Appendix N

APPENDIX A

Approved Scoping Agreement

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Murrieta Transportation Department requirements for the traffic impact analysis of the following project.

Case No.
Related Cases -
SP No. n/a
EIR No. n/a
GPA No. n/a
CZ No. n/a
Project Name: McElwain and Linnel
Project Address: N. of Linnel and east of McElwain
Project Description: 120 room Hotel. 15,000 sf event center

	Consultant	Developer
Name:	Trames Solutions, Inc.	Mr. Joe Sapp
Address:	Scott Sato	Murrieta Development II, LLC
	4225 Oceanside Blvd., #354H	23656 Bellwood Court
	Oceanside, CA 92056	Murrieta, CA 92562
Phone No:	(949) 244-2436	
Date:	4/2/2019	

A. Trip Generation Source: ITE 10th Edition (See Tables 1 & 2)

Proposed Land Use: Office and Research Park (ORP) Previous Land Use: Office and Research Park (ORP)
Existing Zoning: Office and Research Park (ORP) Proposed Zoning: Office and Research Park (ORP)

	In	Out	Total	In	Out	Total
AM Trips	34	23	57			-
PM Trips	37	35	72			-

Internal Trip Allowance No (0 % Trip Discount)
Pass-By Trip Allowance No (0 % Trip Discount)

B. Trip Geographic Distribution: (See attached exhibit for detailed assignment). **See Figure C**

N _____ S _____ E _____ W _____

C. Background Traffic

Project Build-out Year 2021 Annual Ambient Growth Rate: 2.0 %

Other projects to be analyzed: To be provided by the City of Murrieta
Model/Forecast methodology:

D. Study Intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments form other agencies). **See Figure A**

1	McElwain/Linnel	11	
2	McElwain/Clinton Keith	12	
3	Stepp/Linnel	13	
4	Project Driveway/Linnel	14	
5		15	
6		16	
7		17	
8		18	
9		19	
10		20	

E. Study Roadway Segments:

1 Linnel e/o McElwain
2 McElwain s/o Linnel
3
4

F. Other Jurisdictional Impacts

Is this project within a City's Sphere of influence or one mile radius of City boundaries? NO

If so, name of City jurisdiction:

G. Site Plan See Figure B

H. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Transportation Department)

Existing
Existing+Ambient Growth+Project
Existing+Ambient Growth+Project+Cumulative

Recommended by:

Scott Sato 4/2/2019

Consultant's Representative Date

Approved By:

Ieda Edgington 4/4/19

City of Murrieta Transportation Department Date
Department - Traffic Staff

TABLE 1

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	QUANTITY[2]	PEAK HOUR TRIP RATES						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Hotel	310	120 RM	0.28	0.19	0.47	0.31	0.29	0.60	8.36

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 10th Edition.

[2] RM = Room

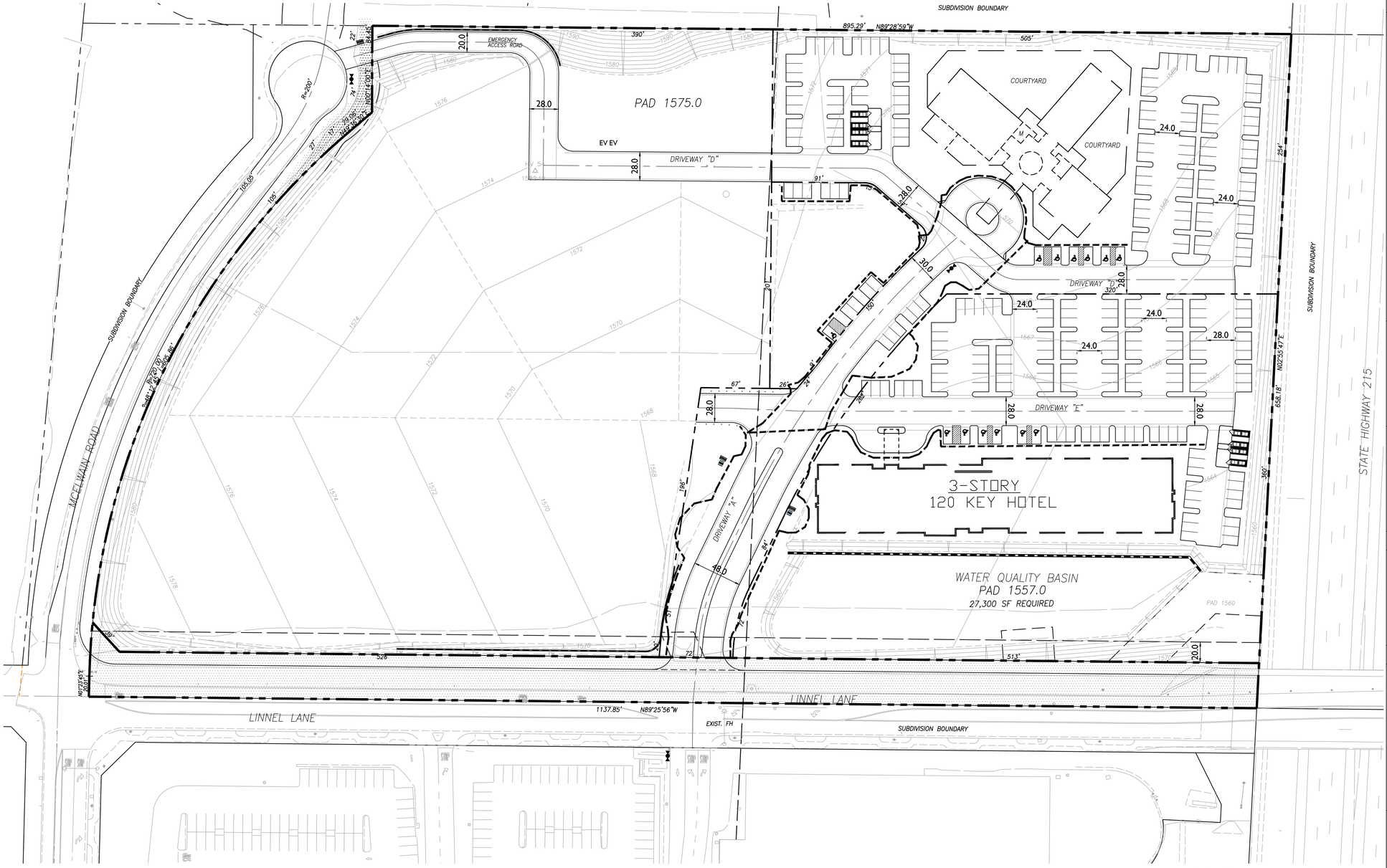
TABLE 2

TRIP GENERATION SUMMARY

LAND USE	QUANTITY[1]	PEAK HOUR						DAILY
		AM			PM			
		IN	OUT	TOTAL	IN	OUT	TOTAL	
Hotel	120 RM	34	23	57	37	35	72	1,003
TOTAL		**34**	**23**	**57**	**37**	**35**	**72**	**1,003**

[1] RM = Room

FIGURE A
STUDY AREA



PROJECT SUMMARY

APN	392-280-007
GROSS SITE AREA	15.78 AC
NET SITE AREA	14.62 AC
TOTAL PARKING	254 SPACES
EXISTING ZONING	ORP
PROPOSED ZONING	ORP
ADJACENT ZONING	ORP, COMMERCIAL
LAND USE	HOTEL, AND EVENT CENTER
ADJACENT LAND USE	VACANT, COMMERCIAL

LEGAL DESCRIPTION: A PORTION OF SECTION 34, TOWNSHIP 6 SOUTH, RANGE 3 WEST,SAN BERNARDINO BASE & MERIDIAN

PUBLIC UTILITES

SEWER	WESTERN MUNICIPAL WATER DISTRICT
WATER	WESTERN MUNICIPAL WATER DISTRICT
TELEPHONE	SOUTHERN CALIFORNIA TELEPHONE
ELECTRIC	SOUTHERN CALIFORNIA EDISON
GAS	SOUTHERN CALIFORNIA GAS COMPANY
CABLE T.V.	TIME WARNER CABLE / FRONTIER COMM.

HOTEL (LOT 4)

TOTAL KEYS	120 KEYS (71,562 SF)
SITE AREA	3.63 ACRES
FAR	.45
OCCUPANCY	R-1
PARKING PROVIDED	126 SPACES(1:1 KEY+6 EMPLOYEE)

EVENT CENTER (LOT 3)

TOTAL	15,295 SF
SITE AREA	3.36 ACRES
FAR	.104
OCCUPANCY	A-3
PARKING PROVIDED	128 SPACES (8.4 : 1,000)

LOT COVERAGE

BUILDING	39,145 SF	6%
PARKING	36,810 SF	6%
PAVED	94,870 SF	15%
LANDSCAPE	466,111 SF	73%
TOTAL	636,936 SF	100%

TRASH ENCLOSURES

HOTEL

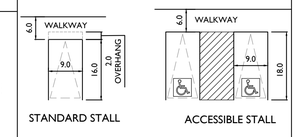
REQUIRED:
144 SF RECYCLE
144 SF TRASH

PROVIDED:
160 SF RECYCLEE
160 SF TRASH

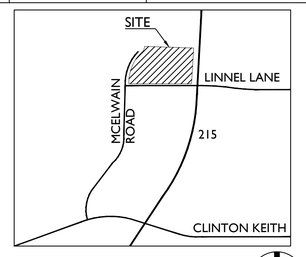
EVENT

REQUIRED:
48 SF RECYCLE
48 SF TRASH

PROVIDED:
160 SF RECYCLE
160 SF TRASH



TYPICAL PARKING DIMENSIONS
NOT TO SCALE



VICINITY MAP : NOT TO SCALE

N

MURRIETA, CA

MURRIETA DEVELOPMENT II, LLC
23656 BELLWOOD COURT
MURRIETA, CA 92562
858-228-7322

SAPPHIRE

MARCH 22, 2019

SCALE: 0 50 100 150

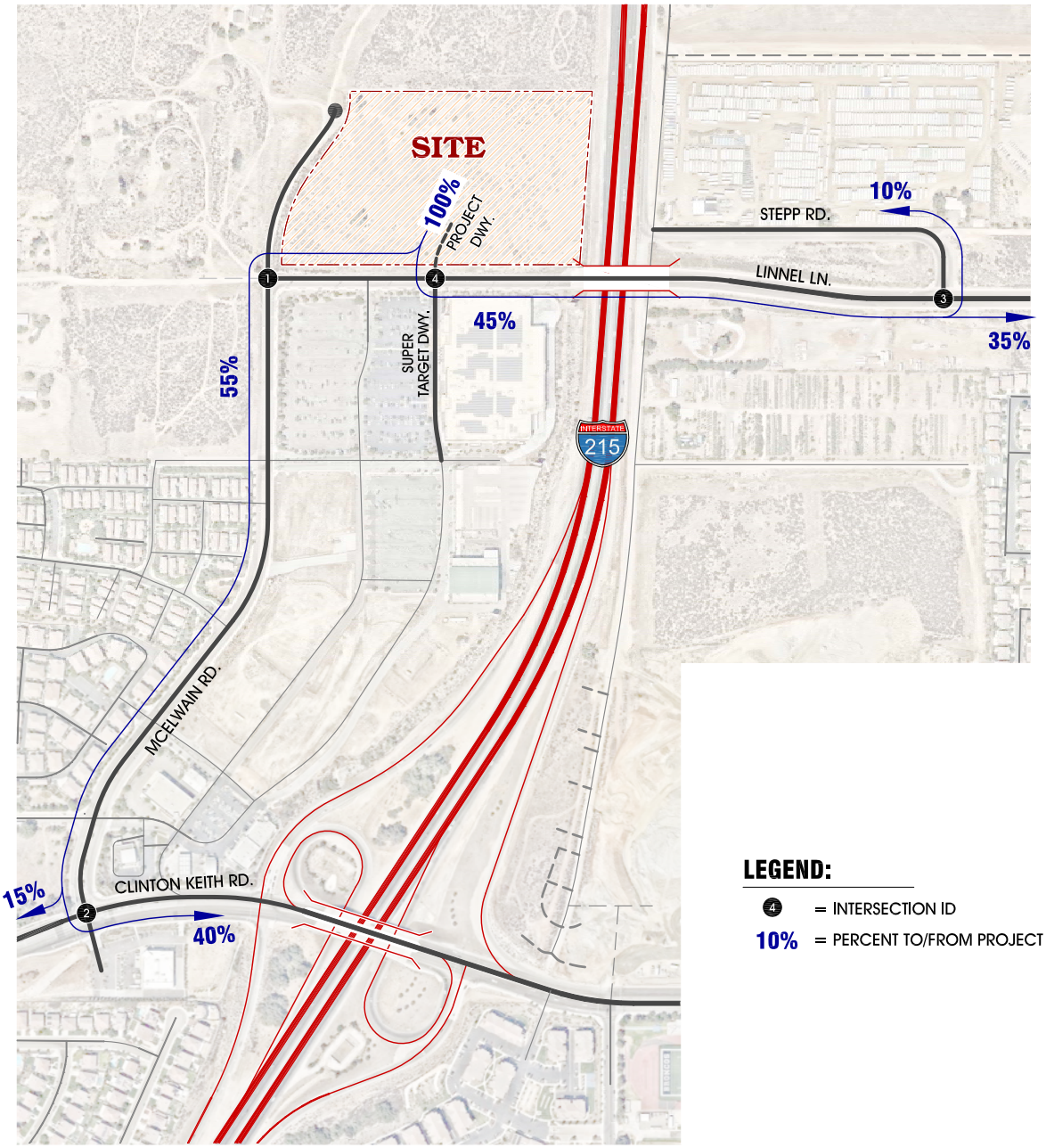
N

SUMMA ARCHITECTURE
5256 S. Mission Road, Ste 404
Bonsall, CA 92003
760.724.1198

SITE PLAN

A-SP1

FIGURE C
PROJECT TRIP DISTRIBUTION



LEGEND:

4 = INTERSECTION ID

10% = PERCENT TO/FROM PROJECT

N

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APPENDIX B

TRAFFIC COUNT WORKSHEETS

Counts Unlimited
PO Box 1178
Corona, CA 92878
951-268-6268

City of Murrieta
N/S: McElwain Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 01_MUR_McElwain_Linnel AM
Site Code : 20119127
Start Date : 2/26/2019
Page No : 1

Groups Printed- Total Volume

	McElwain Road Southbound				Linnel Lane Westbound				McElwain Road Northbound				Linnel Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	75	0	0	75	0	0	40	40	0	0	0	0	115
07:15 AM	1	0	0	1	112	0	0	112	0	0	43	43	0	0	0	0	156
07:30 AM	0	0	0	0	97	0	0	97	0	0	59	59	0	0	2	2	158
07:45 AM	0	0	0	0	90	1	0	91	0	0	65	65	0	0	1	1	157
Total	1	0	0	1	374	1	0	375	0	0	207	207	0	0	3	3	586
08:00 AM	0	0	0	0	68	0	0	68	1	0	45	46	0	0	0	0	114
08:15 AM	0	0	0	0	64	0	0	64	0	0	29	29	0	0	0	0	93
08:30 AM	0	0	0	0	34	0	0	34	0	0	40	40	0	0	0	0	74
08:45 AM	0	0	0	0	42	0	0	42	0	0	36	36	0	0	0	0	78
Total	0	0	0	0	208	0	0	208	1	0	150	151	0	0	0	0	359
Grand Total	1	0	0	1	582	1	0	583	1	0	357	358	0	0	3	3	945
Apprch %	100	0	0		99.8	0.2	0		0.3	0	99.7		0	0	100		
Total %	0.1	0	0	0.1	61.6	0.1	0	61.7	0.1	0	37.8	37.9	0	0	0.3	0.3	

	McElwain Road Southbound				Linnel Lane Westbound				McElwain Road Northbound				Linnel Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	75	0	0	75	0	0	40	40	0	0	0	0	115
07:15 AM	**1**	0	0	**1**	**112**	0	0	**112**	0	0	43	43	0	0	0	0	156
07:30 AM	0	0	0	0	97	0	0	97	0	0	59	59	0	0	**2**	**2**	**158**
07:45 AM	0	0	0	0	90	**1**	0	91	0	0	**65**	**65**	0	0	1	1	157
Total Volume	1	0	0	1	374	1	0	375	0	0	207	207	0	0	3	3	586
% App. Total	100	0	0		99.7	0.3	0		0	0	100		0	0	100		
PHF	.250	.000	.000	.250	.835	.250	.000	.837	.000	.000	.796	.796	.000	.000	.375	.375	.927

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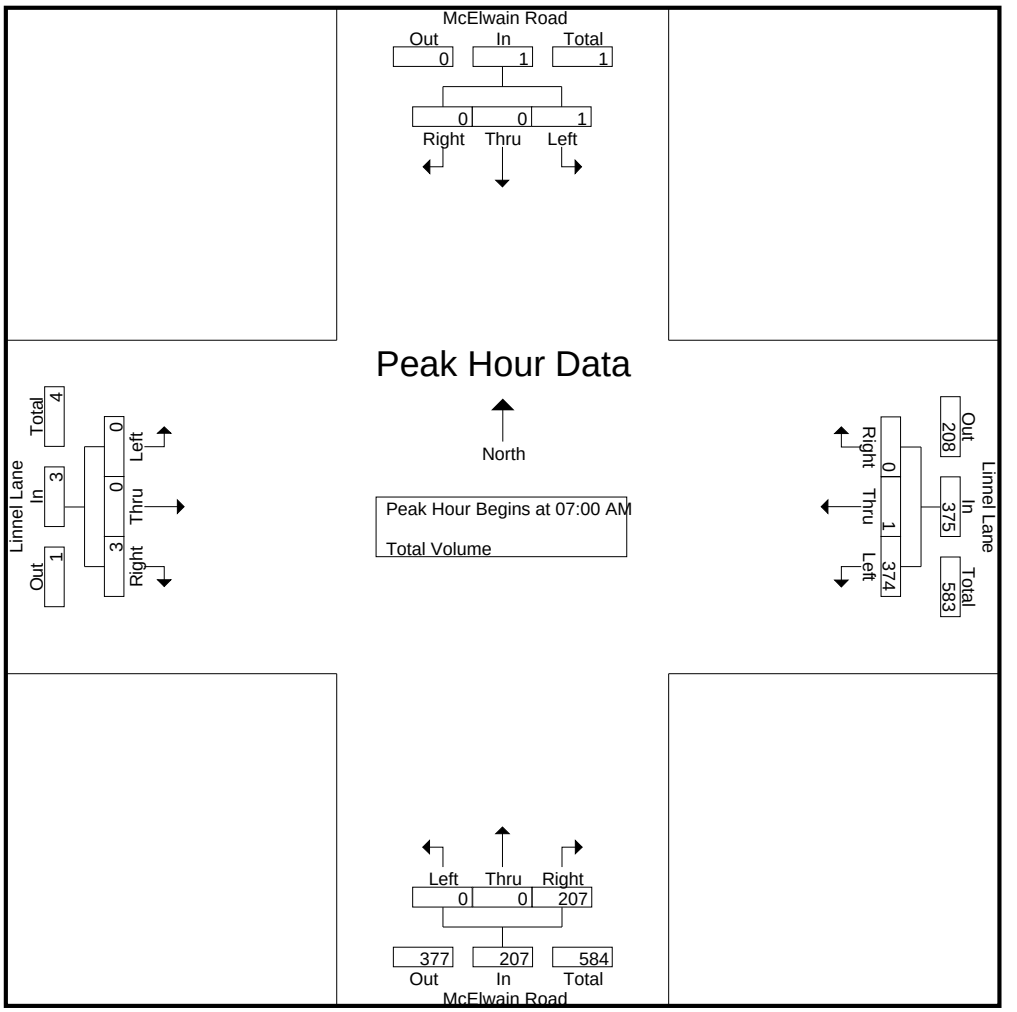

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	0	0	0	0	75	0	0	75	0	0	43	43	0	0	0	0
+15 mins.	**1**	0	0	**1**	**112**	0	0	**112**	0	0	59	59	0	0	0	0
+30 mins.	0	0	0	0	97	0	0	97	0	0	**65**	**65**	0	0	**2**	**2**
+45 mins.	0	0	0	0	90	**1**	0	91	**1**	0	45	46	0	0	1	1
Total Volume	1	0	0	1	374	1	0	375	1	0	212	213	0	0	3	3
% App. Total	100	0	0		99.7	0.3	0		0.5	0	99.5		0	0	100	
PHF	.250	.000	.000	.250	.835	.250	.000	.837	.250	.000	.815	.819	.000	.000	.375	.375

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	McElwain Road Southbound				Linnel Lane Westbound				McElwain Road Northbound				Linnel Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	36	0	0	36	0	0	68	68	0	0	0	0	104
04:15 PM	0	0	0	0	48	0	0	48	0	0	90	90	0	0	0	0	138
04:30 PM	0	0	0	0	45	0	0	45	0	0	73	73	0	0	1	1	119
04:45 PM	0	0	0	0	42	1	0	43	2	0	89	91	0	1	0	1	135
Total	0	0	0	0	171	1	0	172	2	0	320	322	0	1	1	2	496
05:00 PM	0	1	0	1	68	0	0	68	0	1	67	68	0	0	2	2	139
05:15 PM	0	0	0	0	46	1	0	47	0	0	74	74	0	0	0	0	121
05:30 PM	0	0	0	0	51	0	0	51	0	0	91	91	0	0	0	0	142
05:45 PM	1	0	0	1	39	0	0	39	1	1	80	82	0	0	0	0	122
Total	1	1	0	2	204	1	0	205	1	2	312	315	0	0	2	2	524
Grand Total	1	1	0	2	375	2	0	377	3	2	632	637	0	1	3	4	1020
Apprch %	50	50	0		99.5	0.5	0		0.5	0.3	99.2		0	25	75		
Total %	0.1	0.1	0	0.2	36.8	0.2	0	37	0.3	0.2	62	62.5	0	0.1	0.3	0.4	

	McElwain Road Southbound				Linnel Lane Westbound				McElwain Road Northbound				Linnel Lane Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	42	**1**	0	43	**2**	0	89	**91**	0	**1**	0	1	135
05:00 PM	0	**1**	0	**1**	**68**	0	0	**68**	0	**1**	67	68	0	0	**2**	**2**	139
05:15 PM	0	0	0	0	46	1	0	47	0	0	74	74	0	0	0	0	121
05:30 PM	0	0	0	0	51	0	0	51	0	0	**91**	91	0	0	0	0	**142**
Total Volume	0	1	0	1	207	2	0	209	2	1	321	324	0	1	2	3	537
% App. Total	0	100	0		99	1	0		0.6	0.3	99.1		0	33.3	66.7		
PHF	.000	.250	.000	.250	.761	.500	.000	.768	.250	.250	.882	.890	.000	.250	.250	.375	.945

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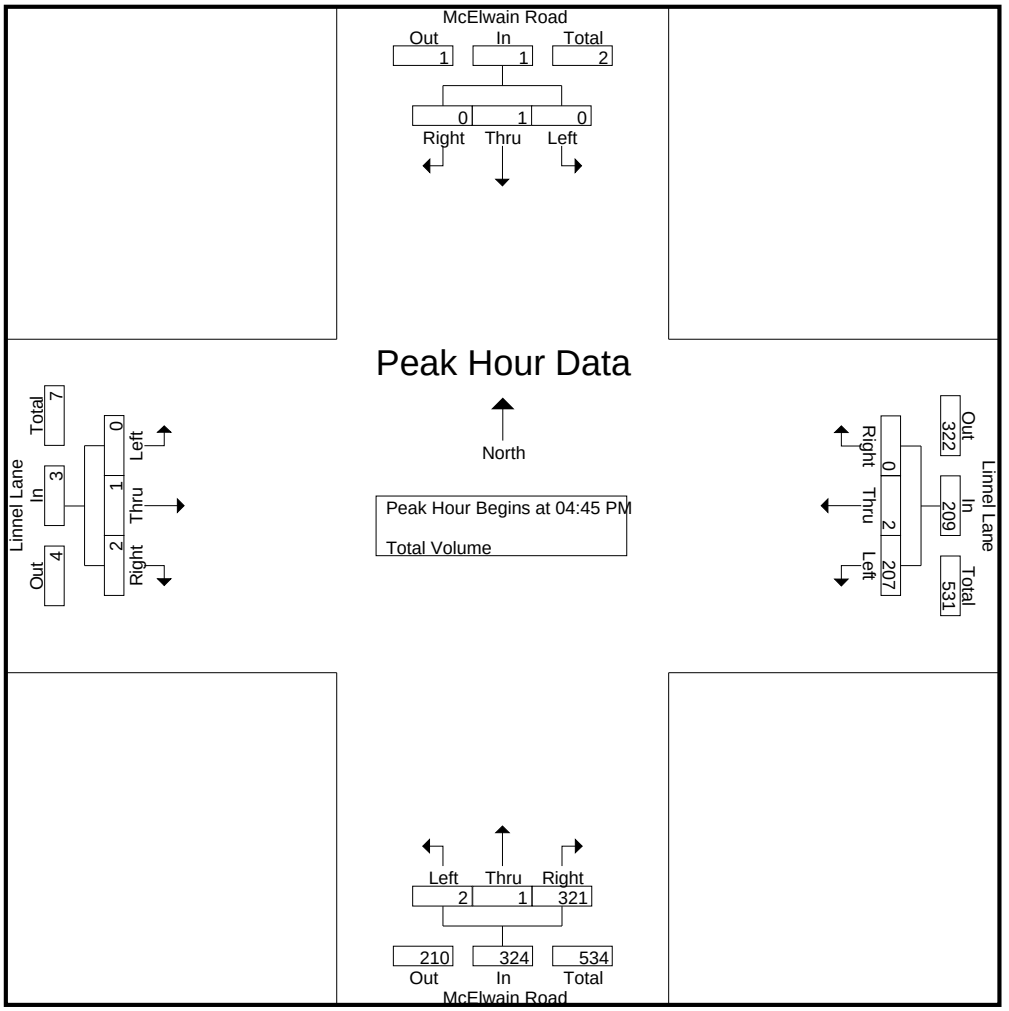

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				04:45 PM				04:15 PM			
+0 mins.	0	**1**	0	**1**	42	**1**	0	43	**2**	0	89	**91**	0	0	0	0
+15 mins.	0	0	0	0	**68**	0	0	**68**	0	**1**	67	68	0	0	1	1
+30 mins.	0	0	0	0	46	1	0	47	0	0	74	74	0	**1**	0	1
+45 mins.	**1**	0	0	1	51	0	0	51	0	0	**91**	91	0	0	**2**	**2**
Total Volume	1	1	0	2	207	2	0	209	2	1	321	324	0	1	3	4
% App. Total	50	50	0		99	1	0		0.6	0.3	99.1		0	25	75	
PHF	.250	.250	.000	.500	.761	.500	.000	.768	.250	.250	.882	.890	.000	.250	.375	.500

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Site Code : 20119127
Start Date : 2/26/2019
Page No : 1

Groups Printed- Total Volume

	McElwain Road Southbound				Clinton Keith Road Westbound				CVS Driveway Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	96	0	55	151	5	233	19	257	1	0	1	2	38	396	1	435	845
07:15 AM	116	2	73	191	4	273	28	305	1	0	3	4	59	372	3	434	934
07:30 AM	99	2	86	187	4	261	9	274	2	1	5	8	65	310	1	376	845
07:45 AM	68	0	83	151	4	334	18	356	2	3	3	8	74	307	8	389	904
Total	379	4	297	680	17	1101	74	1192	6	4	12	22	236	1385	13	1634	3528
08:00 AM	68	0	69	137	3	282	14	299	2	0	4	6	65	270	3	338	780
08:15 AM	79	0	70	149	3	306	15	324	4	0	3	7	71	307	5	383	863
08:30 AM	84	0	64	148	2	254	26	282	2	1	1	4	77	336	2	415	849
08:45 AM	64	2	59	125	3	264	18	285	3	1	2	6	63	256	2	321	737
Total	295	2	262	559	11	1106	73	1190	11	2	10	23	276	1169	12	1457	3229
Grand Total	674	6	559	1239	28	2207	147	2382	17	6	22	45	512	2554	25	3091	6757
Apprch %	54.4	0.5	45.1		1.2	92.7	6.2		37.8	13.3	48.9		16.6	82.6	0.8		
Total %	10	0.1	8.3	18.3	0.4	32.7	2.2	35.3	0.3	0.1	0.3	0.7	7.6	37.8	0.4	45.7	

