



LSC TRANSPORTATION CONSULTANTS, INC.

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November 30, 2020

Mr. Eric Boileau
Olsson
1880 Fall River Drive, Suite 200
Loveland, CO 80538

Re: Market Street Business
Park Update
Keenesburg, CO
LSC #190901

Dear Mr. Boileau:

In response to your request, LSC Transportation Consultants, Inc. has prepared this updated traffic impact analysis for the proposed Market Street Business Park development. As shown on Figure 1, the site is located between I-76 and Weld County Road (CR) 18 and west of Market Street in Keenesburg, Colorado.

REPORT CONTENTS

The report contains the following: the existing roadway and traffic conditions in the vicinity of the site including the lane geometries, traffic controls, posted speed limits, etc.; the existing weekday peak-hour traffic volumes; the existing daily traffic volumes in the area; the typical weekday site-generated traffic volume projections for the site; the assignment of the projected traffic volumes to the area roadways; the projected short-term and long-term background and resulting total traffic volumes on the area roadways; the site's projected traffic impacts; and any recommended roadway improvements to mitigate the site's traffic impacts.

LAND USE AND ACCESS

The site is proposed to include a 60-room hotel, a 6,000 square-foot drive-in bank, two 3,000 square-foot fast casual restaurants, and a 6,000 square-foot super convenience market/gas station. Figure 2 shows the conceptual site plan as well as the interim and long-term widening of Market Street adjacent to the site.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The major roadways in the site's vicinity are shown on Figure 1 and are described below.

- **Market Street** is a north-south, two-lane collector roadway east of the site. The intersections with CR 18 and the I-76 Ramps are stop-sign controlled. The posted speed limit in the vicinity of the site is 30 mph.
- **County Road (CR) 18** is an east-west, two-lane collector roadway north of the site. The intersection with Market Street is stop-sign controlled. The posted speed limit in the vicinity of the site is 30 mph.

Existing Traffic Conditions

Figure 3 shows the existing lane geometries, traffic controls, posted speed limits, and traffic volumes in the site's vicinity on a typical weekday. The weekday peak-hour traffic and daily traffic volumes are from the attached traffic counts conducted by Counter Measures in August, 2019.

2025 and 2040 Background Traffic

Figure 4 shows the estimated 2025 background traffic, lane geometries, and traffic control based on an annual growth rate of one percent. Figure 5 shows the estimated 2040 background traffic based on an annual growth rate of one percent plus additional development east of the site and along N. 1st Street.

Existing, 2025 Background, and 2040 Background Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay and LOS F is indicative of a high level of congestion or delay. Attached are specific level of service definitions for unsignalized intersections.

The intersections in the study area were analyzed to determine the existing, 2025 background, and 2040 background levels of service using Synchro. Table 1 shows the level of service analysis results. The level of service reports are attached.

- **Market Street/Site Access:** All movements at this unsignalized intersection are expected to operate at LOS "B" or better during both morning and afternoon peak-hours in 2040.
- **Market Street/CR 18:** All movements at this unsignalized intersection currently operate at LOS "A" during both morning and afternoon peak-hours and are expected to do so through 2040.
- **Market Street/N. 1st Street:** All movements at this unsignalized intersection currently operate at LOS "B" or better during both morning and afternoon peak-hours and are expected to do so through 2040.

TRIP GENERATION

Table 2 shows the estimated average weekday, morning peak-hour, and afternoon peak-hour trip generation for the proposed site based on the rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE).

The site is projected to generate about 4,190 primary vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 307 vehicles would enter and about 289 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:00 p.m., about 333 vehicles would enter and about 325 vehicles would exit. These peak-hour estimates include pass-by trips as shown in Table 2.

TRIP DISTRIBUTION

Figure 6 shows the estimated directional distribution of the site-generated traffic volumes on the area roadways. The estimates were based on the location of the site with respect to the regional population, employment, and activity centers; the site's proposed land use; and the traffic counts.

TRIP ASSIGNMENT

Figure 7a shows the estimated primary site-generated traffic volumes based on the directional distribution percentages (from Figure 6) and the primary trip generation estimate (from Table 2).

Figure 7b shows the estimated passby traffic volumes based on the passby trip generation estimate (from Table 2) assuming 90 percent of passby trips occur from I-76 and 10 percent from Market Street.

Figure 7c shows the estimated total site-generated traffic volumes which is the sum of the volumes in Figures 7a and 7b.

2025 and 2040 TOTAL TRAFFIC

Figure 8 shows the 2025 total traffic which is the sum of the 2025 background traffic volumes (from Figure 4) and the site-generated traffic volumes (from Figure 7c). Figure 8 also shows the recommended 2025 lane geometry and traffic control.

Figure 9 shows the 2040 total traffic which is the sum of 2040 background traffic volumes (from Figure 5) and the site-generated traffic volumes (from Figure 7c). Figure 9 also shows the recommended 2040 lane geometry and traffic control.

PROJECTED LEVELS OF SERVICE

The intersections in the study area were analyzed to determine the 2025 and 2040 total levels of service. Table 1 shows the level of service analysis results. The level of service reports are attached.

- **Market Street/Site Access:** All movements at this unsignalized intersection are expected to operate at LOS "D" or better during both morning and afternoon peak-hours through 2040.
- **Market Street/CR 18:** All movements at this unsignalized intersection are expected to operate at LOS "A" during both morning and afternoon peak-hours through 2040.

- **Market Street/N. 1st Street:** All movements at this unsignalized intersection are expected to operate at LOS "C" or better during both morning and afternoon peak-hours through 2040.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

1. The site is projected to generate about 4,190 primary vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, about 307 vehicles would enter and about 289 vehicles would exit the site. During the afternoon peak-hour, about 333 vehicles would enter and about 325 vehicles would exit. These peak-hour estimates include pass-by trips as shown in Table 2.

Projected Levels of Service

2. All movements at all of the intersections analyzed are expected to operate at LOS "D" or better through 2040.

Conclusions

3. The impact of the proposed Market Street Business Park development can be accommodated by the existing roadway network with the following recommended improvements.

Recommendations

4. A northbound left-turn lane is recommended on Market Street approaching the site as shown in Figure 2. The posted speed limit is 30 mph so an appropriate length would be about 100 feet to accommodate vehicle storage for one tractor trailer and one passenger vehicle or four passenger vehicles. An appropriate transition taper is 50 feet and an appropriate redirect taper is 15:1. A southbound left-turn lane will likely be needed at this intersection if the property to the east develops.
5. A continuous right-turn lane is proposed in both directions of Market Street adjacent to the site by 2040 as shown in Figure 2.
6. The eastbound and future westbound approaches to Market Street from the main site access intersection should have a shared through/left lane and a dedicated right-turn lane as shown in Figure 2.

* * * * *

We trust our findings will assist you in gaining approval of the proposed Market Street Business Park development. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By _____

Christopher S. McGranahan, PE, PTOE
Principal

CSM/wc

11-30-20

Enclosures: Tables 1 and 2
Figures 1 - 9
Traffic Count Reports
Level of Service Definitions
Level of Service Reports

W:\LSC\Projects\2019\190901-MarketStreetBusParkUpdate\Report\MarketStreetBusinessParkUpdate-113020.wpd

Table 1
Intersection Levels of Service Analysis
Market Street Business Park Update
Keenesburg, CO
LSC #190901; November, 2020

Intersection Location	Traffic Control	Existing Traffic		2025 Background		2025 Total		2040 Background		2040 Total	
		Level of Service AM	Level of Service PM								
<u>Market Street/Site Access</u>	TWSC										
NB Approach		--	--	--	--	--	--	--	--	--	--
NB Left		--	--	--	--	A	A	A	A	A	A
EB Approach		--	--	--	--	B	C	--	--	--	--
EB Left/Through		--	--	--	--	--	--	B	B	C	D
EB Right		--	--	--	--	--	--	A	A	A	A
WB Approach		--	--	--	--	--	--	--	--	--	--
WB Left/Through		--	--	--	--	--	--	B	B	C	D
WB Right		--	--	--	--	--	--	A	A	A	A
SB Left		--	--	--	--	--	--	A	A	A	A
Critical Movement Delay (sec /veh)		--	--	--	--	12.4	15.1	10.1	10.7	23.0	26.7
<u>Market Street/CR 18</u>	AWSC										
NB Approach		A	A	A	A	A	A	--	--	--	--
NB Left		--	--	--	--	--	--	A	A	A	A
NB Right		--	--	--	--	--	--	A	A	A	A
EB Approach		A	A	A	A	A	A	--	--	--	--
EB Through		--	--	--	--	--	--	A	A	A	A
EB Right		--	--	--	--	--	--	A	A	A	A
WB Approach		A	A	A	A	A	A	--	--	--	--
WB Left		--	--	--	--	--	--	A	A	A	A
WB Through		--	--	--	--	--	--	A	A	A	A
Entire Intersection Delay (sec /veh)		7.3	7.6	7.4	7.7	7.5	7.8	7.8	8.2	7.9	8.4
Entire Intersection LOS		A	A	A	A	A	A	A	A	A	A
<u>Market Street/N. 1st Street</u>	TWSC										
NB Approach		A	A	A	A	A	A	A	A	A	A
EB Approach		B	B	B	B	B	C	B	B	B	C
WB Approach		A	B	A	B	B	B	B	B	B	C
SB Approach		A	A	A	A	A	A	A	A	A	A
Critical Movement Delay (sec /veh)		10.6	13.1	10.4	13.4	12.7	18.9	11.2	14.9	13.8	21.5

Table 2
ESTIMATED TRAFFIC GENERATION
Market Street Business Park Update
Keenesburg, CO
LSC #190901; November, 2020

Trip Generating Category	Quantity	Trip Generation Rates ⁽¹⁾						Vehicle-Trips Generated					
		Average	AM Peak-Hour		PM Peak-Hour		Average	AM Peak-Hour		PM Peak-Hour			
		Weekday	In	Out	In	Out	Weekday	In	Out	In	Out		
CURRENTLY PROPOSED LAND USE													
Lot 1 Hotel ⁽²⁾	60 Rooms	8.36	0.277	0.193	0.306	0.294	502	17	12	18	18		
Lot 2 Drive-In Bank ⁽³⁾	6 KSF ⁽⁴⁾	100.03	5.510	3.990	10.225	10.225	600	33	24	61	61		
Lot 3 Restaurant ⁽⁵⁾	3 KSF	315.17	1.387	0.683	7.772	6.359	946	4	2	23	19		
Lot 4 Restaurant ⁽⁵⁾	3 KSF	315.17	1.387	0.683	7.772	6.359	946	4	2	23	19		
Lot 5 Gas Station ⁽⁶⁾	6 KSF	837.56	41.570	41.570	34.640	34.640	5,025	249	249	208	208		
							Subtotal =	8,019	307	289	333	325	
							<i>Passby Trips ⁽⁷⁾ =</i>	3,829	152	152	143	143	
							Primary Trips =	4,190	155	137	190	182	

Notes:

- (1) Source: *Trip Generation*, Institute of Transportation Engineers, 10th Edition, 2017.
- (2) ITE Land Use No. 310 - Hotel
- (3) ITE Land Use No. 912 - Drive-In Bank
- (4) KSF = 1,000 square feet
- (5) ITE Land Use No. 930 - Fast Casual Restaurant
- (6) ITE Land Use No. 960 - Super Convenience Market/Gas Station
- (7) Pass-by rates were assumed based on the *Trip Generation Handbook*, 3rd Edition, as follows: Restaurant = 43%; Gas Station = 60%;



