.1	7.8	30.2	23.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	819	383	533	2128	1053	484
V/C Ratio(X)	0.62	0.96	1.06	0.23	0.82	0.69
Avail Cap(c_a), veh/h	819	383	533	2128	1506	693
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	40.6	45.8	40.4	11.1	36.8	34.7
Incr Delay (d2), s/veh	3.5	37.9	55.3	0.3	2.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	16.1	25.8	3.8	13.6	9.8
LnGrp Delay(d),s/veh	44.0	83.7	95.7	11.3	39.4	36.4
LnGrp LOS	D	F	F	B	D	D
Approach Vol, veh/h	875			1058	1200	
Approach Delay, s/veh	60.8			56.3	38.6	
Approach LOS	E			E	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		43.9	43.1	33.0				76.1
Change Period (Y+Rc), s		6.0	5.7	5.7				5.7
Max Green Setting (Gmax), s		55.0	20.3	27.3				53.3
Max Q Clear Time (g_c+I1), s		32.2	41.1	29.7				9.8
Green Ext Time (p_c), s		5.7	0.0	0.0				4.8

Intersection Summary	
HCM 2010 Ctrl Delay	50.8
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	460	328	541	487	806	314
Future Volume (veh/h)	460	328	541	487	806	314
Number	4	14	3	8	5	12
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	1863	1750	1716	1863	1716	1716
Adj Flow Rate, veh/h	517	369	576	518	867	338
Adj No. of Lanes	3	0	1	2	2	1
Peak Hour Factor	0.89	0.89	0.94	0.94	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	697	325	565	2083	1068	491
Arrive On Green	0.21	0.19	0.35	0.59	0.34	0.34
Sat Flow, veh/h	3558	1583	1634	3632	3170	1458
Grp Volume(v), veh/h	517	369	576	518	867	338
Grp Sat Flow(s),veh/h/ln	1695	1583	1634	1770	1585	1458
Q Serve(g_s), s	15.3	22.0	37.0	7.6	26.7	21.4
Cycle Q Clear(g_c), s	15.3	22.0	37.0	7.6	26.7	21.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	697	325	565	2083	1068	491
V/C Ratio(X)	0.74	1.13	1.02	0.25	0.81	0.69
Avail Cap(c_a), veh/h	697	325	565	2083	1451	667
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	39.9	43.4	35.0	10.6	32.4	30.6
Incr Delay (d2), s/veh	4.3	91.3	43.0	0.1	2.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	17.8	23.4	3.7	12.1	8.9
LnGrp Delay(d),s/veh	44.1	134.7	78.1	10.7	35.0	32.4
LnGrp LOS	D	F	F	B	D	C
Approach Vol, veh/h	886			1094	1205	
Approach Delay, s/veh	81.9			46.2	34.3	
Approach LOS	F			D	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		40.1	41.0	26.0				67.0
Change Period (Y+Rc), s		6.0	5.7	5.7				5.7
Max Green Setting (Gmax), s		47.0	35.3	20.3				61.3
Max Q Clear Time (g_c+I1), s		28.7	39.0	24.0				9.6
Green Ext Time (p_c), s		5.3	0.0	0.0				7.1

Intersection Summary	
HCM 2010 Ctrl Delay	51.6
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	460	328	541	487	806	314
Future Volume (veh/h)	460	328	541	487	806	314
Number	4	14	3	8	5	12
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	1863	1750	1716	1863	1716	1716
Adj Flow Rate, veh/h	517	369	576	518	867	338
Adj No. of Lanes	3	0	1	2	2	1
Peak Hour Factor	0.89	0.89	0.94	0.94	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	706	330	300	1504	1611	741
Arrive On Green	0.21	0.19	0.18	0.43	0.51	0.51
Sat Flow, veh/h	3558	1583	1634	3632	3170	1458
Grp Volume(v), veh/h	517	369	576	518	867	338
Grp Sat Flow(s),veh/h/ln	1695	1583	1634	1770	1585	1458
Q Serve(g_s), s	17.1	25.0	22.0	11.8	22.2	17.8
Cycle Q Clear(g_c), s	17.1	25.0	22.0	11.8	22.2	17.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	706	330	300	1504	1611	741
V/C Ratio(X)	0.73	1.12	1.92	0.34	0.54	0.46
Avail Cap(c_a), veh/h	706	330	300	1504	1611	741
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	44.4	48.4	49.0	23.2	20.0	18.9
Incr Delay (d2), s/veh	3.9	85.5	427.4	0.1	1.3	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	18.7	45.5	5.8	9.9	7.6
LnGrp Delay(d),s/veh	48.3	133.9	476.4	23.4	21.3	20.9
LnGrp LOS	D	F	F	C	C	C
Approach Vol, veh/h	886			1094	1205	
Approach Delay, s/veh	83.9			261.9	21.2	
Approach LOS	F			F	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		65.0	26.0	29.0				55.0
Change Period (Y+Rc), s		6.0	5.7	5.7				5.7
Max Green Setting (Gmax), s		59.0	20.3	23.3				49.3
Max Q Clear Time (g_c+I1), s		24.2	24.0	27.0				13.8
Green Ext Time (p_c), s		6.2	0.0	0.0				5.0