	McElwain Road Southbound				Clinton Keith Road Westbound				CVS Driveway Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	96	0	55	151	**5**	233	19	257	1	0	1	2	38	**396**	1	**435**	845
07:15 AM	**116**	**2**	73	**191**	4	273	**28**	305	1	0	3	4	59	372	3	434	**934**
07:30 AM	99	2	**86**	187	4	261	9	274	**2**	1	**5**	**8**	65	310	1	376	845
07:45 AM	68	0	83	151	4	**334**	18	**356**	2	**3**	3	8	**74**	307	**8**	389	904
Total Volume	379	4	297	680	17	1101	74	1192	6	4	12	22	236	1385	13	1634	3528
% App. Total	55.7	0.6	43.7		1.4	92.4	6.2		27.3	18.2	54.5		14.4	84.8	0.8		
PHF	.817	.500	.863	.890	.850	.824	.661	.837	.750	.333	.600	.688	.797	.874	.406	.939	.944

Counts Unlimited
PO Box 1178
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City of Murrieta
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File Name : 02_MUR_McElwain_Clinton K AM
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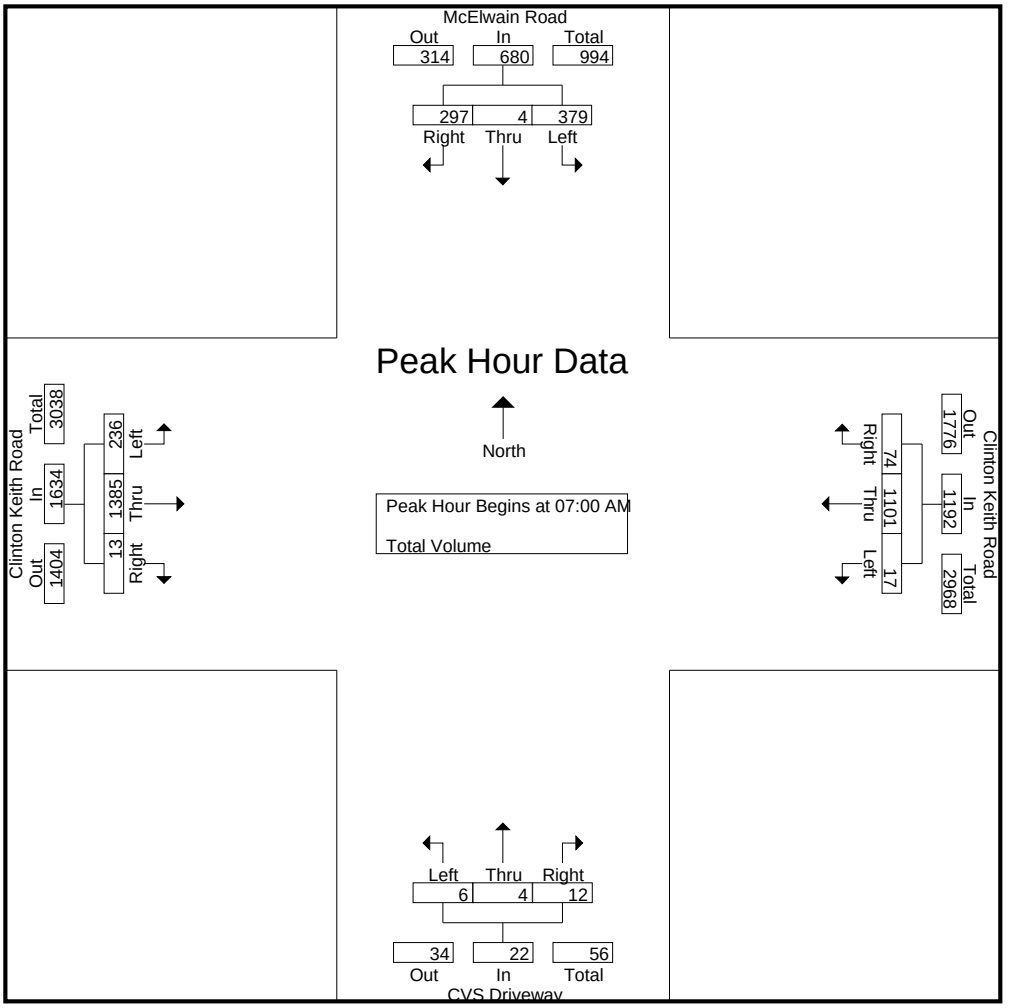
Start Date : 2/26/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:45 AM				07:30 AM				07:00 AM			
+0 mins.	96	0	55	151	**4**	**334**	18	**356**	2	1	**5**	**8**	38	**396**	1	**435**
+15 mins.	**116**	**2**	73	**191**	3	282	14	299	2	**3**	3	8	59	372	3	434
+30 mins.	99	2	**86**	187	3	306	15	324	2	0	4	6	65	310	1	376
+45 mins.	68	0	83	151	2	254	**26**	282	**4**	0	3	7	**74**	307	**8**	389
Total Volume	379	4	297	680	12	1176	73	1261	10	4	15	29	236	1385	13	1634
% App. Total	55.7	0.6	43.7		1	93.3	5.8		34.5	13.8	51.7		14.4	84.8	0.8	
PHF	.817	.500	.863	.890	.750	.880	.702	.886	.625	.333	.750	.906	.797	.874	.406	.939

Counts Unlimited
PO Box 1178
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City of Murrieta
N/S: McElwain Road
E/W: Clinton Keith Road
Weather: Clear

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Groups Printed- Total Volume

	McElwain Road Southbound				Clinton Keith Road Westbound				CVS Driveway Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	92	2	84	178	5	326	50	381	2	1	12	15	80	301	9	390	964
04:15 PM	66	0	77	143	9	287	42	338	6	3	7	16	94	341	2	437	934
04:30 PM	61	2	65	128	5	294	50	349	2	2	8	12	103	321	10	434	923
04:45 PM	102	3	75	180	14	351	47	412	10	3	7	20	83	348	8	439	1051
Total	321	7	301	629	33	1258	189	1480	20	9	34	63	360	1311	29	1700	3872
05:00 PM	79	4	68	151	6	347	40	393	10	2	9	21	87	315	9	411	976
05:15 PM	88	3	83	174	17	345	56	418	5	4	7	16	159	352	7	518	1126
05:30 PM	81	4	73	158	6	309	47	362	9	4	7	20	120	380	8	508	1048
05:45 PM	50	3	51	104	5	346	60	411	9	3	12	24	103	290	6	399	938
Total	298	14	275	587	34	1347	203	1584	33	13	35	81	469	1337	30	1836	4088
Grand Total	619	21	576	1216	67	2605	392	3064	53	22	69	144	829	2648	59	3536	7960
Apprch %	50.9	1.7	47.4		2.2	85	12.8		36.8	15.3	47.9		23.4	74.9	1.7		
Total %	7.8	0.3	7.2	15.3	0.8	32.7	4.9	38.5	0.7	0.3	0.9	1.8	10.4	33.3	0.7	44.4	

	McElwain Road Southbound				Clinton Keith Road Westbound				CVS Driveway Northbound				Clinton Keith Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**102**	3	75	**180**	14	**351**	47	412	**10**	3	7	20	83	348	8	439	1051
05:00 PM	79	**4**	68	151	6	347	40	393	10	2	**9**	**21**	87	315	**9**	411	976
05:15 PM	88	3	**83**	174	**17**	345	**56**	**418**	5	**4**	7	16	**159**	352	7	**518**	**1126**
05:30 PM	81	4	73	158	6	309	47	362	9	4	7	20	120	**380**	8	508	1048
Total Volume	350	14	299	663	43	1352	190	1585	34	13	30	77	449	1395	32	1876	4201
% App. Total	52.8	2.1	45.1		2.7	85.3	12		44.2	16.9	39		23.9	74.4	1.7		
PHF	.858	.875	.901	.921	.632	.963	.848	.948	.850	.813	.833	.917	.706	.918	.889	.905	.933

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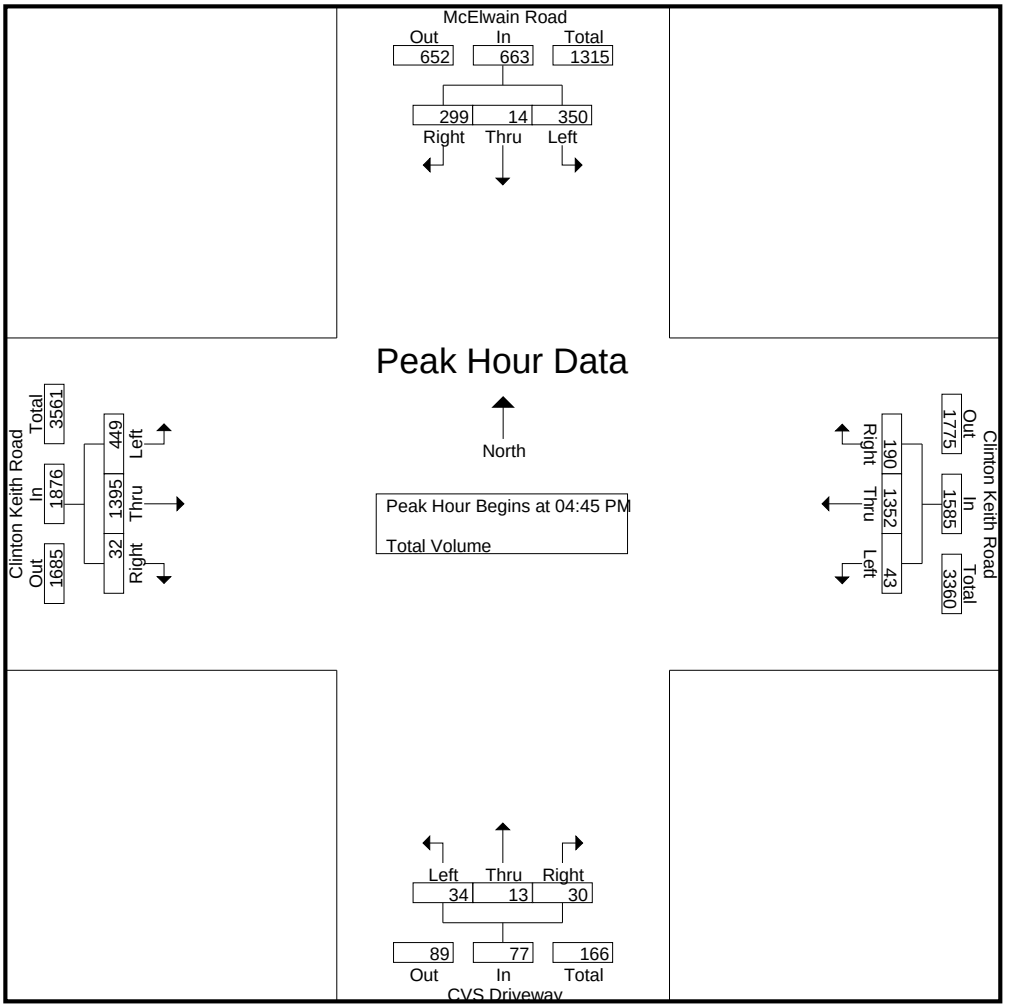
City of Murrieta
N/S: McElwain Road
E/W: Clinton Keith Road
Weather: Clear

File Name : 02_MUR_McElwain_Clinton K PM
Site Code : 20119127
Start Date : 2/26/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				05:00 PM				04:45 PM			
+0 mins.	**102**	3	75	**180**	14	**351**	47	412	**10**	2	9	21	83	348	8	439
+15 mins.	79	**4**	68	151	6	347	40	393	5	**4**	7	16	87	315	**9**	411
+30 mins.	88	3	**83**	174	**17**	345	**56**	**418**	9	4	7	20	**159**	352	7	**518**
+45 mins.	81	4	73	158	6	309	47	362	9	3	**12**	**24**	120	**380**	8	508
Total Volume	350	14	299	663	43	1352	190	1585	33	13	35	81	449	1395	32	1876
% App. Total	52.8	2.1	45.1		2.7	85.3	12		40.7	16	43.2		23.9	74.4	1.7	
PHF	.858	.875	.901	.921	.632	.963	.848	.948	.825	.813	.729	.844	.706	.918	.889	.905

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City of Murrieta
N/S: Stepp Road
E/W: Linnel Lane
Weather: Clear

File Name : 08_MUR_Stepp_Linnel AM
Site Code : 20119127
Start Date : 2/26/2019
Page No : 1

Groups Printed- Total Volume

	Stepp Road Southbound			Linnel Lane Westbound			Linnel Lane Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	5	34	39	45	1	46	23	7	30	115
07:15 AM	5	53	58	62	0	62	39	18	57	177
07:30 AM	5	79	84	31	1	32	36	18	54	170
07:45 AM	5	52	57	31	2	33	58	15	73	163
Total	20	218	238	169	4	173	156	58	214	625
08:00 AM	6	60	66	20	0	20	30	10	40	126
08:15 AM	3	46	49	21	1	22	27	11	38	109
08:30 AM	9	35	44	26	2	28	30	11	41	113
08:45 AM	1	44	45	16	2	18	30	8	38	101
Total	19	185	204	83	5	88	117	40	157	449
Grand Total	39	403	442	252	9	261	273	98	371	1074
Apprch %	8.8	91.2		96.6	3.4		73.6	26.4		
Total %	3.6	37.5	41.2	23.5	0.8	24.3	25.4	9.1	34.5	

	Stepp Road Southbound			Linnel Lane Westbound			Linnel Lane Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	5	53	58	**62**	0	**62**	39	**18**	57	**177**
07:30 AM	5	**79**	**84**	31	1	32	36	18	54	170
07:45 AM	5	52	57	31	**2**	33	**58**	15	**73**	163
08:00 AM	**6**	60	66	20	0	20	30	10	40	126
Total Volume	21	244	265	144	3	147	163	61	224	636
% App. Total	7.9	92.1		98	2		72.8	27.2		
PHF	.875	.772	.789	.581	.375	.593	.703	.847	.767	.898

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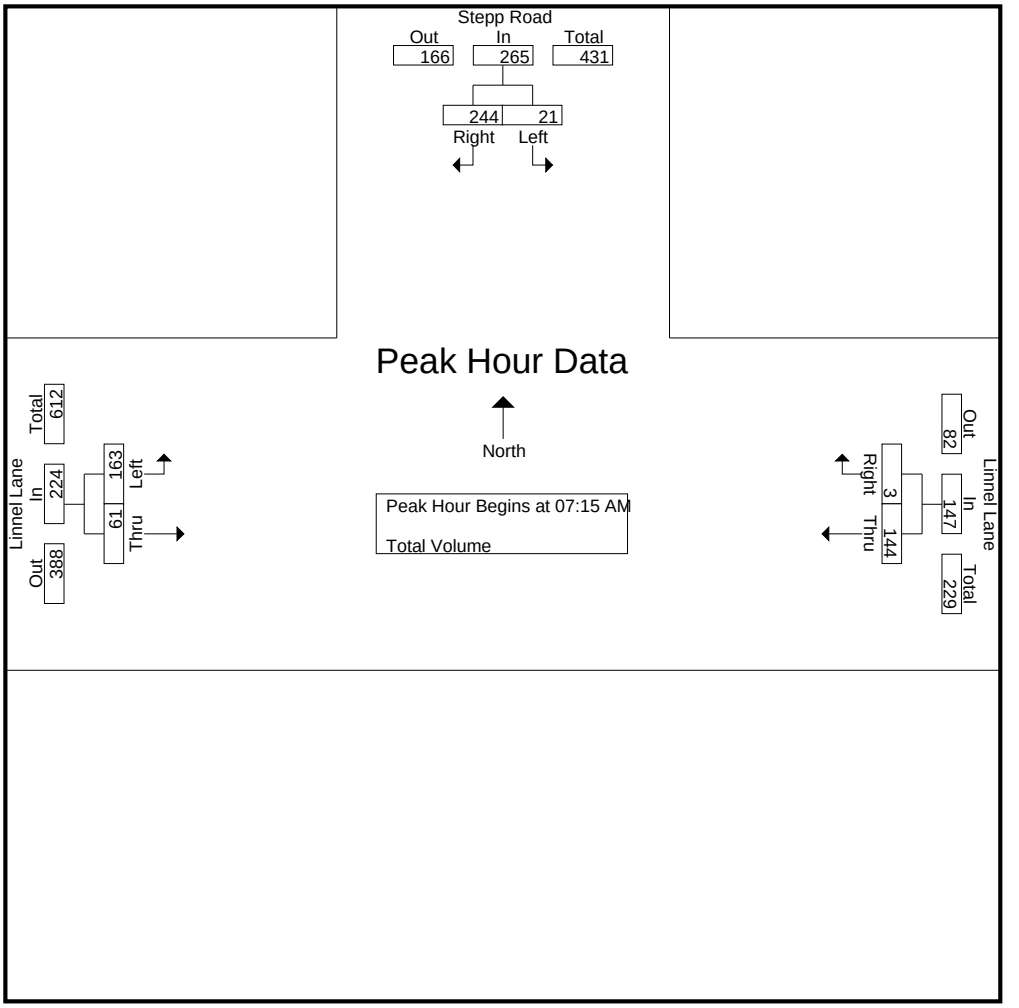
City of Murrieta
N/S: Stepp Road
E/W: Linnel Lane
Weather: Clear

File Name : 08_MUR_Stepp_Linnel AM
Site Code : 20119127
Start Date : 2/26/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:00 AM			07:15 AM		
+0 mins.	5	53	58	45	1	46	39	**18**	57
+15 mins.	5	**79**	**84**	**62**	0	**62**	36	18	54
+30 mins.	5	52	57	31	1	32	**58**	15	**73**
+45 mins.	**6**	60	66	31	**2**	33	30	10	40
Total Volume	21	244	265	169	4	173	163	61	224
% App. Total	7.9	92.1		97.7	2.3		72.8	27.2	
PHF	.875	.772	.789	.681	.500	.698	.703	.847	.767

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City of Murrieta
N/S: Stepp Road
E/W: Linnel Lane
Weather: Clear

File Name : 08_MUR_Stepp_Linnel PM
Site Code : 20119127
Start Date : 2/26/2019
Page No : 1

Groups Printed- Total Volume

	Stepp Road Southbound			Linnel Lane Westbound			Linnel Lane Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	2	48	50	21	3	24	48	28	76	150
04:15 PM	1	33	34	15	4	19	50	25	75	128
04:30 PM	5	49	54	14	5	19	64	30	94	167
04:45 PM	11	36	47	20	3	23	60	26	86	156
Total	19	166	185	70	15	85	222	109	331	601
05:00 PM	8	49	57	23	7	30	63	43	106	193
05:15 PM	3	38	41	22	3	25	63	33	96	162
05:30 PM	3	42	45	17	1	18	72	44	116	179
05:45 PM	6	32	38	19	1	20	64	34	98	156
Total	20	161	181	81	12	93	262	154	416	690
Grand Total	39	327	366	151	27	178	484	263	747	1291
Apprch %	10.7	89.3		84.8	15.2		64.8	35.2		
Total %	3	25.3	28.4	11.7	2.1	13.8	37.5	20.4	57.9	

	Stepp Road Southbound			Linnel Lane Westbound			Linnel Lane Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	**11**	36	47	20	3	23	60	26	86	156
05:00 PM	8	**49**	**57**	**23**	**7**	**30**	63	43	106	**193**
05:15 PM	3	38	41	22	3	25	63	33	96	162
05:30 PM	3	42	45	17	1	18	**72**	**44**	**116**	179
Total Volume	25	165	190	82	14	96	258	146	404	690
% App. Total	13.2	86.8		85.4	14.6		63.9	36.1		
PHF	.568	.842	.833	.891	.500	.800	.896	.830	.871	.894

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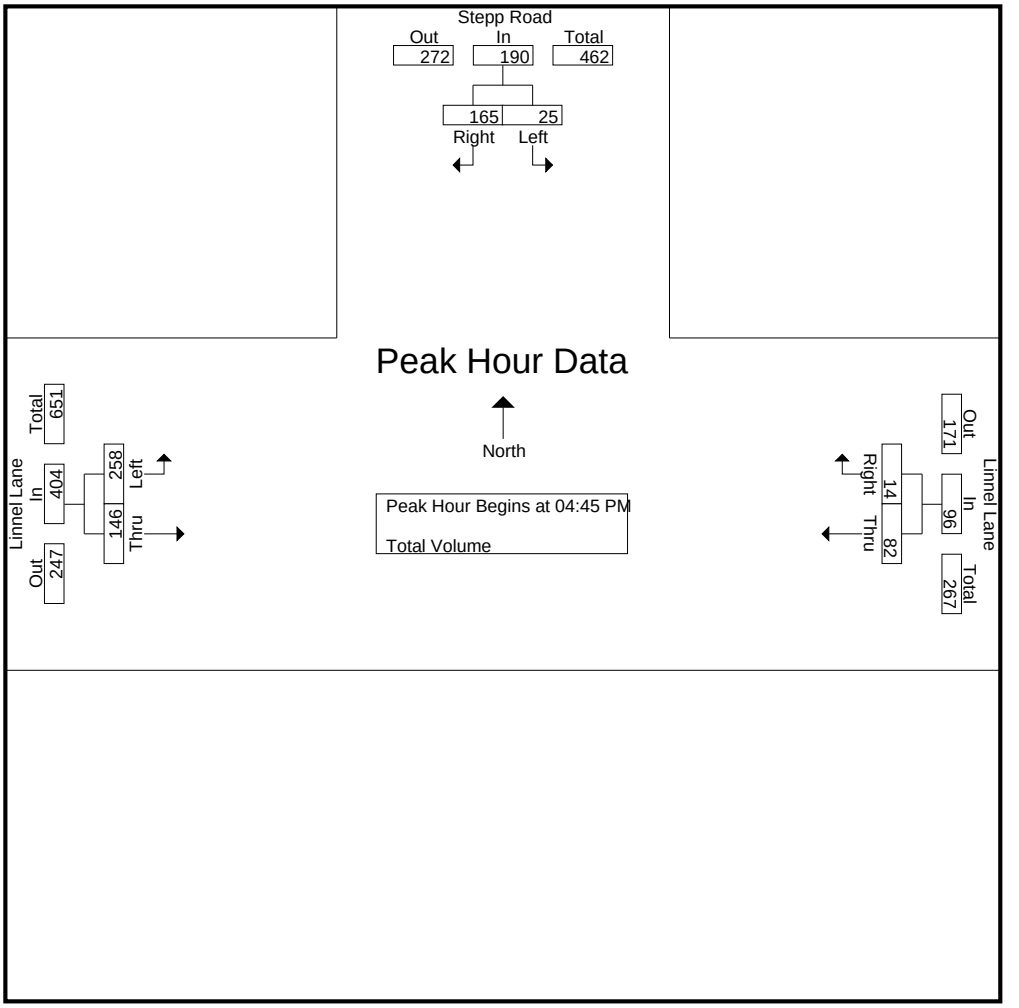
City of Murrieta
N/S: Stepp Road
E/W: Linnel Lane
Weather: Clear

File Name : 08_MUR_Stepp_Linnel PM
Site Code : 20119127
Start Date : 2/26/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			05:00 PM		
+0 mins.	5	**49**	54	14	5	19	63	43	106
+15 mins.	**11**	36	47	20	3	23	63	33	96
+30 mins.	8	49	**57**	**23**	**7**	**30**	**72**	**44**	**116**
+45 mins.	3	38	41	22	3	25	64	34	98
Total Volume	27	172	199	79	18	97	262	154	416
% App. Total	13.6	86.4		81.4	18.6		63	37	
PHF	.614	.878	.873	.859	.643	.808	.910	.875	.897

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City of Murrieta
N/S: Target Driveway
E/W: Linnel Lane
Weather: Clear

File Name : MUR_Target DW_Linnel AM
Site Code : 20119185
Start Date : 5/2/2019
Page No : 1

Groups Printed- Total Volume

	Linnel Lane Westbound			Target Driveway Northbound			Linnel Lane Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	5	59	64	0	2	2	38	0	38	104
07:15 AM	1	90	91	0	4	4	52	0	52	147
07:30 AM	11	81	92	0	4	4	52	0	52	148
07:45 AM	8	59	67	0	3	3	47	0	47	117
Total	25	289	314	0	13	13	189	0	189	516
08:00 AM	6	62	68	0	7	7	35	0	35	110
08:15 AM	8	56	64	0	4	4	45	0	45	113
08:30 AM	16	39	55	0	7	7	53	0	53	115
08:45 AM	11	33	44	0	3	3	29	0	29	76
Total	41	190	231	0	21	21	162	0	162	414
Grand Total	66	479	545	0	34	34	351	0	351	930
Apprch %	12.1	87.9		0	100		100	0		
Total %	7.1	51.5	58.6	0	3.7	3.7	37.7	0	37.7	

	Linnel Lane Westbound			Target Driveway Northbound			Linnel Lane Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	1	**90**	91	0	4	4	**52**	0	**52**	147
07:30 AM	**11**	81	**92**	0	4	4	52	0	52	**148**
07:45 AM	8	59	67	0	3	3	47	0	47	117
08:00 AM	6	62	68	0	**7**	**7**	35	0	35	110
Total Volume	26	292	318	0	18	18	186	0	186	522
% App. Total	8.2	91.8		0	100		100	0		
PHF	.591	.811	.864	.000	.643	.643	.894	.000	.894	.882

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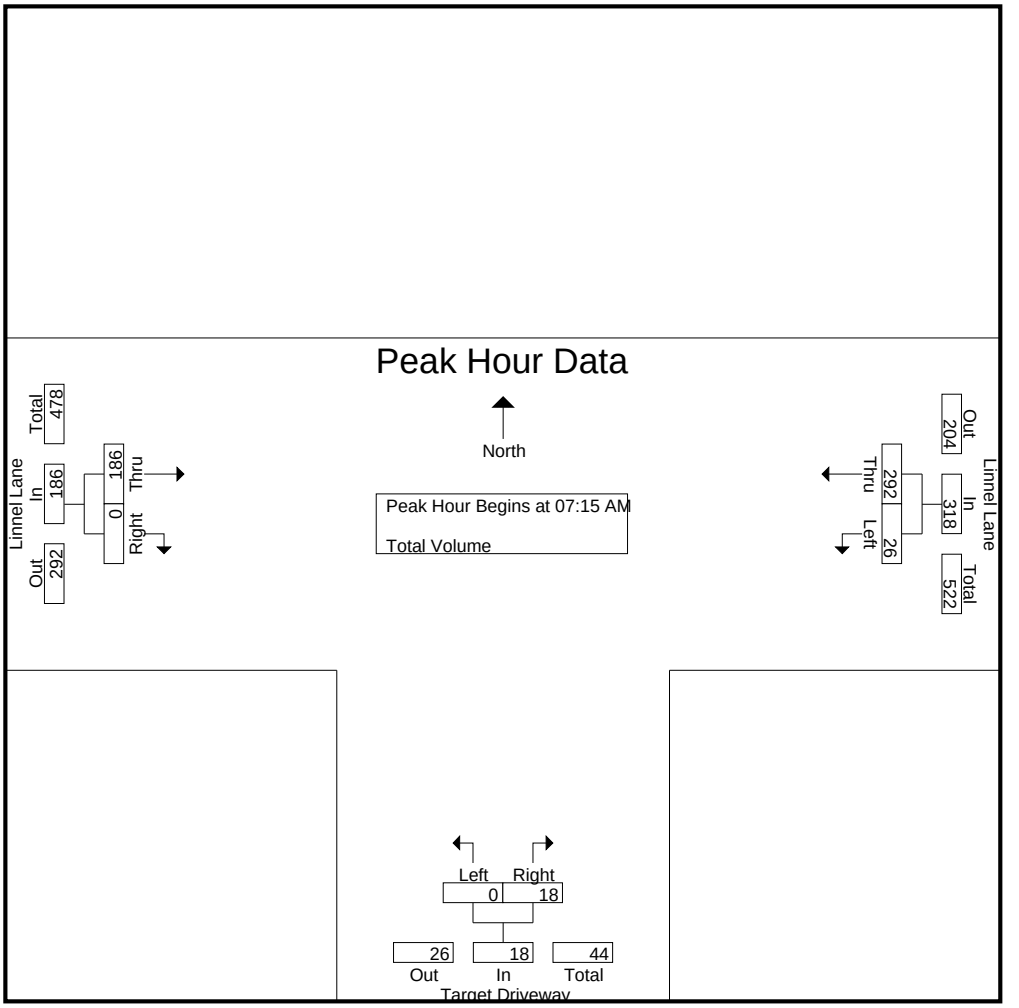
City of Murrieta
N/S: Target Driveway
E/W: Linnel Lane
Weather: Clear