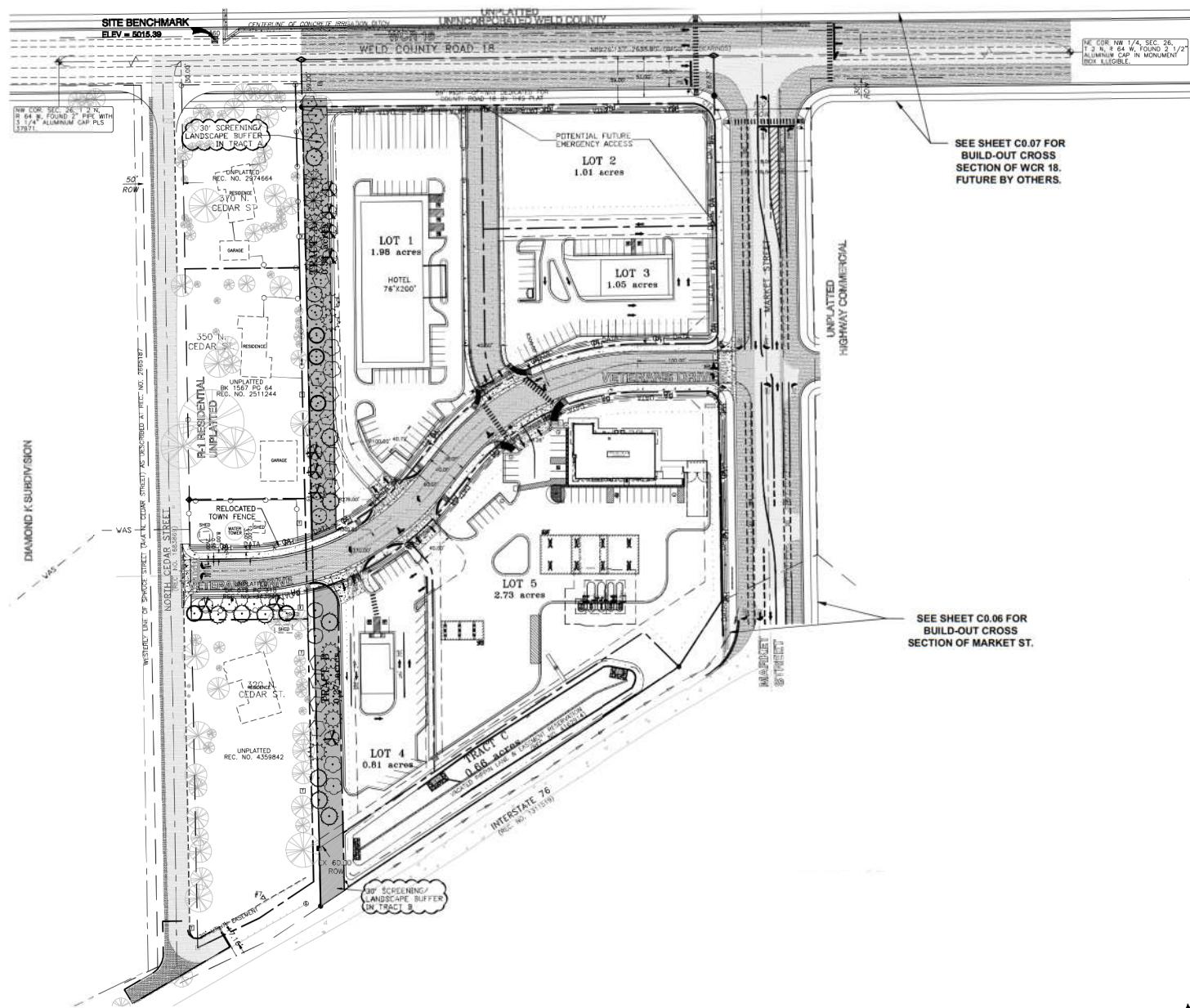
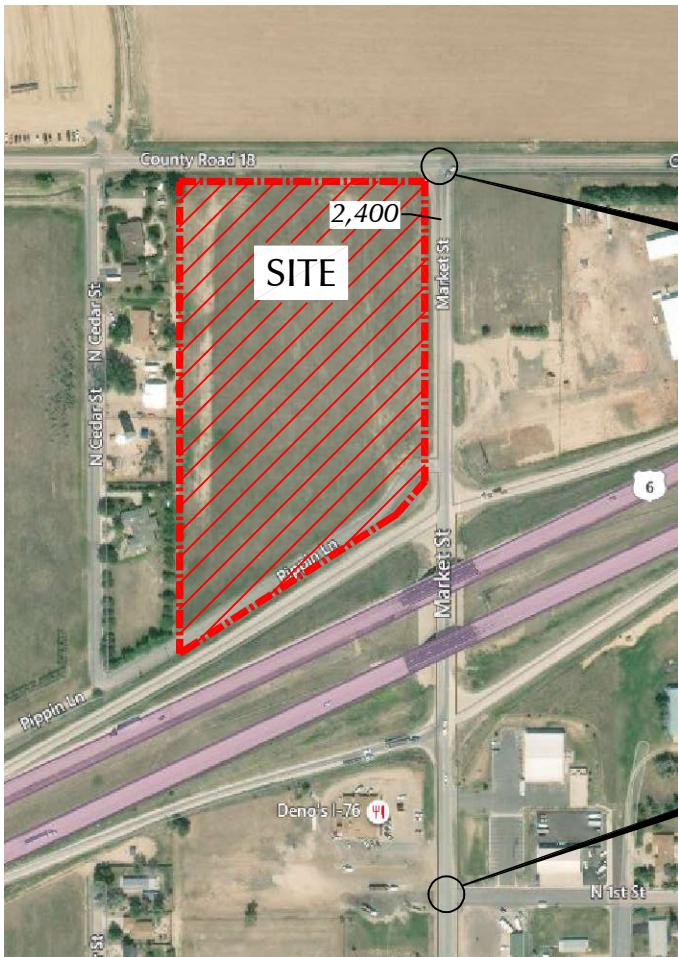
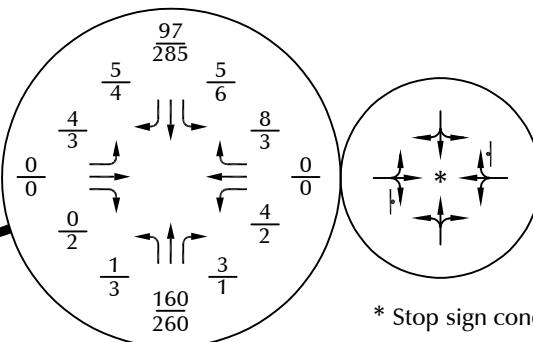
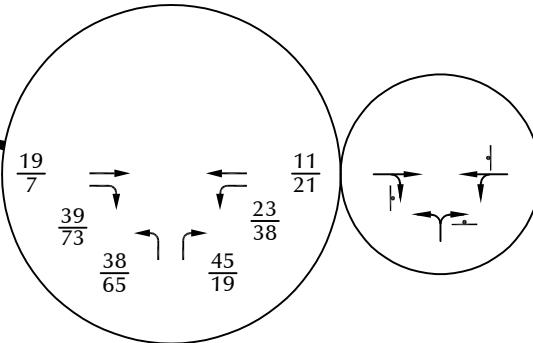


Figure 2
Site Plan
Market Street Business Park Update (LSC #190901)



Approximate Scale
Scale: 1"=400'



* Stop sign condition is implied.

LEGEND:

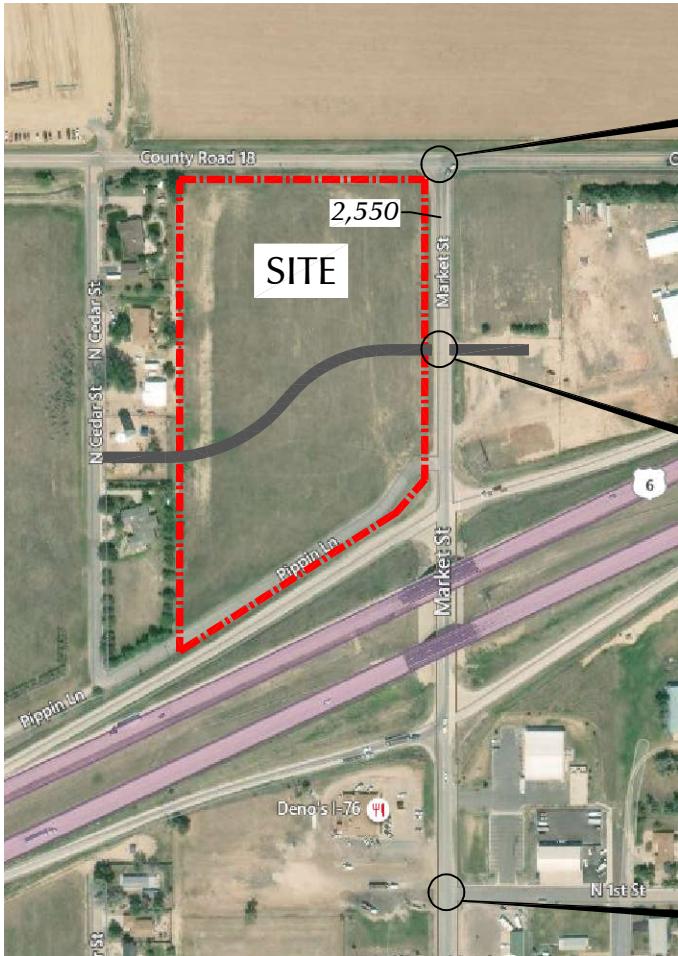
↑ = Stop Sign

$\frac{26}{35}$ = AM Peak Hour Traffic
PM Peak Hour Traffic

2,500 = Average Daily Traffic

Figure 3
2019 Existing Traffic, Lane Geometry and Traffic Control

Market Street Business Park Update (LSC #190901)



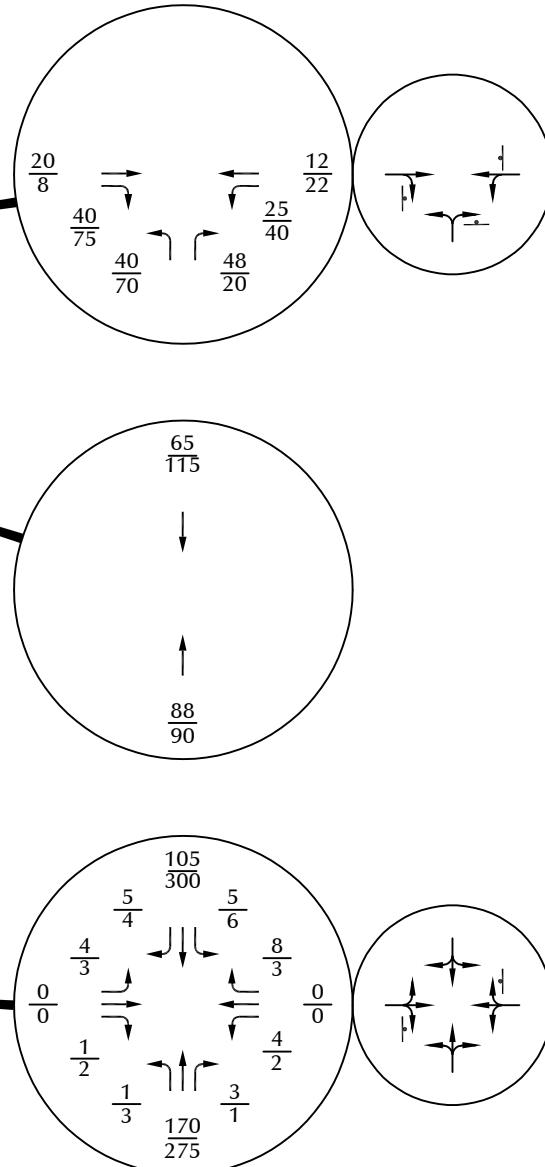
Note: Assumes annual growth rate of one percent.

LEGEND:

↑ = Stop Sign

$\frac{26}{35}$ = AM Peak Hour Traffic
PM Peak Hour Traffic

2,500 = Average Daily Traffic



Approximate Scale
Scale: 1"=400'

Figure 4
Year 2025 Background Traffic,
Lane Geometry and Traffic Control

Market Street Business Park Update (LSC #190901)

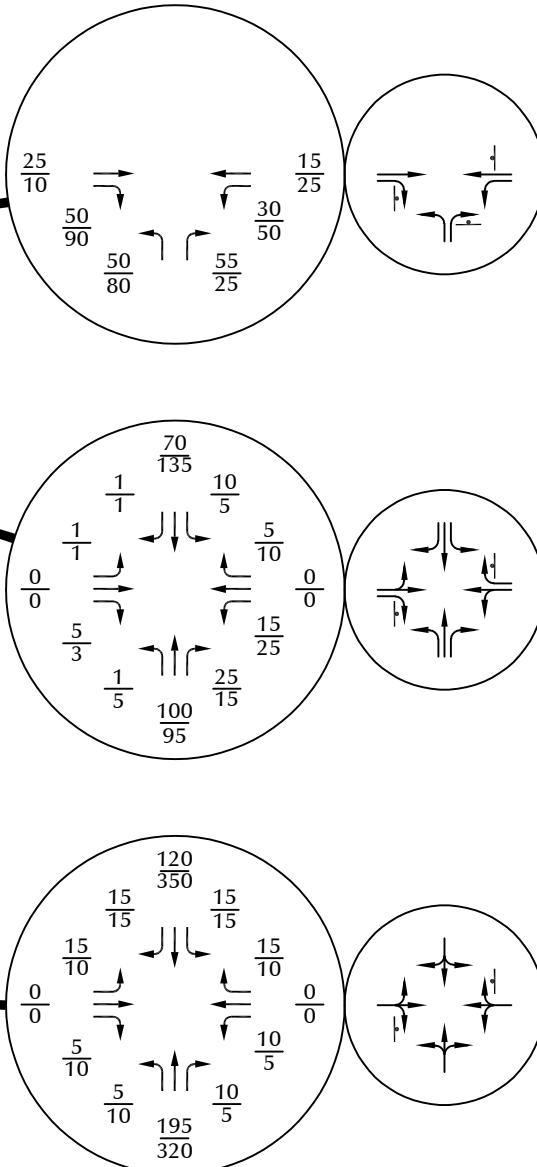


LEGEND:

↑ = Stop Sign

$\frac{26}{35}$ = AM Peak Hour Traffic
PM Peak Hour Traffic

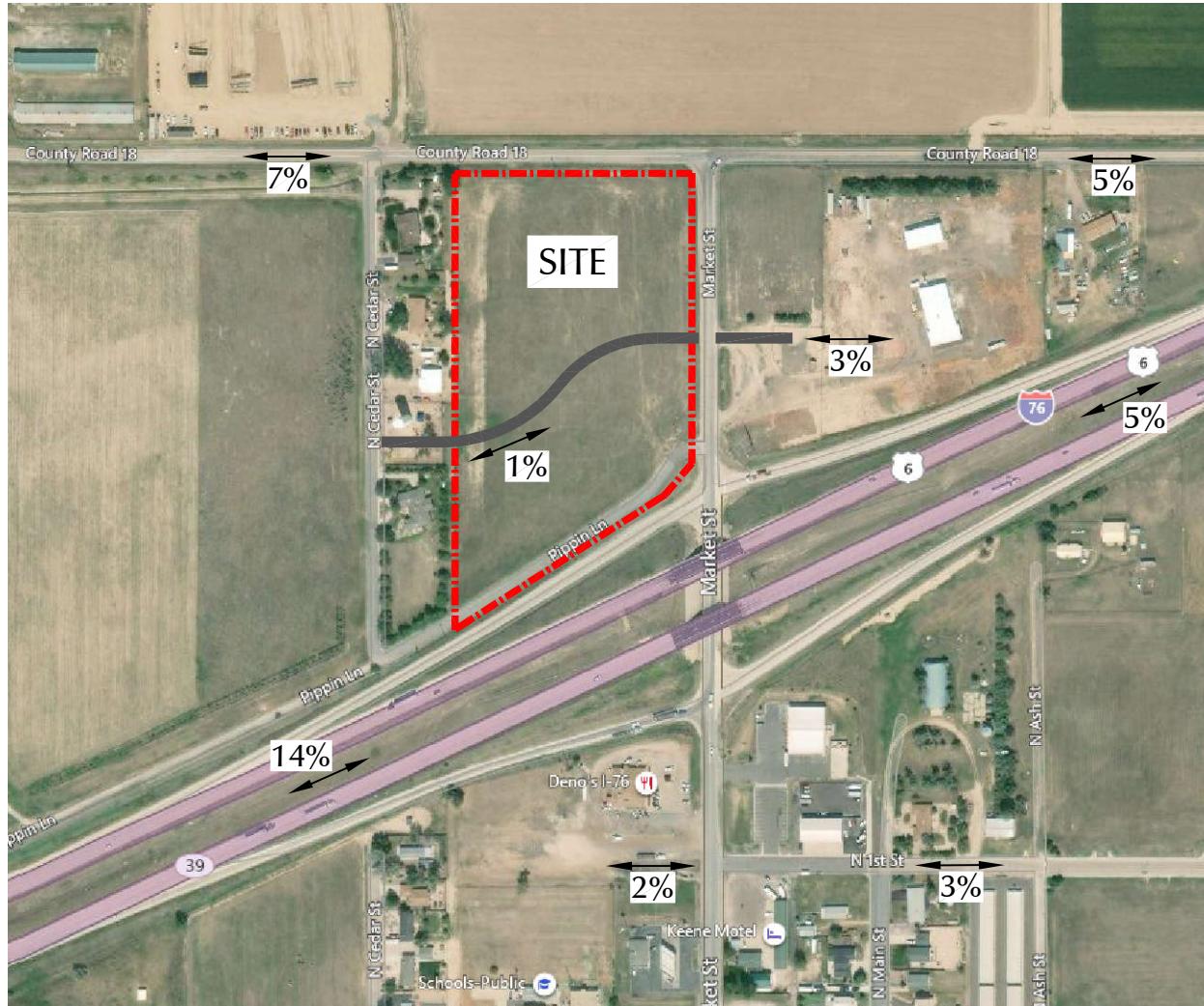
2,500 = Average Daily Traffic



N
Approximate Scale
Scale: 1"=400'