Intersection Summary	
HCM 2010 Ctrl Delay	121.3
HCM 2010 LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	439	442	411	219	193	375
Future Volume (veh/h)	439	442	411	219	193	375
Number	4	14	3	8	5	12
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	1863	1750	1716	1863	1716	1716
Adj Flow Rate, veh/h	493	497	442	235	222	431
Adj No. of Lanes	3	0	1	2	2	1
Peak Hour Factor	0.89	0.89	0.93	0.93	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	942	440	499	2200	957	440
Arrive On Green	0.28	0.26	0.31	0.62	0.30	0.30
Sat Flow, veh/h	3558	1583	1634	3632	3170	1458
Grp Volume(v), veh/h	493	497	442	235	222	431
Grp Sat Flow(s),veh/h/ln	1695	1583	1634	1770	1585	1458
Q Serve(g_s), s	12.9	29.1	27.0	2.8	5.5	30.7
Cycle Q Clear(g_c), s	12.9	29.1	27.0	2.8	5.5	30.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	942	440	499	2200	957	440
V/C Ratio(X)	0.52	1.13	0.89	0.11	0.23	0.98
Avail Cap(c_a), veh/h	942	440	660	2549	957	440
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	31.9	38.6	34.6	8.0	27.4	36.2
Incr Delay (d2), s/veh	0.5	83.1	11.0	0.0	0.1	37.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	22.8	13.7	1.4	2.4	16.9
LnGrp Delay(d),s/veh	32.5	121.8	45.6	8.0	27.6	73.5
LnGrp LOS	C	F	D	A	C	E
Approach Vol, veh/h	990			677	653	
Approach Delay, s/veh	77.3			32.6	57.9	
Approach LOS	E			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		35.6	36.0	33.1				69.1
Change Period (Y+Rc), s		6.0	5.7	5.7				5.7
Max Green Setting (Gmax), s		29.6	40.6	27.4				73.7
Max Q Clear Time (g_c+I1), s		32.7	29.0	31.1				4.8
Green Ext Time (p_c), s		0.0	1.3	0.0				6.1

Intersection Summary	
HCM 2010 Ctrl Delay	58.8
HCM 2010 LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	459	442	414	224	193	386
Future Volume (veh/h)	459	442	414	224	193	386
Number	4	14	3	8	5	12
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	1863	1750	1716	1863	1716	1716
Adj Flow Rate, veh/h	516	497	445	241	222	444
Adj No. of Lanes	3	0	1	2	2	1
Peak Hour Factor	0.89	0.89	0.93	0.93	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	940	439	502	2204	955	439
Arrive On Green	0.28	0.26	0.31	0.62	0.30	0.30
Sat Flow, veh/h	3558	1583	1634	3632	3170	1458
Grp Volume(v), veh/h	516	497	445	241	222	444
Grp Sat Flow(s),veh/h/ln	1695	1583	1634	1770	1585	1458
Q Serve(g_s), s	13.6	29.1	27.2	2.9	5.5	31.6
Cycle Q Clear(g_c), s	13.6	29.1	27.2	2.9	5.5	31.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	940	439	502	2204	955	439
V/C Ratio(X)	0.55	1.13	0.89	0.11	0.23	1.01
Avail Cap(c_a), veh/h	940	439	659	2543	955	439
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	32.3	38.8	34.6	8.0	27.6	36.7
Incr Delay (d2), s/veh	0.7	84.2	11.3	0.0	0.1	45.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	23.0	13.8	1.4	2.4	18.3
LnGrp Delay(d),s/veh	33.0	122.9	45.9	8.0	27.7	82.4
LnGrp LOS	C	F	D	A	C	F
Approach Vol, veh/h	1013			686	666	
Approach Delay, s/veh	77.1			32.6	64.2	
Approach LOS	E			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		35.6	36.2	33.1				69.3
Change Period (Y+Rc), s		6.0	5.7	5.7				5.7
Max Green Setting (Gmax), s		29.6	40.6	27.4				73.7
Max Q Clear Time (g_c+I1), s		33.6	29.2	31.1				4.9
Green Ext Time (p_c), s		0.0	1.3	0.0				6.3