File Name : MUR_Target DW_Linnel AM
Site Code : 20119185
Start Date : 5/2/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:45 AM			07:00 AM		
+0 mins.	1	**90**	91	0	3	3	38	0	38
+15 mins.	**11**	81	**92**	0	**7**	**7**	**52**	0	**52**
+30 mins.	8	59	67	0	4	4	52	0	52
+45 mins.	6	62	68	0	7	7	47	0	47
Total Volume	26	292	318	0	21	21	189	0	189
% App. Total	8.2	91.8		0	100		100	0	
PHF	.591	.811	.864	.000	.750	.750	.909	.000	.909

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City of Murrieta
N/S: Target Driveway
E/W: Linnel Lane
Weather: Clear

File Name : MUR_Target DW_Linnel PM
Site Code : 20119185
Start Date : 5/2/2019
Page No : 1

Groups Printed- Total Volume

	Linnel Lane Westbound			Target Driveway Northbound			Linnel Lane Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	10	45	55	2	12	14	75	0	75	144
04:15 PM	16	32	48	2	16	18	88	1	89	155
04:30 PM	8	55	63	0	17	17	71	1	72	152
04:45 PM	10	39	49	1	22	23	92	0	92	164
Total	44	171	215	5	67	72	326	2	328	615
05:00 PM	18	58	76	2	13	15	83	0	83	174
05:15 PM	13	53	66	1	20	21	103	0	103	190
05:30 PM	10	45	55	1	21	22	76	0	76	153
05:45 PM	11	34	45	0	19	19	72	0	72	136
Total	52	190	242	4	73	77	334	0	334	653
Grand Total	96	361	457	9	140	149	660	2	662	1268
Apprch %	21	79		6	94		99.7	0.3		
Total %	7.6	28.5	36	0.7	11	11.8	52.1	0.2	52.2	

	Linnel Lane Westbound			Target Driveway Northbound			Linnel Lane Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	10	39	49	1	**22**	**23**	92	0	92	164
05:00 PM	**18**	**58**	**76**	**2**	13	15	83	0	83	174
05:15 PM	13	53	66	1	20	21	**103**	0	**103**	**190**
05:30 PM	10	45	55	1	21	22	76	0	76	153
Total Volume	51	195	246	5	76	81	354	0	354	681
% App. Total	20.7	79.3		6.2	93.8		100	0		
PHF	.708	.841	.809	.625	.864	.880	.859	.000	.859	.896

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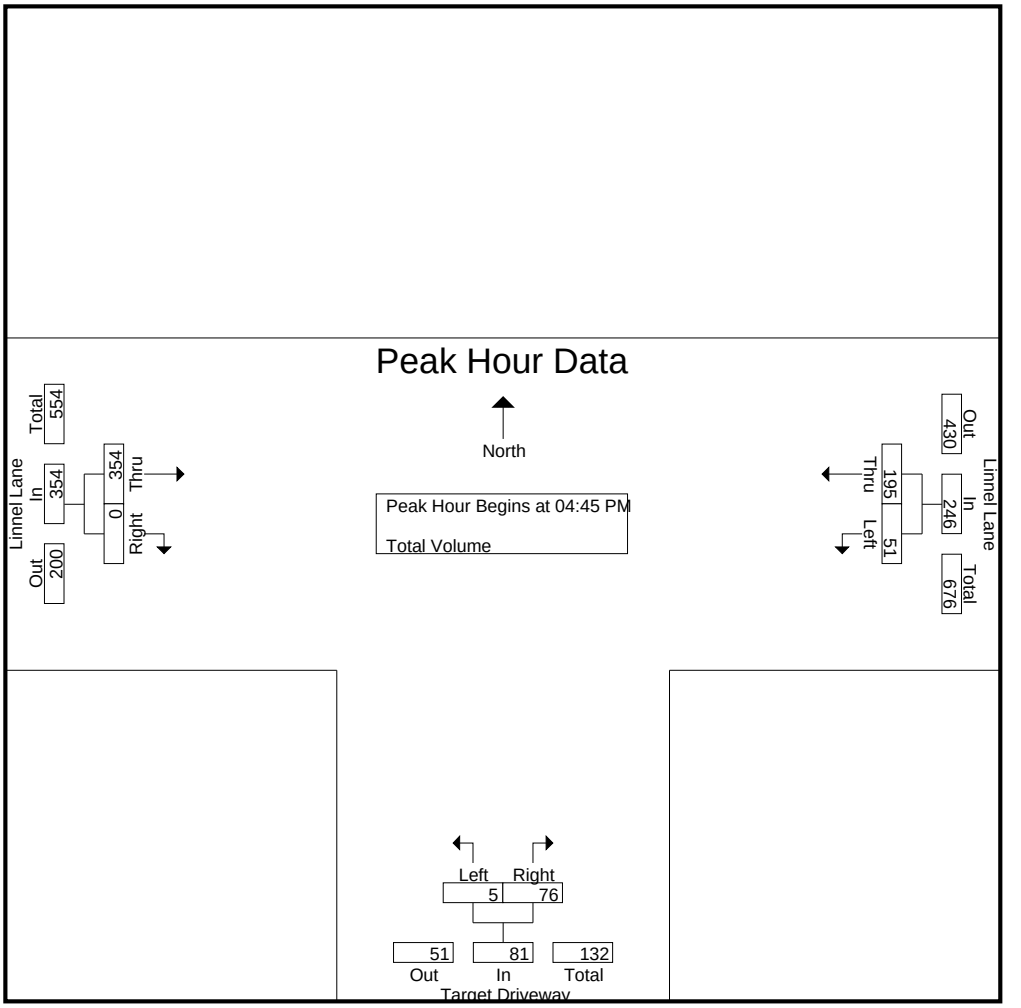
City of Murrieta
N/S: Target Driveway
E/W: Linnel Lane
Weather: Clear

File Name : MUR_Target DW_Linnel PM
Site Code : 20119185
Start Date : 5/2/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:45 PM			04:45 PM		
+0 mins.	8	55	63	1	**22**	**23**	92	0	92
+15 mins.	10	39	49	**2**	13	15	83	0	83
+30 mins.	**18**	**58**	**76**	1	20	21	**103**	0	**103**
+45 mins.	13	53	66	1	21	22	76	0	76
Total Volume	49	205	254	5	76	81	354	0	354
% App. Total	19.3	80.7		6.2	93.8		100	0	
PHF	.681	.884	.836	.625	.864	.880	.859	.000	.859

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Murrieta
Linnel Lane
E/ McElwain Road
24 Hour Directional Volume Count

MUR001
Site Code: 201-19147

Start Time	28-Feb-19 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	26			2	41				
12:15		2	30			1	34				
12:30		1	44			6	53				
12:45		3	39	7	139	0	37	9	165	16	304
01:00		1	30			2	33				
01:15		2	29			1	28				
01:30		2	40			2	35				
01:45		0	40	5	139	1	34	6	130	11	269
02:00		0	47			1	**45**				
02:15		0	35			0	**62**				
02:30		0	45			2	**56**				
02:45		0	41	0	168	3	**55**	6	218	6	386
03:00		1	61			3	40				
03:15		1	80			0	39				
03:30		1	93			1	48				
03:45		1	64	4	298	1	53	5	180	9	478
04:00		0	68			3	36				
04:15		1	90			3	48				
04:30		1	73			2	45				
04:45		1	**90**	3	321	6	43	14	172	17	493
05:00		2	**67**			4	68				
05:15		11	**74**			7	47				
05:30		10	**91**			9	51				
05:45		11	81	34	313	9	39	29	205	63	518
06:00		15	56			15	36				
06:15		12	54			17	38				
06:30		11	55			27	26				
06:45		28	50	66	215	49	30	108	130	174	345
07:00		40	35			**75**	22				
07:15		**44**	18			**112**	25				
07:30		**59**	20			**97**	18				
07:45		**65**	15	208	88	**91**	23	375	88	583	176
08:00		**45**	9			68	13				
08:15		29	20			64	10				
08:30		40	14			34	15				
08:45		36	10	150	53	42	11	208	49	358	102
09:00		42	11			37	13				
09:15		34	12			40	11				
09:30		32	5			35	8				
09:45		33	2	141	30	33	7	145	39	286	69
10:00		30	3			37	2				
10:15		21	9			24	3				
10:30		37	5			45	4				
10:45		21	2	109	19	37	8	143	17	252	36
11:00		24	2			34	0				
11:15		25	3			47	3				
11:30		28	2			42	1				
11:45		32	2	109	9	35	2	158	6	267	15
Total		836	1792	836	1792	1206	1399	1206	1399	2042	3191
Combined Total		2628		2628		2605		2605		5233	
AM Peak	-	07:15	-	-	-	07:00	-	-	-	-	-
Vol.	-	213	-	-	-	375	-	-	-	-	-
P.H.F.		0.819				0.837					
PM Peak	-	-	04:45	-	-	-	02:00	-	-	-	-
Vol.	-	-	322	-	-	-	218	-	-	-	-
P.H.F.			0.885				0.879				
Percentage		31.8%	68.2%			46.3%	53.7%				
ADT/AADT		ADT 5,233		AADT 5,233							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
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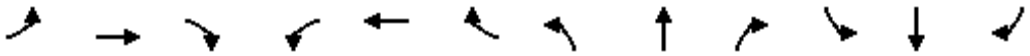
City of Murrieta
McElwain Road
S/ Linnel Lane
24 Hour Directional Volume Count

MUR002
Site Code: 201-19147

Start Time	28-Feb-19 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	26			2	41				
12:15		2	30			1	34				
12:30		1	44			6	54				
12:45		3	39	7	139	0	37	9	166	16	305
01:00		1	31			2	33				
01:15		2	30			1	28				
01:30		2	39			2	35				
01:45		0	40	5	140	1	34	6	130	11	270
02:00		0	48			1	**45**				
02:15		0	33			0	**63**				
02:30		0	44			2	**54**				
02:45		0	41	0	166	3	**55**	6	217	6	383
03:00		1	61			2	40				
03:15		1	80			0	39				
03:30		0	93			1	47				
03:45		1	64	3	298	1	53	4	179	7	477
04:00		0	68			3	36				
04:15		1	90			3	48				
04:30		1	73			2	46				
04:45		1	**91**	3	322	6	42	14	172	17	494
05:00		2	**68**			5	71				
05:15		11	**74**			7	46				
05:30		10	**91**			9	51				
05:45		11	82	34	315	9	39	30	207	64	522
06:00		15	57			15	36				
06:15		13	55			18	37				
06:30		10	55			27	26				
06:45		28	49	66	216	50	30	110	129	176	345
07:00		40	35			**75**	20				
07:15		**43**	18			**112**	25				
07:30		**59**	20			**99**	18				
07:45		**65**	15	207	88	**91**	23	377	86	584	174
08:00		**46**	10			68	13				
08:15		29	20			64	10				
08:30		40	14			34	15				
08:45		36	10	151	54	42	11	208	49	359	103
09:00		42	11			37	13				
09:15		35	13			41	11				
09:30		32	5			35	8				
09:45		33	2	142	31	34	7	147	39	289	70
10:00		30	3			37	2				
10:15		22	9			25	3				
10:30		37	5			45	5				
10:45		22	3	111	20	37	8	144	18	255	38
11:00		24	2			34	2				
11:15		25	3			47	4				
11:30		28	2			42	1				
11:45		33	2	110	9	39	2	162	9	272	18
Total		839	1798	839	1798	1217	1401	1217	1401	2056	3199
Combined Total		2637		2637		2618		2618		5255	
AM Peak	-	07:15	-	-	-	07:00	-	-	-	-	-
Vol.	-	213	-	-	-	377	-	-	-	-	-
P.H.F.		0.819				0.842					
PM Peak	-	-	04:45	-	-	-	02:00	-	-	-	-
Vol.	-	-	324	-	-	-	217	-	-	-	-
P.H.F.			0.890				0.861				
Percentage		31.8%	68.2%			46.5%	53.5%				
ADT/AADT		ADT 5,255		AADT 5,255							

APPENDIX C

EXISTING CONDITIONS
INTERSECTION ANALYSIS CALCULATION WORKSHEETS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	3	374	1	0	0	0	207	1	0	0
Future Volume (vph)	0	0	3	374	1	0	0	0	207	1	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865							0.850			
Flt Protected					0.952						0.950	
Satd. Flow (prot)	0	1611	0	0	1773	0	0	1863	1583	0	1770	0
Flt Permitted					0.952						0.950	
Satd. Flow (perm)	0	1611	0	0	1773	0	0	1863	1583	0	1770	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		394			602			211			349	
Travel Time (s)		9.0			13.7			4.8			7.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	374	1	0	0	0	207	1	0	0
Future Vol, veh/h	0	0	3	374	1	0	0	0	207	1	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	3	402	1	0	0	0	223	1	0	0
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	7.4	12.9	9.6	8.6
HCM LOS	A	B	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	100%	100%
Vol Thru, %	100%	0%	0%	0%	0%
Vol Right, %	0%	100%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	207	3	375	1
LT Vol	0	0	0	374	1
Through Vol	0	0	0	1	0
RT Vol	0	207	3	0	0
Lane Flow Rate	0	223	3	403	1
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0	0.299	0.004	0.526	0.002
Departure Headway (Hd)	5.541	4.835	4.368	4.693	5.535
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	0	741	814	766	644
Service Time	3.279	2.572	2.425	2.728	3.594
HCM Lane V/C Ratio	0	0.301	0.004	0.526	0.002
HCM Control Delay	8.3	9.6	7.4	12.9	8.6
HCM Lane LOS	N	A	A	B	A
HCM 95th-tile Q	0	1.3	0	3.1	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	236	1385	13	17	1101	74	6	4	12	379	4	297
Future Volume (vph)	236	1385	13	17	1101	74	6	4	12	379	4	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		100	200		150	0		0	250		0
Storage Lanes	2		2	1		1	1		0	1		0
Taper Length (ft)	150			120			25			90		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	*1.00	1.00	1.00
Ped Bike Factor											0.99	
Frt											0.852	
Flt Protected												
Satd. Flow (prot)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1564	0
Flt Permitted												
Satd. Flow (perm)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1564	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			75		13			316	
Link Speed (mph)		45			45			30			35	
Link Distance (ft)		655			690			257			759	
Travel Time (s)		9.9			10.5			5.8			14.8	
Confl. Peds. (#/hr)												2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												

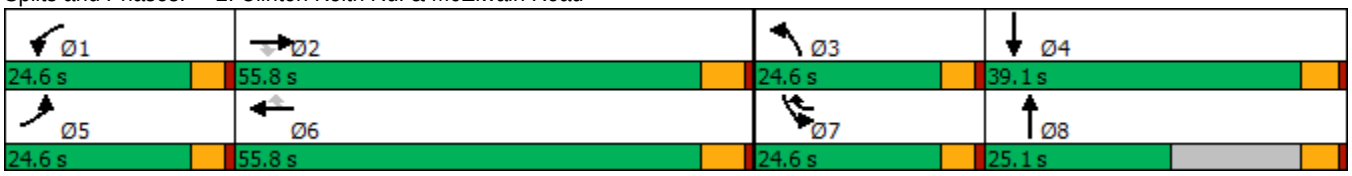
Intersection Summary	
Area Type:	Other

* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	236	1385	13	17	1101	74	6	4	379	4
Future Volume (vph)	236	1385	13	17	1101	74	6	4	379	4
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	24.6	55.8	55.8	24.6	55.8	24.6	24.6	25.1	24.6	39.1
Total Split (%)	17.1%	38.7%	38.7%	17.1%	38.7%	17.1%	17.1%	17.4%	17.1%	27.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	10.8	38.8	38.8	6.8	26.3	47.2	6.7	12.4	14.6	18.4
Actuated g/C Ratio	0.15	0.52	0.52	0.09	0.36	0.64	0.09	0.17	0.20	0.25
v/c Ratio	0.46	0.50	0.01	0.11	0.59	0.06	0.04	0.05	0.55	0.51
Control Delay	36.1	15.7	0.0	44.0	22.7	3.0	44.2	21.9	33.4	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	15.7	0.0	44.0	22.7	3.0	44.2	21.9	33.4	6.6
LOS	D	B	A	D	C	A	D	C	C	A
Approach Delay		18.5			21.8			27.7		21.6
Approach LOS		B			C			C		C

Intersection Summary	
Cycle Length: 144.1	
Actuated Cycle Length: 74	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 20.3	Intersection LOS: C
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

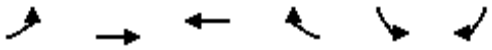
Splits and Phases: 2: Clinton Keith Rd. & McElwain Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	1385	13	17	1101	74	6	4	12	379	4	297
Future Volume (veh/h)	236	1385	13	17	1101	74	6	4	12	379	4	297
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	251	1473	14	18	1171	79	6	4	13	403	4	316
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	342	2685	758	44	2283	867	17	46	149	499	5	390
Arrive On Green	0.10	0.48	0.48	0.02	0.41	0.41	0.01	0.12	0.12	0.14	0.25	0.25
Sat Flow, veh/h	3563	5611	1585	1781	5611	1585	1781	387	1257	3563	20	1564
Grp Volume(v), veh/h	251	1473	14	18	1171	79	6	0	17	403	0	320
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1644	1781	0	1584
Q Serve(g_s), s	5.8	15.7	0.4	0.8	13.2	2.0	0.3	0.0	0.8	9.2	0.0	16.0
Cycle Q Clear(g_c), s	5.8	15.7	0.4	0.8	13.2	2.0	0.3	0.0	0.8	9.2	0.0	16.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.76	1.00		0.99
Lane Grp Cap(c), veh/h	342	2685	758	44	2283	867	17	0	195	499	0	395
V/C Ratio(X)	0.73	0.55	0.02	0.41	0.51	0.09	0.36	0.00	0.09	0.81	0.00	0.81
Avail Cap(c_a), veh/h	845	3328	940	423	3328	1162	423	0	390	845	0	639
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	0.00	1.00
Uniform Delay (d), s/veh	37.1	15.5	11.6	40.5	18.7	9.1	41.5	0.0	33.1	35.2	0.0	29.8
Incr Delay (d2), s/veh	1.2	0.4	0.0	2.3	0.4	0.1	12.7	0.0	0.2	1.2	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	5.9	0.1	0.4	5.2	0.7	0.2	0.0	0.3	4.0	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	16.0	11.6	42.8	19.2	9.2	54.2	0.0	33.3	36.4	0.0	34.8
LnGrp LOS	D	B	B	D	B	A	D	A	C	D	A	C
Approach Vol, veh/h		1738			1268			23			723	
Approach Delay, s/veh		19.1			18.9			38.7			35.6	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	46.1	5.4	26.1	12.7	40.1	16.4	15.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	4.6	5.8	4.6	5.1
Max Green Setting (Gmax), s	20.0	50.0	20.0	34.0	20.0	50.0	20.0	20.0
Max Q Clear Time (g_c+I1), s	2.8	17.7	2.3	18.0	7.8	15.2	11.2	2.8
Green Ext Time (p_c), s	0.0	22.3	0.0	2.2	0.3	19.1	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	163	61	144	3	21	244
Future Volume (vph)	163	61	144	3	21	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	50
Storage Lanes	1			0	1	0
Taper Length (ft)	90				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.997		0.876	
Flt Protected	0.950				0.996	
Satd. Flow (prot)	1770	3539	3529	0	1625	0
Flt Permitted	0.950				0.996	
Satd. Flow (perm)	1770	3539	3529	0	1625	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		888	602		266	
Travel Time (s)		20.2	13.7		6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	163	61	144	3	21	244
Future Vol, veh/h	163	61	144	3	21	244
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	181	68	160	3	23	271

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	163	0	-	0	558	82
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	396	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1413	-	-	-	460	961
Stage 1	-	-	-	-	850	-
Stage 2	-	-	-	-	649	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1413	-	-	-	401	961
Mov Cap-2 Maneuver	-	-	-	-	401	-
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	649	-

Approach	EB	WB	SB
HCM Control Delay, s	5.8	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1413	-	-	-	865
HCM Lane V/C Ratio	0.128	-	-	-	0.34
HCM Control Delay (s)	7.9	-	-	-	11.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.5

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	186	0	26	292	0	18
Future Volume (vph)	186	0	26	292	0	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			60		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected			0.950			
Satd. Flow (prot)	1863	0	1770	1863	1863	1583
Flt Permitted			0.950			
Satd. Flow (perm)	1863	0	1770	1863	1863	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	602			484	231	
Travel Time (s)	13.7			11.0	5.3	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)						

Intersection Summary	
Area Type:	Other

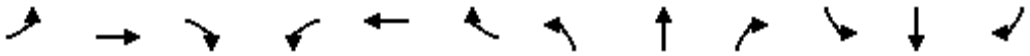
Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	186	0	26	292	0	18
Future Vol, veh/h	186	0	26	292	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
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	211	0	30	332	0	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	211	0	603	211
Stage 1	-	-	-	-	211	-
Stage 2	-	-	-	-	392	-
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	-	-	1360	-	462	829
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	683	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1360	-	452	829
Mov Cap-2 Maneuver	-	-	-	-	452	-
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	683	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	829	-	-	1360	-
HCM Lane V/C Ratio	-	0.025	-	-	0.022	-
HCM Control Delay (s)	0	9.5	-	-	7.7	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	2	207	2	0	2	1	321	0	1	0
Future Volume (vph)	0	1	2	207	2	0	2	1	321	0	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.910							0.850			
Flt Protected					0.953			0.968				
Satd. Flow (prot)	0	1695	0	0	1775	0	0	1803	1583	0	1863	0
Flt Permitted					0.953			0.968				
Satd. Flow (perm)	0	1695	0	0	1775	0	0	1803	1583	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		394			602			211			349	
Travel Time (s)		9.0			13.7			4.8			7.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	2	207	2	0	2	1	321	0	1	0
Future Vol, veh/h	0	1	2	207	2	0	2	1	321	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	2	218	2	0	2	1	338	0	1	0
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	7.7	10.1	10.2	8
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	0%	0%	99%	0%
Vol Thru, %	33%	0%	33%	1%	100%
Vol Right, %	0%	100%	67%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	321	3	209	1
LT Vol	2	0	0	207	0
Through Vol	1	0	1	2	1
RT Vol	0	321	2	0	0
Lane Flow Rate	3	338	3	220	1
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.005	0.414	0.004	0.3	0.001
Departure Headway (Hd)	5.446	4.408	4.598	4.911	4.993
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	658	818	775	730	715
Service Time	3.168	2.129	2.646	2.946	3.034
HCM Lane V/C Ratio	0.005	0.413	0.004	0.301	0.001
HCM Control Delay	8.2	10.2	7.7	10.1	8
HCM Lane LOS	A	B	A	B	A
HCM 95th-tile Q	0	2	0	1.3	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	449	1395	32	43	1352	190	34	13	30	350	14	299
Future Volume (vph)	449	1395	32	43	1352	190	34	13	30	350	14	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		100	200		150	0		0	250		0
Storage Lanes	2		2	1		1	1		0	1		0
Taper Length (ft)	150			120			25			90		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	*1.00	1.00	1.00
Ped Bike Factor											0.99	
Frt											0.857	
Flt Protected												
Satd. Flow (prot)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1574	0
Flt Permitted												
Satd. Flow (perm)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1574	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			155		32			322	
Link Speed (mph)		45			45			30			35	
Link Distance (ft)		655			690			257			759	
Travel Time (s)		9.9			10.5			5.8			14.8	
Confl. Peds. (#/hr)												2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												

Intersection Summary	
Area Type:	Other

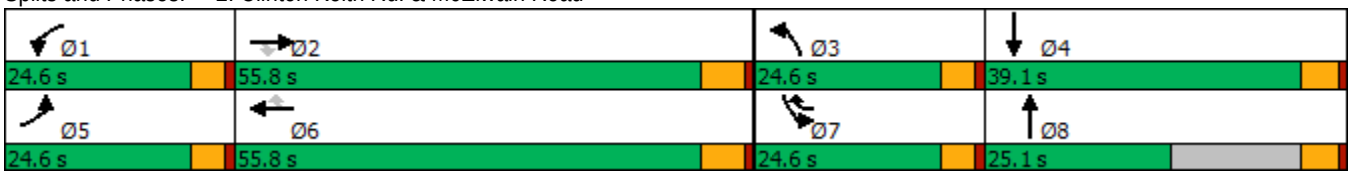
* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	449	1395	32	43	1352	190	34	13	350	14
Future Volume (vph)	449	1395	32	43	1352	190	34	13	350	14
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	24.6	55.8	55.8	24.6	55.8	24.6	24.6	25.1	24.6	39.1
Total Split (%)	17.1%	38.7%	38.7%	17.1%	38.7%	17.1%	17.1%	17.4%	17.1%	27.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	18.8	51.0	51.0	7.8	36.6	58.3	8.1	12.9	15.5	21.2
Actuated g/C Ratio	0.19	0.51	0.51	0.08	0.36	0.58	0.08	0.13	0.15	0.21
v/c Ratio	0.69	0.53	0.03	0.32	0.71	0.18	0.25	0.17	0.65	0.58
Control Delay	47.2	20.3	0.1	57.0	30.8	3.9	55.0	22.9	48.9	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	20.3	0.1	57.0	30.8	3.9	55.0	22.9	48.9	9.6
LOS	D	C	A	E	C	A	D	C	D	A
Approach Delay		26.4			28.3			37.2		30.4
Approach LOS		C			C			D		C

Intersection Summary

Cycle Length: 144.1
Actuated Cycle Length: 100.3
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 27.9 — Intersection LOS: C
Intersection Capacity Utilization 80.1% — ICU Level of Service D
Analysis Period (min) 15

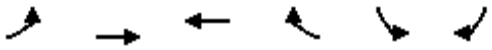
Splits and Phases: 2: Clinton Keith Rd. & McElwain Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	1395	32	43	1352	190	34	13	30	350	14	299
Future Volume (veh/h)	449	1395	32	43	1352	190	34	13	30	350	14	299
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	483	1500	34	46	1454	204	37	14	32	376	15	322
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	546	2846	804	72	2213	823	65	76	174	444	17	363
Arrive On Green	0.15	0.51	0.51	0.04	0.39	0.39	0.04	0.15	0.15	0.12	0.24	0.24
Sat Flow, veh/h	3563	5611	1585	1781	5611	1585	1781	506	1156	3563	71	1521
Grp Volume(v), veh/h	483	1500	34	46	1454	204	37	0	46	376	0	337
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1662	1781	0	1592
Q Serve(g_s), s	15.1	20.4	1.2	2.9	24.0	8.1	2.3	0.0	2.7	11.7	0.0	23.2
Cycle Q Clear(g_c), s	15.1	20.4	1.2	2.9	24.0	8.1	2.3	0.0	2.7	11.7	0.0	23.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.70	1.00		0.96
Lane Grp Cap(c), veh/h	546	2846	804	72	2213	823	65	0	250	444	0	380
V/C Ratio(X)	0.88	0.53	0.04	0.64	0.66	0.25	0.57	0.00	0.18	0.85	0.00	0.89
Avail Cap(c_a), veh/h	629	2846	804	314	2475	897	314	0	293	629	0	477
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	0.00	1.00
Uniform Delay (d), s/veh	47.0	18.8	14.1	53.6	28.1	15.0	53.7	0.0	42.1	48.6	0.0	41.7
Incr Delay (d2), s/veh	11.7	0.4	0.1	3.5	0.9	0.4	7.7	0.0	0.4	5.4	0.0	16.1
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	7.3	8.3	0.4	1.3	10.3	3.0	1.2	0.0	1.2	5.5	0.0	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.7	19.2	14.1	57.0	29.0	15.4	61.4	0.0	42.4	54.0	0.0	57.8
LnGrp LOS	E	B	B	E	C	B	E	A	D	D	A	E
Approach Vol, veh/h		2017			1704			83			713	
Approach Delay, s/veh		28.6			28.1			50.9			55.8	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	63.3	8.7	32.1	22.0	50.5	18.7	22.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	4.6	5.8	4.6	5.1
Max Green Setting (Gmax), s	20.0	50.0	20.0	34.0	20.0	50.0	20.0	20.0
Max Q Clear Time (g_c+I1), s	4.9	22.4	4.3	25.2	17.1	26.0	13.7	4.7
Green Ext Time (p_c), s	0.0	20.3	0.0	1.6	0.3	18.7	0.4	0.1

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	258	146	82	14	25	165
Future Volume (vph)	258	146	82	14	25	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	50
Storage Lanes	1			0	1	0
Taper Length (ft)	90				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.978		0.883	
Flt Protected	0.950				0.993	
Satd. Flow (prot)	1770	3539	3461	0	1633	0
Flt Permitted	0.950				0.993	
Satd. Flow (perm)	1770	3539	3461	0	1633	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		888	602		266	
Travel Time (s)		20.2	13.7		6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	258	146	82	14	25	165
Future Vol, veh/h	258	146	82	14	25	165
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	287	162	91	16	28	183

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	107	0	-	0	754	54
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	655	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1482	-	-	-	345	1002
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	479	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1482	-	-	-	278	1002
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	479	-

Approach	EB	WB	SB
HCM Control Delay, s	5.1	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1482	-	-	-	746
HCM Lane V/C Ratio	0.193	-	-	-	0.283
HCM Control Delay (s)	8	-	-	-	11.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1.2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	354	0	51	195	5	76
Future Volume (vph)	354	0	51	195	5	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			60		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1863	0	1770	1863	1770	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	602			484	231	
Travel Time (s)	13.7			11.0	5.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	354	0	51	195	5	76
Future Vol, veh/h	354	0	51	195	5	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	393	0	57	217	6	84

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	393	0	724	393
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	331	-
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	-	-	1166	-	393	656
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	728	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1166	-	374	656
Mov Cap-2 Maneuver	-	-	-	-	374	-
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	728	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	374	656	-	-	1166	-
HCM Lane V/C Ratio	0.015	0.129	-	-	0.049	-
HCM Control Delay (s)	14.8	11.3	-	-	8.2	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.4	-	-	0.2	-

APPENDIX D

CUMULATIVE DEVELOPMENT PROJECT DATA

KUNZMAN ASSOCIATES, INC.