Figure 5
Year 2040 Background Traffic,
Lane Geometry and Traffic Control

Market Street Business Park Update (LSC #190901)



N
Approximate Scale
Scale: 1"=400'

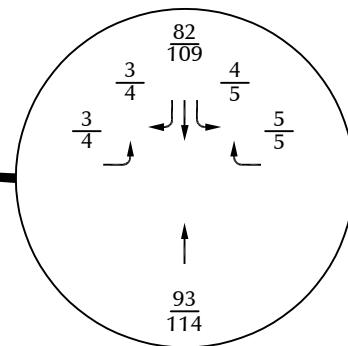
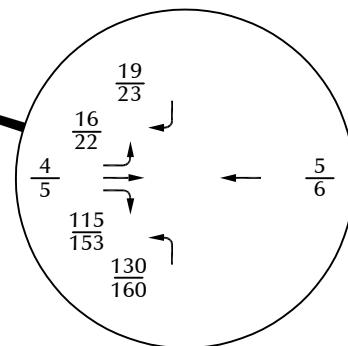
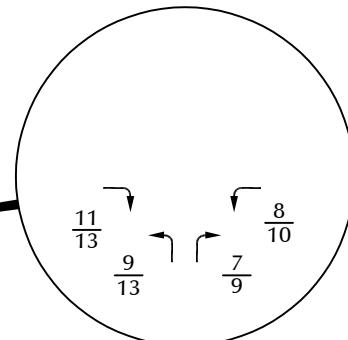
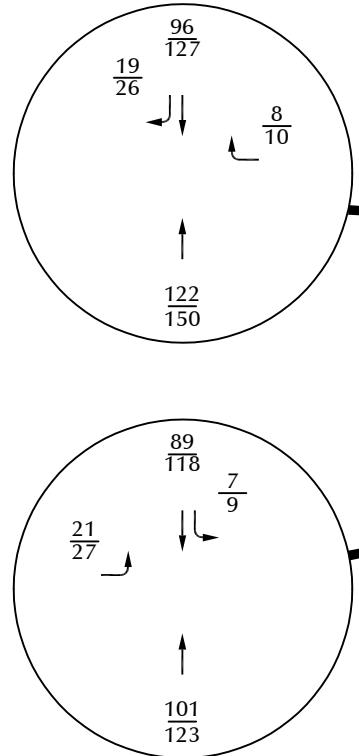
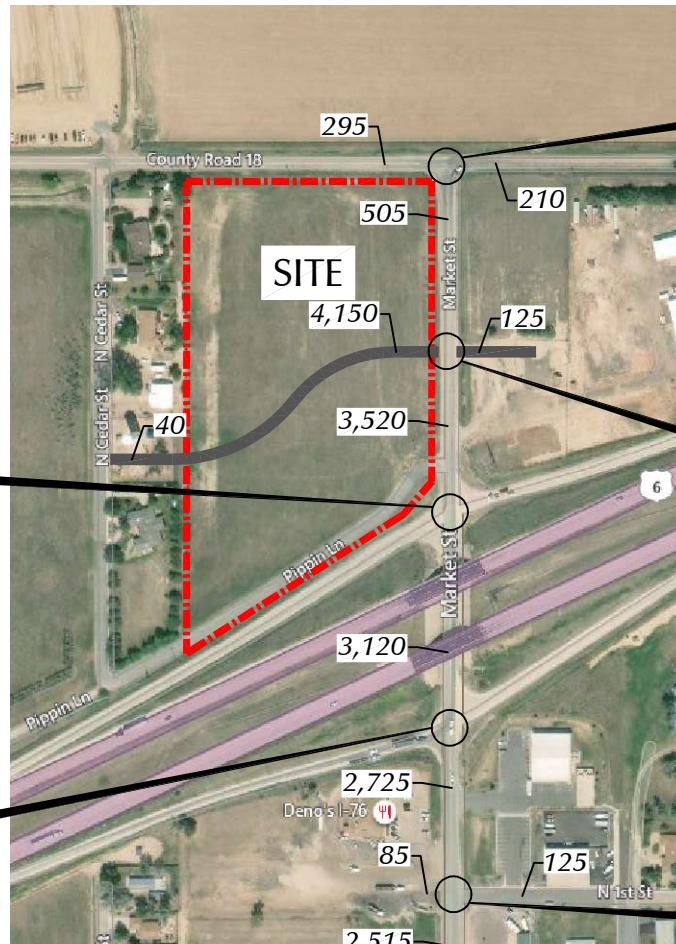
Figure 6

Directional Distribution of Primary Site-Generated Traffic

Market Street Business Park Update (LSC #190901)

LEGEND:

65% = Percent Directional Distribution



N
Approximate Scale
Scale: 1"=400'

LEGEND:

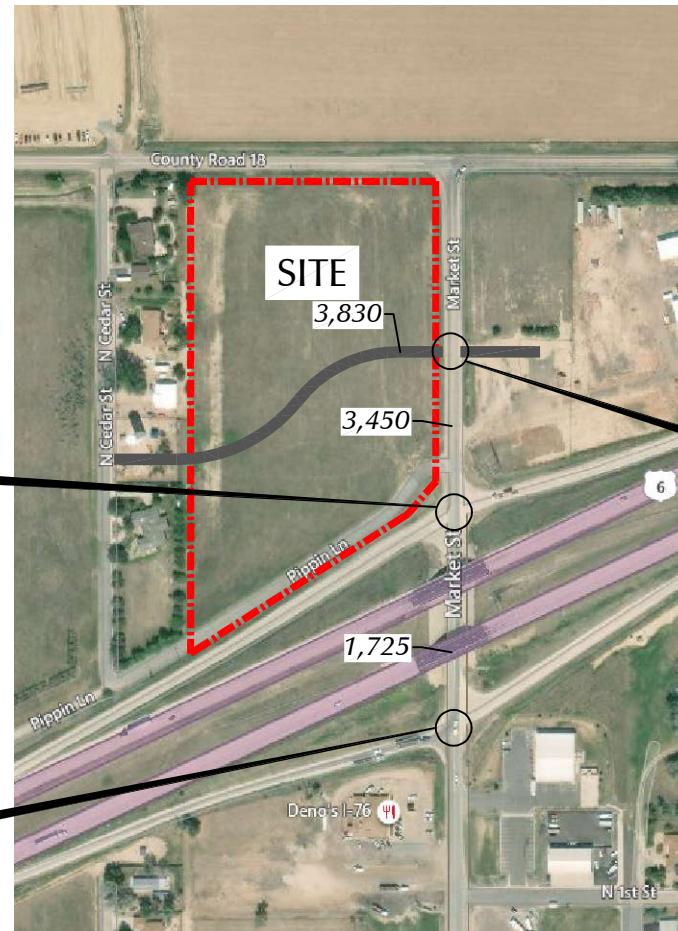
$$\frac{26}{35} = \frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$$

2,500 = Average Daily Traffic

Figure 7a

Assignment of Primary Site-Generated Traffic

Market Street Business Park Update (LSC #190901)



N
Approximate Scale
Scale: 1"=400'

Note: Assumes 45% passby trips from each direction of I-76 and 10% passby trips from Market Street.

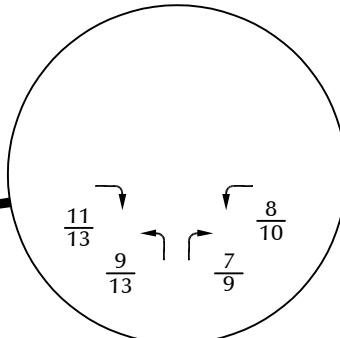
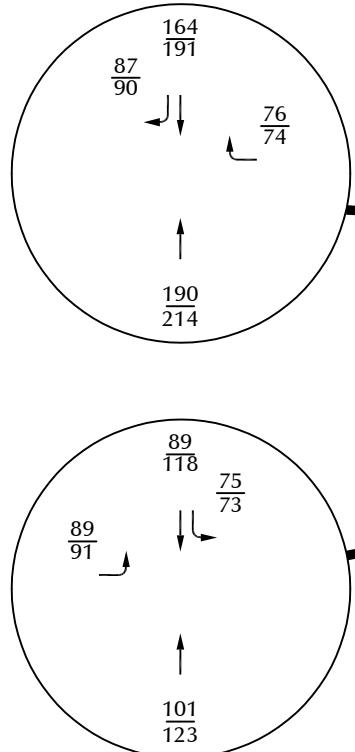
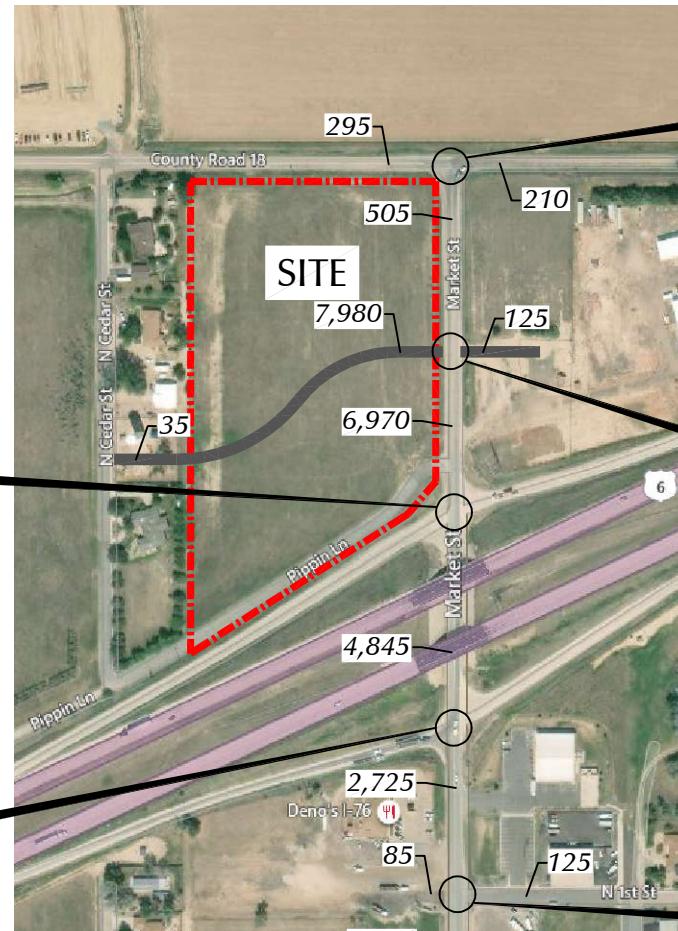
LEGEND:

$$\frac{26}{35} = \frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$$

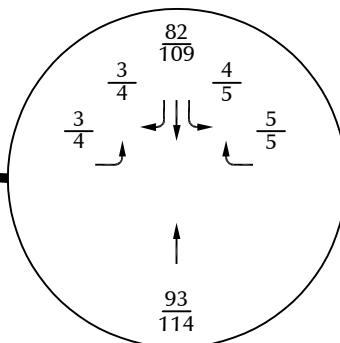
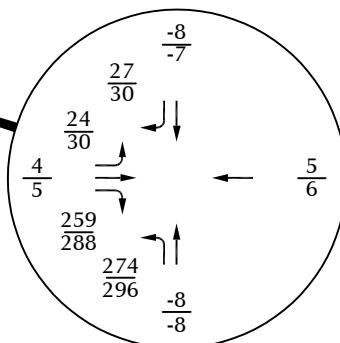
2,500 = Average Daily Traffic

Figure 7b
Assignment of Passby Site-Generated Traffic

Market Street Business Park Update (LSC #190901)



N
Approximate Scale
Scale: 1"=400'



LEGEND:

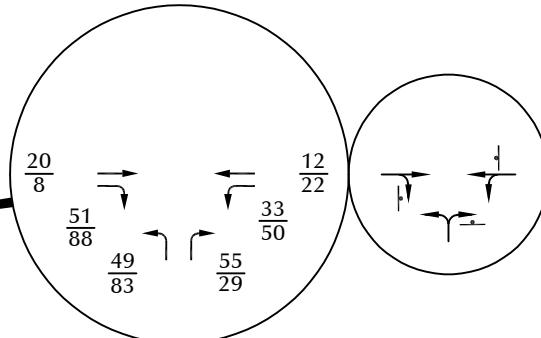
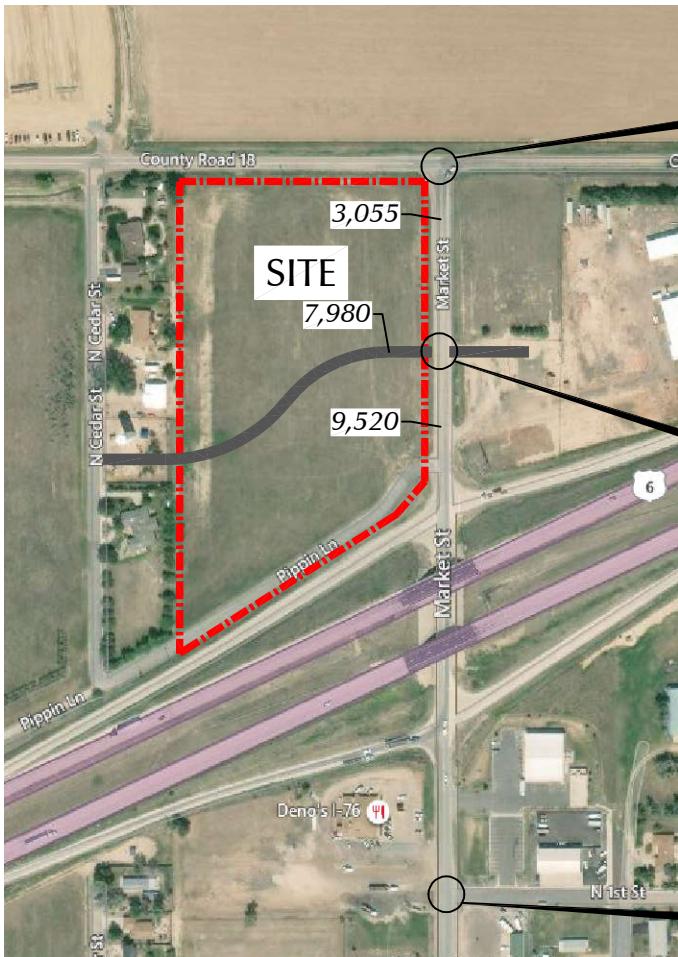
$$\frac{26}{35} = \frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$$

2,500 = Average Daily Traffic

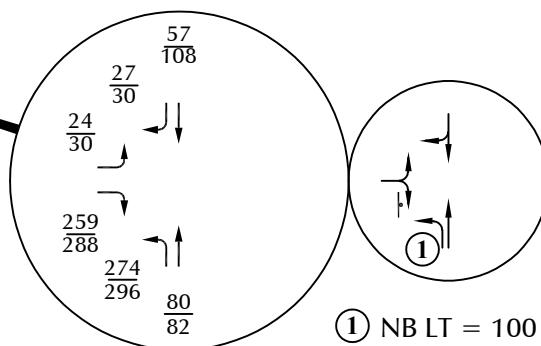
Assignment of Total Site-Generated Traffic

Market Street Business Park Update (LSC #190901)

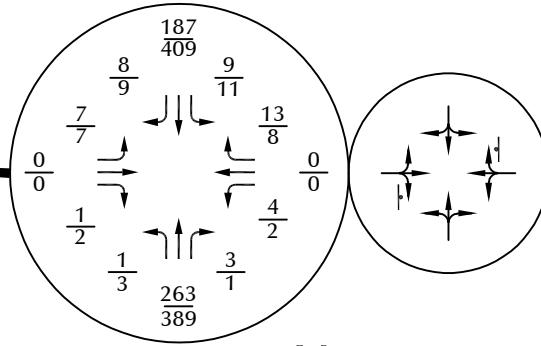
Figure 7c



Approximate Scale
Scale: 1"=400'



① NB LT = 100 feet + 50-foot transition taper and 15:1 redirect taper.



LEGEND:

↑ = Stop Sign

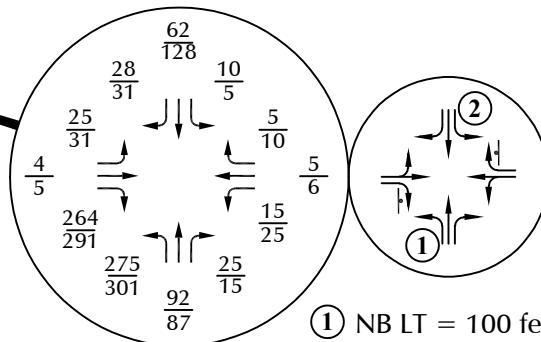
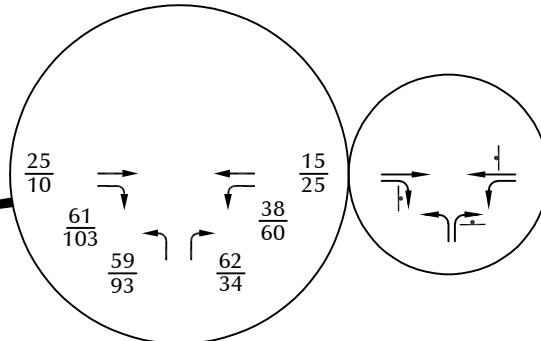
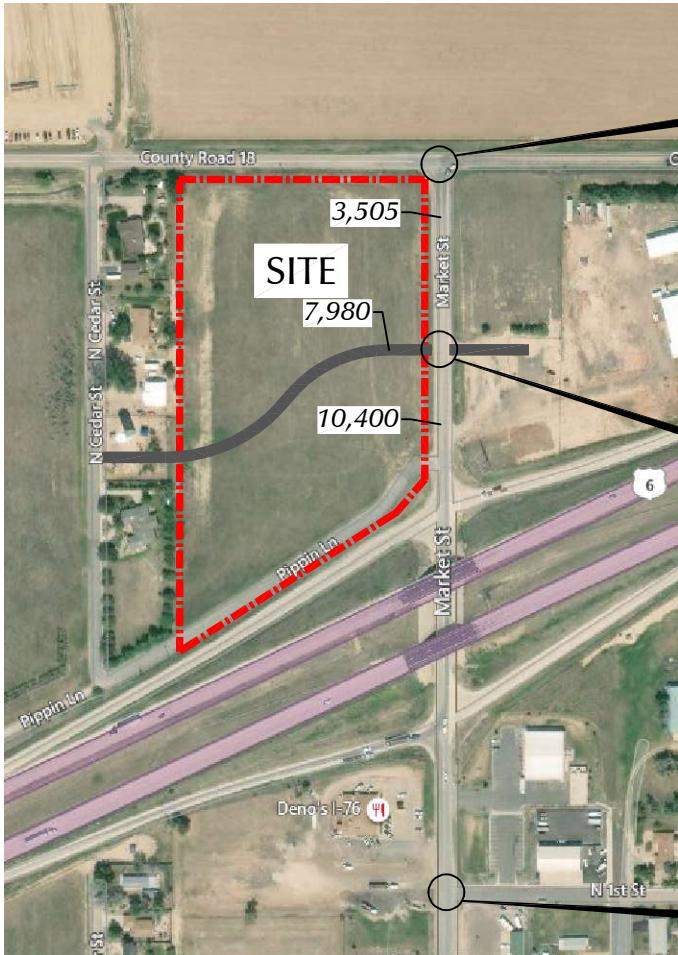
$\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic

2,500 = Average Daily Traffic

Year 2025 Total Traffic, Lane Geometry and Traffic Control

Market Street Business Park Update (LSC #190901)

Figure 8



- ① NB LT = 100 feet + 50-foot transition taper and 15:1 redirect taper.
- ② SB LT = 100 feet + 50-foot transition taper and 15:1 redirect taper.

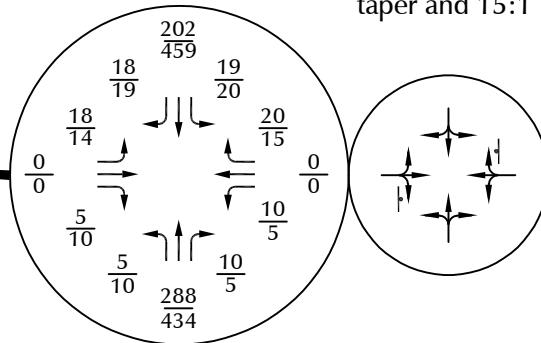


Figure 9

Year 2040 Total Traffic, Lane Geometry and Traffic Control

Market Street Business Park Update (LSC #190901)

LEGEND:

↑ = Stop Sign

$\frac{26}{35}$ = AM Peak Hour Traffic
PM Peak Hour Traffic

2,500 = Average Daily Traffic

COUNTER MEASURES INC.

N/S STREET: MARKET ST.
E/W STREET: 1ST ST
CITY: KEENESBURG
COUNTY: WELD

1889 YORK STREET
DENVER.COLORADO
303-333-7409

File Name : MARKET1ST
Site Code : 00000015
Start Date : 8/6/2019
Page No : 1

Groups Printed- VEHICLES

	MARKET ST Southbound				1ST ST Westbound				MARKET ST Northbound				DENO'S SITE Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	2	43	0	0	0	0	0	0	1	59	0	0	4	0	1	0	110
06:45 AM	1	30	2	0	0	0	1	0	1	35	0	0	0	0	0	0	70
Total	3	73	2	0	0	0	1	0	2	94	0	0	4	0	1	0	180
07:00 AM	1	11	1	0	0	0	1	0	0	21	0	0	2	0	0	0	37
07:15 AM	2	12	1	0	0	0	0	0	0	36	0	0	1	0	0	0	52
07:30 AM	0	15	1	0	1	0	0	0	0	43	1	0	3	0	0	0	64
07:45 AM	3	28	1	0	1	0	4	0	0	36	1	0	0	0	0	0	74
Total	6	66	4	0	2	0	5	0	0	136	2	0	6	0	0	0	227
08:00 AM	0	29	1	0	1	0	2	0	0	42	0	1	1	0	0	0	77
08:15 AM	2	25	2	0	1	0	2	0	1	39	1	0	0	0	0	0	73
Total	2	54	3	0	2	0	4	0	1	81	1	1	1	1	0	0	150
04:00 PM	1	49	1	0	2	0	3	0	0	53	0	0	0	0	0	0	109
04:15 PM	2	58	1	0	0	0	1	0	0	48	1	2	0	0	0	0	113
04:30 PM	0	42	1	0	2	0	2	0	0	58	1	0	1	0	0	0	107
04:45 PM	0	68	2	0	0	0	0	0	0	51	0	0	0	0	0	0	121
Total	3	217	5	0	4	0	6	0	0	210	2	2	1	0	0	0	450
05:00 PM	1	72	0	0	0	0	1	0	0	94	0	0	0	0	1	0	169
05:15 PM	3	75	2	0	1	0	1	1	1	76	1	0	0	0	0	0	161
05:30 PM	2	75	0	0	0	0	0	0	1	41	0	0	2	0	0	0	121
05:45 PM	0	63	2	0	1	0	1	0	1	49	0	4	1	0	1	0	123
Total	6	285	4	0	2	0	3	1	3	260	1	4	3	0	2	0	574
Grand Total	20	695	18	0	10	0	19	1	6	781	6	7	15	0	3	0	1581
Apprch %	2.7	94.8	2.5	0.0	33.3	0.0	63.3	3.3	0.8	97.6	0.8	0.9	83.3	0.0	16.7	0.0	
Total %	1.3	44.0	1.1	0.0	0.6	0.0	1.2	0.1	0.4	49.4	0.4	0.4	0.9	0.0	0.2	0.0	

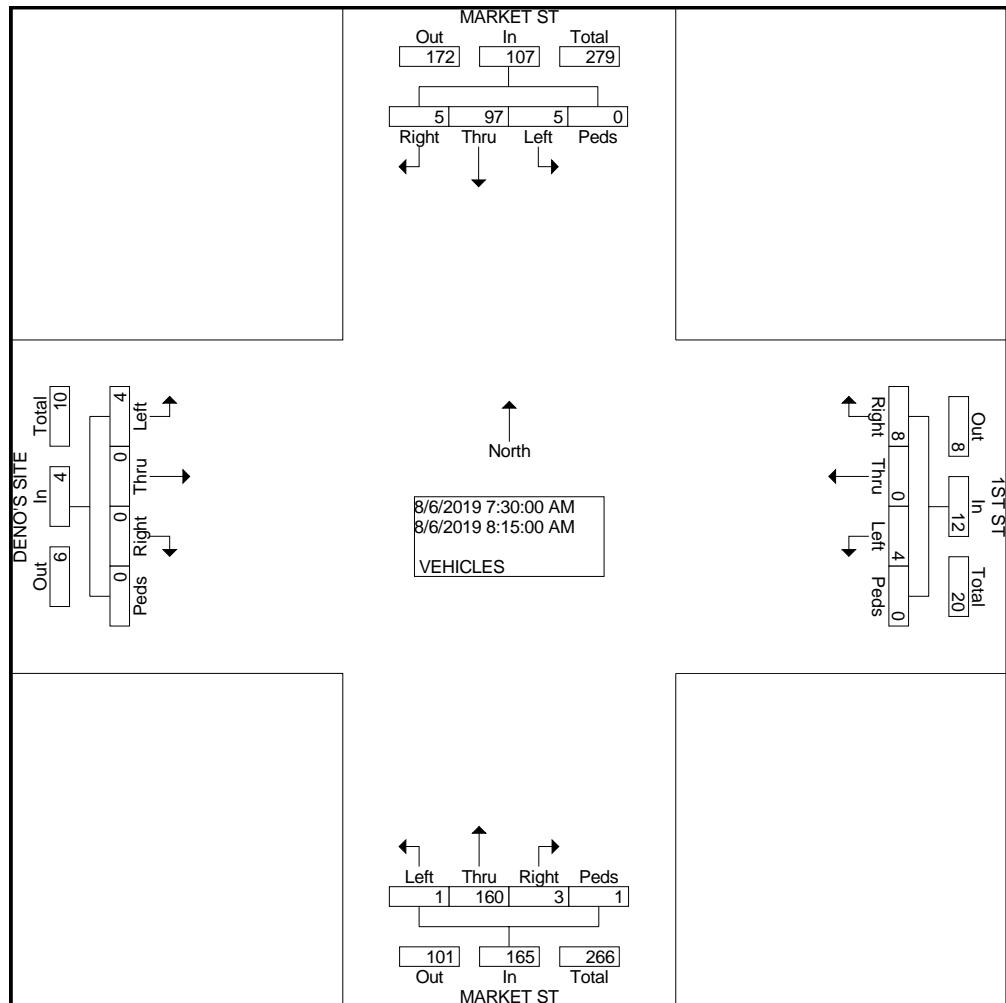
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MARKET ST.
E/W STREET: 1ST ST
CITY: KEENESBURG
COUNTY: WELD