Intersection Summary	
HCM 2010 Ctrl Delay	60.6
HCM 2010 LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	463	642	432	389	254	307
Future Volume (veh/h)	463	642	432	389	254	307
Number	4	14	3	8	5	12
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	1863	1750	1716	1863	1716	1716
Adj Flow Rate, veh/h	520	721	465	418	292	353
Adj No. of Lanes	3	0	1	2	2	1
Peak Hour Factor	0.89	0.89	0.93	0.93	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1384	647	353	2327	875	402
Arrive On Green	0.41	0.39	0.22	0.66	0.28	0.28
Sat Flow, veh/h	3558	1583	1634	3632	3170	1458
Grp Volume(v), veh/h	520	721	465	418	292	353
Grp Sat Flow(s),veh/h/ln	1695	1583	1634	1770	1585	1458
Q Serve(g_s), s	12.9	49.0	25.9	5.5	8.8	27.7
Cycle Q Clear(g_c), s	12.9	49.0	25.9	5.5	8.8	27.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1384	647	353	2327	875	402
V/C Ratio(X)	0.38	1.12	1.32	0.18	0.33	0.88
Avail Cap(c_a), veh/h	1384	647	353	2327	977	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	36.4	47.1	8.0	34.6	41.5
Incr Delay (d2), s/veh	0.8	71.4	162.3	0.2	0.2	16.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	34.2	27.5	2.7	3.9	13.0
LnGrp Delay(d),s/veh	25.6	107.8	209.3	8.2	34.9	57.9
LnGrp LOS	C	F	F	A	C	E
Approach Vol, veh/h	1241			883	645	
Approach Delay, s/veh	73.3			114.1	47.4	
Approach LOS	E			F	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		37.1	29.9	53.0				82.9
Change Period (Y+Rc), s		6.0	5.7	5.7				5.7
Max Green Setting (Gmax), s		35.0	20.3	47.3				73.3
Max Q Clear Time (g_c+I1), s		29.7	27.9	51.0				7.5
Green Ext Time (p_c), s		1.4	0.0	0.0				3.8

Intersection Summary	
HCM 2010 Ctrl Delay	80.3
HCM 2010 LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	481	642	434	393	254	314
Future Volume (veh/h)	481	642	434	393	254	314
Number	4	14	3	8	5	12
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	1863	1750	1716	1863	1716	1716
Adj Flow Rate, veh/h	540	721	467	423	292	361
Adj No. of Lanes	3	0	1	2	2	1
Peak Hour Factor	0.89	0.89	0.93	0.93	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1232	575	409	2289	909	418
Arrive On Green	0.36	0.35	0.25	0.65	0.29	0.29
Sat Flow, veh/h	3558	1583	1634	3632	3170	1458
Grp Volume(v), veh/h	540	721	467	423	292	361
Grp Sat Flow(s),veh/h/ln	1695	1583	1634	1770	1585	1458
Q Serve(g_s), s	14.5	43.6	30.0	5.8	8.7	28.2
Cycle Q Clear(g_c), s	14.5	43.6	30.0	5.8	8.7	28.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1232	575	409	2289	909	418
V/C Ratio(X)	0.44	1.25	1.14	0.18	0.32	0.86
Avail Cap(c_a), veh/h	1232	575	409	2289	1162	535
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	28.9	39.1	45.0	8.5	33.6	40.6
Incr Delay (d2), s/veh	1.1	127.8	89.6	0.2	0.2	11.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	39.4	23.7	2.9	3.8	12.6
LnGrp Delay(d),s/veh	30.1	166.8	134.6	8.7	33.8	51.9
LnGrp LOS	C	F	F	A	C	D
Approach Vol, veh/h	1261			890	653	
Approach Delay, s/veh	108.3			74.8	43.8	
Approach LOS	F			E	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		38.4	34.0	47.6				81.6
Change Period (Y+Rc), s		6.0	5.7	5.7				5.7
Max Green Setting (Gmax), s		42.0	18.7	41.9				66.3
Max Q Clear Time (g_c+I1), s		30.2	32.0	45.6				7.8
Green Ext Time (p_c), s		2.2	0.0	0.0				3.8