MITCHELL CROSSING

TRAFFIC IMPACT ANALYSIS

February 2, 2015

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

KUNZMAN ASSOCIATES, INC.

MITCHELL CROSSING

TRAFFIC IMPACT ANALYSIS

February 2, 2015

Prepared by:

Carl Ballard, LEED GA
William Kunzman, P.E.

1111 Town & Country Road, Suite 34
Orange, California 92868
(714) 973-8383

www.traffic-engineer.com

3534c

Table 3

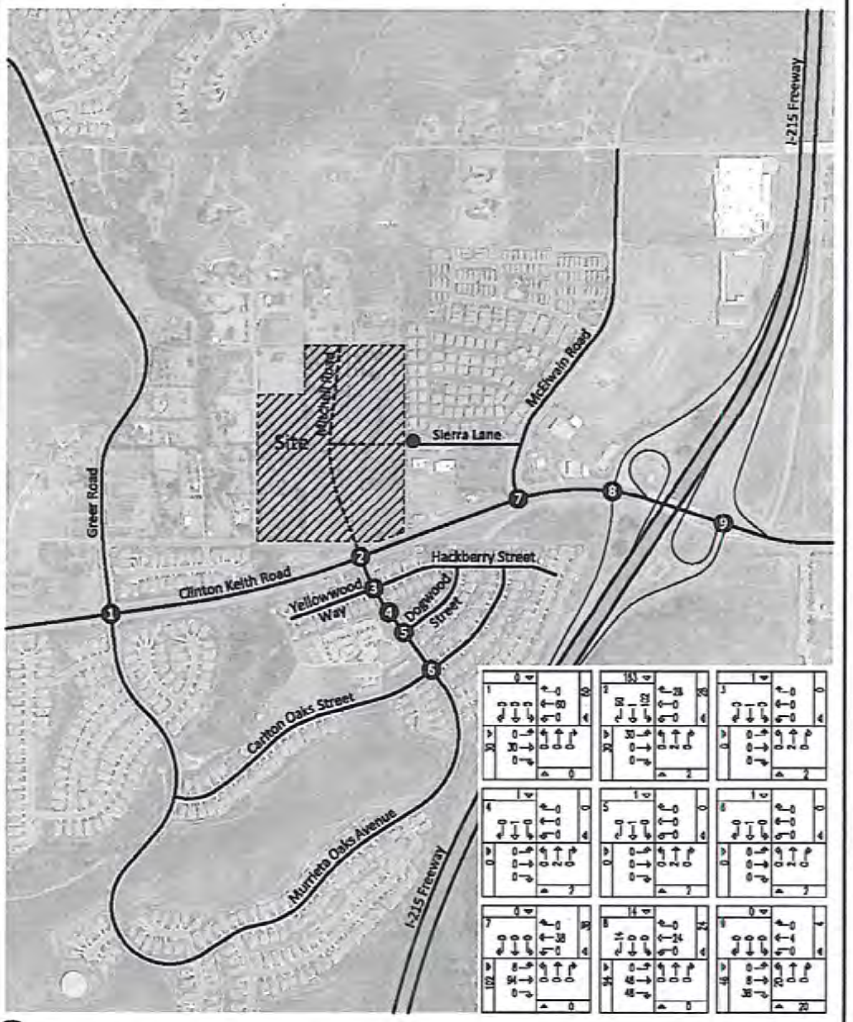
Project Trip Generation[1]

Land Use	Quantity	Units[2]	Peak Hour						Daily
			Morning			Evening			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Multi-Family Attached Residential		DU	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Specialty Retail		TSF	0.80	0.53	1.33	1.19	1.52	2.71	44.32
Trips Generated									
Multi-Family Attached Residential	331	DU	33	136	169	132	73	205	2,201
Specialty Retail	50.000	TSF	40	27	67	60	76	136	2,216
Total			73	163	236	192	149	341	4,417

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 220 and 826. The morning peak hour specialty retail trip generation has been obtained from the San Diego Association of Governments, Traffic Generators, April 2003.

[2] DU = Dwelling Units; TSF = Thousand Square Feet

Figure 16
Project Morning Peak Hour Intersection Turning Movement Volumes

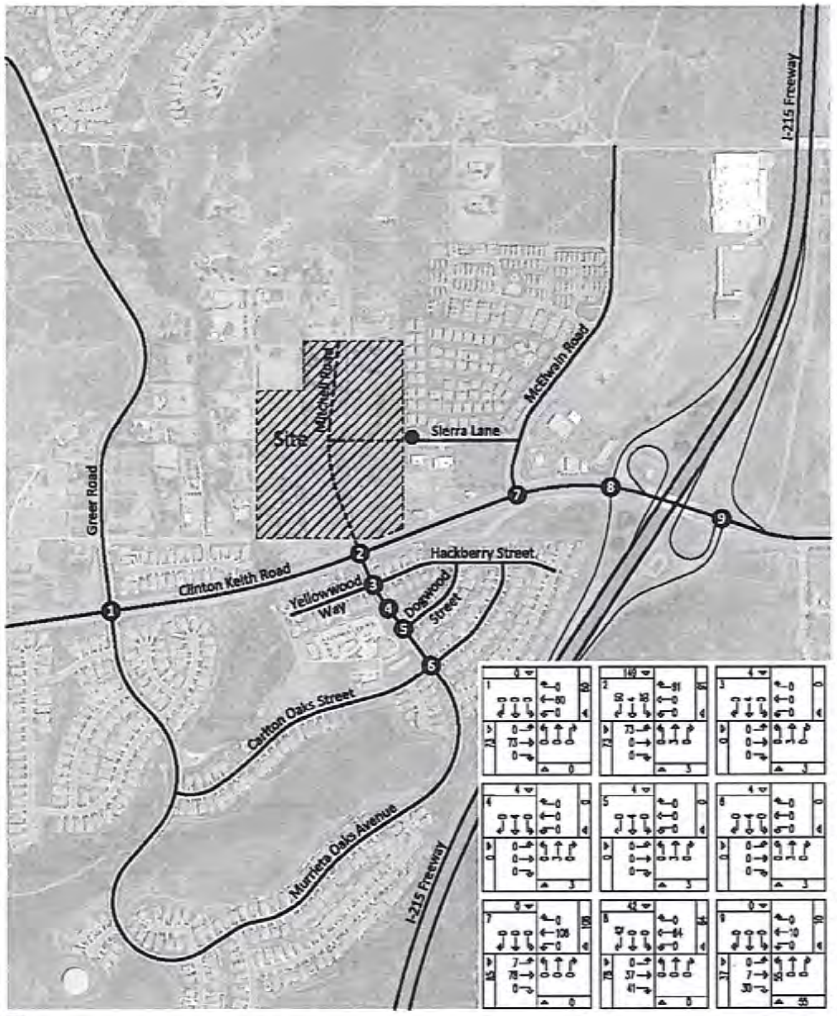


KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

3534c/16

Figure 17
Project Evening Peak Hour Intersection Turning Movement Volumes



KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.
OVER 35 YEARS OF EXCELLENT SERVICE

3534c/17

THE VINEYARD SHOPPING CENTER
TRAFFIC IMPACT ANALYSIS
(CASE NO. DPO-2012-3260)
CITY OF MURRIETA, CALIFORNIA

APRIL 8, 2013

Prepared for:

CK-17, L.P.
Mr. Allan L. Davis
RETAIL DEVELOPMENT ADVISORS
27890 Clinton Keith Rd., Suite D-490
Murrieta, CA 92562

Prepared by:

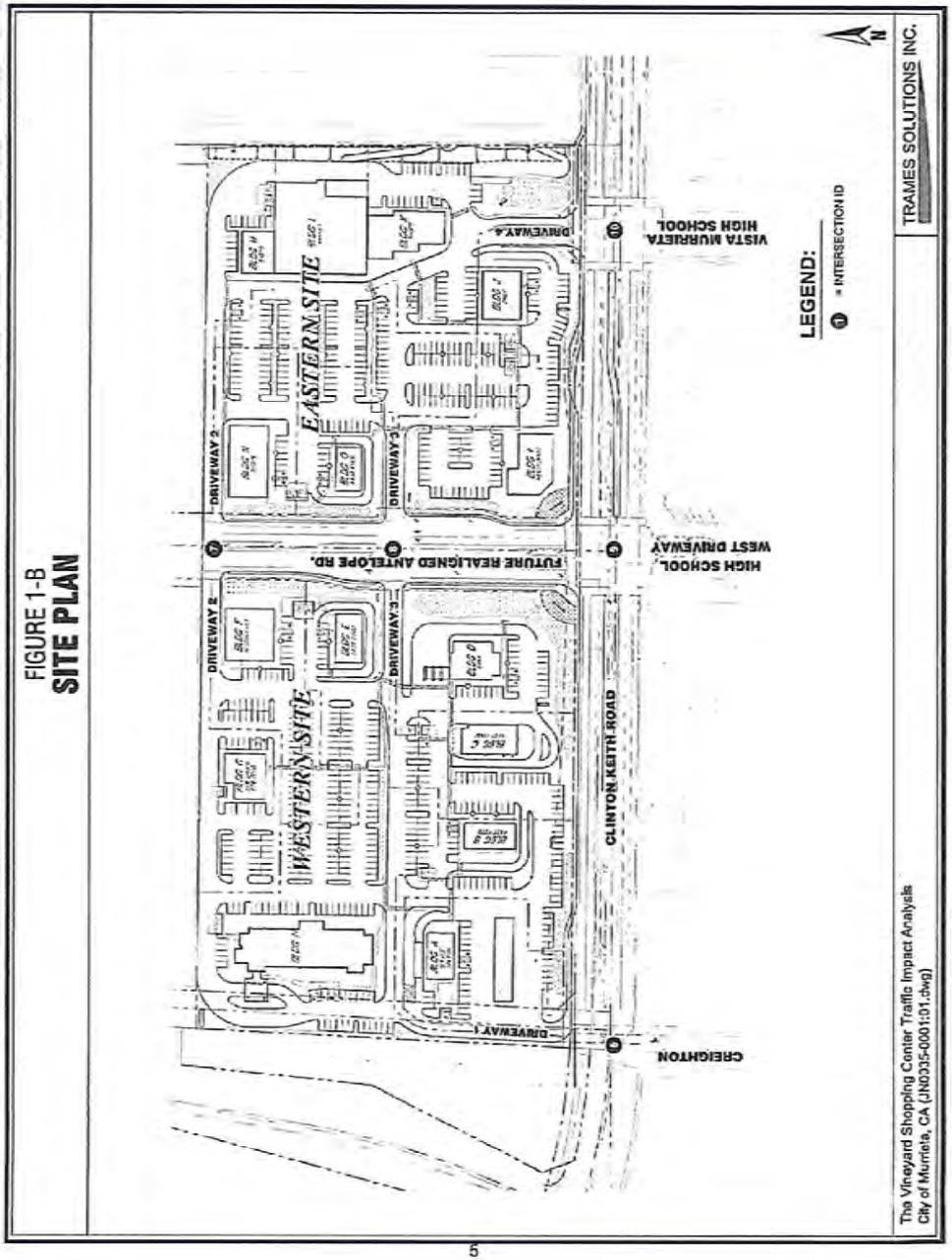
REGISTERED PROFESSIONAL ENGINEER
SCOTT L. SATO
TR 2660
EXP. 12/30/13
TRAFFIC
STATE OF CALIFORNIA

CITY OF MURRIETA
Community Development/Planning Dept.
RECEIVED
MAY 14 2013
CASE # DP-012-3260

Scott Sato, P.E.
100 E. San Marcos Boulevard, Suite 400
San Marcos, CA 92069

TRAMES SOLUTIONS INC.

(0035-0001-03)



5

TABLE 3-2

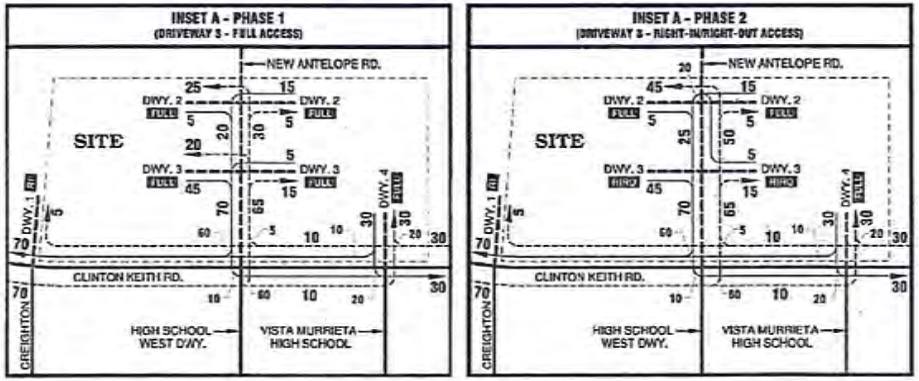
TRIP GENERATION SUMMARY

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR AM IN	AM OUT	AM TOTAL	PM IN	PM OUT	PM TOTAL	DAILY
West Side									
Shopping Center	30.149	TSF	46	29	75	129	140	269	3,115
Hotel	91	RM	31	20	51	28	25	53	743
Commercial Pass-By	25%		-12	-7	-19	-32	-35	-67	-779
West Side Subtotal			65	42	107	125	130	255	3,079
East Side									
Shopping Center	48.34	TSF	62	38	100	177	191	368	4,234
Commercial Pass-By	25%		-16	-10	-26	-44	-48	-92	-1,059
East Side Subtotal			46	28	74	133	143	276	3,175
Project Total			111	70	181	258	273	531	6,254

[1] RM = Rooms; TSF = Thousand Square Feet

FIGURE 3-A

PROJECT TRIP DISTRIBUTION



LEGEND:

- 10 = PERCENT FROM PROJECT (OUTBOUND)
- 10 = PERCENT TO PROJECT (INBOUND)
- FULL = FULL ACCESS
- RIRO = RIGHT-IN/RIGHT-OUT ONLY
- RI = RIGHT-IN ONLY
- = NEW ANTELOPE ROAD, FUTURE ROADWAY DEFERRED - CITY TO EXTEND
- = CLINTON KEITH ROAD, FUTURE ROADWAY - 1/2 WIDTH EXTENSION TO BE BUILT BY THE COUNTY CONCURRENT WITH THE PROJECT

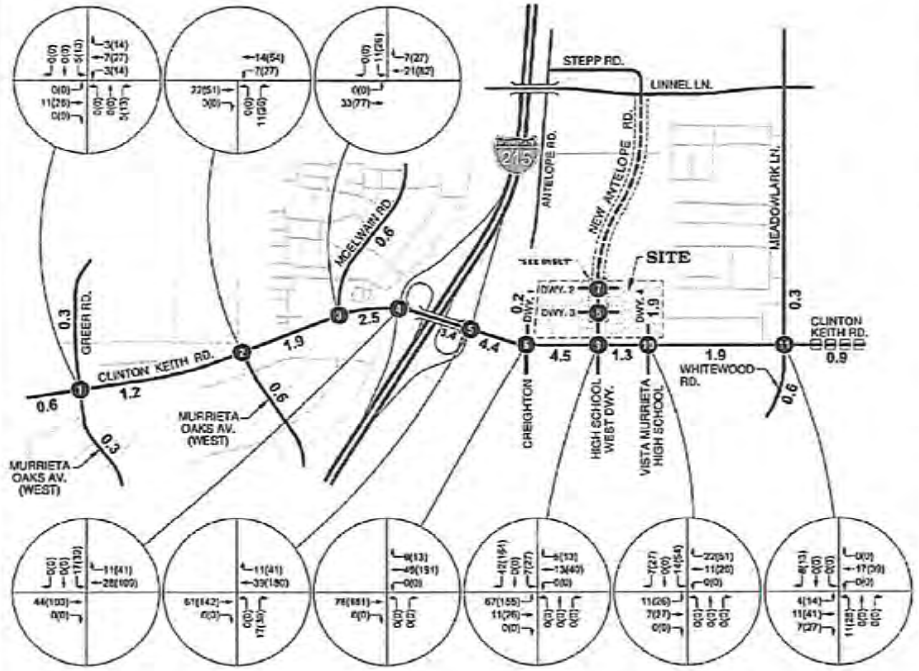
N

The Vineyard Shopping Center Traffic Impact Analysis
City of Murrieta, CA (JN0035-0001:01.dwg)

TRAMES SOLUTIONS INC.

FIGURE 3-B

PROJECT ONLY TRAFFIC VOLUMES



LEGEND:

- = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR VOLUMES
- 1.0 = VEHICLES PER DAY (1000's)
- FULL = FULL ACCESS
- RIRO = RIGHT-IN/RIGHT-OUT ONLY ACCESS
- = NEW ANTELOPE ROAD, FUTURE ROADWAY DEFERRED - CITY TO EXTEND
- = CLINTON KEITH ROAD, FUTURE ROADWAY - 1/2 WIDTH EXTENSION TO BE BUILT BY THE COUNTY CONCURRENT WITH THE PROJECT

N

The Vineyard Shopping Center Traffic Impact Analysis
City of Murrieta, CA (JN0035-0001:02.dwg)

TRAMES SOLUTIONS INC.

LINSCOTT LAW & GREENSPAN engineers

TRAFFIC IMPACT ANALYSIS

MAKENA HILLS

City of Murrieta, California
October 5, 2017

LLG Ref. 3-17-2704

CITY OF MURRIETA
Community Development/Planning Dept.
RECEIVED
NOV 27 2017
CASE #
TPM - 2017 - 1314
EA - 2017 - 1515

Prepared by:
Amy Downing, P.E.
Transportation Engineer

Under the Supervision of:
John Boarman, P.E.
Principal Engineer

Linscott, Law & Greenspan, Engineers
4542 Ruffner Street
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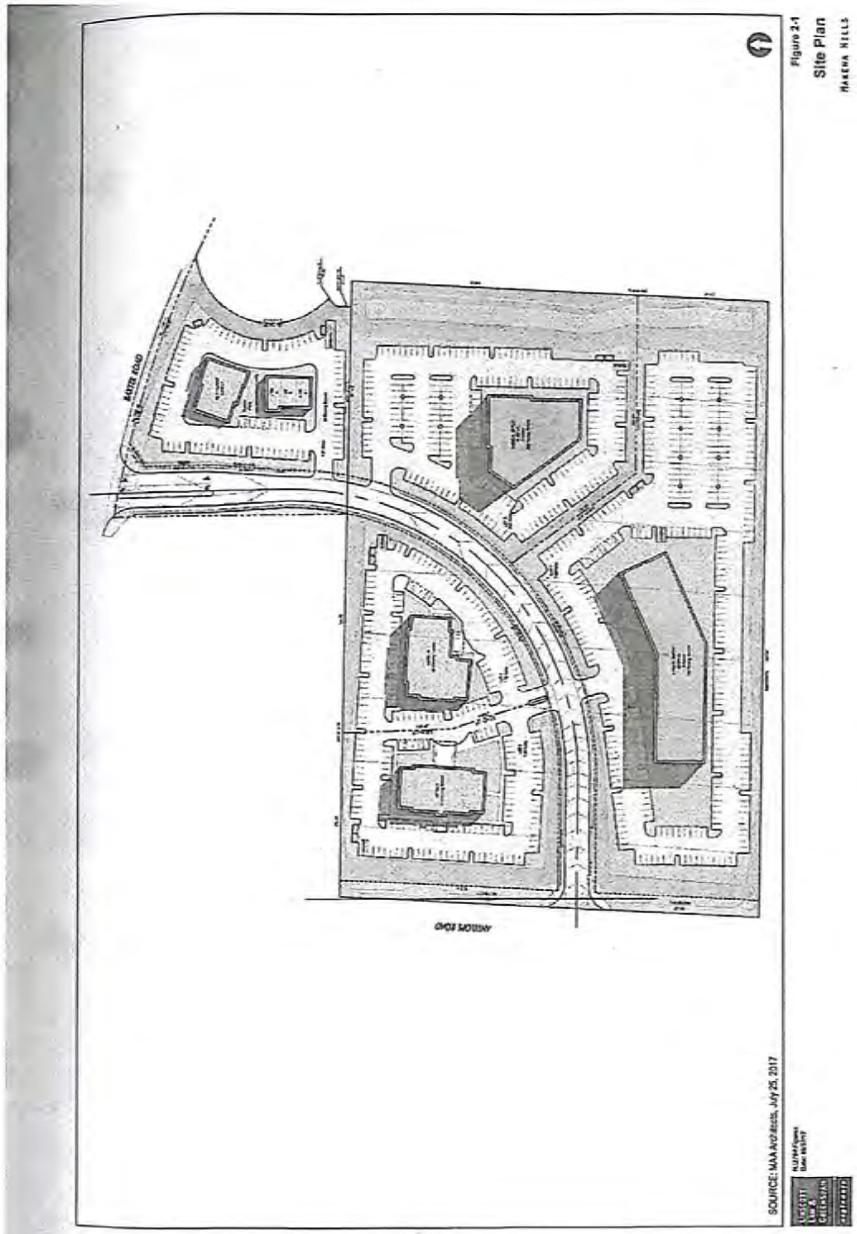