File Name : MARKET1ST
Site Code : 00000015
Start Date : 8/6/2019
Page No : 2

Start Time	MARKET ST Southbound					1ST ST Westbound					MARKET ST Northbound					DENO'S SITE Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:30 AM - Peak 1 of 1																					
Intersection 07:30 AM																					
Volume	5	97	5	0	107	4	0	8	0	12	1	160	3	1	165	4	0	0	0	4	288
Percent	4.7	90.	4.7	0.0		33.	0.0	66.	0.0		0.6	97.	1.8	0.6		100.	0.0	0.0	0.0		
08:00 Volume Peak Factor	0	29	1	0	30	1	0	2	0	3	0	42	0	1	43	1	0	0	0	1	77
High Int. 07:45 AM						07:45 AM					07:30 AM					07:30 AM					0.935
Volume Peak Factor	3	28	1	0	32	1	0	4	0	5	0	43	1	0	44	3	0	0	0	0	0.33
					0.83					0.60					0.93					3	
					6					0					8						



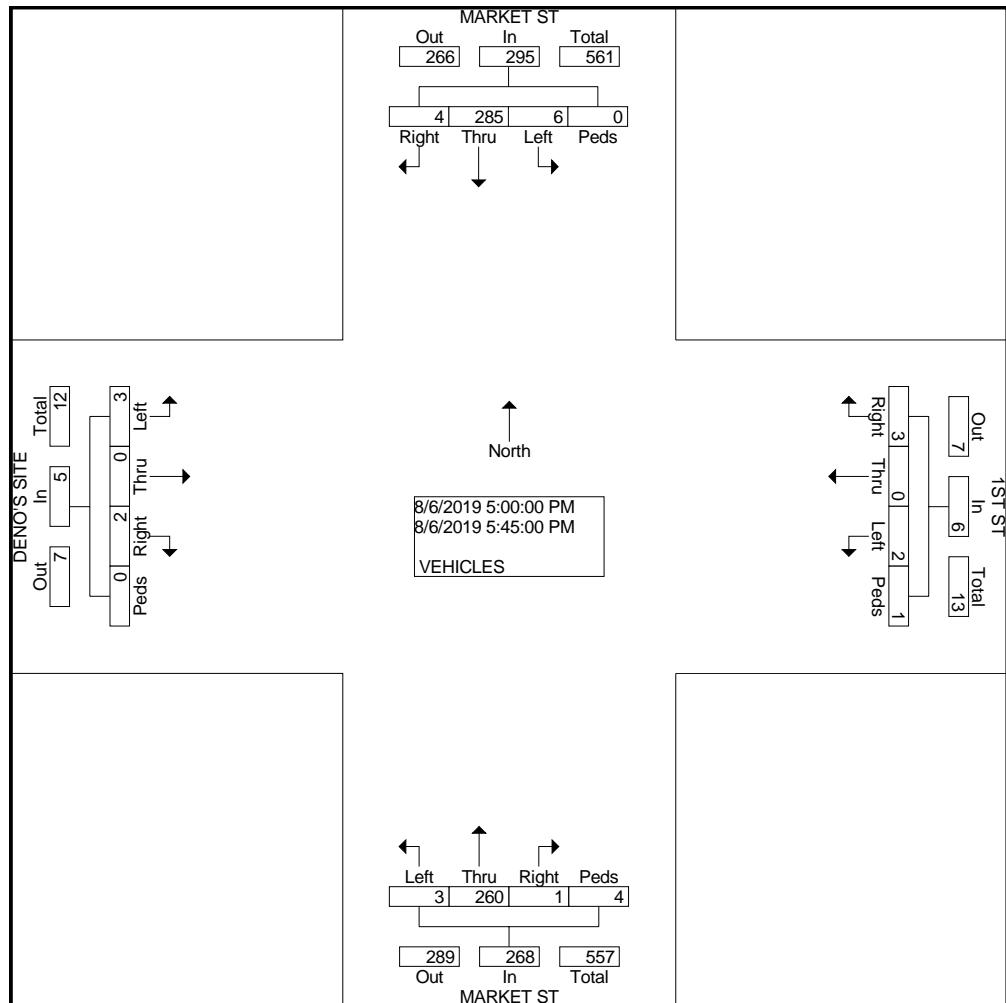
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MARKET ST.
E/W STREET: 1ST ST
CITY: KEENESBURG
COUNTY: WELD

File Name : MARKET1ST
Site Code : 00000015
Start Date : 8/6/2019
Page No : 2

Start Time	MARKET ST Southbound					1ST ST Westbound					MARKET ST Northbound					DENO'S SITE Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection 05:00 PM																					
Volume	6	285	4	0	295	2	0	3	1	6	3	260	1	4	268	3	0	2	0	5	574
Percent	2.0	96.6	1.4	0.0		33.3	0.0	50.0	16.7		1.1	97.0	0.4	1.5		60.0	0.0	40.0	0.0		
05:00 Volume Peak Factor	1	72	0	0	73	0	0	1	0	1	0	94	0	0	94	0	0	1	0	1	169
High Int. Peak Factor						05:15 PM					05:00 PM					05:30 PM					0.849
Volume	3	75	2	0	80	1	0	1	1	3	0	94	0	0	94	2	0	0	0	0	0.62
Peak Factor					0.92					0.50					0.71					5	



COUNTER MEASURES INC.

N/S STREET: MARKET STREET
E/W STREET: CR-18
CITY: KEENESBURG
COUNTY: WELD

1889 YORK STREET
DENVER.COLORADO
303-333-7409

File Name : MARKETCR-18
Site Code : 00000005
Start Date : 8/6/2019
Page No : 1

Groups Printed- VEHICLES

Start Time	Southbound				CR-18 Westbound				MARKET ST Northbound				CR-18 Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
06:30 AM	0	0	0	1	11	3	0	0	23	0	8	0	0	8	18	0	72
06:45 AM	0	0	0	0	4	3	0	0	22	0	15	0	0	7	15	0	66
Total	0	0	0	1	15	6	0	0	45	0	23	0	0	15	33	0	138
07:00 AM	0	0	0	0	6	2	0	0	14	0	7	0	0	4	14	0	47
07:15 AM	0	0	0	0	3	3	0	0	7	0	6	0	0	3	11	0	33
07:30 AM	0	0	0	0	5	5	0	0	13	0	19	0	0	8	5	0	55
07:45 AM	0	0	0	0	5	3	0	0	10	0	8	0	0	3	11	0	40
Total	0	0	0	0	19	13	0	0	44	0	40	0	0	18	41	0	175
08:00 AM	0	0	0	0	8	0	0	0	4	0	6	2	0	4	12	0	36
08:15 AM	0	0	0	0	5	3	0	0	11	0	12	0	0	4	11	0	46
Total	0	0	0	0	13	3	0	0	15	0	18	2	0	8	23	0	82
04:00 PM	0	0	0	1	15	1	0	0	7	0	8	0	0	2	5	0	39
04:15 PM	0	0	0	0	21	4	0	0	13	0	1	0	0	3	9	0	51
04:30 PM	0	0	0	0	7	5	0	0	15	0	4	0	0	3	11	0	45
04:45 PM	0	0	0	0	6	4	0	0	14	0	7	0	0	0	18	0	49
Total	0	0	0	1	49	14	0	0	49	0	20	0	0	8	43	0	184
05:00 PM	0	0	0	0	15	8	0	0	20	0	1	0	0	0	26	0	70
05:15 PM	0	0	0	0	11	1	0	0	21	0	8	0	0	0	16	0	57
05:30 PM	0	0	0	0	9	12	0	0	12	0	6	0	0	5	14	0	58
05:45 PM	0	0	0	0	3	0	0	0	12	0	4	0	0	2	17	0	38
Total	0	0	0	0	38	21	0	0	65	0	19	0	0	7	73	0	223
Grand Total	0	0	0	2	134	57	0	0	218	0	120	2	0	56	213	0	802
Apprch %	0.0	0.0	0.0	100.0	70.2	29.8	0.0	0.0	64.1	0.0	35.3	0.6	0.0	20.8	79.2	0.0	
Total %	0.0	0.0	0.0	0.2	16.7	7.1	0.0	0.0	27.2	0.0	15.0	0.2	0.0	7.0	26.6	0.0	

COUNTER MEASURES INC.

1889 YORK STREET

DENVER.COLORADO

303-333-7409

N/S STREET: MARKET STREET

E/W STREET: CR-18

CITY: KEENESBURG

COUNTY: WELD

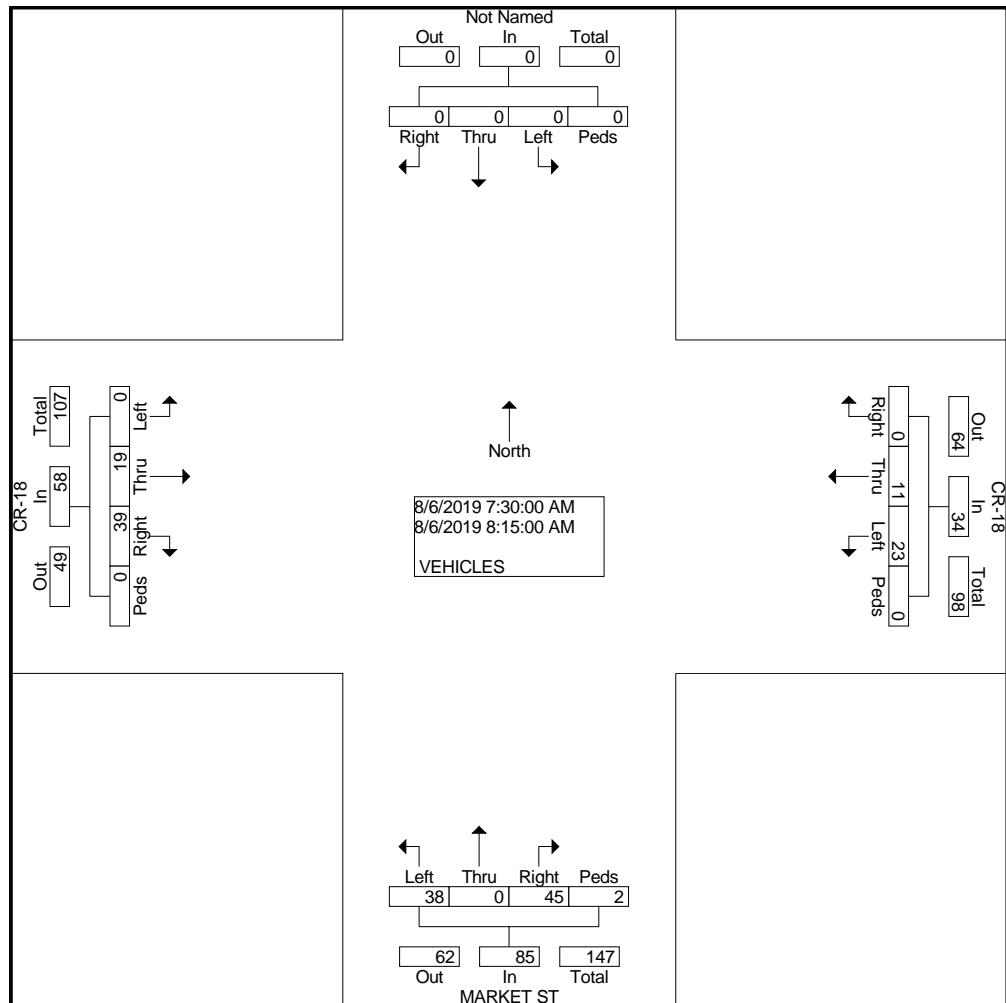
File Name : MARKETCR-18

Site Code : 00000005

Start Date : 8/6/2019

Page No : 2

Start Time	Southbound					CR-18 Westbound					MARKET ST Northbound					CR-18 Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	0	0	0	0	0	23	11	0	0	34	38	0	45	2	85	0	19	39	0	58	177
Percent	0.0	0.0	0.0	0.0	0.0	67.6	32.4	0.0	0.0	44.7	0.0	52.9	2.4		0.0	32.8	67.2	0.0			
07:30 Volume Peak Factor	0	0	0	0	0	5	5	0	0	10	13	0	19	0	32	0	8	5	0	13	55
High Int. Volume Peak Factor	0	0	0	0	0	5	5	0	0	10	13	0	19	0	32	0	4	12	0	16	0.805
						0.85					0.66					0.90					0.90
						0					4					6					



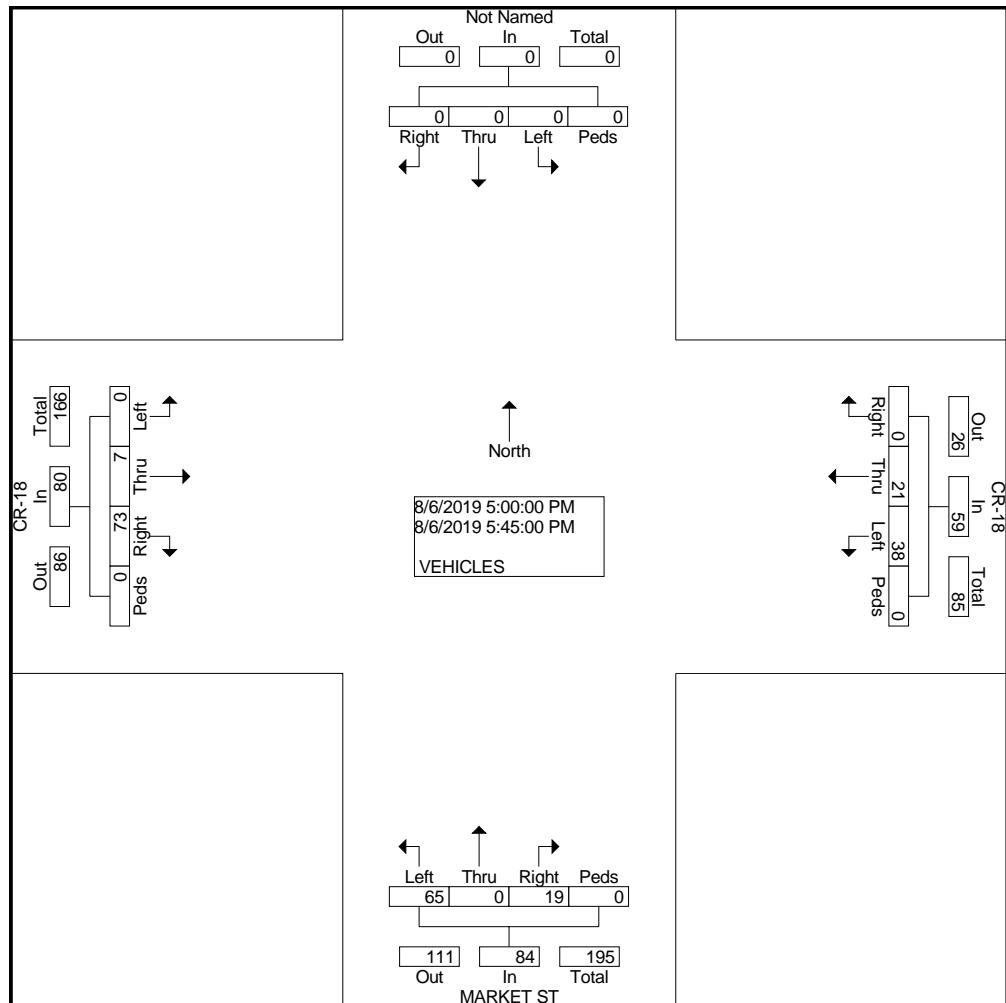
COUNTER MEASURES INC.