Intersection Summary	
HCM 2010 Ctrl Delay	82.6
HCM 2010 LOS	F

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	481	642	434	393	254	314
Future Volume (veh/h)	481	642	434	393	254	314
Number	4	14	3	8	5	12
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	1863	1750	1716	1863	1716	1716
Adj Flow Rate, veh/h	540	721	467	423	292	361
Adj No. of Lanes	3	0	1	2	2	1
Peak Hour Factor	0.89	0.89	0.93	0.93	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1048	489	511	2322	872	401
Arrive On Green	0.31	0.29	0.31	0.66	0.28	0.28
Sat Flow, veh/h	3558	1583	1634	3632	3170	1458
Grp Volume(v), veh/h	540	721	467	423	292	361
Grp Sat Flow(s),veh/h/ln	1695	1583	1634	1770	1585	1458
Q Serve(g_s), s	15.2	36.0	32.0	5.4	8.6	27.8
Cycle Q Clear(g_c), s	15.2	36.0	32.0	5.4	8.6	27.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1048	489	511	2322	872	401
V/C Ratio(X)	0.52	1.47	0.91	0.18	0.33	0.90
Avail Cap(c_a), veh/h	1048	489	553	2413	887	408
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	33.1	41.1	38.5	7.8	33.7	40.7
Incr Delay (d2), s/veh	0.4	223.8	19.0	0.0	0.2	22.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	46.1	17.1	2.7	3.8	13.6
LnGrp Delay(d),s/veh	33.5	264.9	57.5	7.9	33.9	62.7
LnGrp LOS	C	F	E	A	C	E
Approach Vol, veh/h	1261			890	653	
Approach Delay, s/veh	165.8			33.9	49.9	
Approach LOS	F			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		36.1	40.4	40.0				80.4
Change Period (Y+Rc), s		6.0	5.7	5.7				5.7
Max Green Setting (Gmax), s		30.6	37.7	34.3				77.7
Max Q Clear Time (g_c+I1), s		29.8	34.0	38.0				7.4
Green Ext Time (p_c), s		0.3	0.7	0.0				10.2