Figure 2-1
Site Plan
MAKENA HILLS

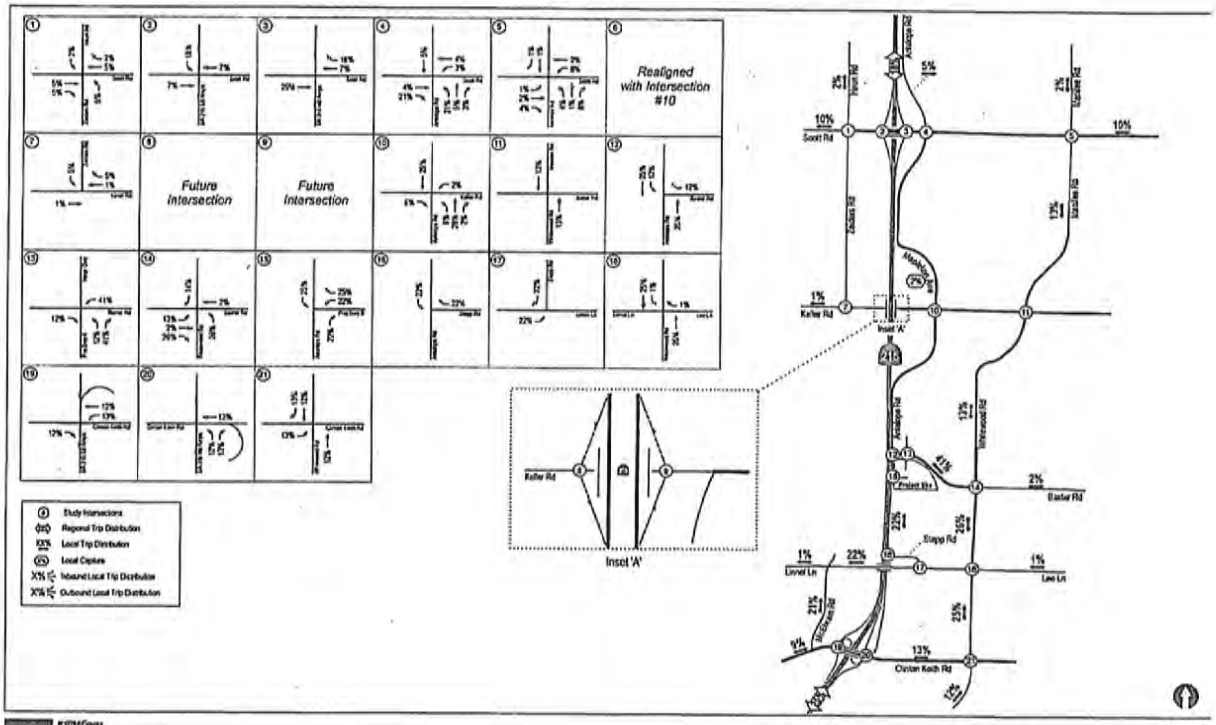


Figure 7-

Project Phase I Traffic Distribution

RAKENA HILLS

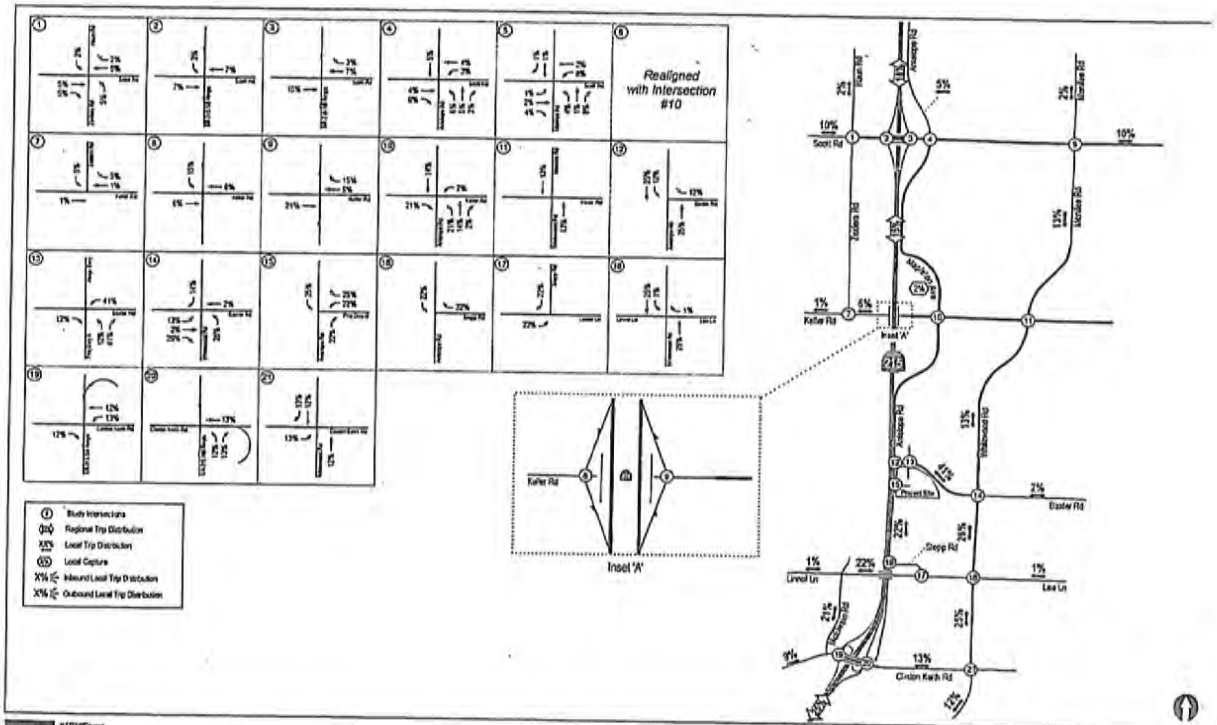


Figure 7-

Project Phase II Traffic Distribution

RAKENA HILLS

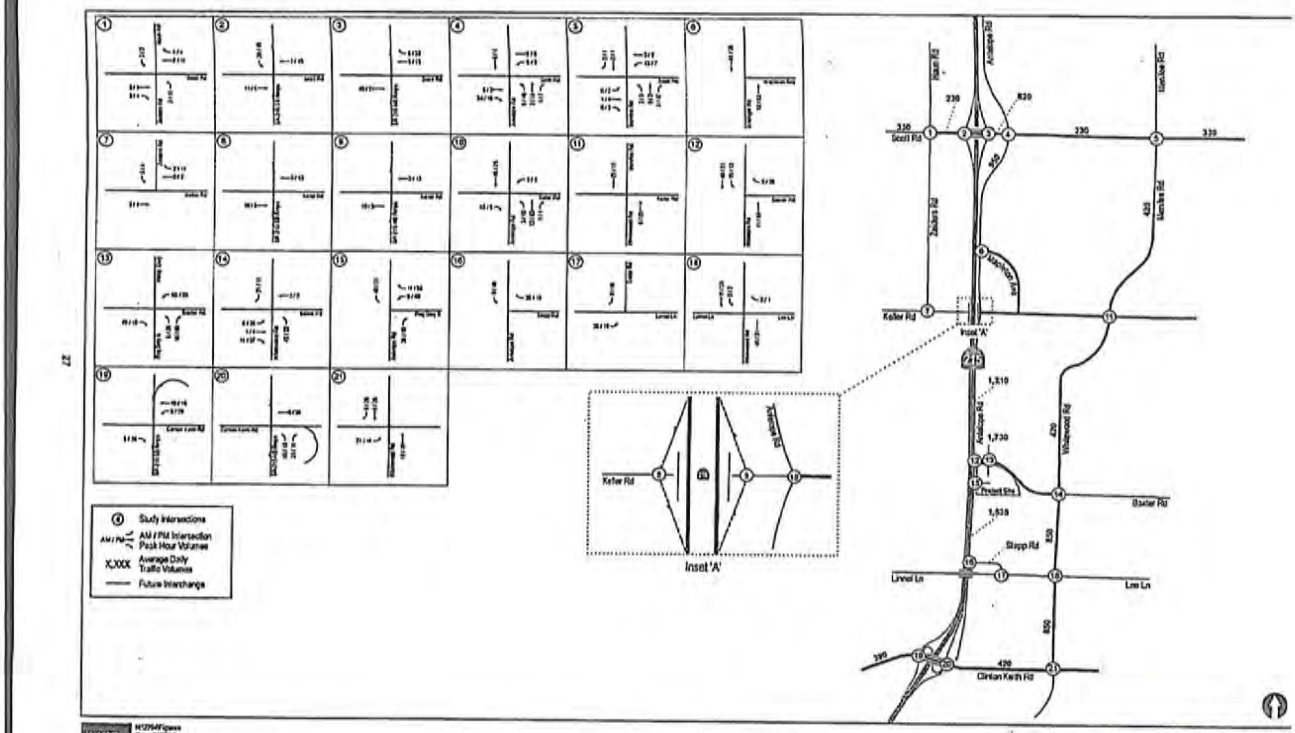


Figure 7-4

Project Phase I Traffic Volumes

MAKENA HILLS

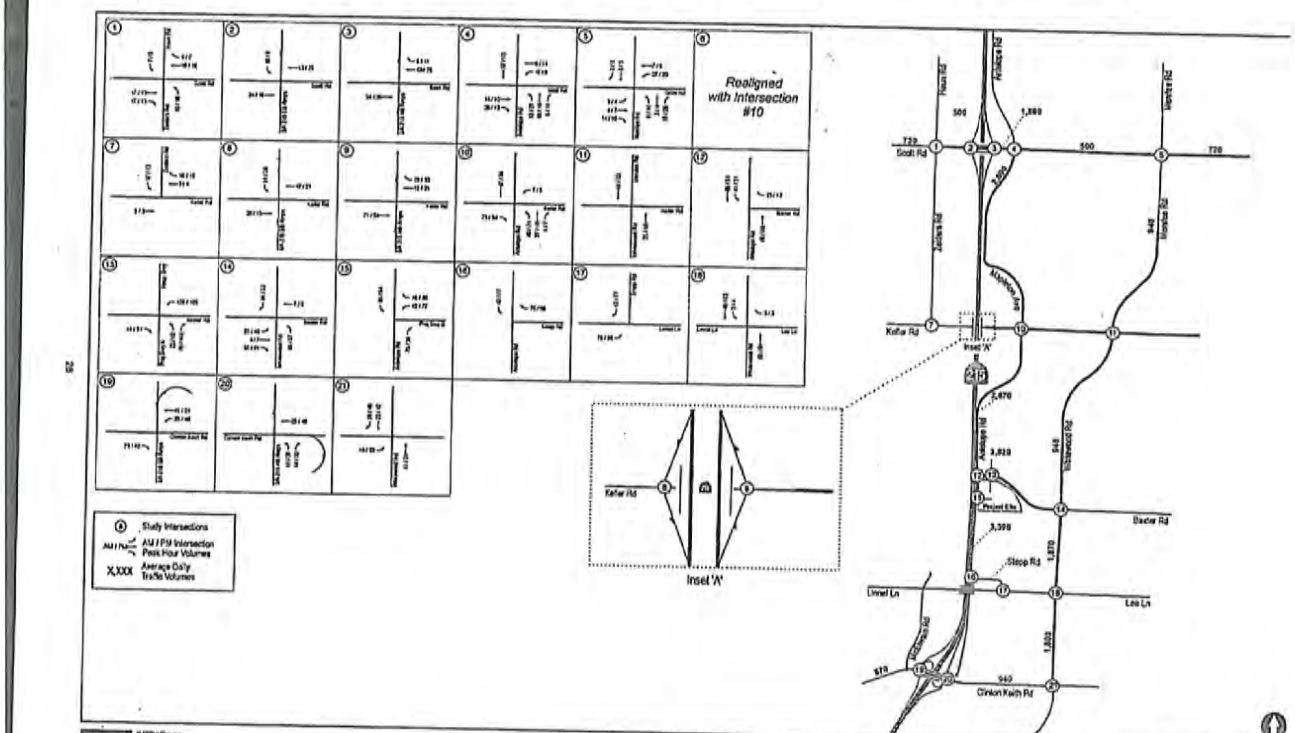


Figure 7-4

Project Phases I & II Traffic Volumes

MAKENA HILLS

URBAN
CROSSROADS

41 Corporate Park, Suite 300
Irvine, CA 92606

Prepared by:

John Kain, AICP
Scott Sato, P.E.
Philip Nitollama

Prepared for:

Ms. Nancy Cappos
SUNCAL COMPANIES
1250 Corona Pointe Court, Suite 210
Corona, CA 92879

GOLDEN CITIES (TRACT 28532-3) RESIDENTIAL DEVELOPMENT MURRIETA, CALIFORNIA

January 5, 2006

JN:02663-06
JK:SS:PN:cg

EAU-009-006

EXHIBIT B
SITE PLAN

GOLDEN CITIES (TRACT 28532-3) DEVELOPMENT, Murrieta, California - 02663:12-16-05\ 02.dwg

URBAN

4

PROJECTED TRAFFIC

Trip Generation

Trip generation represents the amount of traffic which is attracted and produced by a development. The traffic generation for the project is based upon the specific land uses which have been planned for this development.

The proposed project comprises a development of 69 single-family detached residential dwelling units. Trip generation rates for the project are shown in Table 2. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE).

TABLE 2
TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR AM IN	PEAK HOUR AM OUT	PEAK HOUR AM TOTAL	PEAK HOUR PM IN	PEAK HOUR PM OUT	PEAK HOUR PM TOTAL	DAILY
Single Family Residential	210	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation, Seventh Edition, 2003.

[2] DU = Dwelling Units

Both daily and peak hour trip generation for the proposed development are shown in Table 3. The proposed development is expected to generate a total of 660 daily trips with 52 trips occurring during the AM peak hour and 70 trips occurring during the PM peak hour.

TABLE 3

PROJECT TRIP GENERATION

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family Residential	69	DU	13	39	52	44	26	70	660

Trip Distribution

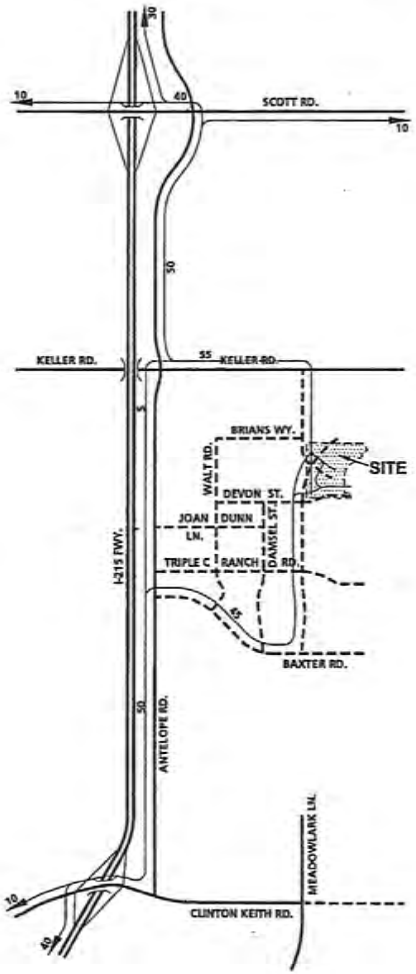
Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of commercial, employment and recreational opportunities and the proximity to the regional freeway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses and highways within the community and existing traffic volumes.

Trip distribution for this study has been based upon near-term conditions, adopting those highway facilities which are either in place or will be completed over the next few years, which represents the opening occupancy time-frame for the proposed development. The trip distribution pattern for the project, which has been approved by the City, is shown on Exhibit I.

The traffic reducing potential of public transit has not been considered in this report. Essentially the traffic projections are "conservative" in that public transit might be able to reduce the traffic volumes.

EXHIBIT I

PROJECT TRIP DISTRIBUTION



GOLDEN CITIES (TRACT 28532-3) DEVELOPMENT, Murrieta, California - 02663:12-16-05\ 09.dwg

URBAN

URBAN
CROSSROADS

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Prepared by:

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Philip Nitollama

REGISTERED PROFESSIONAL ENGINEER
PRESCOTT T SATO
No. C 60277
Exp 06/30/06
CIVIL
STATE OF CALIFORNIA

Prepared for:

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SUNCAL COMPANIES
1250 Corona Pointe Court, Suite 210
Corona, CA 92879

GOLDEN CITIES (TRACT 28532-4) RESIDENTIAL DEVELOPMENT MURRIETA, CALIFORNIA

February 15, 2006

JN:02663-06
SS:PD:cg

CITY OF MURRIETA
FEB 24 2006
RECEIVED
PLANNING DEPT.

EXHIBIT B
SITE PLAN

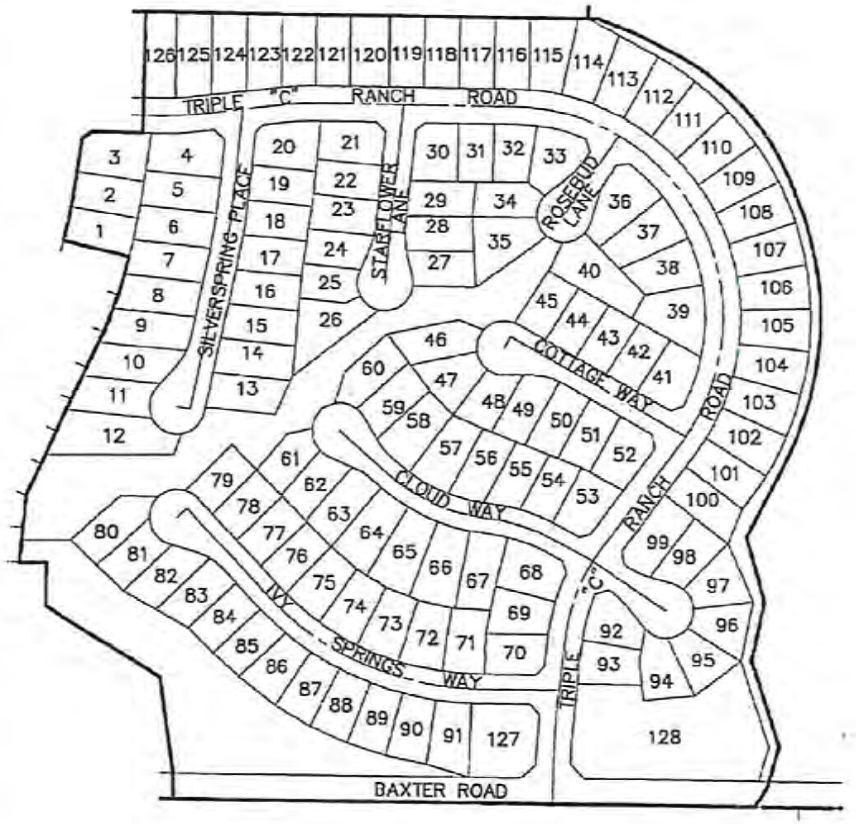


TABLE 2

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR AM IN	PEAK HOUR AM OUT	PEAK HOUR AM TOTAL	PEAK HOUR PM IN	PEAK HOUR PM OUT	PEAK HOUR PM TOTAL	DAILY
Single Family Residential	210	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation, Seventh Edition, 2003.

[2] DU = Dwelling Units

Both daily and peak hour trip generation for the proposed development are shown in Table 3. The proposed development is expected to generate a total of 1,206 daily trips with 95 trips occurring during the AM peak hour and 128 trips occurring during the PM peak hour.

TABLE 3

PROJECT TRIP GENERATION

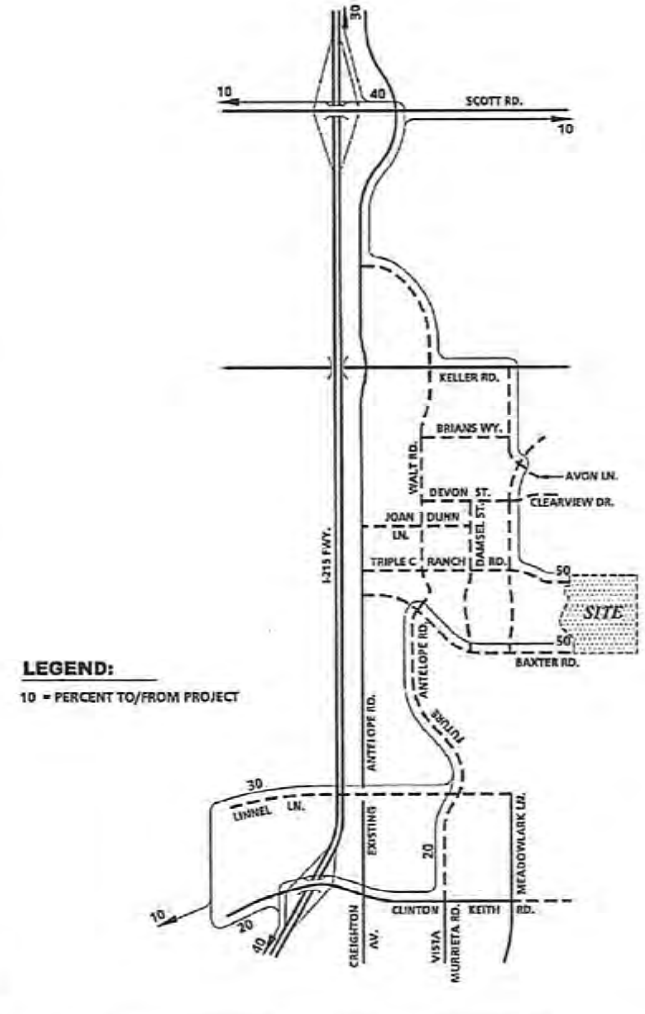
LAND USE	QUANTITY	UNITS[1]	PEAK HOUR AM IN	PEAK HOUR AM OUT	PEAK HOUR AM TOTAL	PEAK HOUR PM IN	PEAK HOUR PM OUT	PEAK HOUR PM TOTAL	DAILY
Single Family Residential	126	DU	24	71	95	81	47	128	1,206

Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of commercial, employment and recreational opportunities and the proximity to the regional

EXHIBIT K

PROJECT TRIP DISTRIBUTION



GOLDEN CITIES (TRACT 28532-4) DEVELOPMENT, Murrieta, California - 02663:1-23-06\ 09.dwg

URBAN

URBAN
CROSSROADS

41 Corporate Park, Suite 300
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CIVIL
STATE OF CALIFORNIA

Prepared for:

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1250 Corona Pointe Court, Suite 210
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GOLDEN CITIES
(TRACT 28532-5)
RESIDENTIAL DEVELOPMENT
MURRIETA, CALIFORNIA

April 7, 2006

JN:02663-21
SS:PN:cg

CITY OF MURRIETA
APR 24 2006
RECEIVED
PLANNING DEPT.

EXHIBIT B
SITE PLAN

N

GOLDEN CITIES (TRACT 28532-5) DEVELOPMENT, Murrieta, California - 02663-3-30-06\ 13.dwg

URBAN

4

The proposed project comprises a development of 119 single-family detached residential dwelling units. Trip generation rates for the project are shown in Table 2. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE).

TABLE 2

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR AM IN	AM OUT	AM TOTAL	PM IN	PM OUT	PM TOTAL	DAILY
Single Family Residential	210	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation, Seventh Edition, 2003.

[2] DU = Dwelling Units

Both daily and peak hour trip generation for the proposed development are shown in Table 3. The proposed development is expected to generate a total of 1,139 daily trips with 90 trips occurring during the AM peak hour and 120 trips occurring during the PM peak hour.

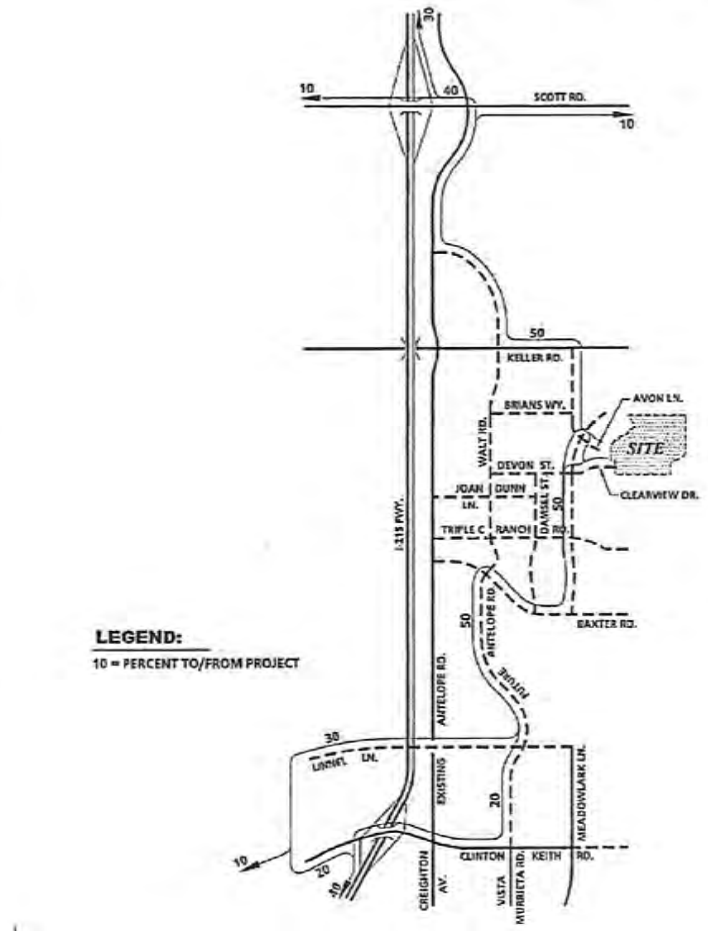
TABLE 2

TRIP GENERATION RATES[1]

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR AM IN	AM OUT	AM TOTAL	PM IN	PM OUT	PM TOTAL	DAILY
Single Family Residential	119	DU	23	67	90	76	44	120	1,139

EXHIBIT K

PROJECT TRIP DISTRIBUTION



Transportation Impact Analysis

Costco Warehouse Murrieta

Murrieta, California

Preliminary Draft

March 2018

KITTELSON & ASSOCIATES

Table 11: Project Trip Generation

Land Use (Size)/Trip Type	Weekday Daily	Weekday PM Peak Hour			Saturday Middy Peak Hour		
		Total	In	Out	Total	In	Out
Costco Warehouse With Fuel Center (151,340 SF)	12,395	1,092	530	562	1,499	763	736
Pass-by trips (33.3% weekday PM, 29.0% Sat mid)[1]	*-4,130*[2]	*-364*	*-182*	*-182*	*-434*	*-217*	*-217*
Net New Costco Trips	**8,265**[2]	**728**	**348**	**380**	**1,065**	**546**	**519**
Shopping Center East (ITE Code 820; 79,900 SF)	5,870	515	247	268	756	393	363
Pass-by trips (25.0%)	*-1,468*	*-128*	*-64*	*-64*	*-188*	*-94*	*-94*
Net New Shopping Center East Trips	**4,402**	**387**	**183**	**204**	**568**	**299**	**269**

[1]While not accounted for in the trip generation for purposes of the traffic study, it is expected that 31.5% of weekday PM and 20.7% of Saturday midday peak hour trips to/from Costco will be diverted trips.

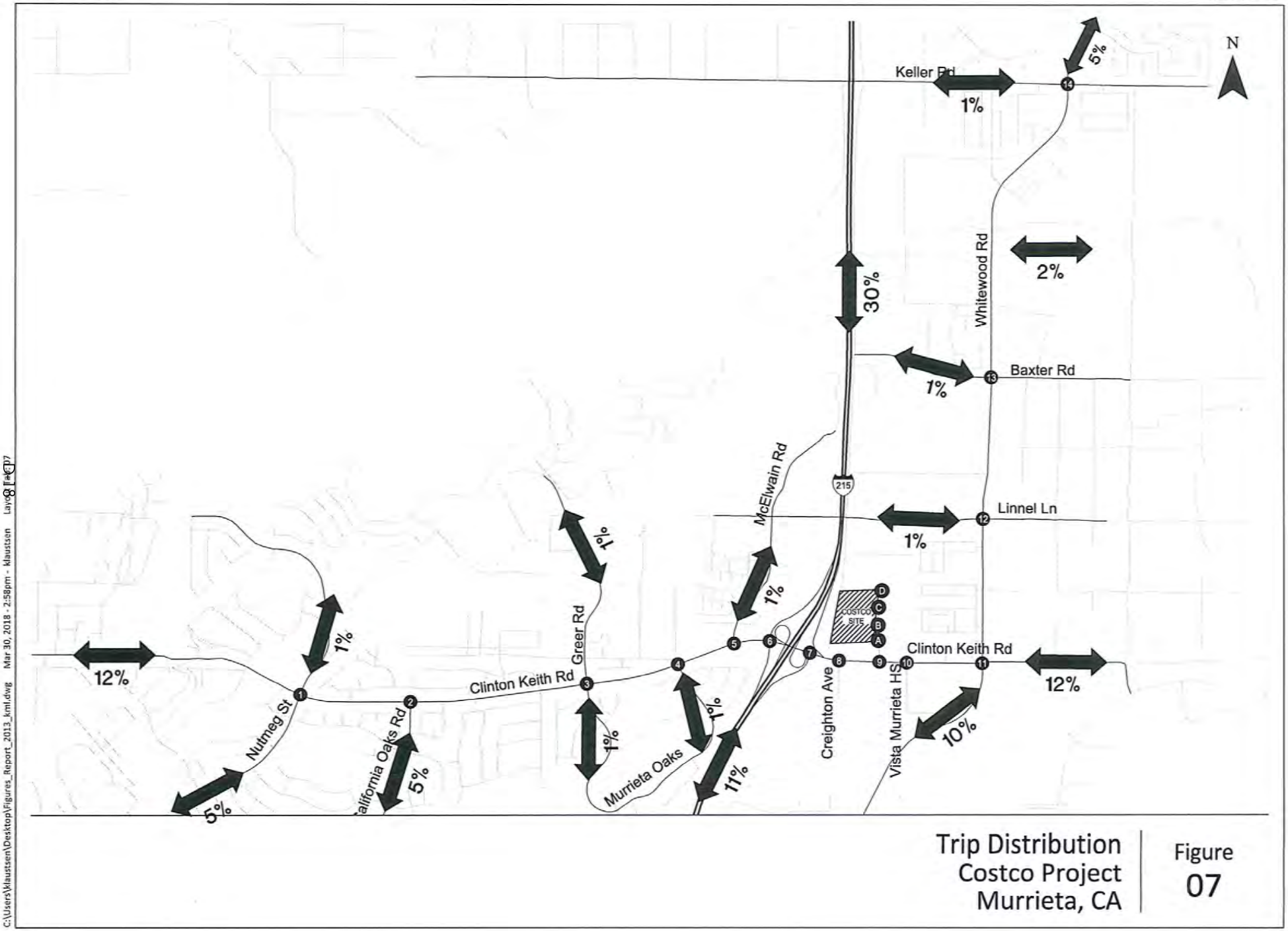
[2]The number of weekday daily primary and pass-by trips was estimated using weekday PM peak hour trip type percentages.

Note that adjustments for transportation demand management (TDM) or other reductions are not made in Table 11. In addition, diverted trips are not included in the table as these trips are expected to come from Interstate 215 and function as new trips at the study intersections. However, it should be noted that these trips do not create similar system capacity or environmental impacts to the regional system as these are not new trips.

5.1.1 Project Trip Distribution and Assignment

Trip distribution and assignment for the proposed Costco is based on Costco Warehouse membership data as well as review of existing travel patterns in the study area[1]. The trip distribution for the Shopping Center East site matches the pattern utilized in *The Vineyard Shopping Center Traffic Impact Analysis* (Reference 6). The same trip distribution patterns were used for the weekday PM peak hour and Saturday midday peak hour. The trip distribution patterns were provided in the scoping memo approved by the City of Murrieta. Figure 7 presents the Costco project trip distribution patterns for the weekday PM and Saturday midday peak hours. Figure 8 presents the Shopping Center East trip distribution patterns for the weekday PM and Saturday midday peak hours. Figure 9 presents the total project trip assignment within the study area.