1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MARKET STREET
E/W STREET: CR-18
CITY: KEENESBURG
COUNTY: WELD

File Name : MARKETCR-18
Site Code : 00000005
Start Date : 8/6/2019
Page No : 2

Start Time	Southbound					CR-18 Westbound					MARKET ST Northbound					CR-18 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 05:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	0	0	0	0	0	38	21	0	0	59	65	0	19	0	84	0	7	73	0	80	223
Percent	0.0	0.0	0.0	0.0	0.0	64.	35.	0.0	0.0	77.	74	0.0	22.	0.0	0.0	0.0	8.8	91.	0.0	0.0	
05:00 Volume Peak Factor	0	0	0	0	0	15	8	0	0	23	20	0	1	0	21	0	0	26	0	26	70
High Int. Volume Peak Factor	0	0	0	0	0	15	8	0	0	23	21	0	8	0	29	0	0	26	0	26	0.796
						0.64	1				0.72				0.72						0.769



COUNTER MEASURES INC.
1889 YORK STREET
DENVER, COLORADO 80206
303-333-7409

Location: MARKET ST. N/O HWY. 76
City: KEENESBURG
County: WELD
Direction: NB-SB

Site Code: 190513
Station ID: 190513

Start Time	05-Aug-19		06-Aug-19		07-Aug-19		08-Aug-19		09-Aug-19		Weekday Average		10-Aug-19		11-Aug-19	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	5	5	*	*	*	*	*	*	5	5	*	*	*	*
01:00	*	*	2	1	*	*	*	*	*	*	2	1	*	*	*	*
02:00	*	*	0	2	*	*	*	*	*	*	0	2	*	*	*	*
03:00	*	*	3	2	*	*	*	*	*	*	3	2	*	*	*	*
04:00	*	*	5	7	*	*	*	*	*	*	5	7	*	*	*	*
05:00	*	*	51	26	*	*	*	*	*	*	51	26	*	*	*	*
06:00	*	*	130	57	*	*	*	*	*	*	130	57	*	*	*	*
07:00	*	*	106	67	*	*	*	*	*	*	106	67	*	*	*	*
08:00	*	*	64	66	*	*	*	*	*	*	64	66	*	*	*	*
09:00	*	*	73	60	*	*	*	*	*	*	73	60	*	*	*	*
10:00	*	*	88	74	*	*	*	*	*	*	88	74	*	*	*	*
11:00	*	*	77	96	*	*	*	*	*	*	77	96	*	*	*	*
12:00 PM	*	*	88	80	*	*	*	*	*	*	88	80	*	*	*	*
01:00	*	*	84	63	*	*	*	*	*	*	84	63	*	*	*	*
02:00	*	*	73	88	*	*	*	*	*	*	73	88	*	*	*	*
03:00	*	*	84	78	*	*	*	*	*	*	84	78	*	*	*	*
04:00	*	*	77	84	*	*	*	*	*	*	77	84	*	*	*	*
05:00	*	*	93	122	*	*	*	*	*	*	93	122	*	*	*	*
06:00	*	*	67	61	*	*	*	*	*	*	67	61	*	*	*	*
07:00	*	*	29	35	*	*	*	*	*	*	29	35	*	*	*	*
08:00	*	*	27	20	*	*	*	*	*	*	27	20	*	*	*	*
09:00	*	*	24	22	*	*	*	*	*	*	24	22	*	*	*	*
10:00	*	*	14	5	*	*	*	*	*	*	14	5	*	*	*	*
11:00	*	*	8	8	*	*	*	*	*	*	8	8	*	*	*	*
Total Day	0	0	1272	1129	0	0	0	0	0	0	1272	1129	0	0	0	0
AM Peak Vol.	-	-	06:00	11:00	-	-	-	-	-	06:00	11:00	-	-	-	-	
PM Peak Vol.	-	-	17:00	17:00	-	-	-	-	-	17:00	17:00	-	-	-	-	

Comb. Total	0	2401	0	0	0	2401	0	0
----------------	---	------	---	---	---	------	---	---

ADT	ADT 2,440	AADT 2,440
-----	-----------	------------

LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual, Transportation Research Board, 2016, 6th Edition*

UNSIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

Applicable to Two-Way Stop Control, All-Way Stop Control, and Roundabouts

LOS	Average Vehicle Control Delay	Operational Characteristics
A	<10 seconds	Normally, vehicles on the stop-controlled approach only have to wait up to 10 seconds before being able to clear the intersection. Left-turning vehicles on the uncontrolled street do not have to wait to make their turn.
B	10 to 15 seconds	Vehicles on the stop-controlled approach will experience delays before being able to clear the intersection. The delay could be up to 15 seconds. Left-turning vehicles on the uncontrolled street may have to wait to make their turn.
C	15 to 25 seconds	Vehicles on the stop-controlled approach can expect delays in the range of 15 to 25 seconds before clearing the intersection. Motorists may begin to take chances due to the long delays, thereby posing a safety risk to through traffic. Left-turning vehicles on the uncontrolled street will now be required to wait to make their turn causing a queue to be created in the turn lane.
D	25 to 35 seconds	This is the point at which a traffic signal may be warranted for this intersection. The delays for the stop-controlled intersection are not considered to be excessive. The length of the queue may begin to block other public and private access points.
E	35 to 50 seconds	The delays for all critical traffic movements are considered to be unacceptable. The length of the queues for the stop-controlled approaches as well as the left-turn movements are extremely long. There is a high probability that this intersection will meet traffic signal warrants. The ability to install a traffic signal is affected by the location of other existing traffic signals. Consideration may be given to restricting the accesses by eliminating the left-turn movements from and to the stop-controlled approach.
F	>50 seconds	The delay for the critical traffic movements are probably in excess of 100 seconds. The length of the queues are extremely long. Motorists are selecting alternative routes due to the long delays. The only remedy for these long delays is installing a traffic signal or restricting the accesses. The potential for accidents at this intersection are extremely high due to motorist taking more risky chances. If the median permits, motorists begin making two-stage left-turns.

HCM 6th AWSC
3: Market Street & County Road 18

Existing
AM Peak

Intersection

Intersection Delay, s/veh 7.3

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h 19 39 23 11 38 45

Future Vol, veh/h 19 39 23 11 38 45

Peak Hour Factor 0.81 0.81 0.81 0.81 0.81 0.81

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 23 48 28 14 47 56

Number of Lanes 1 0 0 1 1 0

Approach	EB	WB	NB
----------	----	----	----

Opposing Approach WB EB

Opposing Lanes 1 1 0

Conflicting Approach Left NB EB

Conflicting Lanes Left 0 1 1

Conflicting Approach Right NB WB

Conflicting Lanes Right 1 0 1

HCM Control Delay 7.1 7.6 7.4

HCM LOS A A A

Lane	NBLn1	EBLn1	WBLn1
------	-------	-------	-------

Vol Left, % 46% 0% 68%

Vol Thru, % 0% 33% 32%

Vol Right, % 54% 67% 0%

Sign Control Stop Stop Stop

Traffic Vol by Lane 83 58 34

LT Vol 38 0 23

Through Vol 0 19 11

RT Vol 45 39 0

Lane Flow Rate 102 72 42

Geometry Grp 1 1 1

Degree of Util (X) 0.111 0.074 0.05

Departure Headway (Hd) 3.896 3.741 4.305

Convergence, Y/N Yes Yes Yes

Cap 915 950 827

Service Time 1.94 1.793 2.354

HCM Lane V/C Ratio 0.111 0.076 0.051

HCM Control Delay 7.4 7.1 7.6

HCM Lane LOS A A A

HCM 95th-tile Q 0.4 0.2 0.2

HCM 6th TWSC
8: Market Street & N. 1st Street

Existing
AM Peak

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	0	4	0	8	1	160	3	5	97	5
Future Vol, veh/h	4	0	0	4	0	8	1	160	3	5	97	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	4	0	9	1	170	3	5	103	5

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	294	291	106	290	292	172	108	0	0	173	0	0
Stage 1	116	116	-	174	174	-	-	-	-	-	-	-
Stage 2	178	175	-	116	118	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	658	619	948	662	619	872	1483	-	-	1404	-	-
Stage 1	889	800	-	828	755	-	-	-	-	-	-	-
Stage 2	824	754	-	889	798	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	649	616	948	659	616	872	1483	-	-	1404	-	-
Mov Cap-2 Maneuver	649	616	-	659	616	-	-	-	-	-	-	-
Stage 1	888	797	-	827	754	-	-	-	-	-	-	-
Stage 2	815	753	-	885	795	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	10.6	9.7			0			0.4				
HCM LOS	B	A			A			A				
<hr/>												
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1483	-	-	649	787	1404	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.007	0.016	0.004	-	-				
HCM Control Delay (s)	7.4	0	-	10.6	9.7	7.6	0	-				
HCM Lane LOS	A	A	-	B	A	A	A	A				
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-				

HCM 6th AWSC
3: Market Street & County Road 18

Existing
PM Peak

Intersection

Intersection Delay, s/veh 7.6

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations



Traffic Vol, veh/h 7

73

38

21

65

19

Future Vol, veh/h 7

73

38

21

65

19

Peak Hour Factor 0.80

0.80

0.80

0.80

0.80

0.80

Heavy Vehicles, % 2

2

2

2

2

2

Mvmt Flow 9

91

48

26

81

24

Number of Lanes 1

0

0

1

1

0

Approach	EB	WB	NB
----------	----	----	----

Opposing Approach WB

EB

Opposing Lanes 1

1

0

Conflicting Approach Left NB

NB

EB

Conflicting Lanes Left 0

1

1

Conflicting Approach Right NB

NB

WB

Conflicting Lanes Right 1

0

1

HCM Control Delay 7.1

7.8

7.9

HCM LOS A

A

A

Lane	NBLn1	EBLn1	WBLn1
------	-------	-------	-------

Vol Left, % 77%

0%

64%

Vol Thru, % 0%

9%

36%

Vol Right, % 23%

91%

0%

Sign Control Stop

Stop

Stop

Traffic Vol by Lane 84

80

59

LT Vol 65

0

38

Through Vol 0

7

21

RT Vol 19

73

0

Lane Flow Rate 105

100

74

Geometry Grp 1

1

1

Degree of Util (X) 0.124

0.101

0.089

Departure Headway (Hd) 4.252

3.626

4.324

Convergence, Y/N Yes

Yes

Yes

Cap 836

972

820

Service Time 2.318

1.708

2.397

HCM Lane V/C Ratio 0.126

0.103

0.09

HCM Control Delay 7.9

7.1

7.8

HCM Lane LOS A

A

A

HCM 95th-tile Q 0.4

0.3

0.3

HCM 6th TWSC
8: Market Street & N. 1st Street

Existing
PM Peak

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	0	2	2	0	3	3	260	1	6	285	4
Future Vol, veh/h	3	0	2	2	0	3	3	260	1	6	285	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	2	2	0	4	4	306	1	7	335	5

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	669	667	338	668	669	307	340	0	0	307	0	0
Stage 1	352	352	-	315	315	-	-	-	-	-	-	-
Stage 2	317	315	-	353	354	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	371	380	704	372	379	733	1219	-	-	1254	-	-
Stage 1	665	632	-	696	656	-	-	-	-	-	-	-
Stage 2	694	656	-	664	630	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	366	376	704	368	375	733	1219	-	-	1254	-	-
Mov Cap-2 Maneuver	366	376	-	368	375	-	-	-	-	-	-	-
Stage 1	662	628	-	693	653	-	-	-	-	-	-	-
Stage 2	688	653	-	657	626	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	13.1	11.9			0.1			0.2				
HCM LOS	B	B										
<hr/>												
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1219	-	-	453	525	1254	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.013	0.011	0.006	-	-				
HCM Control Delay (s)	8	0	-	13.1	11.9	7.9	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-				

Intersection

Intersection Delay, s/veh 7.4

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h 20 40 25 12 40 48

Future Vol, veh/h 20 40 25 12 40 48

Peak Hour Factor 0.80 0.80 0.80 0.80 0.80 0.80

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 25 50 31 15 50 60

Number of Lanes 1 0 0 1 1 0

Approach	EB	WB	NB
----------	----	----	----

Opposing Approach WB EB

Opposing Lanes 1 1 0

Conflicting Approach Left NB EB

Conflicting Lanes Left 0 1 1

Conflicting Approach Right NB WB

Conflicting Lanes Right 1 0 1

HCM Control Delay 7.1 7.6 7.5

HCM LOS A A A

Lane	NBLn1	EBLn1	WBLn1
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Vol Left, % 45% 0% 68%