Intersection Summary	
HCM 2010 Ctrl Delay	97.0
HCM 2010 LOS	F

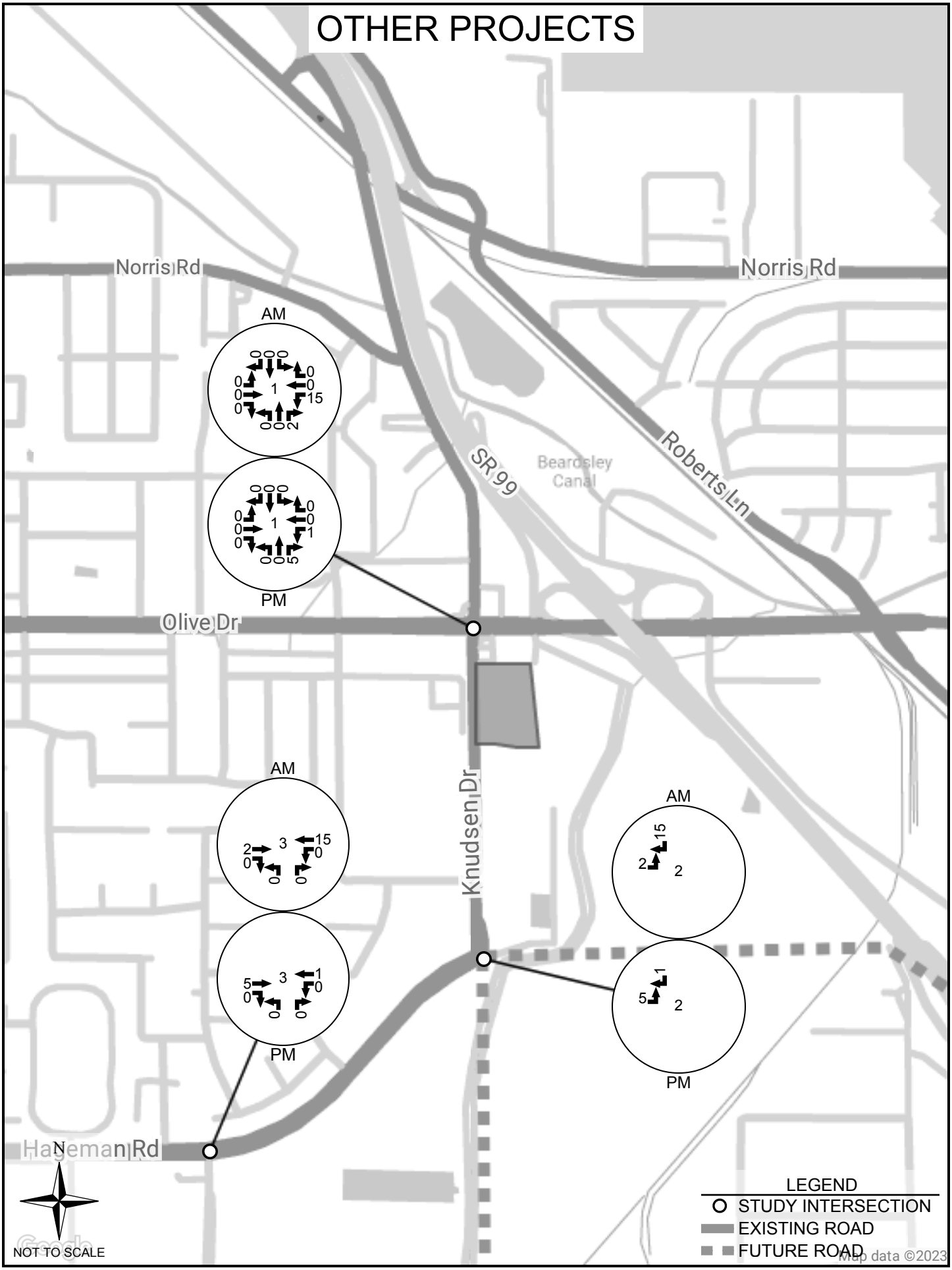
CUMULATIVE PROJECTS

PROJECT_NU	DESCRIPTIO	TYPE	ADDRESS	DEC_DATE	COMMENTS	DWELLING	STATUS	NARRATIVE
18-0445	Restaurant - 9170 SF	COMMERCIAL	3310 CALIFORNIA AVE	1/4/2019	Cracker Barrel?	0	<Null>	<Null>
19-0072	RESTRAUNT 3925sf	COMMERCIAL	4025 California Ave	3/28/2019	<Null>	0	ACTIVE	<Null>
19-0197	Add take-out restaurant to existing bldg	COMMERCIAL	1660 Oak St	6/11/2019	<Null>	0	<Null>	<Null>
19-0170	Warehouse (8000 sf) & ofc (500 sf)	INDUSTRIAL	3231 BRITTAN RD	6/11/2019	<Null>	0	<Null>	<Null>
19-0219	LNC Trucking yard, Shop, Warehouse & Ofc (permitted by KC)	COMMERCIAL	1816 Golden State Ave	6/24/2019	<Null>	0	<Null>	<Null>
19-0235	Medical Office Bldg - 90,000 sf	COMMERCIAL	625 34th Street	7/12/2019	<Null>	0	ACTIVE	<Null>
19-0253	C-STORE	COMMERCIAL	3624 CALIFORNIA AVE	8/9/2019 15:30	includes DEMO of existing Restaurant Bldg	0	ACTIVE	<Null>
19-0248	Reraturant - 1175 sf & Car Wash	COMMERCIAL	2931 BUCK OWENS BLVD	8/12/2019	<Null>	0	ACTIVE	<Null>
19-0307	6970 sf PAINT BOOTH & 800 sf MAINTENANCE BUILDING	INDUSTRIAL	1830 GOLDEN STATE AVE	10/4/2019 16:41	<Null>	0	ACTIVE	<Null>
19-0393	HOTEL - 4 story, 110 room w/Mtg rooms 62749 sf	COMMERCIAL	1401 Easton Dr	12/13/2019	<Null>	0	ACTIVE	<Null>
20-0171	480sf Temp Medical Trailer	COMMERCIAL	2620-2700 Chester AVE	8/20/2020	<Null>	0	ACTIVE	<Null>
20-0184	OFFICE/WAREHOUSE - 6541 sf	INDUSTRIAL	3220 RIO MIRADA DR	8/26/2020	<Null>	0	ACTIVE	<Null>
20-0199	Retail BLDG - 4990 sf	COMMERCIAL	3925 ROSEDALE HWY	9/9/2020	X-REF SPR 18-0391	0	<Null>	<Null>
20-0349	OFC BLDG - 8492sf	COMMERCIAL	4733 CENTENNIAL PLAZA WAY	1/6/2021	<Null>	0	ACTIVE	<Null>
20-0102	MEDICAL OUTPATIENT FACLITY - 39648 sf	COMMERCIAL	5512 KNUDSEN DR	1/8/2021	<Null>	0	ACTIVE	<Null>