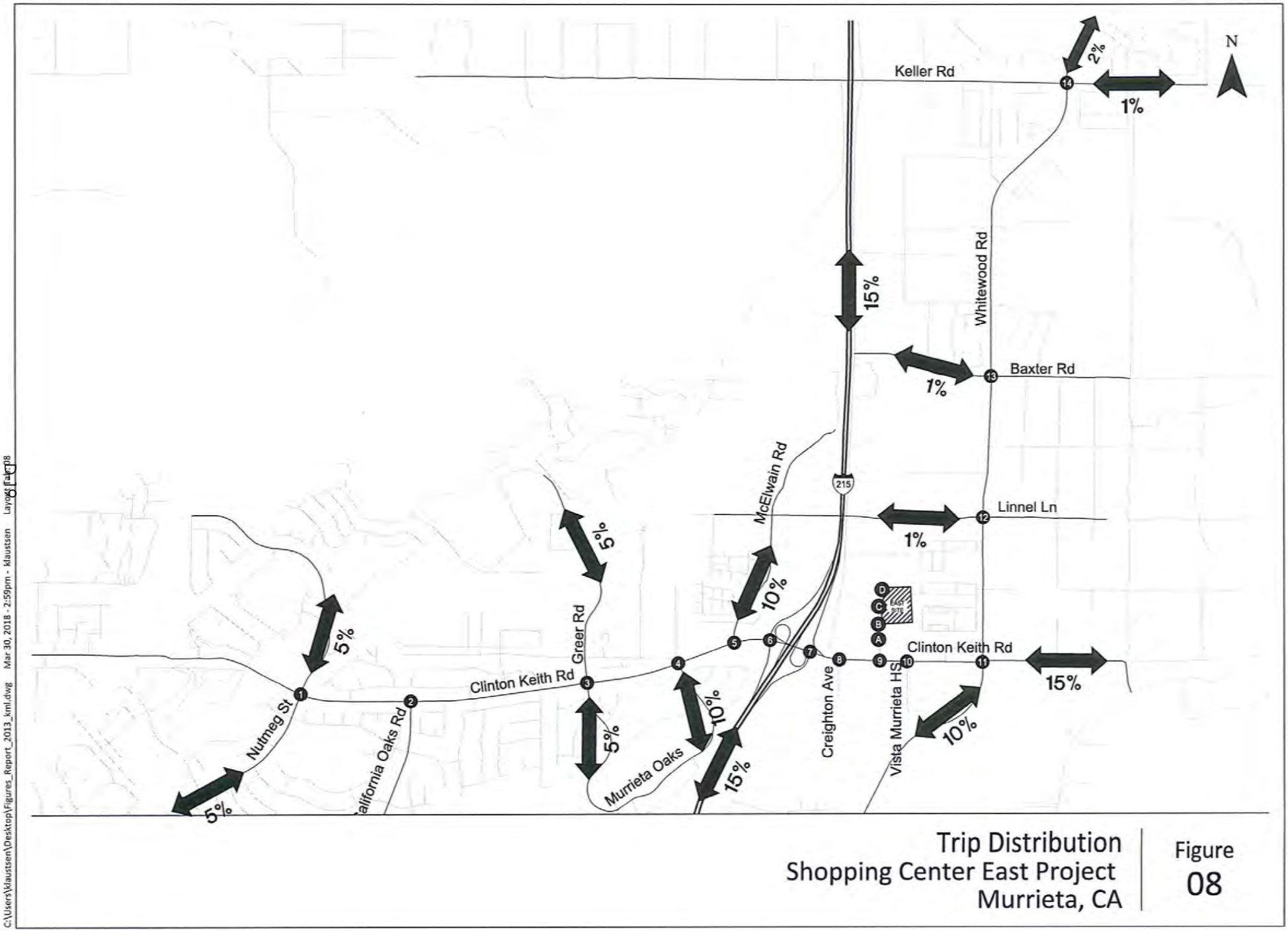
[1] Trip patterns for Costco took into consideration that the Costco in Temecula would attract many of the residents who live south of the proposed site. It also took into consideration the new travel patterns with the Clinton Keith extension, providing an east-west connection to Winchester Road and the extension of Whitewood Road to Scott Road.



Trip Distribution
Costco Project
Murrieta, CA

Figure
07

KITTELSON & ASSOCIATES



Trip Distribution
Shopping Center East Project
Murrieta, CA

Figure
08

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KITTELSON & ASSOCIATES

CURCI PROPERTY
TRAFFIC IMPACT ANALYSIS
CITY OF MURRIETA, CALIFORNIA

NOVEMBER 19, 2018

Prepared for:

Mr. Allan Davis
Retail Development Advisors/Lambda Inv./Scott 215 LP
27890 Clinton Keith Road D490
Murrieta, CA 92562

Prepared by:

Scott Sato, P.E.
4225 Oceanside Blvd., #354H
Oceanside, CA 92056

TRAMES SOLUTIONS INC.

(0035-0003-05)

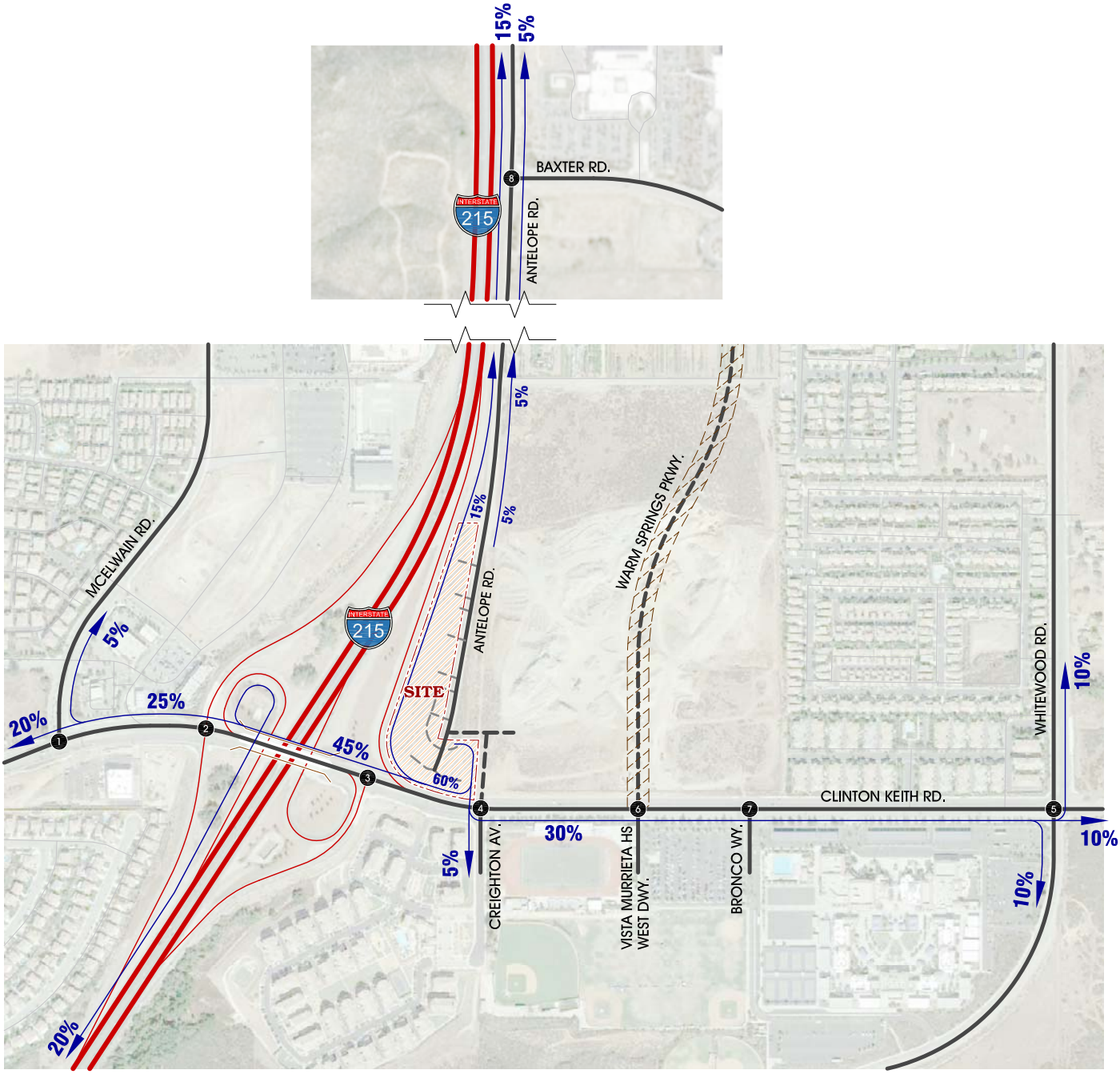
TABLE 4-2

PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity[1]	Peak Hour						Daily
		AM			PM			
		In	Out	Total	In	Out	Total	
Automobile Parts and Service Center	4 TSF	6	2	8	4	5	9	65
Tire Store	5 TSF	9	5	14	9	12	21	124
Shopping Center	11.65 TSF	26	16	42	68	74	142	1,679
High Turnover (Sit-Down) Restaurant	3 TSF	18	15	33	18	12	30	381
Fast Food w/ Drive Thru	5 TSF	116	111	227	85	78	163	2,481
- Pass-By Reduction (25%)		-29	-28	-57	-21	-20	-41	-620
Drive-in Bank	5 TSF	34	26	60	61	61	122	741
- Pass-By Reduction (25%)					-16	-15	-31	-185
- Internal Capture (5% Reduction)		-9	-7	-16	-10	-10	-20	-233
TOTAL		171	140	311	198	197	395	4,433

[1] TSF = Thousand Square Feet

FIGURE 4-A
PROJECT TRIP DISTRIBUTION



LEGEND:

8 = INTERSECTION ID

10% = PERCENT TO/FROM PROJECT

N

CLINTON KEITH SERVICE STATION
Traffic Impact Analysis
City of Murrieta, California

Prepared for:
Heady Design Inc.
7365 Carnelian St, Suite 239
Rancho Cucamonga, CA 91730

Prepared by:
TJW ENGINEERING, INC.
6 Venture, Suite 225
Irvine, CA 92618

December 13, 2018

Table 7:
Proposed Project AM/PM Peak Hour Trip Generation

Proposed Land Use[1]	Units	Daily Trips (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
Super Convenience Market/Gas Station (960)	12 Fueling Positions	230.52	2766	28.08	50:50	168	168	336	22.96	50:50	138	138	276

Proposed Land Use	AM Peak Hour			PM Peak Hour			Daily Total
	In	Out	Total	In	Out	Total	
Super Convenience Market/Gas Station (960)	168	168	336	138	138	276	2766
Pass-By Trips (25%)	-42	-42	-84	-34	-34	-68	-691
Net Trips	**126**	**126**	**252**	**104**	**104**	**208**	**2075**

1: Rates from ITE Trip Generation (10th Edition, 2017)

The proposed project is projected to generate 252 AM net peak hour trips, 208 PM net peak hour trips and 2,075 net daily trips.

4.3 PROJECT TRIP DISTRIBUTION

Projecting trip distribution involves the process of identifying probable destinations and traffic routes that will be utilized by the proposed project's traffic. The potential interaction between the proposed land use and surrounding regional access routes are considered to identify the probable routes onto which project traffic would distribute. The projected trip distribution for the proposed project is based on anticipated travel patterns to and from the project site.

Exhibit 5A shows the general projected trip distribution of proposed project trips. ***Exhibit 5B*** shows the general projected trip distribution of pass-by trips.

4.4 MODAL SPLIT

The traffic reducing potential of public transit, walking and bicycling have not been considered in this analysis since transit facilities in the study area are limited.

4.5 PROJECT TRIP ASSIGNMENT

Exhibit 6 shows the corresponding projected AM/PM peak hour trip assignment of proposed project trips.

4.6 CUMULATIVE PROJECTS TRAFFIC

CEQA guidelines require that other reasonably foreseeable development projects which are either approved or are currently being processed in the study area also be included as part of a cumulative analysis scenario. A list of cumulative projects was developed for this analysis through consultation with City of Murrieta staff, and obtainment of current development status reports. ***Exhibit 7*** shows the location of nearby cumulative developments. A summary of the cumulative projects land uses is shown in ***Table 8.***

Legend:

XX% Percent Trip Distribution

--------- Project Site

Exhibit 5A: Trip Distribution of Proposed Project Trips

HDI-18-001 Service Station Clinton Keith Road Traffic Impact Analysis

Not to Scale

HEALTHSOUTH REHABILITATION HOSPITAL OF MURRIETA PROJECT
Initial Study

Prepared For:
Boulder Associates Architects
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San Francisco, CA 94103
(415) 609-7605
Contact: Todd Henderson, AIA, LEED AP BD+C, Principal

Prepared By:
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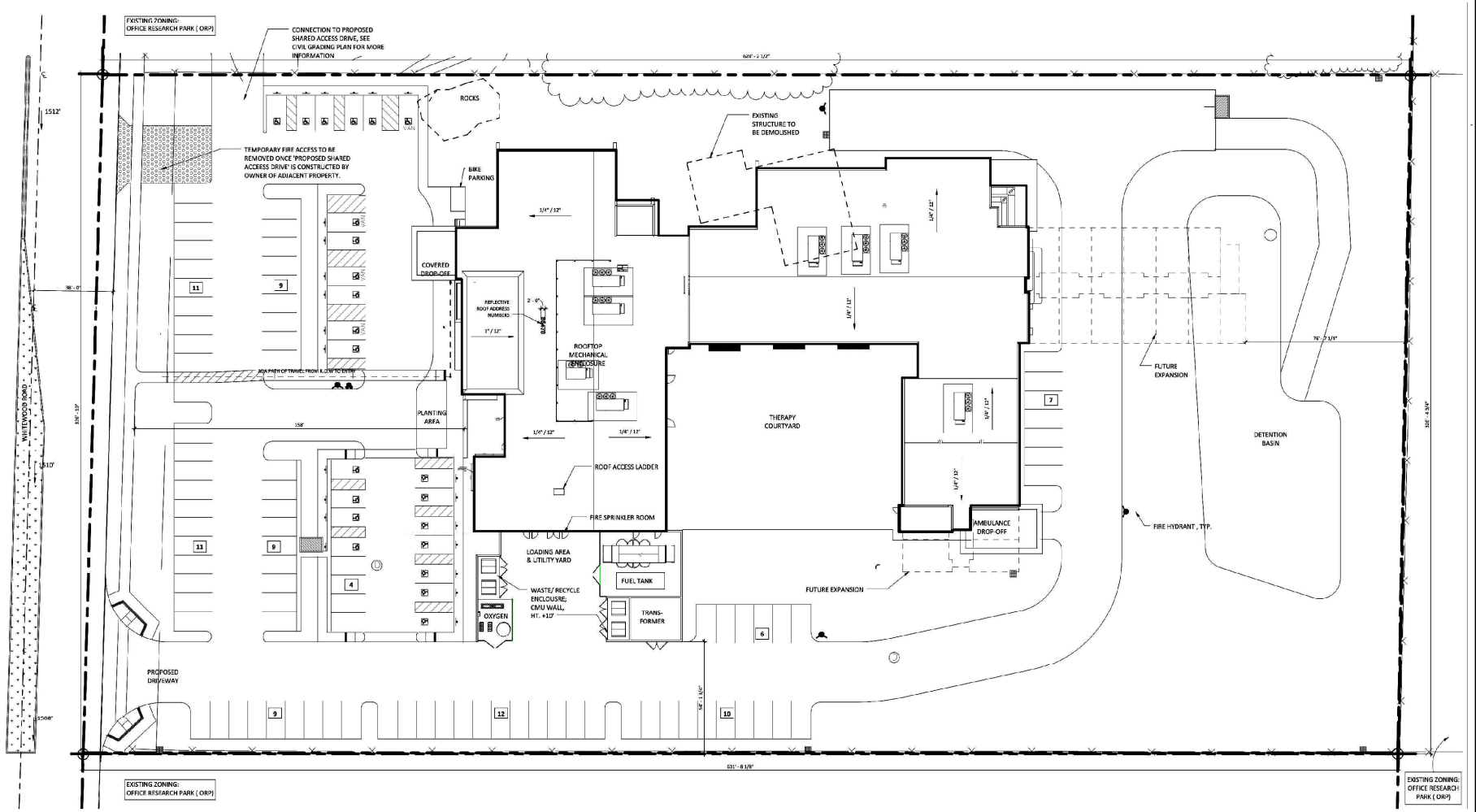
Contact: Cheryl DeGano, Principal Environmental Analyst
Jessica May, Assistant Environmental Analyst

December 2016



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Source: Boulder Associates, March 2016

Figure 6 - Site Plan

HelathSouth Rehabilitation Hospital of Murrieta

ALBERT A. WEBB ASSOCIATES

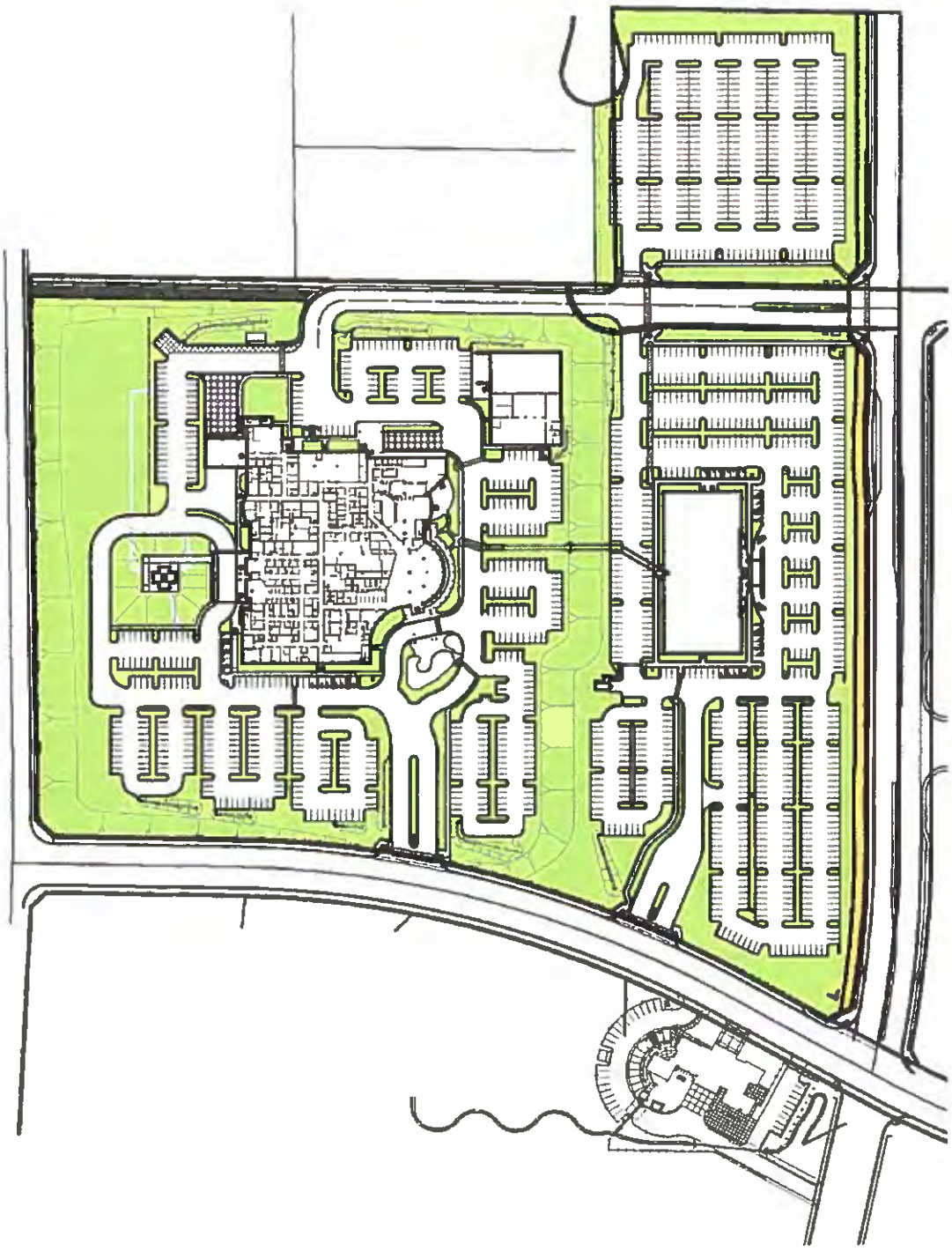

TABLE 3-2
Project Trip Generation

Land Use	ITE Code	Quantity	Units[1]	Peak Hour						Daily
				AM			PM			
				In	Out	Total	In	Out	Total	
Hospital	610	490.000	TSF	392	196	588	191	387	578	8,609
Medical-Dental Office	720	160.000	TSF	314	83	397	160	435	595	5,781
Total				**706**	**279**	**985**	**351**	**822**	**1,173**	**14,390**

[1] TSF = Thousand Square Feet

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JN:1911-2006-01

Traffic Study for
The Orchard at Stonecreek
in the
City of Murrieta
(City Log #03-S-017)

February 27, 2004

Prepared for:

City of Murrieta
26442 Beckman Court
Murrieta, CA 92562
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Prepared by:

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Traffic Engineers and Transportation Planners
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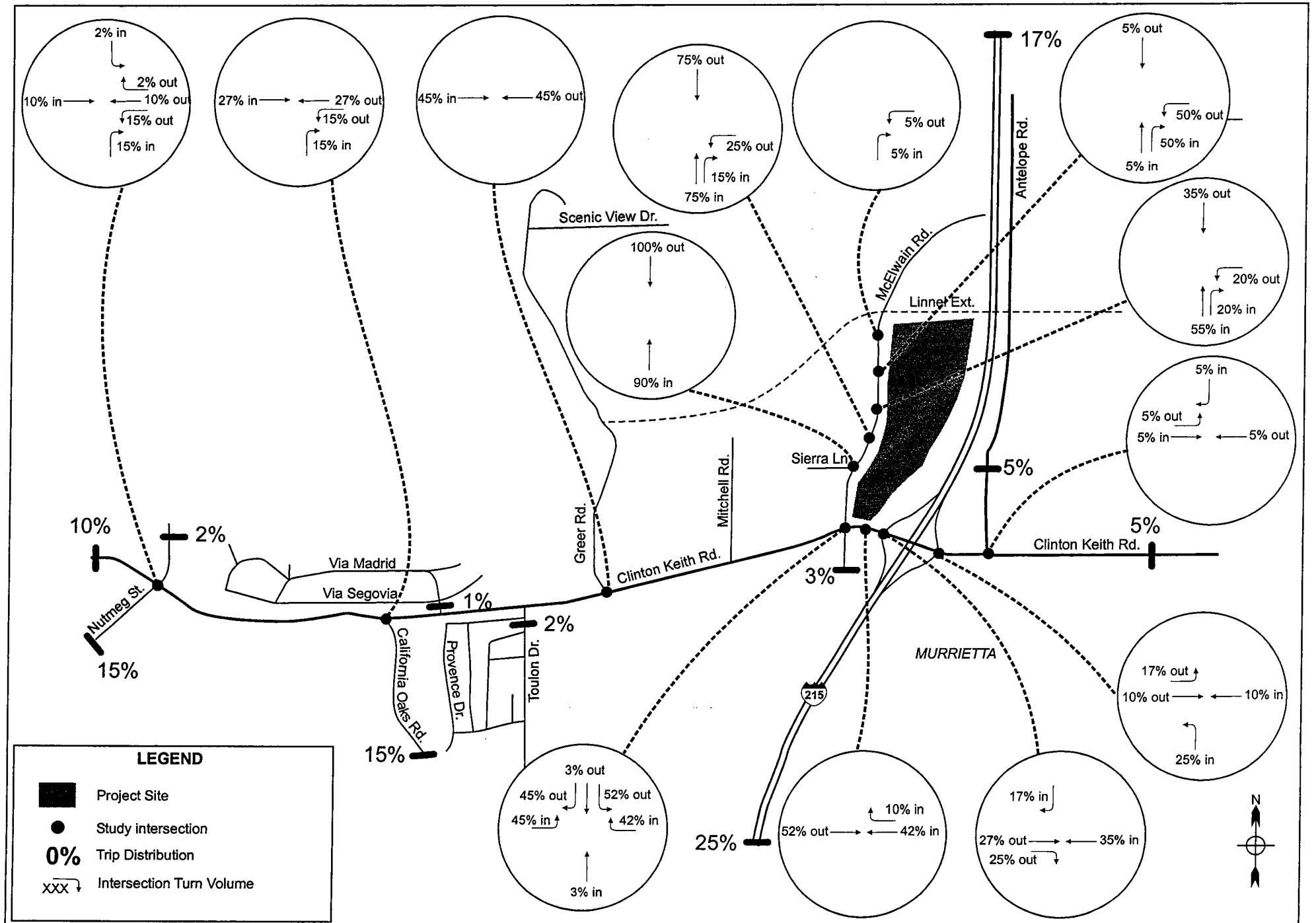
(909) 890-9693