Vol Thru, % 0% 33% 32%

Vol Right, % 55% 67% 0%

Sign Control Stop Stop Stop

Traffic Vol by Lane 88 60 37

LT Vol 40 0 25

Through Vol 0 20 12

RT Vol 48 40 0

Lane Flow Rate 110 75 46

Geometry Grp 1 1 1

Degree of Util (X) 0.119 0.078 0.056

Departure Headway (Hd) 3.906 3.762 4.321

Convergence, Y/N Yes Yes Yes

Cap 912 944 824

Service Time 1.956 1.817 2.373

HCM Lane V/C Ratio 0.121 0.079 0.056

HCM Control Delay 7.5 7.1 7.6

HCM Lane LOS A A A

HCM 95th-tile Q 0.4 0.3 0.2

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	1	4	0	8	1	170	3	5	105	5
Future Vol, veh/h	4	0	1	4	0	8	1	170	3	5	105	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	1	4	0	9	1	181	3	5	112	5

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	314	311	115	310	312	183	117	0	0	184	0	0
Stage 1	125	125	-	185	185	-	-	-	-	-	-	-
Stage 2	189	186	-	125	127	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	639	604	937	642	603	859	1471	-	-	1391	-	-
Stage 1	879	792	-	817	747	-	-	-	-	-	-	-
Stage 2	813	746	-	879	791	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	630	601	937	639	600	859	1471	-	-	1391	-	-
Mov Cap-2 Maneuver	630	601	-	639	600	-	-	-	-	-	-	-
Stage 1	878	789	-	816	746	-	-	-	-	-	-	-
Stage 2	804	745	-	874	788	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB			
HCM Control Delay, s	10.4	9.7			0			0.3			
HCM LOS	B	A			A			A			
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1471	-	-	674	771	1391	-	-			
HCM Lane V/C Ratio	0.001	-	-	0.008	0.017	0.004	-	-			
HCM Control Delay (s)	7.4	0	-	10.4	9.7	7.6	0	-			
HCM Lane LOS	A	A	-	B	A	A	A	-			
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-			

Intersection

Intersection Delay, s/veh 7.7

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations



Traffic Vol, veh/h 8

75

40

22

70

20

Future Vol, veh/h 8

75

40

22

70

20

Peak Hour Factor 0.80

0.80

0.80

0.80

0.80

0.80

Heavy Vehicles, % 2

2

2

2

2

2

Mvmt Flow 10

94

50

28

88

25

Number of Lanes 1

0

0

1

1

0

Approach	EB	WB	NB
----------	----	----	----

Opposing Approach WB

EB

Opposing Lanes 1

1

0

Conflicting Approach Left NB

NB

EB

Conflicting Lanes Left 0

1

1

Conflicting Approach Right NB

NB

WB

Conflicting Lanes Right 1

0

1

HCM Control Delay 7.2

7.9

8

HCM LOS A

A

A

Lane	NBLn1	EBLn1	WBLn1
------	-------	-------	-------

Vol Left, % 78%

0%

65%

Vol Thru, % 0%

10%

35%

Vol Right, % 22%

90%

0%

Sign Control Stop

Stop

Stop

Traffic Vol by Lane 90

83

62

LT Vol 70

0

40

Through Vol 0

8

22

RT Vol 20

75

0

Lane Flow Rate 112

104

78

Geometry Grp 1

1

1

Degree of Util (X) 0.133

0.105

0.093

Departure Headway (Hd) 4.266

3.648

4.341

Convergence, Y/N Yes

Yes

Yes

Cap 833

966

816

Service Time 2.336

1.735

2.419

HCM Lane V/C Ratio 0.134

0.108

0.096

HCM Control Delay 8

7.2

7.9

HCM Lane LOS A

A

A

HCM 95th-tile Q 0.5

0.4

0.3

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	0	2	2	0	3	3	275	1	6	300	4
Future Vol, veh/h	3	0	2	2	0	3	3	275	1	6	300	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	2	2	0	4	4	324	1	7	353	5

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	705	703	356	704	705	325	358	0	0	325	0	0
Stage 1	370	370	-	333	333	-	-	-	-	-	-	-
Stage 2	335	333	-	371	372	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	351	362	688	352	361	716	1201	-	-	1235	-	-
Stage 1	650	620	-	681	644	-	-	-	-	-	-	-
Stage 2	679	644	-	649	619	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	346	358	688	348	357	716	1201	-	-	1235	-	-
Mov Cap-2 Maneuver	346	358	-	348	357	-	-	-	-	-	-	-
Stage 1	647	616	-	678	641	-	-	-	-	-	-	-
Stage 2	673	641	-	642	615	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	13.4	12.2			0.1			0.2				
HCM LOS	B	B										
<hr/>												
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1201	-	-	432	503	1235	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.014	0.012	0.006	-	-				
HCM Control Delay (s)	8	0	-	13.4	12.2	7.9	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-				

HCM 6th TWSC
1: Market Street & Site Access

2025 Total
AM Peak

Intersection

Int Delay, s/veh 7.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	R	
Traffic Vol, veh/h	24	259	279	80	57	27
Future Vol, veh/h	24	259	279	80	57	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	75	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	294	317	91	65	31

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	806	81	96	0	-	0
Stage 1	81	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	351	979	1498	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	277	979	1498	-	-	-
Mov Cap-2 Maneuver	277	-	-	-	-	-
Stage 1	742	-	-	-	-	-
Stage 2	479	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	6.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1498	-	806	-	-
HCM Lane V/C Ratio	0.212	-	0.399	-	-
HCM Control Delay (s)	8	-	12.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.8	-	1.9	-	-

HCM 6th AWSC
3: Market Street & County Road 18

2025 Total
AM Peak

Intersection

Intersection Delay, s/veh 7.5

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h 20 51 33 12 49 55

Future Vol, veh/h 20 51 33 12 49 55

Peak Hour Factor 0.88 0.88 0.88 0.88 0.88 0.88

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 23 58 38 14 56 63

Number of Lanes 1 0 0 1 1 0

Approach	EB	WB	NB
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Opposing Approach WB EB

Opposing Lanes 1 1 0

Conflicting Approach Left NB EB

Conflicting Lanes Left 0 1 1

Conflicting Approach Right NB WB

Conflicting Lanes Right 1 0 1

HCM Control Delay 7.2 7.7 7.6

HCM LOS A A A

Lane	NBLn1	EBLn1	WBLn1
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Vol Left, % 47% 0% 73%

Vol Thru, % 0% 28% 27%

Vol Right, % 53% 72% 0%

Sign Control Stop Stop Stop

Traffic Vol by Lane 104 71 45

LT Vol 49 0 33

Through Vol 0 20 12

RT Vol 55 51 0

Lane Flow Rate 118 81 51

Geometry Grp 1 1 1

Degree of Util (X) 0.129 0.084 0.062

Departure Headway (Hd) 3.937 3.749 4.351

Convergence, Y/N Yes Yes Yes

Cap 904 946 817

Service Time 1.992 1.811 2.41

HCM Lane V/C Ratio 0.131 0.086 0.062

HCM Control Delay 7.6 7.2 7.7

HCM Lane LOS A A A

HCM 95th-tile Q 0.4 0.3 0.2

HCM 6th TWSC
8: Market Street & N. 1st Street

2025 Total
AM Peak

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	+	+	+	+	+	+	+	+	+	+	+	+
Traffic Vol, veh/h	7	0	1	4	0	13	1	263	3	9	187	8
Future Vol, veh/h	7	0	1	4	0	13	1	263	3	9	187	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	1	4	0	14	1	286	3	10	203	9
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	525	519	208	518	522	288	212	0	0	289	0	0
Stage 1	228	228	-	290	290	-	-	-	-	-	-	-
Stage 2	297	291	-	228	232	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	463	461	832	468	459	751	1358	-	-	1273	-	-
Stage 1	775	715	-	718	672	-	-	-	-	-	-	-
Stage 2	712	672	-	775	713	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	451	456	832	464	454	751	1358	-	-	1273	-	-
Mov Cap-2 Maneuver	451	456	-	464	454	-	-	-	-	-	-	-
Stage 1	774	709	-	717	671	-	-	-	-	-	-	-
Stage 2	698	671	-	767	707	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.7		10.6		0		0.3					
HCM LOS	B		B		A		A					
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1358	-	-	478	656	1273	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.018	0.028	0.008	-	-				
HCM Control Delay (s)	7.7	0	-	12.7	10.6	7.8	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-				

HCM 6th TWSC
1: Market Street & Site Access

2025 Total
PM Peak

Intersection

Int Delay, s/veh 8.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	↑	R	
Traffic Vol, veh/h	30	288	296	82	108	30
Future Vol, veh/h	30	288	296	82	108	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	75	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	327	336	93	123	34

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	905	140	157	0	-
Stage 1	140	-	-	-	-
Stage 2	765	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	307	908	1423	-	-
Stage 1	887	-	-	-	-
Stage 2	459	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	235	908	1423	-	-
Mov Cap-2 Maneuver	235	-	-	-	-
Stage 1	678	-	-	-	-
Stage 2	459	-	-	-	-

Approach	EB	NB	SB	
HCM Control Delay, s	15.1	6.5	0	
HCM LOS	C			

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1423	-	715	-	-
HCM Lane V/C Ratio	0.236	-	0.505	-	-
HCM Control Delay (s)	8.3	-	15.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.9	-	2.9	-	-

HCM 6th AWSC
3: Market Street & County Road 18

2025 Total
PM Peak

Intersection

Intersection Delay, s/veh 7.8

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations

Traffic Vol, veh/h

8 88 50 22 83 29

Future Vol, veh/h

8 88 50 22 83 29

Peak Hour Factor

0.88 0.88 0.88 0.88 0.88 0.88

Heavy Vehicles, %

2 2 2 2 2 2

Mvmt Flow

9 100 57 25 94 33

Number of Lanes

1 0 0 1 1 0

Approach	EB	WB	NB
----------	----	----	----

Opposing Approach WB EB

Opposing Lanes 1 1 0

Conflicting Approach Left NB EB

Conflicting Lanes Left 0 1 1

Conflicting Approach Right NB WB

Conflicting Lanes Right 1 0 1

HCM Control Delay 7.2 8 8.1

HCM LOS A A A

Lane	NBLn1	EBLn1	WBLn1
------	-------	-------	-------

Vol Left, % 74% 0% 69%

Vol Thru, % 0% 8% 31%

Vol Right, % 26% 92% 0%

Sign Control Stop Stop Stop

Traffic Vol by Lane 112 96 72

LT Vol 83 0 50

Through Vol 0 8 22

RT Vol 29 88 0

Lane Flow Rate 127 109 82

Geometry Grp 1 1 1

Degree of Util (X) 0.15 0.111 0.1

Departure Headway (Hd) 4.254 3.67 4.382

Convergence, Y/N Yes Yes Yes

Cap 834 957 807

Service Time 2.331 1.768 2.469

HCM Lane V/C Ratio 0.152 0.114 0.102

HCM Control Delay 8.1 7.2 8

HCM Lane LOS A A A

HCM 95th-tile Q 0.5 0.4 0.3

HCM 6th TWSC
8: Market Street & N. 1st Street

2025 Total
PM Peak

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	+	+	+	+	+	+	+	+	+	+	+	+
Traffic Vol, veh/h	7	0	2	2	0	8	3	389	1	11	409	9
Future Vol, veh/h	7	0	2	2	0	8	3	389	1	11	409	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	2	2	0	9	3	442	1	13	465	10
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	949	945	470	946	950	443	475	0	0	443	0	0
Stage 1	496	496	-	449	449	-	-	-	-	-	-	-
Stage 2	453	449	-	497	501	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	240	262	594	241	260	615	1087	-	-	1117	-	-
Stage 1	556	545	-	589	572	-	-	-	-	-	-	-
Stage 2	586	572	-	555	543	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	233	257	594	236	255	615	1087	-	-	1117	-	-
Mov Cap-2 Maneuver	233	257	-	236	255	-	-	-	-	-	-	-
Stage 1	554	536	-	587	570	-	-	-	-	-	-	-
Stage 2	575	570	-	544	534	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	18.9		12.9		0.1		0.2					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1087	-	-	269	465	1117	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.038	0.024	0.011	-	-				
HCM Control Delay (s)	8.3	0	-	18.9	12.9	8.3	0	-				
HCM Lane LOS	A	A	-	C	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-				

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↑ ↗	↑ ↗	↑ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Vol, veh/h	1	0	5	15	0	5	1	100	25	10	70	1
Future Vol, veh/h	1	0	5	15	0	5	1	100	25	10	70	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	0	-	-	0	100	-	0	100	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	6	17	0	6	1	114	28	11	80	1

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	235	246	80	222	219	114	81	0	0	142	0	0
Stage 1	102	102	-	116	116	-	-	-	-	-	-	-
Stage 2	133	144	-	106	103	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	720	656	980	734	679	939	1517	-	-	1441	-	-
Stage 1	904	811	-	889	800	-	-	-	-	-	-	-
Stage 2	870	778	-	900	810	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	711	650	980	725	673	939	1517	-	-	1441	-	-
Mov Cap-2 Maneuver	711	650	-	725	673	-	-	-	-	-	-	-
Stage 1	903	805	-	888	799	-	-	-	-	-	-	-
Stage 2	864	777	-	888	804	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	8.9	9.8			0.1			0.9				
HCM LOS	A	A										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1517	-	-	711	980	725	939	1441	-	-		
HCM Lane V/C Ratio	0.001	-	-	0.002	0.006	0.024	0.006	0.008	-	-		
HCM Control Delay (s)	7.4	-	-	10.1	8.7	10.1	8.9	7.5	-	-		
HCM Lane LOS	A	-	-	B	A	B	A	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0	0	0.1	0	0	-	-		

Intersection

Intersection Delay, s/veh 7.8

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	25	50	30	15	50	55
Future Vol, veh/h	25	50	30	15	50	55
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	57	34	17	57	63
Number of Lanes	1	1	1	1	1	1
Approach	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	2	2	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	2	2			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	2	0	2			
HCM Control Delay	7.4	8.2	7.9			
HCM LOS	A	A	A			