20-0365	NON-MOBILE COMMERCIAL COACH 2560SF	COMMERCIAL	420 34TH ST	1/20/2021	LOCATED IN PKNG LOT ON SAN DIMAS SIDE OF BLDG	0	ACTIVE	<Null>
21-0033	HYDROGEN FUELLING FACILITY	INDUSTRIAL	1920 GOLDEN STATE AVE	2/16/2021	<Null>	0	ACTIVE	<Null>
20-0184	Construct 6450 sq. ft. office/warehouse	INDUSTRIAL	3220 Rio Mirada Drive	9/1/2020	Construct 6450 sq. ft. office/warehouse	<Null>	<Null>	<Null>
20-0423	Construct 8,250 sq. ft. office building	COMMERCIAL	4930 California Avenue	1/20/2021	Construct 8,250 sq. ft. office building	<Null>	<Null>	<Null>
19-0043	7500 sf industrial building	INDUSTRIAL	4621 BURR ST	2/19/2019	<Null>	0	<Null>	<Null>
21-0199	RESTAURANT - TAKE OUT ONLY W/DRIVE THRU	COMMERCIAL	924 34TH ST	7/21/2021	<Null>	0	ACTIVE	RESTAURANT - TAKE OUT ONLY W/DRIVE THRU - 1375 SF
21-0187	restaurant with drive-thru 2695 sf	COMMERCIAL	8310 Granite Falls Drive	8/11/2021	expires 8/11/2023	0	<Null>	<Null>
21-0218	hotel (120 rooms, 4 stories) in a C-2 73800 sf	COMMERCIAL	3905 Marriot Drive,	8/11/2021	<Null>	0	<Null>	requires 138 parking spaces
21-0260	Warehouse & ofc	INDUSTRIAL	7511 ROSEDALE HWY	10/28/2021	<Null>	0	ACTIVE	warehouse and office development

Cumulative Projects List
Ruettgers & Schuler Civil Engineers

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
710	General Office	8.492 1000 sq ft GFA	eq	97	eq	86% 30	14% 5	eq	16% 2	84% 9

OTHER PROJECTS



VEHICLE TURNING MOVEMENT COUNTS

Turning Movement Count Report AM

Location ID: 1
North/South: Knudsen Drive
East/West: Olive Drive

Date: 01/04/22
City: Bakersfield, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:30	11	30	131	50	133	111	197	30	6	5	352	10	1066
7:45	7	26	105	72	206	112	164	22	11	12	380	10	1127
8:00	4	45	106	49	190	103	157	21	23	11	265	12	986
8:15	11	48	96	49	150	83	136	17	6	10	258	12	876
Total Volume:	33	149	438	220	679	409	654	90	46	38	1255	44	4055
Approach %	5%	24%	71%	17%	52%	31%	83%	11%	6%	3%	94%	3%	