Job No: A3865

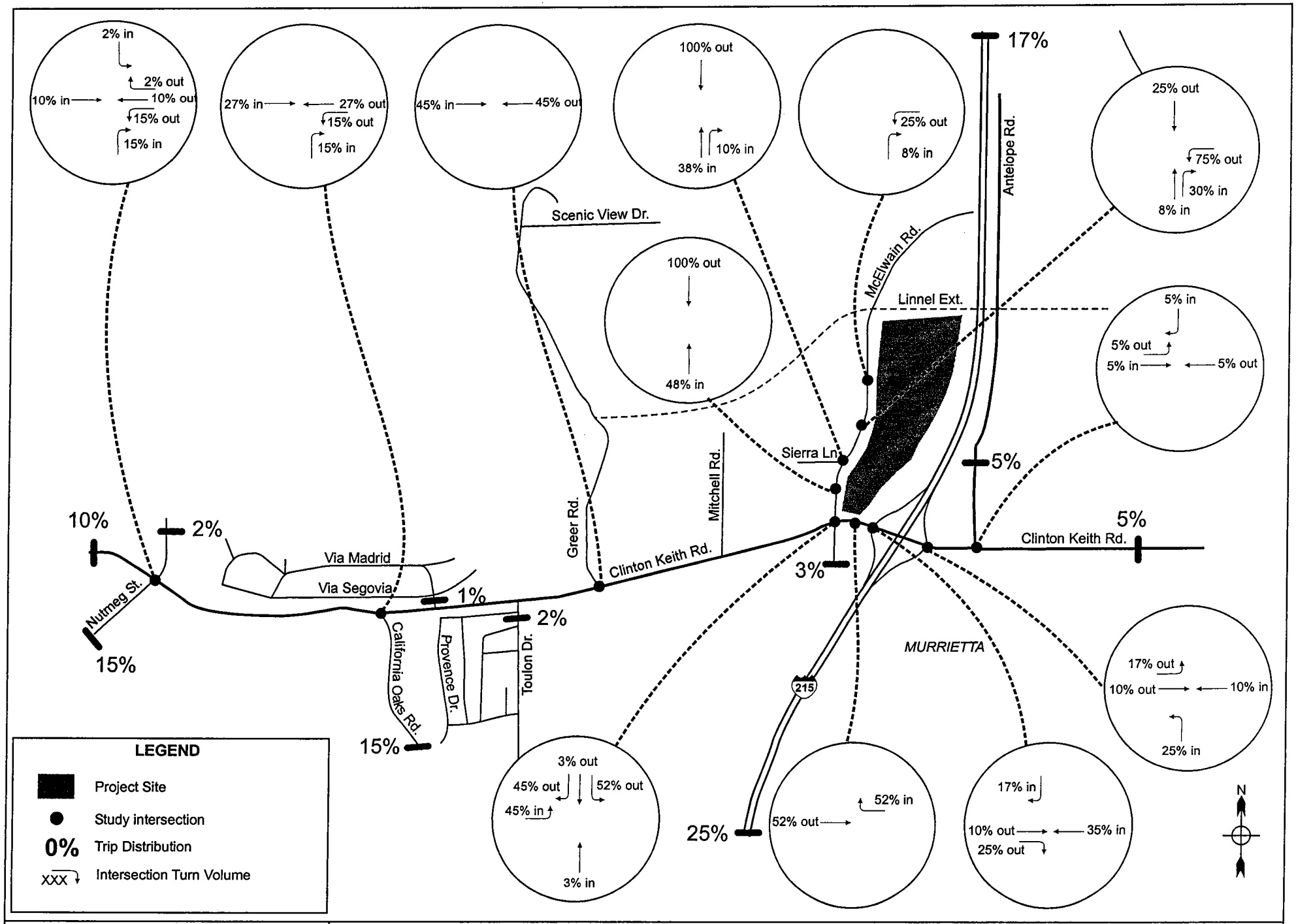


Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners

Murrieta Shopping Center, Traffic Study

Figure 10a

Project 1 (North) Existing and Near Term Project Trip Distribution



Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners

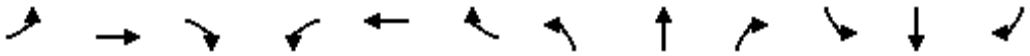
Murrieta Shopping Center, Traffic Study

Figure 10b

Project 2 (South) Existing and Near Term Project Trip Distribution

APPENDIX E

EXISTING PLUS AMBIENT PLUS PROJECT CONDITIONS
INTERSECTION ANALYSIS CALCULATION WORKSHEETS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	3	402	1	1	1	1	234	1	1	1
Future Volume (vph)	1	1	3	402	1	1	1	1	234	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.919							0.850		0.955	
Flt Protected		0.990			0.953			0.976			0.984	
Satd. Flow (prot)	0	1695	0	0	1775	0	0	1818	1583	0	1750	0
Flt Permitted		0.990			0.953			0.976			0.984	
Satd. Flow (perm)	0	1695	0	0	1775	0	0	1818	1583	0	1750	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		394			602			211			349	
Travel Time (s)		9.0			13.7			4.8			7.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	3	402	1	1	1	1	234	1	1	1
Future Vol, veh/h	1	1	3	402	1	1	1	1	234	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	3	432	1	1	1	1	252	1	1	1
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	7.9	14.2	10.3	8.5
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	0%	20%	100%	33%
Vol Thru, %	50%	0%	20%	0%	33%
Vol Right, %	0%	100%	60%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	234	5	404	3
LT Vol	1	0	1	402	1
Through Vol	1	0	1	1	1
RT Vol	0	234	3	1	1
Lane Flow Rate	2	252	5	434	3
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.004	0.345	0.007	0.576	0.005
Departure Headway (Hd)	5.891	4.932	4.789	4.773	5.352
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	606	727	740	752	664
Service Time	3.637	2.678	2.866	2.821	3.426
HCM Lane V/C Ratio	0.003	0.347	0.007	0.577	0.005
HCM Control Delay	8.7	10.3	7.9	14.2	8.5
HCM Lane LOS	A	B	A	B	A
HCM 95th-tile Q	0	1.5	0	3.7	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	1440	14	18	1145	91	6	4	12	403	4	312
Future Volume (vph)	250	1440	14	18	1145	91	6	4	12	403	4	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		100	200		150	0		0	250		0
Storage Lanes	2		2	1		1	1		0	1		0
Taper Length (ft)	150			120			25			90		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	*1.00	1.00	1.00
Ped Bike Factor											0.99	
Frt											0.852	
Flt Protected												
Satd. Flow (prot)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1565	0
Flt Permitted												
Satd. Flow (perm)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1565	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133			97		13			332	
Link Speed (mph)		45			45			30			35	
Link Distance (ft)		655			690			257			759	
Travel Time (s)		9.9			10.5			5.8			14.8	
Confl. Peds. (#/hr)												2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												

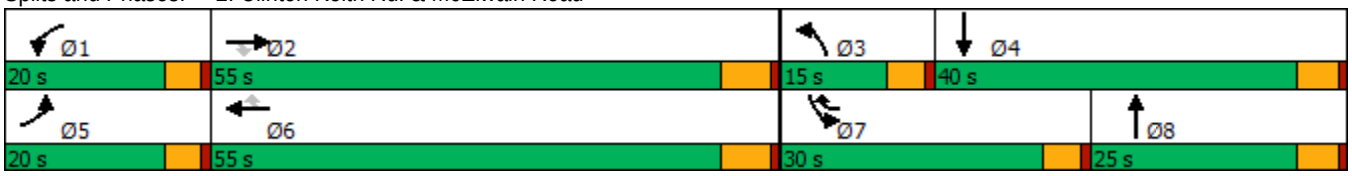
Intersection Summary	
Area Type:	Other

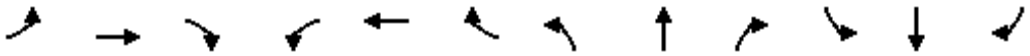
* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	250	1440	14	18	1145	91	6	4	403	4
Future Volume (vph)	250	1440	14	18	1145	91	6	4	403	4
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	20.0	55.0	55.0	20.0	55.0	30.0	15.0	25.0	30.0	40.0
Total Split (%)	15.4%	42.3%	42.3%	15.4%	42.3%	23.1%	11.5%	19.2%	23.1%	30.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	10.9	39.7	39.7	6.8	27.1	48.5	6.8	12.2	15.0	18.5
Actuated g/C Ratio	0.15	0.53	0.53	0.09	0.36	0.65	0.09	0.16	0.20	0.25
v/c Ratio	0.49	0.52	0.01	0.11	0.60	0.08	0.04	0.05	0.58	0.53
Control Delay	37.2	15.9	0.0	44.6	22.8	2.3	45.0	22.8	34.0	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	15.9	0.0	44.6	22.8	2.3	45.0	22.8	34.0	6.8
LOS	D	B	A	D	C	A	D	C	C	A
Approach Delay		18.9			21.6			28.6		22.0
Approach LOS		B			C			C		C

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 75.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: Clinton Keith Rd. & McElwain Road





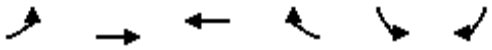
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1440	14	18	1145	91	6	4	12	403	4	312
Future Volume (veh/h)	250	1440	14	18	1145	91	6	4	12	403	4	312
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	266	1532	15	19	1218	97	6	4	13	429	4	332
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	351	2706	764	45	2295	882	17	44	145	526	5	396
Arrive On Green	0.10	0.48	0.48	0.03	0.41	0.41	0.01	0.11	0.11	0.15	0.25	0.25
Sat Flow, veh/h	3563	5611	1585	1781	5611	1585	1781	387	1257	3563	19	1565
Grp Volume(v), veh/h	266	1532	15	19	1218	97	6	0	17	429	0	336
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1644	1781	0	1584
Q Serve(g_s), s	6.4	17.0	0.4	0.9	14.3	2.5	0.3	0.0	0.8	10.2	0.0	17.6
Cycle Q Clear(g_c), s	6.4	17.0	0.4	0.9	14.3	2.5	0.3	0.0	0.8	10.2	0.0	17.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.76	1.00		0.99
Lane Grp Cap(c), veh/h	351	2706	764	45	2295	882	17	0	189	526	0	401
V/C Ratio(X)	0.76	0.57	0.02	0.42	0.53	0.11	0.36	0.00	0.09	0.82	0.00	0.84
Avail Cap(c_a), veh/h	627	3157	892	314	3157	1126	212	0	374	1035	0	632
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	0.00	1.00
Uniform Delay (d), s/veh	38.4	16.1	11.8	42.0	19.5	9.2	43.1	0.0	34.6	36.1	0.0	30.9
Incr Delay (d2), s/veh	1.3	0.4	0.0	2.3	0.5	0.1	12.7	0.0	0.2	1.2	0.0	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.4	0.2	0.4	5.7	0.8	0.2	0.0	0.3	4.4	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	16.6	11.9	44.3	20.0	9.3	55.8	0.0	34.8	37.3	0.0	37.6
LnGrp LOS	D	B	B	D	B	A	E	A	C	D	A	D
Approach Vol, veh/h		1813			1334			23			765	
Approach Delay, s/veh		19.9			19.5			40.3			37.5	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	48.0	5.4	27.3	13.2	41.6	17.5	15.2
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	4.6	5.8	4.6	5.1
Max Green Setting (Gmax), s	15.4	49.2	10.4	34.9	15.4	49.2	25.4	19.9
Max Q Clear Time (g_c+I1), s	2.9	19.0	2.3	19.6	8.4	16.3	12.2	2.8
Green Ext Time (p_c), s	0.0	21.9	0.0	2.3	0.3	19.4	0.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	172	71	162	3	22	257
Future Volume (vph)	172	71	162	3	22	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	50
Storage Lanes	1			0	1	0
Taper Length (ft)	90				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998		0.875	
Flt Protected	0.950				0.996	
Satd. Flow (prot)	1770	3539	3532	0	1623	0
Flt Permitted	0.950				0.996	
Satd. Flow (perm)	1770	3539	3532	0	1623	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		888	602		266	
Travel Time (s)		20.2	13.7		6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						

Intersection Summary	
Area Type:	Other

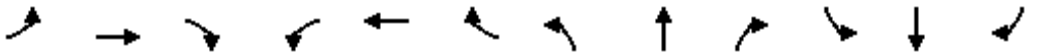
Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	172	71	162	3	22	257
Future Vol, veh/h	172	71	162	3	22	257
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	191	79	180	3	24	286

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	183	0	-	0	604	92
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	422	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1389	-	-	-	430	947
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	629	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1389	-	-	-	371	947
Mov Cap-2 Maneuver	-	-	-	-	371	-
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	629	-

Approach	EB	WB	SB
HCM Control Delay, s	5.7	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1389	-	-	-	844
HCM Lane V/C Ratio	0.138	-	-	-	0.367
HCM Control Delay (s)	8	-	-	-	11.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	193	1	27	304	15	1	1	19	10	1	13
Future Volume (vph)	19	193	1	27	304	15	1	1	19	10	1	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	60			60			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.993			0.857			0.925	
Flt Protected	0.950			0.950			0.950				0.980	
Satd. Flow (prot)	1770	1861	0	1770	1850	0	1770	1596	0	0	1689	0
Flt Permitted	0.950			0.950			0.950				0.980	
Satd. Flow (perm)	1770	1861	0	1770	1850	0	1770	1596	0	0	1689	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		602			484			231			240	
Travel Time (s)		13.7			11.0			5.3			5.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												

Intersection Summary	
Area Type:	Other

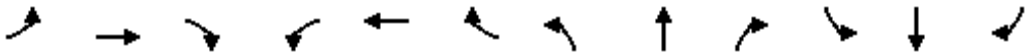
Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	193	1	27	304	15	1	1	19	10	1	13
Future Vol, veh/h	19	193	1	27	304	15	1	1	19	10	1	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	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	22	219	1	31	345	17	1	1	22	11	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	362	0	0	220	0	0	688	688	220	691	680	354
Stage 1	-	-	-	-	-	-	264	264	-	416	416	-
Stage 2	-	-	-	-	-	-	424	424	-	275	264	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	10	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1197	-	-	1349	-	-	360	369	820	359	373	690
Stage 1	-	-	-	-	-	-	741	690	-	614	592	-
Stage 2	-	-	-	-	-	-	608	587	-	731	690	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1197	-	-	1349	-	-	341	354	820	338	358	690
Mov Cap-2 Maneuver	-	-	-	-	-	-	341	354	-	338	358	-
Stage 1	-	-	-	-	-	-	728	678	-	603	578	-
Stage 2	-	-	-	-	-	-	580	573	-	697	678	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.6	10.1	13.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	341	769	1197	-	-	1349	-	-	469
HCM Lane V/C Ratio	0.003	0.03	0.018	-	-	0.023	-	-	0.058
HCM Control Delay (s)	15.6	9.8	8.1	-	-	7.7	-	-	13.1
HCM Lane LOS	C	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	0.1	-	-	0.1	-	-	0.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	2	234	2	1	2	1	354	1	1	1
Future Volume (vph)	1	1	2	234	2	1	2	1	354	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.999				0.850		0.955	
Flt Protected		0.988			0.953			0.968			0.984	
Satd. Flow (prot)	0	1715	0	0	1773	0	0	1803	1583	0	1750	0
Flt Permitted		0.988			0.953			0.968			0.984	
Satd. Flow (perm)	0	1715	0	0	1773	0	0	1803	1583	0	1750	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		394			602			211			349	
Travel Time (s)		9.0			13.7			4.8			7.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												

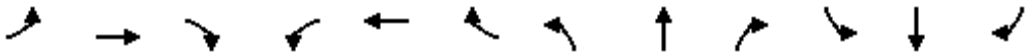
Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	2	234	2	1	2	1	354	1	1	1
Future Vol, veh/h	1	1	2	234	2	1	2	1	354	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	2	246	2	1	2	1	373	1	1	1
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8	10.7	11.1	8.1
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	0%	25%	99%	33%
Vol Thru, %	33%	0%	25%	1%	33%
Vol Right, %	0%	100%	50%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	354	4	237	3
LT Vol	2	0	1	234	1
Through Vol	1	0	1	2	1
RT Vol	0	354	2	1	1
Lane Flow Rate	3	373	4	249	3
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.005	0.465	0.006	0.347	0.004
Departure Headway (Hd)	5.533	4.494	4.895	5.005	4.996
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	647	801	726	716	712
Service Time	3.267	2.227	2.958	3.048	3.055
HCM Lane V/C Ratio	0.005	0.466	0.006	0.348	0.004
HCM Control Delay	8.3	11.1	8	10.7	8.1
HCM Lane LOS	A	B	A	B	A
HCM 95th-tile Q	0	2.5	0	1.6	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	473	1451	33	45	1406	213	35	14	31	378	15	316
Future Volume (vph)	473	1451	33	45	1406	213	35	14	31	378	15	316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		100	200		150	0		0	250		0
Storage Lanes	2		2	1		1	1		0	1		0
Taper Length (ft)	150			120			25			90		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	*1.00	1.00	1.00
Ped Bike Factor											0.99	
Frt											0.857	
Flt Protected												
Satd. Flow (prot)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1575	0
Flt Permitted												
Satd. Flow (perm)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1575	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133			226		33			313	
Link Speed (mph)		45			45			30			35	
Link Distance (ft)		655			690			257			759	
Travel Time (s)		9.9			10.5			5.8			14.8	
Confl. Peds. (#/hr)												2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												

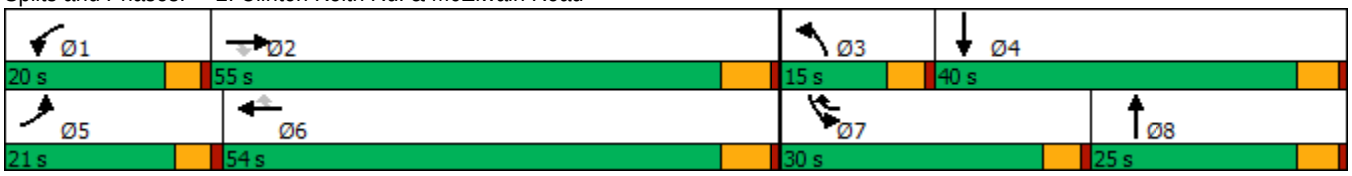
Intersection Summary	
Area Type:	Other

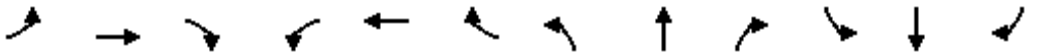
* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	473	1451	33	45	1406	213	35	14	378	15
Future Volume (vph)	473	1451	33	45	1406	213	35	14	378	15
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	21.0	55.0	55.0	20.0	54.0	30.0	15.0	25.0	30.0	40.0
Total Split (%)	16.2%	42.3%	42.3%	15.4%	41.5%	23.1%	11.5%	19.2%	23.1%	30.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	17.2	48.9	48.9	7.7	36.2	58.3	7.9	12.2	16.0	21.4
Actuated g/C Ratio	0.18	0.50	0.50	0.08	0.37	0.59	0.08	0.12	0.16	0.22
v/c Ratio	0.78	0.56	0.04	0.33	0.73	0.19	0.25	0.18	0.67	0.61
Control Delay	51.4	21.3	0.1	55.4	30.2	1.8	53.3	22.9	46.7	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.4	21.3	0.1	55.4	30.2	1.8	53.3	22.9	46.7	11.7
LOS	D	C	A	E	C	A	D	C	D	B
Approach Delay		28.3			27.2			36.3		30.4
Approach LOS		C			C			D		C

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 98.2	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 28.4	Intersection LOS: C
Intersection Capacity Utilization 82.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Clinton Keith Rd. & McElwain Road





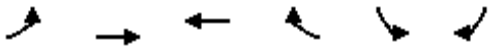
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	473	1451	33	45	1406	213	35	14	31	378	15	316
Future Volume (veh/h)	473	1451	33	45	1406	213	35	14	31	378	15	316
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	509	1560	35	48	1512	229	38	15	33	406	16	340
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	514	2777	785	73	2199	834	66	79	175	479	18	380
Arrive On Green	0.14	0.49	0.49	0.04	0.39	0.39	0.04	0.15	0.15	0.13	0.25	0.25
Sat Flow, veh/h	3563	5611	1585	1781	5611	1585	1781	520	1144	3563	72	1521
Grp Volume(v), veh/h	509	1560	35	48	1512	229	38	0	48	406	0	356
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1664	1781	0	1592
Q Serve(g_s), s	16.2	22.1	1.3	3.0	25.5	9.1	2.4	0.0	2.9	12.7	0.0	24.5
Cycle Q Clear(g_c), s	16.2	22.1	1.3	3.0	25.5	9.1	2.4	0.0	2.9	12.7	0.0	24.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.96
Lane Grp Cap(c), veh/h	514	2777	785	73	2199	834	66	0	254	479	0	398
V/C Ratio(X)	0.99	0.56	0.04	0.65	0.69	0.27	0.58	0.00	0.19	0.85	0.00	0.89
Avail Cap(c_a), veh/h	514	2777	785	241	2380	885	163	0	291	796	0	489
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	0.00	1.00
Uniform Delay (d), s/veh	48.5	20.1	14.8	53.7	28.8	14.9	53.8	0.0	42.0	48.0	0.0	41.2
Incr Delay (d2), s/veh	36.9	0.5	0.1	3.6	1.1	0.4	7.8	0.0	0.4	2.0	0.0	17.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	9.0	0.5	1.4	11.0	3.3	1.2	0.0	1.2	5.7	0.0	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	20.5	14.9	57.3	29.9	15.3	61.6	0.0	42.4	50.1	0.0	58.1
LnGrp LOS	F	C	B	E	C	B	E	A	D	D	A	E
Approach Vol, veh/h		2104			1789			86			762	
Approach Delay, s/veh		36.1			28.8			50.9			53.8	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	62.0	8.8	33.5	21.0	50.3	19.9	22.4
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	4.6	5.8	4.6	5.1
Max Green Setting (Gmax), s	15.4	49.2	10.4	34.9	16.4	48.2	25.4	19.9
Max Q Clear Time (g_c+I1), s	5.0	24.1	4.4	26.5	18.2	27.5	14.7	4.9
Green Ext Time (p_c), s	0.0	19.4	0.0	1.7	0.0	17.0	0.6	0.1

Intersection Summary	
HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	272	164	98	15	26	176
Future Volume (vph)	272	164	98	15	26	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	50
Storage Lanes	1			0	1	0
Taper Length (ft)	90				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.980		0.882	
Flt Protected	0.950				0.994	
Satd. Flow (prot)	1770	3539	3468	0	1633	0
Flt Permitted	0.950				0.994	
Satd. Flow (perm)	1770	3539	3468	0	1633	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		888	602		266	
Travel Time (s)		20.2	13.7		6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						

Intersection Summary	
Area Type:	Other

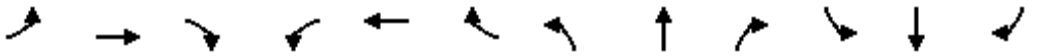
Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	272	164	98	15	26	176
Future Vol, veh/h	272	164	98	15	26	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	302	182	109	17	29	196

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	126	0	-	0	813	63
Stage 1	-	-	-	-	118	-
Stage 2	-	-	-	-	695	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1458	-	-	-	316	988
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	456	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1458	-	-	-	251	988
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	456	-

Approach	EB	WB	SB
HCM Control Delay, s	5.1	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1458	-	-	-	717
HCM Lane V/C Ratio	0.207	-	-	-	0.313
HCM Control Delay (s)	8.1	-	-	-	12.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.8	-	-	-	1.3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	368	1	53	203	17	5	1	79	16	1	19
Future Volume (vph)	20	368	1	53	203	17	5	1	79	16	1	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	60			60			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.988			0.852			0.929	
Flt Protected	0.950			0.950			0.950				0.978	
Satd. Flow (prot)	1770	1863	0	1770	1840	0	1770	1587	0	0	1692	0
Flt Permitted	0.950			0.950			0.950				0.978	
Satd. Flow (perm)	1770	1863	0	1770	1840	0	1770	1587	0	0	1692	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		602			484			231			240	
Travel Time (s)		13.7			11.0			5.3			5.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	368	1	53	203	17	5	1	79	16	1	19
Future Vol, veh/h	20	368	1	53	203	17	5	1	79	16	1	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	409	1	59	226	19	6	1	88	18	1	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	245	0	0	410	0	0	819	817	410	852	808	236
Stage 1	-	-	-	-	-	-	454	454	-	354	354	-
Stage 2	-	-	-	-	-	-	365	363	-	498	454	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	10	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1321	-	-	1149	-	-	294	311	642	280	315	803
Stage 1	-	-	-	-	-	-	586	569	-	663	630	-
Stage 2	-	-	-	-	-	-	654	625	-	554	569	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1321	-	-	1149	-	-	271	290	642	229	294	803
Mov Cap-2 Maneuver	-	-	-	-	-	-	271	290	-	229	294	-
Stage 1	-	-	-	-	-	-	576	559	-	652	598	-
Stage 2	-	-	-	-	-	-	603	593	-	469	559	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1.6	12	15.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	271	632	1321	-	-	1149	-	-	371
HCM Lane V/C Ratio	0.021	0.141	0.017	-	-	0.051	-	-	0.108
HCM Control Delay (s)	18.6	11.6	7.8	-	-	8.3	-	-	15.9
HCM Lane LOS	C	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.5	0.1	-	-	0.2	-	-	0.4

APPENDIX F

EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE CONDITIONS
INTERSECTION ANALYSIS CALCULATION WORKSHEETS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	3	524	1	1	1	1	401	1	1	1
Future Volume (vph)	1	1	3	524	1	1	1	1	401	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.919							0.850		0.955	
Flt Protected		0.990			0.953			0.976			0.984	
Satd. Flow (prot)	0	1695	0	0	1775	0	0	1818	1583	0	1750	0
Flt Permitted		0.990			0.953			0.976			0.984	
Satd. Flow (perm)	0	1695	0	0	1775	0	0	1818	1583	0	1750	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		394			602			211			349	
Travel Time (s)		9.0			13.7			4.8			7.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												

Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	25.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	3	524	1	1	1	1	401	1	1	1
Future Vol, veh/h	1	1	3	524	1	1	1	1	401	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	3	563	1	1	1	1	431	1	1	1
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8.9	31	18.1	9.4
HCM LOS	A	D	C	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	0%	20%	100%	33%
Vol Thru, %	50%	0%	20%	0%	33%
Vol Right, %	0%	100%	60%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	401	5	526	3
LT Vol	1	0	1	524	1
Through Vol	1	0	1	1	1
RT Vol	0	401	3	1	1
Lane Flow Rate	2	431	5	566	3
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.004	0.655	0.009	0.847	0.006
Departure Headway (Hd)	6.436	5.472	5.797	5.394	6.319
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	556	660	615	673	564
Service Time	4.176	3.212	3.853	3.424	4.382
HCM Lane V/C Ratio	0.004	0.653	0.008	0.841	0.005
HCM Control Delay	9.2	18.1	8.9	31	9.4
HCM Lane LOS	A	C	A	D	A
HCM 95th-tile Q	0	4.9	0	9.5	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	344	1691	77	62	1304	251	69	23	56	515	23	369
Future Volume (vph)	344	1691	77	62	1304	251	69	23	56	515	23	369
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		100	200		150	0		0	250		0
Storage Lanes	2		2	1		1	1		0	1		0
Taper Length (ft)	150			120			25			90		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	*1.00	1.00	1.00
Ped Bike Factor											0.99	
Frt											0.859	
Flt Protected												
Satd. Flow (prot)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1578	0
Flt Permitted												
Satd. Flow (perm)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1578	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			213		60			368	
Link Speed (mph)		45			45			30			35	
Link Distance (ft)		655			690			257			759	
Travel Time (s)		9.9			10.5			5.8			14.8	
Confl. Peds. (#/hr)												2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												

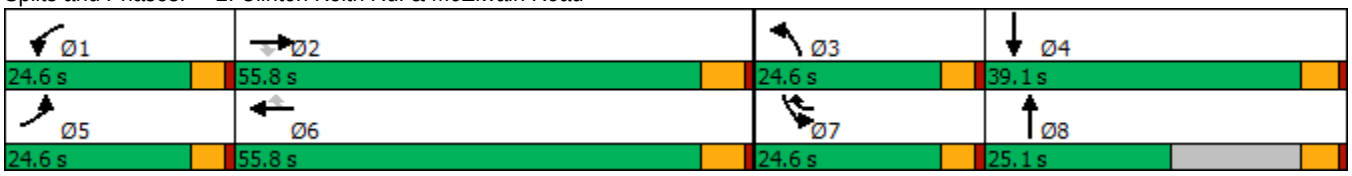
Intersection Summary	
Area Type:	Other

* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	344	1691	77	62	1304	251	69	23	515	23
Future Volume (vph)	344	1691	77	62	1304	251	69	23	515	23
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	24.6	55.8	55.8	24.6	55.8	24.6	24.6	25.1	24.6	39.1
Total Split (%)	17.1%	38.7%	38.7%	17.1%	38.7%	17.1%	17.1%	17.4%	17.1%	27.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	15.1	48.0	48.0	8.7	38.6	65.6	9.9	13.3	20.9	23.1
Actuated g/C Ratio	0.14	0.46	0.46	0.08	0.37	0.63	0.09	0.13	0.20	0.22
v/c Ratio	0.68	0.70	0.09	0.43	0.67	0.21	0.41	0.29	0.74	0.66
Control Delay	52.2	26.7	4.8	60.0	30.6	3.4	57.4	21.0	49.1	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	26.7	4.8	60.0	30.6	3.4	57.4	21.0	49.1	12.5
LOS	D	C	A	E	C	A	E	C	D	B
Approach Delay		30.1			27.5			37.9		33.3
Approach LOS		C			C			D		C