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	55	25	50	30	15
LT Vol	50	0	0	0	30	0
Through Vol	0	0	25	0	0	15
RT Vol	0	55	0	50	0	0
Lane Flow Rate	57	62	28	57	34	17
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.085	0.072	0.038	0.066	0.051	0.023
Departure Headway (Hd)	5.365	4.164	4.875	4.173	5.396	4.894
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	672	866	737	862	666	734
Service Time	3.065	1.864	2.584	1.881	3.105	2.603
HCM Lane V/C Ratio	0.085	0.072	0.038	0.066	0.051	0.023
HCM Control Delay	8.6	7.2	7.8	7.2	8.4	7.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.1	0.2	0.2	0.1

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	0	5	10	0	15	5	195	10	15	120	15
Future Vol, veh/h	15	0	5	10	0	15	5	195	10	15	120	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	5	11	0	16	5	212	11	16	130	16

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	406	403	138	401	406	218	146	0	0	223	0	0
Stage 1	170	170	-	228	228	-	-	-	-	-	-	-
Stage 2	236	233	-	173	178	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	555	536	910	560	534	822	1436	-	-	1346	-	-
Stage 1	832	758	-	775	715	-	-	-	-	-	-	-
Stage 2	767	712	-	829	752	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	537	527	910	549	525	822	1436	-	-	1346	-	-
Mov Cap-2 Maneuver	537	527	-	549	525	-	-	-	-	-	-	-
Stage 1	829	748	-	772	712	-	-	-	-	-	-	-
Stage 2	749	709	-	813	742	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	11.2	10.5			0.2			0.8		
HCM LOS	B	B								
<hr/>										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR		
Capacity (veh/h)	1436	-	-	598	686	1346	-	-		
HCM Lane V/C Ratio	0.004	-	-	0.036	0.04	0.012	-	-		
HCM Control Delay (s)	7.5	0	-	11.2	10.5	7.7	0	-		
HCM Lane LOS	A	A	-	B	B	A	A	-		
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-		

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Vol, veh/h	1	0	3	25	0	10	5	95	15	5	135	1
Future Vol, veh/h	1	0	3	25	0	10	5	95	15	5	135	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	0	-	-	0	100	-	0	100	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	3	28	0	11	6	108	17	6	153	1

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	299	302	153	287	286	108	154	0	0	125	0	0
Stage 1	165	165	-	120	120	-	-	-	-	-	-	-
Stage 2	134	137	-	167	166	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	653	611	893	665	623	946	1426	-	-	1462	-	-
Stage 1	837	762	-	884	796	-	-	-	-	-	-	-
Stage 2	869	783	-	835	761	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	641	606	893	658	618	946	1426	-	-	1462	-	-
Mov Cap-2 Maneuver	641	606	-	658	618	-	-	-	-	-	-	-
Stage 1	834	759	-	880	793	-	-	-	-	-	-	-
Stage 2	855	780	-	828	758	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB			
HCM Control Delay, s	9.4	10.2			0.3			0.3			
HCM LOS	A	B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR	
Capacity (veh/h)	1426	-	-	641	893	658	946	1462	-	-	
HCM Lane V/C Ratio	0.004	-	-	0.002	0.004	0.043	0.012	0.004	-	-	
HCM Control Delay (s)	7.5	-	-	10.6	9	10.7	8.9	7.5	-	-	
HCM Lane LOS	A	-	-	B	A	B	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	0	0	0.1	0	0	-	-	

Intersection

Intersection Delay, s/veh 8.2

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	10	90	50	25	80	25
Future Vol, veh/h	10	90	50	25	80	25
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	102	57	28	91	28
Number of Lanes	1	1	1	1	1	1
Approach	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	2	2	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	2	2			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	2	0	2			
HCM Control Delay	7.5	8.4	8.6			
HCM LOS	A	A	A			

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	25	10	90	50	25
LT Vol	80	0	0	0	50	0
Through Vol	0	0	10	0	0	25
RT Vol	0	25	0	90	0	0
Lane Flow Rate	91	28	11	102	57	28
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.139	0.034	0.016	0.12	0.086	0.039
Departure Headway (Hd)	5.502	4.3	4.94	4.237	5.447	4.945
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	654	835	727	849	660	726
Service Time	3.217	2.014	2.652	1.949	3.161	2.659
HCM Lane V/C Ratio	0.139	0.034	0.015	0.12	0.086	0.039
HCM Control Delay	9.1	7.2	7.7	7.5	8.7	7.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0	0.4	0.3	0.1

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	10	5	0	10	10	320	5	15	350	15
Future Vol, veh/h	10	0	10	5	0	10	10	320	5	15	350	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	11	6	0	11	11	364	6	17	398	17

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	836	833	407	835	838	367	415	0	0	370	0	0
Stage 1	441	441	-	389	389	-	-	-	-	-	-	-
Stage 2	395	392	-	446	449	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	287	304	644	287	302	678	1144	-	-	1189	-	-
Stage 1	595	577	-	635	608	-	-	-	-	-	-	-
Stage 2	630	606	-	591	572	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	276	295	644	275	293	678	1144	-	-	1189	-	-
Mov Cap-2 Maneuver	276	295	-	275	293	-	-	-	-	-	-	-
Stage 1	588	566	-	627	601	-	-	-	-	-	-	-
Stage 2	612	599	-	570	561	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB			
HCM Control Delay, s	14.9	13.2			0.2			0.3			
HCM LOS	B	B									
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Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1144	-	-	386	455	1189	-	-			
HCM Lane V/C Ratio	0.01	-	-	0.059	0.037	0.014	-	-			
HCM Control Delay (s)	8.2	0	-	14.9	13.2	8.1	0	-			
HCM Lane LOS	A	A	-	B	B	A	A	-			
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-			

HCM 6th TWSC
1: Market Street & Site Access

2040 Total
AM Peak

Intersection

Int Delay, s/veh 6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	4	264	15	5	5	275	92	25	10	62	28
Future Vol, veh/h	25	4	264	15	5	5	275	92	25	10	62	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	100	-	0	100	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	5	300	17	6	6	313	105	28	11	70	32

Major/Minor	Minor2	Minor1		Major1		Major2			
Conflicting Flow All	840	851	-	842	855	-	102	0	0
Stage 1	92	92	-	731	731	-	-	-	-
Stage 2	748	759	-	111	124	-	-	-	-
Critical Hdwy	7.12	6.52	-	7.12	6.52	-	4.12	-	4.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	-	3.518	4.018	-	2.218	-	2.218
Pot Cap-1 Maneuver	285	297	0	284	296	0	1490	-	1452
Stage 1	915	819	0	413	427	0	-	-	-
Stage 2	404	415	0	894	793	0	-	-	-
Platoon blocked, %							-	-	-
Mov Cap-1 Maneuver	233	233	-	233	232	-	1490	-	1452
Mov Cap-2 Maneuver	233	233	-	233	232	-	-	-	-
Stage 1	723	812	-	326	337	-	-	-	-
Stage 2	314	328	-	882	787	-	-	-	-

Approach	EB	WB		NB		SB		
HCM Control Delay, s	23	22.1		5.7		0.7		
HCM LOS	C	C						
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL
Capacity (veh/h)	1490	-	-	233	-	233	-	1452
HCM Lane V/C Ratio	0.21	-	-	0.141	-	0.098	-	0.008
HCM Control Delay (s)	8.1	-	-	23	0	22.1	0	7.5
HCM Lane LOS	A	-	-	C	A	C	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.5	-	0.3	-	0

Intersection

Intersection Delay, s/veh 7.9
 Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	25	61	38	15	59	62
Future Vol, veh/h	25	61	38	15	59	62
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	69	43	17	67	70
Number of Lanes	1	1	1	1	1	1
Approach	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	2	2				
Conflicting Approach Left		NB				
Conflicting Lanes Left	0	2				
Conflicting Approach Right	NB					
Conflicting Lanes Right	2	0				
HCM Control Delay	7.4	8.3				
HCM LOS	A	A				

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	62	25	61	38	15
LT Vol	59	0	0	0	38	0
Through Vol	0	0	25	0	0	15
RT Vol	0	62	0	61	0	0
Lane Flow Rate	67	70	28	69	43	17
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.101	0.082	0.039	0.081	0.065	0.023
Departure Headway (Hd)	5.413	4.211	4.935	4.232	5.457	4.955
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	665	855	729	850	659	725
Service Time	3.12	1.918	2.643	1.94	3.167	2.664
HCM Lane V/C Ratio	0.101	0.082	0.038	0.081	0.065	0.023
HCM Control Delay	8.7	7.3	7.8	7.3	8.5	7.8
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.1	0.3	0.2	0.1

HCM 6th TWSC
8: Market Street & N. 1st Street

2040 Total
AM Peak

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	0	5	10	0	20	5	288	10	19	202	18
Future Vol, veh/h	18	0	5	10	0	20	5	288	10	19	202	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	5	11	0	22	5	313	11	21	220	20

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	612	606	230	604	611	319	240	0	0	324	0	0
Stage 1	272	272	-	329	329	-	-	-	-	-	-	-
Stage 2	340	334	-	275	282	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	405	411	809	410	409	722	1327	-	-	1236	-	-
Stage 1	734	685	-	684	646	-	-	-	-	-	-	-
Stage 2	675	643	-	731	678	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	385	401	809	399	399	722	1327	-	-	1236	-	-
Mov Cap-2 Maneuver	385	401	-	399	399	-	-	-	-	-	-	-
Stage 1	730	671	-	681	643	-	-	-	-	-	-	-
Stage 2	651	640	-	712	664	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB			
HCM Control Delay, s	13.8	11.7			0.1			0.6			
HCM LOS	B	B									
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Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1327	-	-	435	569	1236	-	-			
HCM Lane V/C Ratio	0.004	-	-	0.057	0.057	0.017	-	-			
HCM Control Delay (s)	7.7	0	-	13.8	11.7	8	0	-			
HCM Lane LOS	A	A	-	B	B	A	A	-			
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0.1	-	-			

HCM 6th TWSC
1: Market Street & Site Access

2040 Total
PM Peak

Intersection

Int Delay, s/veh 6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	5	291	25	6	10	301	87	15	5	128	31
Future Vol, veh/h	31	5	291	25	6	10	301	87	15	5	128	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	100	-	0	100	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	5	316	27	7	11	327	95	16	5	139	34

Major/Minor	Minor2	Minor1		Major1		Major2			
Conflicting Flow All	910	914	-	918	932	-	173	0	0
Stage 1	149	149	-	749	749	-	-	-	-
Stage 2	761	765	-	169	183	-	-	-	-
Critical Hdwy	7.12	6.52	-	7.12	6.52	-	4.12	-	4.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	-	3.518	4.018	-	2.218	-	2.218
Pot Cap-1 Maneuver	255	273	0	252	266	0	1404	-	1479
Stage 1	854	774	0	404	419	0	-	-	-
Stage 2	398	412	0	833	748	0	-	-	-
Platoon blocked, %						-	-	-	-
Mov Cap-1 Maneuver	204	209	-	202	203	-	1404	-	1479
Mov Cap-2 Maneuver	204	209	-	202	203	-	-	-	-
Stage 1	655	772	-	310	321	-	-	-	-
Stage 2	299	316	-	824	746	-	-	-	-

Approach	EB	WB		NB		SB				
HCM Control Delay, s	26.7	26.4		6.2		0.2				
HCM LOS	D	D								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1404	-	-	205	-	202	-	1479	-	-
HCM Lane V/C Ratio	0.233	-	-	0.191	-	0.167	-	0.004	-	-
HCM Control Delay (s)	8.3	-	-	26.7	0	26.4	0	7.4	-	-
HCM Lane LOS	A	-	-	D	A	D	A	A	-	-
HCM 95th %tile Q(veh)	0.9	-	-	0.7	-	0.6	-	0	-	-

Intersection

Intersection Delay, s/veh 8.4

Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	10	103	60	25	93	34
Future Vol, veh/h	10	103	60	25	93	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	114	67	28	103	38
Number of Lanes	1	1	1	1	1	1
Approach	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	2	2				
Conflicting Approach Left		NB				
Conflicting Lanes Left	0	2				
Conflicting Approach Right	NB					
Conflicting Lanes Right	2	0				
HCM Control Delay	7.7	8.6				
HCM LOS	A	A				

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	34	10	103	60	25
LT Vol	93	0	0	0	60	0
Through Vol	0	0	10	0	0	25
RT Vol	0	34	0	103	0	0
Lane Flow Rate	103	38	11	114	67	28
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.159	0.046	0.015	0.137	0.102	0.039
Departure Headway (Hd)	5.555	4.352	5.01	4.307	5.519	5.016
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	648	824	717	834	651	716
Service Time	3.274	2.071	2.725	2.022	3.235	2.732
HCM Lane V/C Ratio	0.159	0.046	0.015	0.137	0.103	0.039
HCM Control Delay	9.3	7.3	7.8	7.7	8.9	7.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.6	0.1	0	0.5	0.3	0.1

HCM 6th TWSC
8: Market Street & N. 1st Street

2040 Total
PM Peak

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	0	10	5	0	15	10	434	5	20	459	19
Future Vol, veh/h	14	0	10	5	0	15	10	434	5	20	459	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	11	6	0	17	11	493	6	23	522	22

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1106	1100	533	1103	1108	496	544	0	0	499	0	0
Stage 1	579	579	-	518	518	-	-	-	-	-	-	-
Stage 2	527	521	-	585	590	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	188	212	547	189	210	574	1025	-	-	1065	-	-
Stage 1	501	501	-	541	533	-	-	-	-	-	-	-
Stage 2	535	532	-	497	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	176	202	547	179	200	574	1025	-	-	1065	-	-
Mov Cap-2 Maneuver	176	202	-	179	200	-	-	-	-	-	-	-
Stage 1	493	485	-	533	525	-	-	-	-	-	-	-
Stage 2	511	524	-	472	480	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB			
HCM Control Delay, s	21.5	15.4			0.2			0.3			
HCM LOS	C	C									
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Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1025	-	-	245	370	1065	-	-			
HCM Lane V/C Ratio	0.011	-	-	0.111	0.061	0.021	-	-			
HCM Control Delay (s)	8.6	0	-	21.5	15.4	8.5	0	-			
HCM Lane LOS	A	A	-	C	C	A	A	-			
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0.1	-	-			