Peak Hr Begin:	7:30												
PHV	33	149	438	220	679	409	654	90	46	38	1255	44	4055
PHF	0.901			0.838			0.848			0.831			0.900

Turning Movement Count Report PM

Location ID: 1
North/South: Knudsen Drive
East/West: Olive Drive

Date: 01/04/22
City: Bakersfield, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
16:30	16	36	74	79	271	144	131	17	7	16	188	15	994
16:45	8	23	73	73	282	126	175	19	11	8	190	11	999
17:00	10	54	66	111	309	164	157	17	8	8	218	11	1133
17:15	12	60	66	88	281	161	182	27	10	5	173	16	1081
Total Volume:	46	173	279	351	1143	595	645	80	36	37	769	53	4207
Approach %	9%	35%	56%	17%	55%	28%	85%	11%	5%	4%	90%	6%	

Peak Hr Begin:	16:30												
PHV	46	173	279	351	1143	595	645	80	36	37	769	53	4207
PHF	0.902			0.894			0.869			0.906			0.928

Turning Movement Count Report AM

Location ID: 2
North/South: Knudsen Drive
East/West: Hageman Road

Date: 01/04/22
City: Bakersfield, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:30	137	0	0	0	1	0	0	0	0	238	0	0	376
7:45	156	0	0	0	0	0	0	0	0	227	1	0	384
8:00	148	0	2	0	0	0	0	0	0	182	0	0	332
8:15	141	0	0	0	0	0	0	0	0	162	0	0	303
Total Volume:	582	0	2	0	1	0	0	0	0	809	1	0	1395
Approach %	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	

Peak Hr Begin:	7:30												
PHV	582	0	2	0	1	0	0	0	0	809	1	0	1395
PHF	0.936			0.250			0.000			0.851			0.908

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 2
North/South: Knudsen Drive
East/West: Hageman Road

Date: 01/04/22
City: Bakersfield, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
16:30	204	0	0	0	0	0	0	0	0	166	0	0	370
16:45	208	0	0	0	0	0	0	0	0	214	0	0	422
17:00	249	0	0	0	0	0	0	0	0	181	0	0	430
17:15	225	0	0	0	0	0	0	0	0	220	1	0	446
Total Volume:	886	0	0	0	0	0	0	0	0	781	1	0	1668
Approach %	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	

Peak Hr Begin:	16:30												
PHV	886	0	0	0	0	0	0	0	0	781	1	0	1668
PHF	0.890			0.000			0.000			0.885			0.935

Turning Movement Count Report AM

Location ID: 3
North/South: Mohawk Street
East/West: Hageman Road

Date: 01/04/22
City: Bakersfield, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:30	0	0	0	0	59	105	99	0	42	104	139	1	549
7:45	0	0	0	0	58	96	103	0	61	130	118	0	566
8:00	0	0	0	0	46	124	95	0	48	115	101	0	529
8:15	0	0	0	0	56	86	78	0	42	93	81	0	436
Total Volume:	0	0	0	0	219	411	375	0	193	442	439	1	2080
Approach %	0%	0%	0%	0%	35%	65%	66%	0%	34%	50%	50%	0%	

Peak Hr Begin:	7:30												
PHV	0	0	0	0	219	411	375	0	193	442	439	1	2080
PHF	0.000			0.926			0.866			0.889			0.919

Turning Movement Count Report PM

Location ID: 3
North/South: Mohawk Street
East/West: Hageman Road

Date: 01/04/22
City: Bakersfield, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
16:30	0	0	0	0	98	114	87	0	149	57	92	0	597
16:45	0	0	0	0	98	123	101	0	125	68	95	0	610
17:00	0	0	0	0	101	143	89	0	174	55	127	0	689
17:15	0	0	0	0	122	124	102	0	165	46	109	0	668
Total Volume:	0	0	0	0	419	504	379	0	613	226	423	0	2564
Approach %	0%	0%	0%	0%	45%	55%	38%	0%	62%	35%	65%	0%	

Peak Hr Begin:	16:30												
PHV	0	0	0	0	419	504	379	0	613	226	423	0	2564
PHF	0.000			0.938			0.929			0.891			0.930