Intersection Summary	
Cycle Length: 144.1	
Actuated Cycle Length: 104.5	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 30.1	Intersection LOS: C
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Clinton Keith Rd. & McElwain Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	344	1691	77	62	1304	251	69	23	56	515	23	369
Future Volume (veh/h)	344	1691	77	62	1304	251	69	23	56	515	23	369
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	366	1799	82	66	1387	267	73	24	60	548	24	393
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	431	2530	715	85	2119	866	94	77	192	600	26	418
Arrive On Green	0.12	0.45	0.45	0.05	0.38	0.38	0.05	0.16	0.16	0.17	0.28	0.28
Sat Flow, veh/h	3563	5611	1585	1781	5611	1585	1781	474	1184	3563	92	1504
Grp Volume(v), veh/h	366	1799	82	66	1387	267	73	0	84	548	0	417
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1657	1781	0	1596
Q Serve(g_s), s	11.9	30.5	3.5	4.3	24.1	10.8	4.8	0.0	5.3	17.8	0.0	30.1
Cycle Q Clear(g_c), s	11.9	30.5	3.5	4.3	24.1	10.8	4.8	0.0	5.3	17.8	0.0	30.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.94
Lane Grp Cap(c), veh/h	431	2530	715	85	2119	866	94	0	269	600	0	443
V/C Ratio(X)	0.85	0.71	0.11	0.78	0.65	0.31	0.77	0.00	0.31	0.91	0.00	0.94
Avail Cap(c_a), veh/h	604	2530	715	302	2380	939	302	0	281	604	0	460
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	0.00	1.00
Uniform Delay (d), s/veh	50.8	26.2	18.7	55.5	30.3	14.6	55.1	0.0	43.6	48.2	0.0	41.6
Incr Delay (d2), s/veh	6.0	1.2	0.2	5.6	0.9	0.5	12.5	0.0	0.7	17.9	0.0	27.4
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	5.5	13.0	1.3	2.0	10.5	4.0	2.5	0.0	2.2	9.3	0.0	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	27.4	18.9	61.1	31.3	15.1	67.6	0.0	44.2	66.1	0.0	69.0
LnGrp LOS	E	C	B	E	C	B	E	A	D	E	A	E
Approach Vol, veh/h		2247			1720			157			965	
Approach Delay, s/veh		31.9			29.9			55.1			67.4	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	59.0	10.9	37.8	18.9	50.3	24.5	24.2
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	4.6	5.8	4.6	5.1
Max Green Setting (Gmax), s	20.0	50.0	20.0	34.0	20.0	50.0	20.0	20.0
Max Q Clear Time (g_c+I1), s	6.3	32.5	6.8	32.1	13.9	26.1	19.8	7.3
Green Ext Time (p_c), s	0.0	15.5	0.1	0.6	0.4	18.4	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	38.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	344	1691	77	62	1304	251	69	23	56	515	23	369
Future Volume (vph)	344	1691	77	62	1304	251	69	23	56	515	23	369
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		100	200		150	0		0	250		0
Storage Lanes	2		2	1		1	1		0	1		0
Taper Length (ft)	150			120			25			90		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	*1.00	1.00	1.00
Ped Bike Factor											0.99	
Frt											0.859	
Flt Protected												
Satd. Flow (prot)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1579	0
Flt Permitted												
Satd. Flow (perm)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133			267		60			353	
Link Speed (mph)		45			45			30			35	
Link Distance (ft)		655			690			257			759	
Travel Time (s)		9.9			10.5			5.8			14.8	
Confl. Peds. (#/hr)												2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												

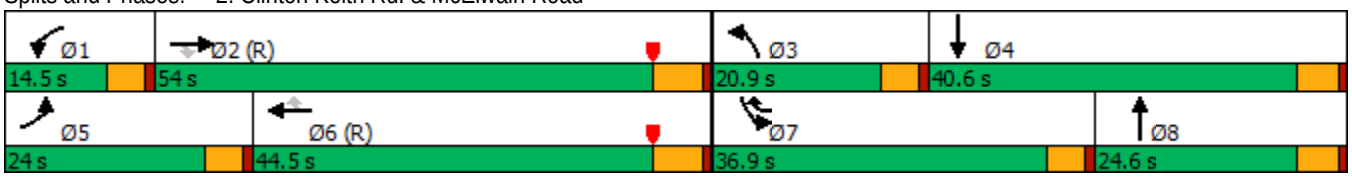
Intersection Summary	
Area Type:	Other

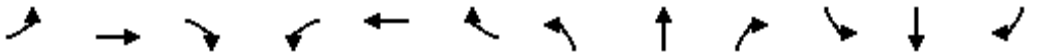
* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	344	1691	77	62	1304	251	69	23	515	23
Future Volume (vph)	344	1691	77	62	1304	251	69	23	515	23
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	24.0	54.0	54.0	14.5	44.5	36.9	20.9	24.6	36.9	40.6
Total Split (%)	18.5%	41.5%	41.5%	11.2%	34.2%	28.4%	16.1%	18.9%	28.4%	31.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	Max	None	None	Max	Max
Act Effct Green (s)	16.6	50.6	50.6	8.5	40.3	79.6	10.4	19.5	33.4	44.7
Actuated g/C Ratio	0.13	0.39	0.39	0.07	0.31	0.61	0.08	0.15	0.26	0.34
v/c Ratio	0.77	0.83	0.10	0.55	0.80	0.21	0.49	0.25	0.57	0.54
Control Delay	65.9	40.2	0.9	75.6	45.5	1.7	67.5	20.3	45.2	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.9	40.2	0.9	75.6	45.5	1.7	67.5	20.3	45.2	9.6
LOS	E	D	A	E	D	A	E	C	D	A
Approach Delay		43.0			39.9			42.2		29.8
Approach LOS		D			D			D		C

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 39.4	Intersection LOS: D
Intersection Capacity Utilization 87.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Clinton Keith Rd. & McElwain Road





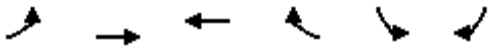
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	344	1691	77	62	1304	251	69	23	56	515	23	369
Future Volume (veh/h)	344	1691	77	62	1304	251	69	23	56	515	23	369
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	366	1799	82	66	1387	267	73	24	60	548	24	393
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	423	2651	749	84	2251	1030	93	37	91	885	25	411
Arrive On Green	0.12	0.47	0.47	0.05	0.40	0.40	0.05	0.08	0.08	0.25	0.27	0.27
Sat Flow, veh/h	3563	5611	1585	1781	5611	1585	1781	474	1184	3563	92	1504
Grp Volume(v), veh/h	366	1799	82	66	1387	267	73	0	84	548	0	417
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1657	1781	0	1596
Q Serve(g_s), s	13.1	32.4	3.7	4.8	25.6	9.2	5.3	0.0	6.4	17.8	0.0	33.4
Cycle Q Clear(g_c), s	13.1	32.4	3.7	4.8	25.6	9.2	5.3	0.0	6.4	17.8	0.0	33.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.94
Lane Grp Cap(c), veh/h	423	2651	749	84	2251	1030	93	0	128	885	0	436
V/C Ratio(X)	0.87	0.68	0.11	0.78	0.62	0.26	0.78	0.00	0.66	0.62	0.00	0.96
Avail Cap(c_a), veh/h	532	2651	749	136	2251	1030	223	0	249	885	0	436
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	0.00	1.00
Uniform Delay (d), s/veh	56.3	26.6	19.1	61.3	31.0	9.6	60.9	0.0	58.3	43.4	0.0	46.5
Incr Delay (d2), s/veh	10.1	1.4	0.3	5.8	1.3	0.6	13.1	0.0	5.6	3.2	0.0	33.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	14.0	1.5	2.3	11.3	3.3	2.7	0.0	2.9	8.2	0.0	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.3	28.0	19.4	67.1	32.2	10.2	73.9	0.0	64.0	46.6	0.0	80.1
LnGrp LOS	E	C	B	E	C	B	E	A	E	D	A	F
Approach Vol, veh/h		2247			1720			157			965	
Approach Delay, s/veh		34.0			30.2			68.6			61.1	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	67.2	11.4	40.6	20.0	58.0	36.9	15.1
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	4.6	5.8	4.6	5.1
Max Green Setting (Gmax), s	9.9	48.2	16.3	35.5	19.4	38.7	32.3	19.5
Max Q Clear Time (g_c+I1), s	6.8	34.4	7.3	35.4	15.1	27.6	19.8	8.4
Green Ext Time (p_c), s	0.0	12.5	0.1	0.0	0.3	9.6	0.9	0.2

Intersection Summary	
HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	172	238	284	3	22	257
Future Volume (vph)	172	238	284	3	22	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	50
Storage Lanes	1			0	1	0
Taper Length (ft)	90				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.999		0.875	
Flt Protected	0.950				0.996	
Satd. Flow (prot)	1770	3539	3536	0	1623	0
Flt Permitted	0.950				0.996	
Satd. Flow (perm)	1770	3539	3536	0	1623	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		888	602		266	
Travel Time (s)		20.2	13.7		6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						

Intersection Summary	
Area Type:	Other

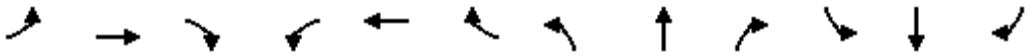
Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	172	238	284	3	22	257
Future Vol, veh/h	172	238	284	3	22	257
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	191	264	316	3	24	286

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	319	0	-	0	832	160
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	514	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1238	-	-	-	308	857
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	565	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1238	-	-	-	261	857
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	601	-
Stage 2	-	-	-	-	565	-

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1238	-	-	-	726
HCM Lane V/C Ratio	0.154	-	-	-	0.427
HCM Control Delay (s)	8.4	-	-	-	13.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	2.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	360	1	27	426	15	1	1	19	10	1	13
Future Volume (vph)	19	360	1	27	426	15	1	1	19	10	1	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	60			60			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.995			0.857			0.925	
Flt Protected	0.950			0.950			0.950				0.980	
Satd. Flow (prot)	1770	1863	0	1770	1853	0	1770	1596	0	0	1689	0
Flt Permitted	0.950			0.950			0.950				0.980	
Satd. Flow (perm)	1770	1863	0	1770	1853	0	1770	1596	0	0	1689	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		602			484			231			240	
Travel Time (s)		13.7			11.0			5.3			5.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	360	1	27	426	15	1	1	19	10	1	13
Future Vol, veh/h	19	360	1	27	426	15	1	1	19	10	1	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	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	22	409	1	31	484	17	1	1	22	11	1	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	501	0	0	410	0	0	1017	1017	410	1020	1009	493
Stage 1	-	-	-	-	-	-	454	454	-	555	555	-
Stage 2	-	-	-	-	-	-	563	563	-	465	454	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	10	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1063	-	-	1149	-	-	216	238	642	215	240	576
Stage 1	-	-	-	-	-	-	586	569	-	516	513	-
Stage 2	-	-	-	-	-	-	511	509	-	578	569	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1063	-	-	1149	-	-	202	227	642	200	229	576
Mov Cap-2 Maneuver	-	-	-	-	-	-	202	227	-	200	229	-
Stage 1	-	-	-	-	-	-	574	557	-	505	499	-
Stage 2	-	-	-	-	-	-	483	495	-	546	557	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.5	11.9	17.6
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	202	588	1063	-	-	1149	-	-	312
HCM Lane V/C Ratio	0.006	0.039	0.02	-	-	0.027	-	-	0.087
HCM Control Delay (s)	22.9	11.4	8.5	-	-	8.2	-	-	17.6
HCM Lane LOS	C	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0.1	0.1	-	-	0.1	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	2	455	2	1	2	1	541	1	1	1
Future Volume (vph)	1	1	2	455	2	1	2	1	541	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932							0.850		0.955	
Flt Protected		0.988			0.953			0.968			0.984	
Satd. Flow (prot)	0	1715	0	0	1775	0	0	1803	1583	0	1750	0
Flt Permitted		0.988			0.953			0.968			0.984	
Satd. Flow (perm)	0	1715	0	0	1775	0	0	1803	1583	0	1750	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		394			602			211			349	
Travel Time (s)		9.0			13.7			4.8			7.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												

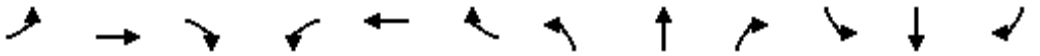
Intersection Summary	
Area Type:	Other

Intersection	
Intersection Delay, s/veh	27.6
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	2	455	2	1	2	1	541	1	1	1
Future Vol, veh/h	1	1	2	455	2	1	2	1	541	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	2	479	2	1	2	1	569	1	1	1
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	9.3	25.4	29.7	9.5
HCM LOS	A	D	D	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	0%	25%	99%	33%
Vol Thru, %	33%	0%	25%	0%	33%
Vol Right, %	0%	100%	50%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	541	4	458	3
LT Vol	2	0	1	455	1
Through Vol	1	0	1	2	1
RT Vol	0	541	2	1	1
Lane Flow Rate	3	569	4	482	3
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.006	0.841	0.007	0.769	0.006
Departure Headway (Hd)	6.361	5.314	6.186	5.74	6.345
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	562	683	575	632	561
Service Time	4.104	3.057	4.26	3.78	4.418
HCM Lane V/C Ratio	0.005	0.833	0.007	0.763	0.005
HCM Control Delay	9.1	29.8	9.3	25.4	9.5
HCM Lane LOS	A	D	A	D	A
HCM 95th-tile Q	0	9.3	0	7.1	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	627	1841	85	81	1847	475	87	30	67	677	31	496
Future Volume (vph)	627	1841	85	81	1847	475	87	30	67	677	31	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		100	200		150	0		0	250		0
Storage Lanes	2		2	1		1	1		0	1		0
Taper Length (ft)	150			120			25			90		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	*1.00	1.00	1.00
Ped Bike Factor											0.99	
Frt											0.859	
Flt Protected												
Satd. Flow (prot)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1578	0
Flt Permitted												
Satd. Flow (perm)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1578	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			285		72			344	
Link Speed (mph)		45			45			30			35	
Link Distance (ft)		655			690			257			759	
Travel Time (s)		9.9			10.5			5.8			14.8	
Confl. Peds. (#/hr)												2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												

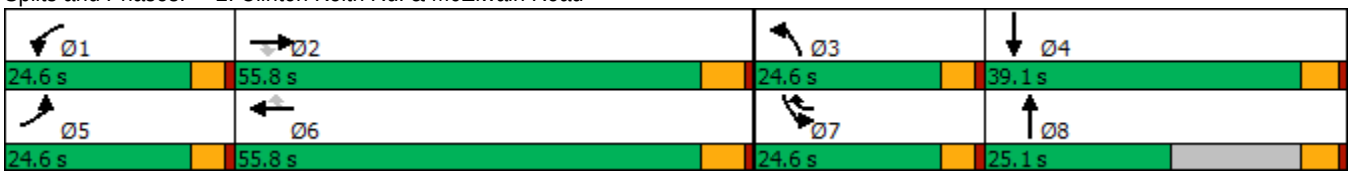
Intersection Summary	
Area Type:	Other

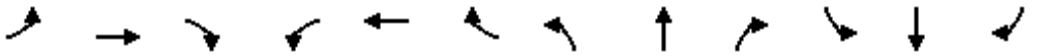
* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	627	1841	85	81	1847	475	87	30	677	31
Future Volume (vph)	627	1841	85	81	1847	475	87	30	677	31
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	34.8	10.6	10.6	15.1	10.6	39.1
Total Split (s)	24.6	55.8	55.8	24.6	55.8	24.6	24.6	25.1	24.6	39.1
Total Split (%)	17.1%	38.7%	38.7%	17.1%	38.7%	17.1%	17.1%	17.4%	17.1%	27.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	20.1	59.7	59.7	10.6	50.2	76.1	12.0	21.3	20.1	29.4
Actuated g/C Ratio	0.15	0.45	0.45	0.08	0.38	0.58	0.09	0.16	0.15	0.22
v/c Ratio	1.19	0.78	0.10	0.58	0.93	0.43	0.56	0.29	1.28	0.91
Control Delay	149.2	35.0	6.2	75.3	49.1	8.2	70.8	19.1	185.1	40.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	149.2	35.0	6.2	75.3	49.1	8.2	70.8	19.1	185.1	40.0
LOS	F	C	A	E	D	A	E	B	F	D
Approach Delay		62.1			41.9			43.6		121.6
Approach LOS		E			D			D		F

Intersection Summary	
Cycle Length: 144.1	
Actuated Cycle Length: 131.8	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 65.2	Intersection LOS: E
Intersection Capacity Utilization 107.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: Clinton Keith Rd. & McElwain Road





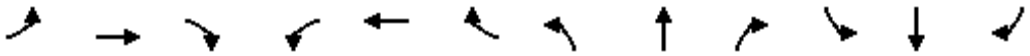
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	627	1841	85	81	1847	475	87	30	67	677	31	496
Future Volume (veh/h)	627	1841	85	81	1847	475	87	30	67	677	31	496
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	674	1980	91	87	1986	511	94	32	72	728	33	533
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	536	2612	738	109	2110	835	118	88	197	536	24	385
Arrive On Green	0.15	0.47	0.47	0.06	0.38	0.38	0.07	0.17	0.17	0.15	0.26	0.26
Sat Flow, veh/h	3563	5611	1585	1781	5611	1585	1781	512	1151	3563	93	1503
Grp Volume(v), veh/h	674	1980	91	87	1986	511	94	0	104	728	0	566
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1663	1781	0	1596
Q Serve(g_s), s	20.0	38.7	4.3	6.4	45.4	29.9	6.9	0.0	7.3	20.0	0.0	34.0
Cycle Q Clear(g_c), s	20.0	38.7	4.3	6.4	45.4	29.9	6.9	0.0	7.3	20.0	0.0	34.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.94
Lane Grp Cap(c), veh/h	536	2612	738	109	2110	835	118	0	285	536	0	408
V/C Ratio(X)	1.26	0.76	0.12	0.80	0.94	0.61	0.80	0.00	0.36	1.36	0.00	1.39
Avail Cap(c_a), veh/h	536	2612	738	268	2112	835	268	0	285	536	0	408
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	0.00	1.00
Uniform Delay (d), s/veh	56.4	29.3	20.1	61.5	40.0	22.0	61.2	0.0	48.6	56.4	0.0	49.4
Incr Delay (d2), s/veh	130.0	1.6	0.2	5.0	9.4	2.1	11.7	0.0	0.8	172.6	0.0	188.2
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	18.5	16.9	1.7	3.0	21.8	11.5	3.5	0.0	3.1	21.8	0.0	34.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	186.5	30.9	20.3	66.5	49.5	24.0	72.8	0.0	49.4	229.0	0.0	237.6
LnGrp LOS	F	C	C	E	D	C	E	A	D	F	A	F
Approach Vol, veh/h		2745			2584			198			1294	
Approach Delay, s/veh		68.8			45.0			60.5			232.8	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	67.6	13.4	39.1	24.6	55.8	24.6	27.9
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	4.6	5.8	4.6	5.1
Max Green Setting (Gmax), s	20.0	50.0	20.0	34.0	20.0	50.0	20.0	20.0
Max Q Clear Time (g_c+I1), s	8.4	40.7	8.9	36.0	22.0	47.4	22.0	9.3
Green Ext Time (p_c), s	0.1	8.8	0.1	0.0	0.0	2.6	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	90.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	627	1841	85	81	1847	475	87	30	67	677	31	496
Future Volume (vph)	627	1841	85	81	1847	475	87	30	67	677	31	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		100	200		150	0		0	250		0
Storage Lanes	2		2	1		1	1		0	1		0
Taper Length (ft)	150			120			25			90		
Lane Util. Factor	*1.00	*1.00	1.00	1.00	*1.00	1.00	1.00	1.00	1.00	*1.00	1.00	1.00
Ped Bike Factor											0.99	
Frt											0.859	
Flt Protected												
Satd. Flow (prot)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1579	0
Flt Permitted												
Satd. Flow (perm)	3725	5588	1863	1863	5588	1863	1863	1863	0	3725	1579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138			347		72			346	
Link Speed (mph)		45			45			30			35	
Link Distance (ft)		655			690			257			759	
Travel Time (s)		9.9			10.5			5.8			14.8	
Confl. Peds. (#/hr)												2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												

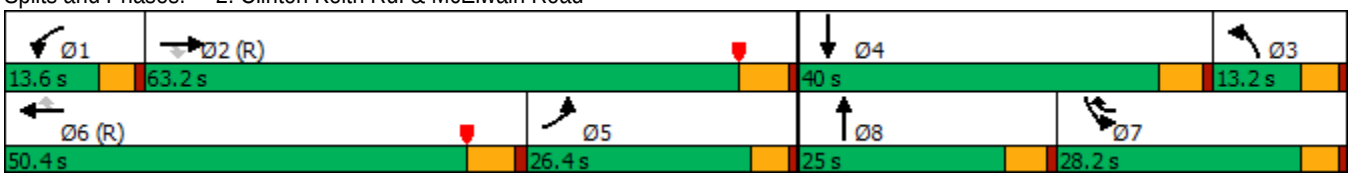
Intersection Summary	
Area Type:	Other

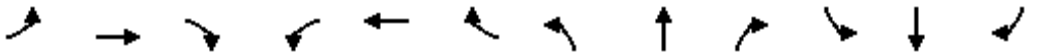
* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	627	1841	85	81	1847	475	87	30	677	31
Future Volume (vph)	627	1841	85	81	1847	475	87	30	677	31
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	6.0	10.0	10.0	6.0	10.0	6.0	6.0	10.0	6.0	10.0
Minimum Split (s)	10.6	27.8	27.8	10.6	50.0	10.6	10.6	25.0	10.6	40.0
Total Split (s)	26.4	63.2	63.2	13.6	50.4	28.2	13.2	25.0	28.2	40.0
Total Split (%)	20.3%	48.6%	48.6%	10.5%	38.8%	21.7%	10.2%	19.2%	21.7%	30.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	4.1	3.6	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	5.1	4.6	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	Max	None	None	Max	Max
Act Effct Green (s)	21.8	57.9	57.9	8.5	44.6	83.4	8.6	10.5	33.0	34.9
Actuated g/C Ratio	0.17	0.45	0.45	0.07	0.34	0.64	0.07	0.08	0.25	0.27
v/c Ratio	1.08	0.80	0.10	0.72	1.04	0.39	0.76	0.48	0.77	0.84
Control Delay	109.9	34.1	1.0	90.3	72.3	4.1	95.5	28.9	51.6	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.9	34.1	1.0	90.3	72.3	4.1	95.5	28.9	51.6	29.1
LOS	F	C	A	F	E	A	F	C	D	C
Approach Delay		51.6			59.4			60.5		41.7
Approach LOS		D			E			E		D

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 52.9	Intersection LOS: D
Intersection Capacity Utilization 107.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: Clinton Keith Rd. & McElwain Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	627	1841	85	81	1847	475	87	30	67	677	31	496
Future Volume (veh/h)	627	1841	85	81	1847	475	87	30	67	677	31	496
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	674	1980	91	87	1986	511	94	32	72	728	33	533
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1381	3809	1076	108	1925	947	116	41	91	907	25	403
Arrive On Green	0.39	0.68	0.68	0.06	0.34	0.34	0.07	0.08	0.08	0.25	0.27	0.27
Sat Flow, veh/h	3563	5611	1585	1781	5611	1585	1781	512	1151	3563	93	1503
Grp Volume(v), veh/h	674	1980	91	87	1986	511	94	0	104	728	0	566
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1663	1781	0	1596
Q Serve(g_s), s	18.6	22.8	3.2	6.3	44.6	0.0	6.8	0.0	8.0	24.9	0.0	34.9
Cycle Q Clear(g_c), s	18.6	22.8	3.2	6.3	44.6	0.0	6.8	0.0	8.0	24.9	0.0	34.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.94
Lane Grp Cap(c), veh/h	1381	3809	1076	108	1925	947	116	0	132	907	0	428
V/C Ratio(X)	0.49	0.52	0.08	0.80	1.03	0.54	0.81	0.00	0.79	0.80	0.00	1.32
Avail Cap(c_a), veh/h	1381	3809	1076	123	1925	947	118	0	255	907	0	428
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	0.00	1.00
Uniform Delay (d), s/veh	30.1	10.4	11.3	60.3	42.7	15.5	60.0	0.0	58.8	45.4	0.0	47.6
Incr Delay (d2), s/veh	0.1	0.5	0.2	24.2	29.1	2.2	32.6	0.0	10.0	7.5	0.0	160.1
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	7.7	8.4	0.9	3.5	24.9	9.4	4.1	0.0	3.7	11.8	0.0	32.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	10.9	11.4	84.5	71.8	17.7	92.5	0.0	68.8	52.9	0.0	207.6
LnGrp LOS	C	B	B	F	F	B	F	A	E	D	A	F
Approach Vol, veh/h		2745			2584			198			1294	
Approach Delay, s/veh		15.6			61.6			80.1			120.6	
Approach LOS		B			E			F			F	

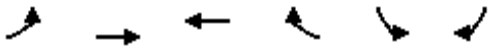
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	94.2	13.1	40.0	56.3	50.4	37.7	15.4
Change Period (Y+Rc), s	4.6	5.8	4.6	5.1	5.8	* 5.8	4.6	5.1
Max Green Setting (Gmax), s	9.0	57.4	8.6	34.9	21.8	* 45	23.6	19.9
Max Q Clear Time (g_c+I1), s	8.3	24.8	8.8	36.9	20.6	46.6	26.9	10.0
Green Ext Time (p_c), s	0.0	28.5	0.0	0.0	0.2	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	54.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	272	351	319	15	26	176
Future Volume (vph)	272	351	319	15	26	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	50
Storage Lanes	1			0	1	0
Taper Length (ft)	90				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.993		0.882	
Flt Protected	0.950				0.994	
Satd. Flow (prot)	1770	3539	3514	0	1633	0
Flt Permitted	0.950				0.994	
Satd. Flow (perm)	1770	3539	3514	0	1633	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		888	602		266	
Travel Time (s)		20.2	13.7		6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						

Intersection Summary	
Area Type:	Other

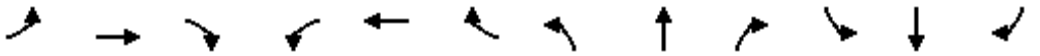
Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	272	351	319	15	26	176
Future Vol, veh/h	272	351	319	15	26	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	302	390	354	17	29	196

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	371	0	-	0	1162	186
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	799	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1184	-	-	-	188	824
Stage 1	-	-	-	-	674	-
Stage 2	-	-	-	-	403	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1184	-	-	-	140	824
Mov Cap-2 Maneuver	-	-	-	-	140	-
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	403	-

Approach	EB	WB	SB
HCM Control Delay, s	4	0	17.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1184	-	-	-	506
HCM Lane V/C Ratio	0.255	-	-	-	0.444
HCM Control Delay (s)	9.1	-	-	-	17.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	1	-	-	-	2.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	555	1	53	424	17	5	1	79	16	1	19
Future Volume (vph)	20	555	1	53	424	17	5	1	79	16	1	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	60			60			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.994			0.852			0.929	
Flt Protected	0.950			0.950			0.950				0.978	
Satd. Flow (prot)	1770	1863	0	1770	1852	0	1770	1587	0	0	1692	0
Flt Permitted	0.950			0.950			0.950				0.978	
Satd. Flow (perm)	1770	1863	0	1770	1852	0	1770	1587	0	0	1692	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		602			484			231			240	
Travel Time (s)		13.7			11.0			5.3			5.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												

Intersection Summary	
Area Type:	Other

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	555	1	53	424	17	5	1	79	16	1	19
Future Vol, veh/h	20	555	1	53	424	17	5	1	79	16	1	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	617	1	59	471	19	6	1	88	18	1	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	490	0	0	618	0	0	1272	1270	618	1305	1261	481
Stage 1	-	-	-	-	-	-	662	662	-	599	599	-
Stage 2	-	-	-	-	-	-	610	608	-	706	662	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	10	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1073	-	-	962	-	-	144	168	489	137	170	585
Stage 1	-	-	-	-	-	-	451	459	-	488	490	-
Stage 2	-	-	-	-	-	-	482	486	-	427	459	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1073	-	-	962	-	-	130	154	489	105	156	585
Mov Cap-2 Maneuver	-	-	-	-	-	-	130	154	-	105	156	-
Stage 1	-	-	-	-	-	-	442	449	-	478	460	-
Stage 2	-	-	-	-	-	-	435	456	-	342	449	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1	15.5	29.3
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	130	476	1073	-	-	962	-	-	188
HCM Lane V/C Ratio	0.043	0.187	0.021	-	-	0.061	-	-	0.213
HCM Control Delay (s)	33.9	14.3	8.4	-	-	9	-	-	29.3
HCM Lane LOS	D	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.1	0.7	0.1	-	-	0.2	-	-	0.8